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**An Emergent Athlete Development Framework:
Examining the Case of Swiss Triathlon from a Coach's Perspective**

A thesis presented in partial fulfilment of the requirements for
the degree of Doctor of Philosophy

At Massey University, Palmerston North, New Zealand

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ABSTRACT

In New Zealand (NZ), recent high-performance (HP) reviews of National Sport Organisation (NSO) teams have identified issues around selection and athlete support. This current study examines Swiss Triathlon's athlete development pathways (youth to elite), specifically issues of selection, de-selection and non-selection, and their practical implications from a coach's perspective. In this thesis, the researcher (originally from NZ) through reflecting on his current role as National Coach for Swiss Duathlon, has used the case of Swiss Triathlon to examine athlete development pathways. This thesis reviews issues of early versus late sport specialisation and the importance of athlete development pathways addressing both physical performance and the athlete's development as a person. Two theoretical and conceptual approaches provide the basis for the research; the Long-Term Athlete Development (LTAD) Model and the Foundation, Talent, Elite and Master (FTEM) Framework. The background to triathlon and Swiss Triathlon are presented, along with the author's personal and professional career, first as a professional athlete and then as a coach at a range of athlete development levels through to HP. A multi-method approach primarily involves an auto-ethnographic analysis providing a 'reflective practitioner' perspective of the researcher's athlete and coaching experiences (at a regional, national, and international level). Triangulation enhances the study's credibility through cross reference to a *bricolage* of secondary sources, for example, document analysis from Swiss Triathlon, results of athlete testing, National and Youth League races, and feedback from athletes, parents, and coaches. The findings of this research have resulted in an emergent framework for enhancing athlete development pathways (youth to elite) for Swiss Triathlon, which is hoped will be transferable to other triathlon, regional and national sport contexts. The framework specifically addresses issues of selection, de-selection, and non-selection, with practical implications provided for coaches, which are designed with the intent of being athlete-centred.

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Dedication

This thesis is dedicated to my mother, Dr Allison Lamont, who believed in and supported me in everything I wanted to do, and to my family who have been a critical part of this journey.

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COVID-19 STATEMENT

The COVID-19 global pandemic has had an impact on the data collection for this thesis. The initial intent was to collect and analyse athlete testing data and race results from the 2020 season. However, all races were cancelled, and testing of athletes did not take place. Racing and testing in the 2021 season were also disrupted, and the format for the tests were changed. Therefore, the main methodological focus of the thesis in examining issues related to athlete development has been an auto-ethnographical account of the researcher's coaching experiences (at a regional, national, and international level), and as a professional athlete. This approach has been supported by triangulation and cross-referencing document analysis from Swiss Triathlon's 2013-2019 results of athlete testing, National and Youth League races, and feedback from athletes, parents, and coaches.

ABBREVIATIONS & FOREIGN TERMS

AIS	Australian Institute of Sport
FTEM	Foundation, Talent, Elite and Master Framework, where a framework is defined as a support structure around which something can be built (Cambridge Dictionary, n.d.)
HP	High-Performance
ITU	International Triathlon Union
LTAD	Long-Term Athlete Development Model, where a model is defined as a simple description of a system or process (Cambridge Dictionary, n.d.)
NSO	National Sport Organisation
NZ	New Zealand
TID	Talent Identification
<i>Bricolage</i>	French word for created from a diverse range of things
<i>Berufstrainer</i>	Professional coach
<i>Nachwuchs</i>	Youth athletes under the age of 20. At 20 athletes enter the elite system
<i>Kader</i>	The German word meaning squad
<i>Leistungssport</i>	High-Performance
<i>PISTE</i>	The Swiss Olympic approach to talent selection, TID <i>Prognostisch: Integrativ: Systematisches: Trainer, Einschätzungen:</i>

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CHAPTER ONE

INTRODUCTION

CHAPTER OVERVIEW

The current study examines Swiss Triathlon's athlete development pathways (youth to elite), specifically issues surrounding selection, de-selection and non-selection, and practical implications for their development from a coach's perspective. It also reviews other systems as a comparison, including those of New Zealand (NZ), Great Britain and Germany. This introductory chapter provides the rationale for the thesis. It discusses issues of early versus late sport specialisation and the importance of athlete development pathways addressing not only physical performance, but also considering the athlete's wider personal development. The theoretical and conceptual foundations for this research are the Long-Term Athlete Development model (LTAD; Balyi & Hamilton, 2004) and the Foundation, Talent, Elite and Master framework (FTEM; Gulbin et al., 2013). The aim of this thesis is to help enhance athlete development pathways (youth to elite), within an emergent athlete development framework, that takes into consideration related issues of athlete selection, de-selection, non-selection and retention, and the development of the athlete as a person through developing policy and practice. Also discussed are the histories of triathlon and Swiss Triathlon, along with my personal background as a professional athlete and as a coach at a range of athlete development levels through to high-performance (HP) at Swiss Triathlon. A multi-method approach involves an auto-ethnographic narrative providing a 'reflective practitioner' perspective of the researcher as an athlete and coach. Triangulation enhances this study's credibility through cross reference to document analysis from Swiss Triathlon (for example, selection criteria, testing practices, National and Youth League races, and questionnaire feedback from athletes, parents, and coaches).

This thesis highlights the complementary use of case study and auto-ethnographical qualitative methodologies, where the researcher's personal experiences are integrated into the broader context of a specific case (Swiss Triathlon). Auto-ethnography encourages a rich narrative of the researcher's reflexivity, including biases and insights related to the context of the case, and critiquing the practicalities and theoretical dimensions of athlete frameworks. The combination of case study, auto-ethnography (athlete/coach insights), document analysis and consultation with fellow practitioners has been adopted to elevate the thesis from a simple statement of one individual's opinion to a rigorous, reflective piece of practitioner-informed scholarship. It also allowed a practical study of change management in real time from a practitioner's perspective, informing and providing a high-performance national sport organisation with an emergent athlete development framework with potential transferability to other sport contexts.

1.1 RATIONALE FOR THE RESEARCH

Within and around triathlon there are many opinions about athlete development from coaches and other stakeholders, yet there is a paucity of research in this area. For some stakeholders it is easy to look at a National Sport Organisation (NSO)/Federation and point out what is wrong with a system from their point of view, without offering any solutions. National Federations, for example, Swiss Triathlon, must work within limitations that are placed on them through financial restrictions, by sport funding organisations, and sport governing bodies, as well as many others. These issues mean that a Federation, like Swiss Triathlon, must have a development system that meets many different demands, as well as trying to help their athletes. In the case of Swiss Triathlon, the criteria needed to fulfil all the requirements are currently focused primarily on the physical development of the athletes. This means that athletes are tested, measured and performances are considered as input to athlete selection. These hard facts only measure the physical part of the athlete's development, not if the athlete is a late or early developer, or whether they have transitioned from another sport, nor what else is happening within their life.

Athlete performance is defined as carrying out specific physical routines or procedures by one who is trained or skilled in physical activity. Performance is influenced by a combination of physiological, psychological, and socio-cultural factors (U.S. National Library of Medicine, n.d.). Athlete well-being is outlined by Bouchard et al. (1994) as being both physical and emotional, with a high capacity of enjoying life and challenges, and possessing adequate coping strategies in the face of difficulties. The issue of athlete welfare has come very much to the fore in recent years.

In NZ, over the past decade there have been several reviews by NSOs (NZ Rugby, Cycling NZ twice, Triathlon NZ, NZ Hockey, Canoe Racing NZ) into issues of athlete welfare and inclusivity in their sports, with a particular focus on the high-performance sector. One common feature of these reviews was that the relationship between coaches and athletes was central to athlete support. When this relationship fractured, both performance and athlete experience suffered. The process of selection and de-selection of athletes was another common theme. When selection processes lack clarity and are inconsistently applied, athletes become disillusioned, and many choose to leave the sport (Wrang, 2023).

This current study is of importance because it comes as many sporting codes in NZ and around the world are grappling with creating appropriate environments for athlete development, as these can also now affect a sport's funding level. As a result, looking into development systems and how they affect athletes is of relevance and can help sports develop well rounded and successful athletes for the future. Making this current research even more pertinent are two NZ NSO reviews that were released in 2022. The first report by Muir et al. (2022) provided a review of the women's rugby team, the Black Ferns, its culture, and environment, following a losing European tour in 2021. A subsequent change in coaches and playing personnel early in 2022 led to the team winning the World Cup later that year. The second report (Heron et al., 2022) followed a separate Independent Review of Cycling NZ's High-Performance Programme (Heron, 2018), which highlighted a culture of bullying, poor behaviour, lack of accountability and a dysfunctional high-performance programme. Whilst noting most of the recommendations from the 2018 report had been implemented, this latest report highlighted the need for further improvement in relation to athlete care and found ongoing issues within the high-performance programme, organisational culture and environment.

At a practical level, one recurring theme from the reports was the centrality of the coach in athlete development. Accordingly, this thesis focuses on providing a coach's perspective on athlete development, because coaches are at the coalface of implementing change. As the reviews demonstrated, many sports have had policies regarding athlete welfare, but these are ineffective unless there is a genuine commitment by coaches and administrators to implement them. This raises the question of how best to prepare coaches to promote athlete development.

The transferability of sport coaching research from the scholarly to the practical sphere has been questioned (Lyle, 2018). In particular, the tendency to see academic coaching research as not being relevant to practitioners and therefore being largely absent from coach education. One possible means of addressing this issue, explored in this thesis, is to encourage coaches to learn from their own experiences by being reflective practitioners. For example, in Pill's (2018) text, *Perspectives on Athlete-Centred Coaching*, Karlene Headley-Cooper's chapter detailed her practitioner's perspectives, as an athlete, coach and researcher through her auto-ethnographic journey of athlete-centred experiences. Slade et al. (2020) highlighted that practitioner auto-ethnography provides sport coaching and physical education (PE) scholars with an approach to framing and discussing issues and enhancing their ability to resolve problems in various contexts. This reflective process is achieved in this thesis through an emergent, evolving continuum of life-story biography, evocative auto-ethnography and analytical auto-ethnography (Slade et al., 2020). In this manner, the process becomes highly relevant both as a research measure and in coach education.

This current research reviews the case of the Swiss Federation's athlete development system from a coach's point of view. The researcher, initially as a club coach, started off being

confronted by the Swiss national triathlon system and trying to train athletes to a standard to enter this system, and then as a national coach with athletes in the system at different levels. Since 2021, the researcher has been a coach employed as part of this NSO, writing sport policy and being in a position to start to influence change. Accordingly, this research is a real-time record of the process of trying to effect change from a practitioner's perspective, achieved through a research 'bricolage' approach (Denzin & Lincoln, 2011) that examines the phenomenon investigated within a social constructivist epistemology (Cresswell, 2007). Hence, the purpose of this study is to provide a reflective practitioner perspective of the researcher's athlete, coaching and policy making experiences (at regional, national, and international level), examining athlete development pathways through the case of Swiss Triathlon.

1.1.1 The case of triathlon

The sport of triathlon is made up of different organisations that run independently from one another. The focus and scope of this thesis is on triathlon events that fall under the Olympic Committee and National Federations aligned with them. In between the National Federations and the Olympic Committee sits World Triathlon that governs many areas of triathlon. This thesis focuses on the area World Triathlon covers from youth through to the Olympic Games. This development of youth and the pathway to the Olympics are the focus for most National Federations, which means triathlon events outside the scope of National Federations are not the focus of this thesis, for example Ironman or Half-Ironman (70.3) events. In Swiss Triathlon, the term *Nachwuchs* is used to talk about all youth athletes under the age of 20. At the age of 20, athletes enter the elite system. *Kader* is the German word meaning squad. Swiss Olympic requires the NSOs (federations) to classify the talented athletes into three different squads: Regional without talent card, Regional with talent card and National squads.

These three squads are referred to as *Kader*, for this reason I have chosen to use the German word as it encompasses all three groups.

By using an auto-ethnographical narrative (Ellis, 2012; Ellis et al., 2011), and using self-reflection throughout this process, I have been able to investigate the formation of my coaching beliefs and critically examine them. This analysis has been informed by other stakeholders, for example, leading international coaches, as well as other methods to critically reflect on the ‘truth of the matter’ (Slade et al., 2020). The main outcome of this current research is an emergent framework of athlete development, offering federations a framework that contributes to athlete development within systems which are often imposed on them by National Sports Organisations (NSOs). In this way National Federations from different sports, and not just triathlon, will be able to benefit from the use of a framework that is more athlete-centred.

This ‘athlete-centred’ coaching approach is a philosophy underpinned by a set of values and coaching behaviors, where the primary goal of the coach is to help their athletes take responsibility for their sporting behaviors and decision-making. Vinson and Bell (2019, p. 40) noted that “at its simplest level, the term means putting the needs of the athlete at the forefront of the coaching process.” Kidman and Lombardo (2010) highlighted that this mentoring approach and delegation of responsibility enables athletes to take greater ownership and empower them to maximise their development, performance and overall enjoyment. The introduction to Pill’s (2018, p. 1) text, *Perspectives on Athlete Centred-Coaching*, reinforced this “philosophy of empowerment... built on the provision of age and developmentally appropriate autonomy for players to make decisions.”

1.2 BACKGROUND TO THE RESEARCH

1.2.1 *Early vs. late sport specialisation*

Recently, sport has gone through changes where there has been growing awareness and concern for athletes being involved in competitive sport from a very young age. There are sports that do require early specialisation, such as gymnastics, and figure skating (Balyi & Hamilton, 2003), whereas in many other sports late specialisation has been encouraged. The favouring of late specialisation is based on the belief that learning different sports early or using a ‘poly sport’ approach before specialisation can lead to great chance of elite success (Epstein, 2013). In *The Sports Gene*, Epstein (2013) made the case for both early and late specialisation, but the specific nature of some sports plays a role in such development. Sport NZ (2021) has introduced the “*Balance is Better*” initiative, where sport is encouraged to be undertaken in an inclusive, safe environment, and where Talent Identification (TID) is carried out at a later date than has been done in the past.

The Long-Term Athlete Development (LTAD) model (Balyi & Hamilton, 2003) was a formal start to developing an athlete pathway from a young age to elite sport. The LTAD model was designed around sensitive periods of athlete learning and development. When Ford et al. (2011) re-examined this model, they found that although it was adopted by many different sports, it had some limitations that needed addressing. Since this time the FTEM framework has been developed (AIS, n.d.) as a result of the initial LTAD model. The FTEM framework breaks down the athlete pathway but is primarily focused on the physical development of athletes. The FTEM framework has now been adopted by Swiss Olympic, who require each sport Federation that they fund to have their own FTEM framework. However, even with the use of models and frameworks by NSO’s underlying issues about athlete selection, de-selection and non-selection still appear to be present.

The findings of this current thesis propose a LEAD (Lamont Emergent Athlete Development) Framework (see Appendices A & B), which is designed to help coaches and administrators with these issues, while working inside a (FTEM) model or framework that is often required by NSO's. The LEAD framework highlights four key areas:

1. Giftedness (Gagné, 2020), TID and talent transfer.
2. Athlete-centred focus (Pill, 2018) and coach education/awareness.
3. Managing athlete and staff resources.
4. Selection protocols, de-selection and non-selection.

1.2.2 Youth development pathways

In terms of youth and elite athlete pathways, many sports have raised issues around athlete care. Several sports in NZ have been placed through external review due to HP athlete concerns around team culture, coach behaviour and athlete selection. For example, the following reviews brought athlete welfare to the fore: NZ Cricket (2016); NZ Rugby (Cockburn & Atkinson, 2017); NZ Cycling (Heron, 2018); NZ Football (Muir & Grierson, 2018); Hockey NZ (2019); Gymnastics NZ (Howman et al., 2021). Many of the investigations have been focused on the treatment of athletes (Howman et al. 2021), and specifically how the athlete is developed and supported. In response to such concerns, High-Performance Sport NZ has stated that part of the future funding it disburses will be based on “athlete well-being” (Reid, 2021).

Triathlon NZ has faced ongoing issues about elite athlete selections for Olympic and Commonwealth Games; for example: Kris Gemmell, 2004 (Phil, 2007); Torenzo Bozzone, 2008 (Stuff, 2009); Nicky Samuels, 2014 (Stuff, 2014), Sophie Corbridge and Sam Ward, 2021 (Cleaver, 2021; Howard, 2021) and Tayler Reid in 2024. Continuing within triathlon, the Dutch Triathlon board resigned, as well as the National coach, after an external investigation upheld athletes' complaints about the treatment of athletes (Sport, 2022).

1.2.3 Athlete development pathways and Swiss Triathlon

At Swiss Triathlon, athletes go through a selection process to enter the *Kader* system. This selection system is made up of several tests and race performances. Once an athlete is selected, Swiss Triathlon becomes part of the athlete's development process. In Switzerland, this is the start of Swiss Triathlon's involvement in the athlete's development, and this first involvement with the regional system run by Swiss Triathlon. Youth development pathways in sport are important in allowing nations such as Switzerland to focus limited resources on athletes they believe have the attributes for development into elite athletes, whilst ensuring the psychological and physical health of these chosen athletes.

Currently, within Swiss Triathlon, it is unknown whether the youth development pathway is producing the desired outcomes for selecting the best potential elite athletes at the right time, whilst remaining cognisant of undesired retention and health outcomes. This thesis examines athlete development pathways from a coach's perspective. It also reviews results of the national development programme (*Kader*) testing and national series races over seven years (pre COVID-19) to ascertain if the athletes that are selected early for the national system are the ones that perform at the elite level later. In 2021, Swiss Triathlon had an external investigation underway about its selection processes and transparency. Although this investigation was known about by staff, including myself, and we were told that the investigation was finished, no findings have been released or discussed outside a select few people. This closed and unreleased investigation does not demonstrate transparency of NSO selection process design. Swiss Olympic has also launched the "Are you OK?" campaign, subsequent to a survey carried out on their behalf by Lamprecht et al. (2021) where it was found that whilst 90% of Elite Talent card holders had safe and supportive training environments, 10% did not.

1.2.4 Aim of the research

This current research will be informed by my personal experiences of coaching, first as a private coach, then moving to coaching at club level, working with athletes trying to enter and included into a national system, and then being appointed as a National Coach and developing systems and running selection and national *Kader* systems. This coaching experience is in addition to my experiences as an athlete, including as a professional cyclist and my own experiences working with National Federations.

Research by Wulff and Hoffmann (2013) suggests that in several sports, early developing athletes perform well and enter national youth teams, but that late developers may then perform better as elite athletes. This thesis examines Swiss Triathlon's athlete development pathways and how selection, de-selection and non-selection are managed. It reviews constraints imposed on Swiss Triathlon by funding systems, as well as how they have managed their athletes. An emergent athlete development framework has then been developed, which aims to assist Swiss Triathlon fulfil their HP requirements and support athlete care as a critical factor. This allows athletes to develop through their system, endeavouring to create both mentally and physically healthy athletes.

The aim of this thesis is to help enhance athlete development pathways (youth to elite), within an emergent athlete development framework, that takes into consideration related issues of athlete selection, de-selection, non-selection and retention, and the development of the athlete as a person through developing policy and practice.

Research questions

Athlete development pathways

- How do existing frameworks provide athlete development pathways?
- What are the roles of coaches, clubs, and federations?
- How should athlete development pathways be managed, changed and enhanced by coaches, clubs and federations?

Athlete selection

- How is athlete selection managed?
- What are the roles of testing, racing and coaches/selectors' judgement?
- How should athlete selection be managed, changed, and enhanced by coaches, clubs and National Federations, e.g. Swiss Triathlon?

Athlete de-selection, non-selection, and retention

- How is athlete retention managed relating to de-selection or non-selection?
- What are the roles of coaches, clubs and federations?
- How should athlete retention be managed, changed, and enhanced by coaches, clubs and federations?

1.3 THEORETICAL & CONCEPTUAL FOUNDATIONS

Two main theoretical and conceptual foundations are reviewed. One can be classed as a model and the other as a framework. It is important to define these terms to understand how each is trying to influence athlete development. A model is a simple description of a system or process that can be used in calculation or predictions of what might happen, whereas a framework is the supporting structure around which something can be built (Cambridge Dictionary, n.d.).

1.3.1 *The Long-Term Athlete Development (LTAD) Model*

The Long-Term Athlete Development Model, proposed by Balyi and Hamilton (2003), suggests that there are some sports that require early specialisation and others that can have late specialisation. The LTAD is broken down into stages of development that Balyi and Hamilton (2003) believe to be periods of sensitivity for development. The LTAD starts with learning fundamental movement skills through to retirement for elite sport (Figure 1).

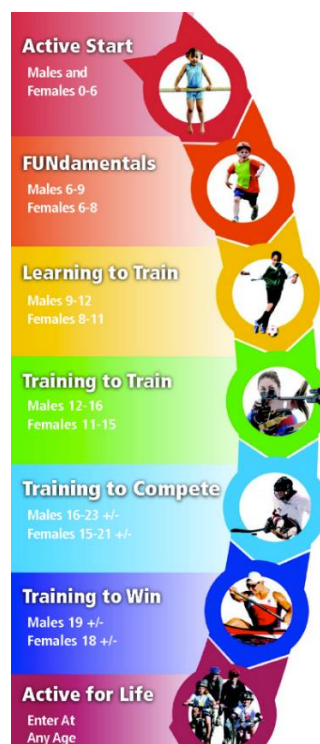


Figure 1 The Long-Term Athlete Development model (Balyi & Hamilton, 2004)

1.3.2 The Foundation, Talent, Elite and Master (FTEM) Framework

The Australian Institute of Sport (AIS) has built on the LTAD model and created the FTEM framework. FTEM stands for Foundation, Talent, Elite and Mastery and represents the four macro phases of athlete development. These four macro phases are then broken down further into 10 micro phases. The FTEM framework was designed to help NSOs, coaches, teachers, parents; and the athlete themselves plus other stakeholders, in reviewing, planning, and supporting athlete pathways (FTEM, n.d., Figure 2).

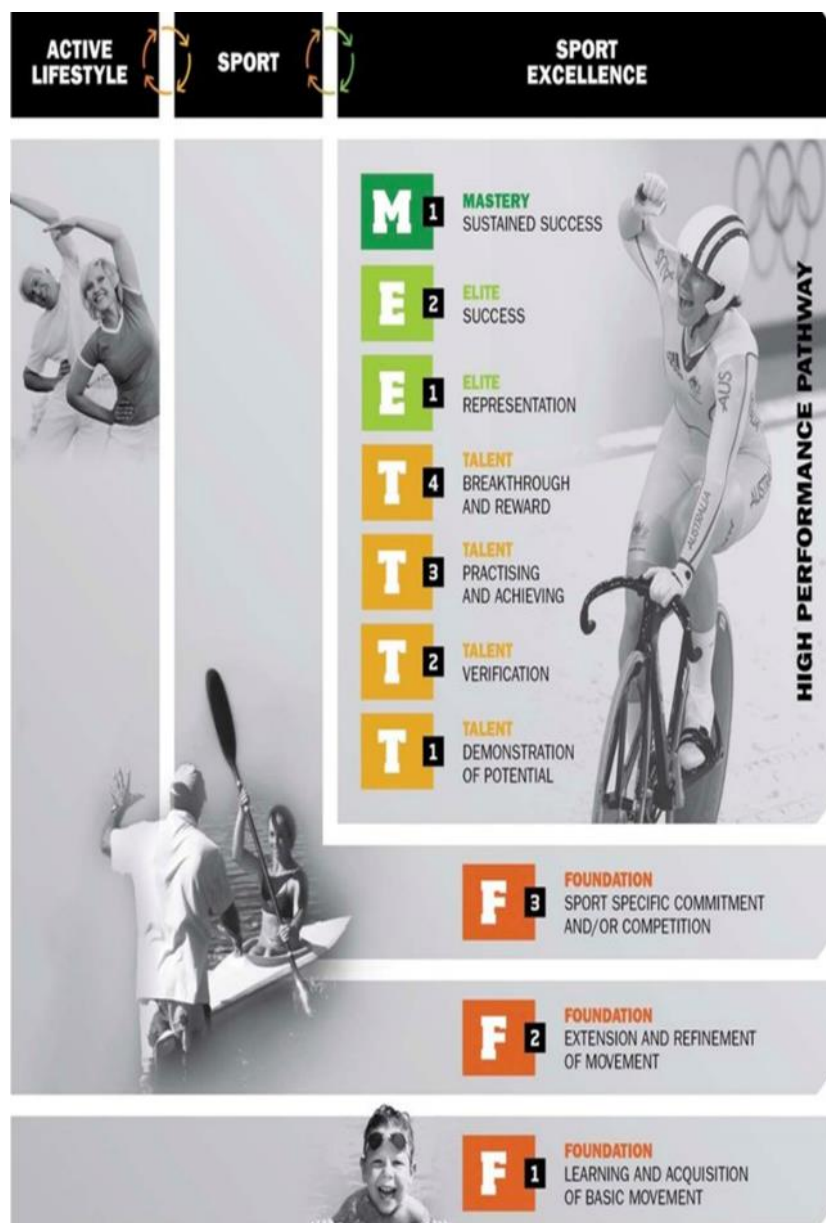


Figure 2 The Foundation, Talent, Elite, Mastery framework (Gulbin et al., 2013)

The LTAD model and the FTEM framework, are designed to help develop pathways for athlete development. However, whereas the LTAD model uses sensitive development phases that are fixed in an athlete's growth, the FTEM framework allows for an athlete to proceed through the pathway as they are ready. The purpose of the FTEM framework and LTAD model is to create long-term engagement in sport. The nature of the FTEM framework would allow more sports to adapt to a new system as it is only a structure or scaffolding, that can be built around, whereas the LTAD model is more fixed on specific sensitive periods of development. Ford et al. (2011) stated that even though Balyi and Hamilton's LTAD model has been used by many coaches, evidence regarding its underlying effectiveness is questionable. Ford et al. (2011) suggested that the LTAD model is a "work in progress" and needs to be tested, questioned, and revised. The LTAD model was also developed before recent concerns for athlete welfare were raised. These concerns do need to be addressed in future models. The FTEM framework is designed as an athlete pathway.

The first step is Foundation, focusing on enjoying sport and promoting a healthy and lifelong participation in sport. The next step is Talent, where athletes have started to show potential and are developed along the athlete pathway towards the Elite and Mastery stages of the framework. Each stage along the pathway is broken down into specific steps. The framework can be used by just about all sporting codes, regardless of whether it is an early or late specialisation sport. It should be noted that Gagné (2020) differentiated 'giftedness' from talent, arguing that giftedness through training and development leads into talent, i.e. a gifted person in the correct place, with the right development process, has a chance of developing into a talented athlete. As part of a TID programme, it is important to understand that a gifted athlete also has different needs to be able to be fully developed and manifest their potential talent.

Swiss Olympic has adopted the FTEM and requires all associated sports to utilise a FTEM framework, regardless of whether a sport has their own framework. Swiss Triathlon created their FTEM framework in 2018. This current research, and my coaching role, provide the opportunity to review how effectively this framework is being utilised within Swiss Triathlon (Figure 3).

Ford et al. (2011) argued that there is a need to review these athlete development models, as the traditional approach may not be the best way to address athlete progression. The current research provides the opportunity to utilise an auto-ethnographic (Ellis, 2012) approach in my role as a 'reflective practitioner' (Schön, 1983) involved in all stages of athlete development as a coach (regional, national, and international level), as well as being involved within the National Federation of Swiss Triathlon helping set sport policy. Schön (1983) highlighted that through reflective practice professionals become aware of their implicit knowledge base and learn from their experience. Such reflection in action, is where coaches question, learn from, and understand their own experiences to adapt and/or change their subsequent behaviours and decision-making processes. My role working with all levels of athletes, provides a unique insight into athlete development.



Foundation 1

Foundation 2

Foundation 3

	Foundation 1	Foundation 2	Foundation 3	
Athlet*innen	Lern- und Leistungsstufe	Freudvolles Entdecken, Erlernen und Üben von sportartübergreifenden Bewegungs- und Spielgrundformen	Bewegungs- und Spielgrundformen werden erweitert und triathlonspezifisch vertieft	Sich triathlonspezifisch engagieren
	Merkmale	Erwerben einer breiten und vielseitigen Basis an motorischen Fähigkeiten und Fertigkeiten	Triathlonspezifische Färbung der polysportiven Ausbildung	Triathlonspezifisches Training (in den drei Disziplinen), Vorbereitung und Teilnahme an Wettkämpfen
	Kaderstufe			
	Selektionskriterien (Kader)			
	Schule/Ausbildung/Beruf	Spielgruppe KITA Kindergarten Primarschule	Kindergarten Primarschule	Primarschule Sekundarschule
	Belastung durch Schule und Beruf	100%	100%	100%
	Unterstützung des Verbandes			
Training	Trainings- und Entwicklungsumfeld	Familie Freies Spielen Lokales Sportangebot Schwimmschule	Familie Freies Spielen Lokales Sportangebot Ausbildungsclub Schwimmverein	Familie Freies Spielen Lokales Sportangebot Ausbildungsclub Schwimmverein LA-Club
	Fördergefäss	Jugend und Sport (Kindersport)	Jugend und Sport (Kindersport)	Jugend und Sport (Kanton)
	Merkmal der Trainingsphase	Vielseitigkeit im Wasser und an Land als Basis	Vielseitiges Voraussetzungstraining Einstieg in schwimmerische Ausbildung	Vielseitiges Triathlontraining
	Trainingsvolumen h/Jahr			200 330
	Schwimmen h/Jahr			110 180
	Radfahren h/Jahr			20 35
	Laufen h/Jahr			20 45
	Vorbereitendes und ergänzendes Training h/Jahr			50 70
	Einheiten/Woche	●●●●●●●● 1 3	●●●●●●●● 2 5	●●●●●●●● 6 10
	Trainerausbildung	J+S Leiterkurs Triathlon (J+S Leiterkurs Zielgruppe Kinder)	J+S Leiterkurs Triathlon	J+S Leiterkurs Triathlon J+S Weiterbildung 1 Trainer C Swiss Triathlon
Trainerstunden h/Jahr	100	100	100 350	
Wettkampf	Wettkämpfe national		Pho3nix Kids Triathlon by Nicola Spirig Regio League Open Races Kindertriathlons Wettkämpfe anderer Sportarten	Regio League 10/11 Regio League 12/13 Regio League Team Jugendtriathlons
	Wettkämpfe international			
	Wettkampfdistanzen		0.05/1/0.3 0.2/5/1.25	0.2/5/1.25 0.75/20/5
	Anzahl der Wettkämpfe		🏆 5 8	🏆 8 12



Talent Transfer



Lebenslang engagiert im Sport als ...

Trainer

Funktionäre



Talent 1



Talent 2



Talent 3



Talent 4

Potential zeigen	Potential bestätigen	Trainieren und Ziele erreichen	Durchbruch und belohnt werden
Commitment zum Triathlon, Teilnahme an Kadertests und nationalen Wettkämpfen	Commitment zum Leistungssport, Erhöhung des Engagements und Trainingsaufwands	Orientierung am internationalen Leistungsniveau	Sport hat höchste Priorität, Anschluss an die nationale Spitze schaffen (Elite)
Regionalkader (15-19 Jahre)	Regionalkader (15-19 Jahre) Nachwuchsnationalkader (17-19 Jahre)	Regionalkader (15-19 Jahre) Nachwuchsnationalkader (17-19 Jahre)	C-Kader (20-26 Jahre)
PISTE	PISTE	PISTE	Top 175 (w)/Top 200 (m) World Triathlon Ranking
Sekundarschule Sportschule	Sportschule Berufslehre in einem leistungssportfreundlichen Lehrbetrieb	Sportschule Berufslehre in einem leistungssportfreundlichen Lehrbetrieb	Ein auf den Sport abgestimmtes Studium oder Teilzeitbeschäftigung (Arbeit oder Ausbildung)
100%	90%	80%	60%
Trainingstage und Trainingslager Betreuung durch Regio Coach	Trainingstage und Trainingslager Betreuung durch National Coach Juniors oder Regio Coach Leistungsdiagnostik, sportärztliche Untersuchung Sportmedizinische und sportpsychologische Unterstützung	Trainingstage und Trainingslager Betreuung durch National Coach Juniors oder Regio Coach Leistungsdiagnostik, sportärztliche Untersuchung Sportmedizinische und sportpsychologische Unterstützung	Trainingslager Betreuung durch National Coach Elite/U23 Leistungsdiagnostik, sportärztliche Untersuchung Sportmedizinische und sportpsychologische Unterstützung Finanzielle Unterstützung
Labelisierter Ausbildungsclub Regionales Leistungszentrum Schulsport	Ausbildungsclub Silber/Gold Regionales Leistungszentrum Schulsport	Ausbildungsclub Silber/Gold Regionales oder Nationales Leistungszentrum	Nationales Leistungszentrum
Jugend und Sport Swiss Olympic NWF Swiss Olympic Talentcard Regional	Jugend und Sport Swiss Olympic NWF Swiss Olympic Talentcard (Regional oder National) Sporthilfe Patenschaft	Jugend und Sport Swiss Olympic NWF Swiss Olympic Card (Regional, National, Bronze) Sporthilfe Patenschaft/Förderbeitrag	Swiss Olympic Card Elite/Bronze Sporthilfe Förderbeitrag Armee, Spitzensport RS, Sport WK
Spezifisches Triathlontraining	Spezifisches Triathlontraining	Spezifisches Triathlontraining Abschluss der Ausbildung zum kompletten Athleten	Individuell auf den Athleten abgestimmtes Training
380 450 210 230 50 60 70 100 50 60 ●●●●●●○○○○ 10 12	500 590 260 270 90 120 80 120 70 ●●●●●●○○○○ 10 12	670 720 290 300 150 165 150 165 80 90 ●●●●●●○○○○ 12 14	800 1000 320 350 190 270 180 240 110 140 ●●●●●●○○○○ 14 16
J+S Weiterbildung 2 Trainer B Swiss Triathlon	J+S Weiterbildung 2 Leistungssport Trainer A Swiss Triathlon	Trainer Leistungssport	Trainer Spitzensport Trainer Leistungssport
200 500	400 700	600 1000	800 1400
Youth League National League	National League	National League	National League
	Youth European Championship Festival, Junioren Europacup	Youth Olympic Games (YOG), Junioren WM, Junioren EM, Junioren Europacup	U23 WM, U23 EM, (CISM-WM/ WUC), Europacup
0.5/13/3.5 0.75/20/5 🏆🏆🏆 10 14	0.75/20/5 🏆🏆🏆 10 14	0.75/20/5 1.5/40/10 🏆🏆🏆🏆 12 16	0.75/20/5 1.5/40/10 🏆🏆🏆🏆 12 16

Diverse Ausdauersportarten
Aquabike
Schwimmen
Wintertriathlon
Aquathlon

Schiedsrichter (Technical Official und Technical Delegate)
Volunteers



Elite 1

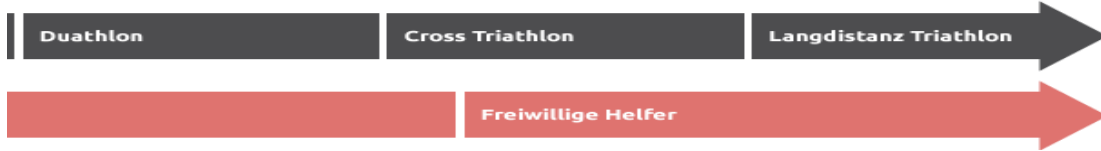


Elite 2



MASTERY

Die Schweiz international repräsentieren	International Erfolg haben	Dominieren der Sportart
Etablierung auf internationalem Niveau (WTS-Ebene)	Erreichen von Podestplätzen bei internationalen Meisterschaften	Wiederholte erfolgreiche Teilnahme an Olympischen Spielen
B-Kader (≥ 20 Jahre)	A-Kader (≥ 20 Jahre)	A-Kader (≥ 20 Jahre)
Top 50 World Triathlon Ranking	Top 15 World Triathlon Ranking	Top 15 World Triathlon Ranking
Ein auf den Sport abgestimmtes Studium oder Teilzeitbeschäftigung (Arbeit oder Ausbildung)	Profisportler	Profisportler
40%	Sport als Beruf	Sport als Beruf
Trainingslager Betreuung durch National Coach Elite/U23 Leistungsdiagnostik, sportärztliche Untersuchung Sportmedizinische und sportpsychologische Unterstützung Finanzielle Unterstützung	Trainingslager Betreuung durch National Coach Elite/U23 Leistungsdiagnostik, sportärztliche Untersuchung Sportmedizinische und sportpsychologische Unterstützung Finanzielle Unterstützung	Trainingslager Betreuung durch National Coach Elite/U23 Leistungsdiagnostik, sportärztliche Untersuchung Sportmedizinische und sportpsychologische Unterstützung Finanzielle Unterstützung
Nationales Leistungszentrum internationale Trainingsgruppe	Nationales Leistungszentrum internationale Trainingsgruppe	Nationales Leistungszentrum internationale Trainingsgruppe
Swiss Olympic Card Elite/ Bronze/Silber Sporthilfe Förderbeitrag Armee, Spitzensport RS, Sport WK	Swiss Olympic Card Silber/ Gold Sporthilfe Förderbeitrag Armee, Sport WK, Zeitmilitär	Swiss Olympic Card Gold Sporthilfe Förderbeitrag Armee, Sport WK, Zeitmilitär
Individuell auf den Athleten abgestimmtes Training	Individuell auf den Athleten abgestimmtes Training	Individuell auf den Athleten abgestimmtes Training
1000 1100 350 360 270 320 240 270 140 150	1100 1200 360 380 320 360 270 310 140 150	≥ 1200 ≥ 380 ≥ 360 ≥ 310 ≥ 150
●●●●●●●●●●●●●●●●●●●● 16 18	●●●●●●●●●●●●●●●●●●●● 16 20	●●●●●●●●●●●●●●●●●●●● 16 20
Trainer Spitzensport Aus- und Weiterbildung (national und international) 1000 1800	Trainer Spitzensport Aus- und Weiterbildung (national und international) 2000	Master Coach Programm Aus- und Weiterbildung (national und international) ≥ 2000
National League	National League	National League
Elite EM, U23 WM, U23 EM, (CISM-WM/WUC), WTS, Weltcup, Europacup 0.75/20/5 1.5/40/10 🏆🏆🏆🏆 12 16	OS, WTS, EM (CISM-WM), Weltcup 0.75/20/5 1.5/40/10 🏆🏆🏆🏆 12 16	OS, WTS, EM, (CISM-WM), Weltcup 0.75/20/5 1.5/40/10 🏆🏆🏆🏆 12 16



1.4 BACKGROUND TO TRIATHLON

1.4.1 The development of triathlon

As a starting point it is important to understand the history of triathlon, and how there have been some dramatic changes in this very young sport. It is suggested that triathlon can find its roots in the 1920s in France (History, 2015), but the first use of the word ‘triathlon’ for the event was in the 1970s as an alternative workout by the San Diego Track Club, where the first event consisted of 10km run, 8km cycle and 500m swim (Triathlon, n.d.). The first triathlon event is recorded as 25th September 1974. Famously, this idea was taken by the founders of Ironman and on 18th February 1978 the first event was held in Hawaii. In 1980, the event was filmed, giving worldwide coverage to this new sport (The Ironman, n.d.).

By 1988, Triathlon had rapidly grown in popularity, where it first came to the notice of the International Olympic Committee who stated they would like triathlon in the Olympic Games as soon as possible (World, n.d.). In 1989, the International Triathlon Union (ITU) was founded, and the Olympic distance was set as 1.5km Swim, 40km Cycle, and 10km Run (World, n.d.). In the same year the ITU held their first World Championships, with NZ having the first female World Champion in Erin Baker, and Rick Wells placing third in the men’s competition (Results, n.d.). Swiss triathletes did not feature among the winners; their best placed athlete finishing in 12th place (Results, n.d.).

As of 2024, when looking at the Olympic Games overall medal tally from the six Olympics since Sydney 2000, where triathlon has been involved, Great Britain leads with eight medals won, followed in second by Switzerland with five medals, and NZ is in fourth place with four medals.

This outcome is of great interest because in the first two Olympic Games, both NZ and Switzerland showed themselves to be strong teams with Switzerland winning three and NZ two medals, respectively. Over the next five Olympics, both teams have won three more medals respectively. Whereas Great Britain didn't win a medal in triathlon at an Olympic Games until 2012 in London, the fourth games, but in the three Olympic Games since they have won eleven medals. This outcome means their performance has outpaced that of other countries by an impressive margin in a short amount of time.

NZ and Switzerland are in a similar position, both have performed well at Olympic Games and have won medals but have had periods where athletes have not performed. The term 'performed' here is defined as the level that is required by the country's HP funding agency to increase the federation's funding. However, of interest is that the athletes that have performed over the past four Olympic Games are not doing so from within the federation's systems. From Switzerland, Nicole Spirig and Julie Darron do not train under the National coach nor at the National Centre, and Hayden Wilde also does not work with the NZ National coach nor at their National Centre. These three athletes have been developed from outside the National system of their respective countries. Therefore, it is worth understanding the National Federations systems and what is happening with athlete development within them. Most National Federations should focus on development of their youth athletes because once athletes start racing in the elite category, they need to already have the skills to compete with the foundations having been laid in youth development.

1.4.2 Swiss Triathlon

Since triathlon became an Olympic Sport at the Sydney Olympics in 2000, Switzerland has achieved great success. Switzerland has won two gold medals, two silver and two bronze medals. In 2004, Sven Riederer won the bronze medal, and after the Olympics the National Coach at the time, Iwan Schuweg, was asked about details of Sven's training. Iwan stated (Schuweg, 2017) that he really did not know, they had just trained with no real thought process behind training decisions made, and he had told Sven when he should attack, and it worked. Iwan said after he had been asked all these questions, he realized how lucky he was to have achieved such a good result. Iwan and Swiss Triathlon started to look at the sport science and gather information to try and improve the likelihood of Swiss Triathlon performing in the future. Swiss Triathlon recognised that there was no national system for developing athletes for the future. Athlete development was mainly left to clubs and coaches.

In 2012, Swiss Triathlon started their development programme (*Kader*), designed by Nina Eggert who was the Youth Talent Manager. Since the *Kader* system's inception, it has had some changes, yet the concept has largely remained static. Swiss Triathlon has purposely created a late *Kader* system for their athletes, where they are only allowed to start aged 14. Whereas other sports, like Swiss Swimming start at 11 years old for their *Kader* system. Swiss Triathlon's later *Kader* selection can be a disadvantage within the Swiss School system, as athletes need to be in a *Kader* system if they wish to attend a Sport School. Sport Schools give their students a year longer to complete their school qualifications and provide windows of time during the day to allow the students to train. The transfer to high school where Sport Schools are available happens generally between the ages of 13 and 14, which means triathletes find it difficult to be selected as they are not in the *Kader* system.

1.5 BACKGROUND TO THE RESEARCHER

1.5.1 My sport background

When I was at school all I wanted was to be a professional cyclist. At that time in NZ (mid 1990s) cycling was not a mainstream sport (unlike, for example, rugby, cricket, netball, and rugby league) and if you were not selected early for national teams, there appeared to be little interest in you as an athlete. In my age group there were several athletes representing NZ who were expected to become professional athletes, whereas I was constantly over-looked by Cycling NZ. However, from the original contenders I was the only one that made it to become a professional cyclist. Since I started studying at university (2013), I have been surprised to read many studies from different sporting codes which show that my experience in sport is not unique (Wulff & Hoffmann, 2013). These situations need to be investigated, and criteria and processes put in place to help late developers or late talent transfer athletes in the future, as well as helping athlete retention. Reflecting on this experience confirms my belief that early selection factors may result in incorrect assessment of an athlete's capability of long-term success at elite levels. Furthermore, non-selection at this early stage may discourage athletes, resulting in them leaving the sport before reaching a high level despite what appeared to be promising ability. Later, as a coach, I was surprised to find that my early athlete experience of being outside the official pathway to elite sport is often repeated. This outcome infers that early selection does not always result in long-term success at the elite athlete level. In many cases, once an athlete is in the system, they may not perform but it seems to be easier to stay in a system once selected. In the case of Swiss Triathlon, there are athletes who are kept in the system despite not having performed or fulfilled the requirements to stay. In addition, non-selection or mishandled selection can result in an athlete viewing themselves and their performances negatively.

1.5.2 My coaching background

Many years later, while working as a coach, I returned to university to study for a Bachelor of Sport and Exercise as a distance student through Massey University, NZ. In 2014, I became the Head Coach at the Wildcats Swiss Triathlon Team in Basel, Switzerland, and one aspect of my job was to develop youth athletes to enter the Swiss Triathlon National system (*Kader*). As I started to develop athletes to reach *Kader*, I began to examine the body of available research on talent selection and athlete development. It was my observation that Swiss Triathlon wanted fast and early development, and expected that these developing athletes would make it to the elite level. The documentation that Swiss Triathlon gave to coaches set very high levels of achievement for young athletes in both swimming and running. No consideration was given as to how long an athlete had been in the sport nor if the athlete had transferred from another sport.

The method of selection appeared to be purely result focused, leading to the selection of athletes that have had more time in the sport, therefore more time to develop. Athlete time in the sport had not been taken into consideration. As the times expected for the *Kader* selection get faster as the athletes get older, it is harder and harder for an athlete to start later into the system. Once an athlete is in, it becomes easier to stay in; however, if you are not in *Kader*, then it is more difficult to break into the system as the athlete becomes older. This approach appeared to reflect what I had experienced as a young athlete. The current selection criteria in triathlon exposes an even more insidious problem than in cycling, as in cycling you can enter teams and become professional without the approval of the National Federation, but this is simply not possible in the World Triathlon system. To enter international races that are run by World Triathlon an athlete must be entered through their National Federation, which means they have a direct say in who can and who cannot attend races.

1.5.3 My current coaching

Despite the difficulty of working within the existing organisational structures, I have ensured that athletes have made the required gains in performance needed to ensure to reach the National *Kader* criteria, whilst keeping the long-term development of the athlete at the centre of my coaching work. In 2024, I am currently the Head Coach at the Wildcats Swiss Triathlon team, based in Basel, Switzerland, and manage athletes in the national Swiss Triathlon *Kader* system. It is my responsibility to develop athletes who wish to enter the national *Kader* programme. As a result, I am invested in the Swiss Triathlon's *Kader* system and want to ascertain if the *Kader* system is helping develop my athletes long-term.

At the end of 2019, I was appointed the National Coach and High-Performance Manager for Swiss Duathlon. As part of this position, I am required to develop a national system for *Kader* and athlete selection, develop pathways for athletes and select athletes, managing their development and retention in the sport. Understanding how talent is identified and selected is of critical importance both to me and to the athletes I am working with. Now working from the Swiss Federation side of the selection process, I am better able to understand the direct intentions on the people designing the concepts and then turning such processes into practice. My position also allows me to contact these individuals within Swiss Triathlon and talk to them at a collegial level, thereby allowing a deeper understanding of the Swiss Triathlon system, as well as offering a different point of view as I am still personally within the club system. This insight has helped me ground my own theory of athlete development, selection, and retention in creating a robust system and development framework that may help Swiss Triathlon help me within my positions at the Wildcats and Swiss Duathlon.

1.6 METHODOLOGY

A multi-method approach (Creswell, 2015) has been used to examine issues of athlete selection and to support an auto-ethnographical account (Ellis, 2012) of the researcher's coaching experiences (at a regional, national, and international level), and as a professional athlete. To enhance the study's credibility, the case of Swiss Triathlon allowed triangulation through cross reference to document analysis from Swiss Triathlon, for example, results of *Kader* tests, National and Youth League races and questionnaire feedback from athletes, parents, and coaches. Case study research involves multiple sources of evidence and in-depth examination of the topic in a specific context. This approach is often used by researchers asking 'how' or 'why' questions of sport-related activities to gain further understanding of issues as they relate to a particular group, organisation, or individual (Yin, 2009).

Ellis (2012) refers to auto-ethnography as a narrative that provides a story that is personal, filled with passion embracing personal thoughts, feelings, and observations, as a means to understand the social context of one's own experience. The narrative of this thesis reflects a process of practitioner auto-ethnography described by Slade et al. (2020). This emergent and evolving ethnography involved a continuum where the initial writing was in the style of life-history biography (Angier, 2010), later refined as evocative auto-ethnography, which elicits emotional response (Ellis, 2012), and subsequently included aspects of analytical ethnography, which develops broader explanations of social phenomena (Anderson, 2006).

1.7 THESIS OVERVIEW

Chapter Two, *Literature Review*, analyses the scholarly discussions around the LTAD model and FTEM framework related to athlete development. It then evaluates the literature around athlete selection, de-selection, coach education and change management before assessing the athlete development framework of Swiss Triathlon and comparing this to equivalent organisations in Britain, Germany, and NZ. Chapter Three, *Methodology*, provides a description of the multi-method research process, which involved the case of Swiss triathlon, auto-ethnographical narrative, and triangulation through cross reference to document analysis.

Chapters Four, Five and Six provide an auto-ethnography of the researcher's experiences as an athlete and coach at regional, national, and international levels and identify the key insights from this that have shaped the author's thinking on athlete development. Chapter Four, *Athlete Development Pathway*, describes the researcher's background and development as a junior and professional athlete with a particular focus on the arbitrary selection policies he experienced and the importance of skilled coaching in enabling him to make the, often problematic, transition from junior to senior level. Chapter Five, *Coach Development Pathway*, details the researcher's development and insights as first a junior coach, and then progressing through involvement with athletes and Swiss Triathlon at regional, national, and international level. Chapter Six, *High-Performance Coaching*, discusses how the researcher sought to apply what he had learned as an athlete and aspiring coach. More recently, as National Coach and High-Performance Manager for Swiss Duathlon, formulating and implementing both policy and practice so that change is achieved, and how his thinking here was shaped by insights from other high-performance coaches.

Chapter Seven, *The Case of Swiss Triathlon*, revisits the research questions with reference to how change has been developed and implemented within that organisation. Chapter Eight, *An Emergent Athlete Development Framework for Swiss Triathlon*, references the practical changes discussed in the previous chapter as a basis for a revised conceptual framework for athlete development – the Lamont Emergent Athlete Development (LEAD) Framework. Chapter Nine, *Conclusions*, identifies the key findings of the thesis relating to athlete development pathways, selection, de-selection, non-selection and retention and their implications for athletes, coaches, and administrators.

CHAPTER TWO

LITERATURE REVIEW

CHAPTER OVERVIEW

There is a paucity of scholarly studies and material in and around triathlon. However, this chapter commences by contrasting Australian and USA approaches to sport development and athlete development in triathlon. The following section is an evaluation of two theoretical and conceptual foundations for athlete development: the Long-Term Athlete Development model (LTAD) (Balyi et al., 2003) and the Foundation, Talent, Elite and Mastery Framework (FTEM) (AIS, n.d.). The structure of this model and framework are critiqued from a practitioner coach perspective. Approaches to athlete selection, de-selection and non-selection are analysed. Coach education and the process of implementing change are also examined.

Document analysis of Swiss Triathlon's testing and development system is introduced, along with their testing (pre 2022 & from 2022) and selection processes, including de-selection and non-selection. Other countries triathlete development processes are also reviewed (British, German and NZ), to provide a direct comparison to what is happening in Switzerland. This document analysis is primarily based on information obtained via websites and official publications, as there is a paucity of scholarly literature on Swiss Triathlon. The key information and interpretations presented from websites and policy documents provide useful information, despite not being written from a critical scholarly perspective. This chapter concludes with a summary of key features of the texts consulted as they relate to athlete development.

2.1 ATHLETE DEVELOPMENT PATHWAYS

Within the literature, the term long-term athlete development is often used to describe an athlete's progress over time. In this section long-term athlete development will be looked at in terms of models and framework pathways for athlete development, as well as talent transfer, rather than the personal development of each athlete in their long-term athletic development.

Analyses of athlete development in triathlon have identified a divergent range of approaches. Newland and Kellet's (2012) analysis of sport development and athlete development in international triathlon federations identified Australia and the United States as exemplars of two different development models. Australia used what is seen as a more traditional athlete development model, where athletes are initially based in triathlon clubs with triathlon specific coaches, then move into the national system and head towards the National Institute of Sport. For example, Australian Emma Snowsill became Olympic Champion in 2008 in Beijing, she also won the ITU World Championship three times (2003, 2004, 2006).

By contrast, in the USA, which does not have the sport club infrastructure of Australia, there is more a culture of talent transfer, or as Newland and Kellet (2012) put it, athletes are "poached". Newland and Kellet (2012) state that in the USA elite athletes who are believed to have reached the ceiling in performance but have not reached the international standard in their chosen single sport, are approached and offered to go on a week training camp with a triathlon focus. After this camp, athletes that are seen as possibly having potential are put in contact with an experienced triathlon coach and given a year's 'pro bono' coaching to help them develop and reach the required standard to be selected for the national team. For example, in 2009 USA Triathlon, who were pursuing former college swimmers and runners,

encouraged Gwen Jorgensen to enter the sport of triathlon. In 2014 and 2015, she came 1st in the World Championship Series and won gold in the 2016 Rio Olympic Triathlon. Newland and Kellet (2012) did point out that both systems have advantages and disadvantages. The Australian outsourcing development to clubs, means that the clubs control every development aspect for the athletes (Buekers et al., 2015). As a result, the Triathlon Australia has become somewhat irrelevant in the development of athletes. However, a seemingly dependence of Triathlon USA on talent transfer could founder when an athlete who is talented in a single sport may not be talented in the sport of triathlon. Newland and Kellet (2012) state that because Triathlon USA was relying on transfer of athletes, it could be, up until their study's completion in 2011, why the USA had struggled at the international level.

Phillips and Newland (2014) looked at athlete development in general and found that the National Federations often left athlete development to third parties like clubs and event organisers. This abdication of responsibility for development by the National Federation, and reliance on third parties has implications for performance. As a result of these structures, it can be seen that Triathlon Australia and Triathlon USA are leaving the important process of youth development out of their national programmes, and focusing on athletes that have come through a system they are not involved with, or relying on talent transfer. As a result, the National Federations have little or no control of the way athletes are being developed, or if they are being developed in a way to provide the skills required to reach the top level of Triathlon. Triathlon USA are still using this talent transfer programme that was investigated by Newland and Kellet (2012), and have created success from it, including four Olympic medals (USA, n.d.). USA Triathlon are still actively searching for talent transfer athletes and have clear lists of criteria that athletes are required to reach before being considered for entering the system. These clear criteria make it understandable for athletes looking at talent

transfer and is a great example of how a system can be built and function. Green et al. (2024) researched talent transfer through a systematic review and found many factors that can influence talent transfer, most of which are covered by the USA Triathlon system.

2.1.1 LTAD

Many athlete development programmes are based on the LTAD model. The premises of this model, in particular its implication that athlete success in a sport can only come about through repetitive dedicated practice, have been the subject of considerable scholarly discussion. Ericsson et al. (1993) suggests that it takes ten years of deliberate practice to reach an elite level of performance. Ericsson is known for the 10,000 hours “rule”, and although his study is about music, there are several notions in common between music and sport. One of the key components from Ericsson’s work is deliberate practice, not just practice. Deliberate practice is seen as practising with purpose to get better. However, Ericsson et al.’s (1993) study was retrospective, self-reporting, and had a limited number of participants, which could lead to some misleading reporting or interpretation of the data. Ericsson and Charness (1994) argue that it takes more than a decade to reach expert performance levels and suggest that starting later may even take longer.

They point out that there are factors that deliberate practice may not overcome. “An analysis of the acquired characteristics and skills of expert performers, as well as their development history and training methods, will provide us with general insights into the structure and limits of human adaptations.” (p. 745). This shows that Ericsson and Charness have a clear understanding of the limitations of their important work. Ericsson’ work illustrates some key points around practice and the amount of time it takes for an athlete to develop. There have been valid points made against Ericsson’s early work and he has himself changed his

standpoint as more empirical investigation has been undertaken. The basic message is important, development and skill acquisition take time and deliberate practice.

Balyi et al. (2003) proposed the LTAD model based on the “findings” of Ericsson et al. (1993) that it takes ten years or more to reach elite performance. Balyi et al. (1993) suggest that there are windows of opportunity for athlete development. At an early age, between 12 and 14 years, youth go through a Peak Height Velocity (PHV), which is a critical or sensitive period of trainability during the maturing process. Balyi et al. (1993) suggest that it would be better to work with an athlete’s biological age, but there is no simple and reliable way to assess this, so using the PHV period that all youths go through is a clear way to proceed. Balyi et al. (2003) at this point starts to lay down the foundation for the LTAD model, which has two starting points; the first is for sports requiring early specialisation and the second for sports requiring late specialisation. Balyi et al. (1993) suggests examples of early required specialisation sports are, diving, gymnastics, and figure skating. Whereas late development sports include team sports, such as cycling, combative sports, athletics, rowing, and racquet sports. Because of the different nature of early and late specialisation, the model is adapted for both types of sports. For example, the early specialisations sports model has four-phases, while the late specialisation approach has a six-stage model (Table 1).

Table 1 LTAD model – Early and late developers

Early Specialisation Model	Late Specialisation Model
1. Training to Train stage	1. FUNdamental Stage
2. Training to Compete	2. Learning to Train
3. Training to Win	3. Training to Train
4. Retirement / retainment	4. Training to Compete
	5. Training to Win
	6. Retirement / retainment

Balyi et al. (1993) made it clear that this is a generic model and needs to be further adapted for each sporting code. Adjustment would be required to make the model specific for each sport. As most sports examined by Balyi et al. (1993) are late specialisation, this is the main focus on the model. For the late specialisation sports Balyi et al.'s (1993) LTAD stages are:

1. Stage 1 – The FUNdamental Stage (Age: Male 6 – 9/ Female 6 – 8 years)
 - Objective: Learn all fundamental movement skills (build overall motor skills)
 - Key Points: Fundamental movement skills should be practiced and mastered before sport specific skills are introduced. During this phase there should be good structure and fun. It is also the first “window of accelerated adaption to speed” or “critical period of speed development.” This is a period where, even if a person leaves competitive sport the skills learnt here are important.
2. Stage 2 – The Learning to Train Stage (Age: Males 9 – 12 / Females 8 – 11 years)
 - Objective: Learn all fundamental sports skills (build overall sports skills).
 - Key Points: Specialised movement skills are developed, and between age nine and twelve is one of the most important motor development periods – the “window of accelerated adaption to motor coordination.”

If Stage 1 and Stage 2 are not completed, these windows of opportunity are lost and could compromise that athlete's ability to reach their full potential.

3. Stage 3 – The Training to Train Stage (Age: Males 12 – 16 / Females 11 – 15)
 - Objectives: Build aerobic capacity, build strength towards the end of the phase, and further develop sport-specific skills.
 - Key Points: Consolidation of basic sport specific skills and tactics, “window of accelerated adaptation to aerobic and strength training.” Optimal aerobic trainability begins with the onset of PHV or the major growth spurt during maturation. Both aerobic and strength trainability is dependent on maturation levels, thus an early, average, or late maturer's needs differ. The Learn to Train and Training to Train are the most important phases for athletic preparation. These stages are where in general athletes need to be self-motivated to go training, and if this self-motivation is not present or drops then so does the athlete's performance.
4. Stage 4 – The Training to Compete Stage (Age: Males 16 – 18/Females 15 – 17 years)
 - Objective: Optimize fitness preparation and sport, individual and position specific skills as well as performance.
 - Key Points: Training focus changes from learning the general sport to more position specific and the development of technical, tactical skills and fitness improvements. Skills are completed under a variety of competition specific environments.
5. Stage 5 – The Training to Win Stage (Age: Males 18 and older/Females 17 and older)
 - Objectives: Maximize fitness preparation and sport, individual and position specific skills as well as performance.
 - Key Points: The final phase of athletic preparation. All the athlete's physical, technical, tactical, mental, personal and lifestyle are now focused on maximising performance. Peaking is done for major events.
6. Stage 6 – The Retirement / Retention stage:
 - Objectives: Retain athletes for coaching, administration, officials.
 - Key Points: Athletes retire from competition, and some will move into sport-related careers.

As can be seen in the LTAD model, each stage relates to an age range or span that has been identified as sensitive for development. Such pre-subscribed age ranges do not necessarily correspond to a sport like triathlon in Switzerland where Swiss Triathlon only start talent development at the age of 12 (from 2023, but before this it was 14), or to any other sport

where an athlete is not active from a young age. It could be said that an athlete can be more poly-sport active early, yet the LTAD model suggests that athletes aged 11-12 years are meant to be learning sport specific skills. In addition, the LTAD approach could then close off athletes transferring between different sports, which appears not to fit the LTAD model.

Nevertheless, Triathlon Canada has chosen to use the LTAD model as their pathway for athlete development (Triathlon Canada, n.d.; Figure 4); however, Triathlon Canada does not commit to the age guidelines of the LTAD model (Balyi et al.,1993). Triathlon Canada uses the LTAD model's names for the development stages, however, they have abandoned the core principle of the LTAD model (Balyi et al.,1993), which is that each development phase has a time sensitive period. Other researchers have suggested that due to the nature of triathlon and how late athletes can develop (Trösch, 2019), and how countries are encouraging athlete transfer (Newland & Kellet, 2012), the LTAD models early aged sensitive periods are not appropriate for the sport of triathlon.

Triathlon Canada (n.d.) has further adapted their LTAD model (Balyi et al.,1993) to include coaching tools (Figure 5), which are key concepts that enable coaches to understand what Triathlon Canada believes is important for an athlete at each phase of their development. Furthermore, Triathlon Canada set relatively high standards for their benchmarks in their LTAD model. It can be debated whether these standards are set at the right level or too high, as such considerations would need to be part of a reflective and emergent system design. Part of the emergent system design is the ability to adjust the standards in accordance with the development pathway.

High Performance Triathlon Podium Pathway

	LTAD STAGE	BENCHMARK	COACHING FOCUS
1	Compete to Win	Olympic Podium	
		World Triathlon Series Grand Final Podium	
		World Triathlon Series Podium	
		Olympic Top 5	
		Major Games Podium	
2	Train to Compete	World Triathlon Series Top 5	
		World Cup Win	
		World Triathlon Series Grand Final Top 12	
		World Cup Podium	
		U23 World Championship Win	
		World Triathlon Series Top 12	
3	Learn to Compete	U23 World Championship Top 5	
		World Triathlon Series Top 20	
		World Cup Top 12	
		Continental Cup Win	
		World Cup Top 20	
4		U23 World Championship Top 12	
		Continental Cup Podium	
		Junior World Championship Top 12	
5	Train to Train	Junior Continental Championship Podium	
		U23 World Championship Top 20	
		Junior World Championship Top 20	
		Junior Continental Championship Top 5	
		National Championship Win	
		Continental Cup Top 5	
6		National Championships Top 5	
		National Development Series Podium	
7		National Championships Top 12	
		Nation Development Series Top 5	
8	Learn to Train	International Draft Legal experience	
		National Draft Legal experience	
		Provincial Draft Legal experience	
		Regional Draft Legal experience	
		Non-drafting experience	



Figure 4 Triathlon Canada LTAD model (Triathlon, n. d.)

Coaching Tools

<p>Compete to Win</p> <ul style="list-style-type: none"> » Race Pace » Tactical Focus; performance on demand » World Championship and Olympic focus » Full IST support » Health and Wellness » Implementation of SSSM strategies » Curriculum score >35
<p>Train to Compete</p> <ul style="list-style-type: none"> » Maximizing physical capacity » Swim, bike, run, transition 1/2 tactics » International competition focus » World class training load » Health and Wellness » Strategic IST usage (<i>physiology, mental performance, injury prevention, strength & conditioning</i>) » Exploration of SSSM strategies » Curriculum score >30
<p>Learn to Compete</p> <ul style="list-style-type: none"> » Establish anaerobic threshold » Swim, bike, run, transition 1/2 technique and tactics » Strategic international exposure » Gradual increase in appropriate volume and intensity » Aerodynamics and bike fit » Appropriate training load » Health and Wellness » Prioritized IST usage (<i>injury prevention, mental performance, nutrition, strength & conditioning</i>) » Curriculum score > 25
<p>Train to Train</p> <ul style="list-style-type: none"> » Aerobic base building » Swim, bike, run, transition 1/2 technique » Training aids and equipment utilization » Gradual increase in appropriate volume and intensity » Health and Wellness » IST introduction (<i>injury prevention, mental performance, nutrition, strength & conditioning</i>) » Load management (<i>Yearly Training Plan, monitoring</i>) » Domestic competition focus » Compliance with codes of conduct » Curriculum score >20
<p>Learn to Train</p> <ul style="list-style-type: none"> » Swim, bike, run, transition 1/2 introduction and technique » Comfortable bike fit » Equipment familiarization » Variability of impulse » Athleticism » Multi-sport participation » Sport specific introduction » A4L, R2P, Respect in Sport

Figure 5 Triathlon Canada coaching tools (Triathlon, n. d.)

Within the triathlon context, I believe that the LTAD model could be enhanced with the addition of a 'Training to Develop' step. Triathlon Canada has included what I believe is missing from the LTAD model, in the form of an additional stage which they call 'Training to Compete'. Triathlon has seen the same issues in the LTAD model where the step from 'Learn to Compete' and 'Compete to Win' is too demanding a transition for many athletes. There is a period where the athletes need time to turn the learning into development and then to winning. Because Triathlon Canada has changed many parts of the LTAD model, it is open to question whether it is still in fact a LTAD model, or it has become a different model in its own right. It appears that Sport Canada is requiring all sports it funds to use a LTAD model, which Triathlon Canada has done. Arguably, however, they have altered it so much that the true intent of the LTAD model has been lost.

British Athletics also use a similar system to the LTAD. Brianmac (n.d.) shows the LTAD model and explains it, as is done above and then shows how British Athletics uses this model (see Figure 6). In Figure 6, the five stages before retirement from LTAD can be clearly seen and like Triathlon Canada the age definitions of the Balyi et al. model (2003) have not been followed. British Athletics have called the stages of the LTAD model 'phases', yet the progression is clearly that of the LTAD model, which is stated by Brianmac (n.d.) and via personal communication with Triathlon Scotland's National Triathlon Centre Lead Coach, Crawford Whyte. British Athletics appear to have used the LTAD model as a starting point and built a framework out of it. This approach once again indicates that the fixed idea of a model is of less use within sport than that of a framework where adaptations are made as needed.

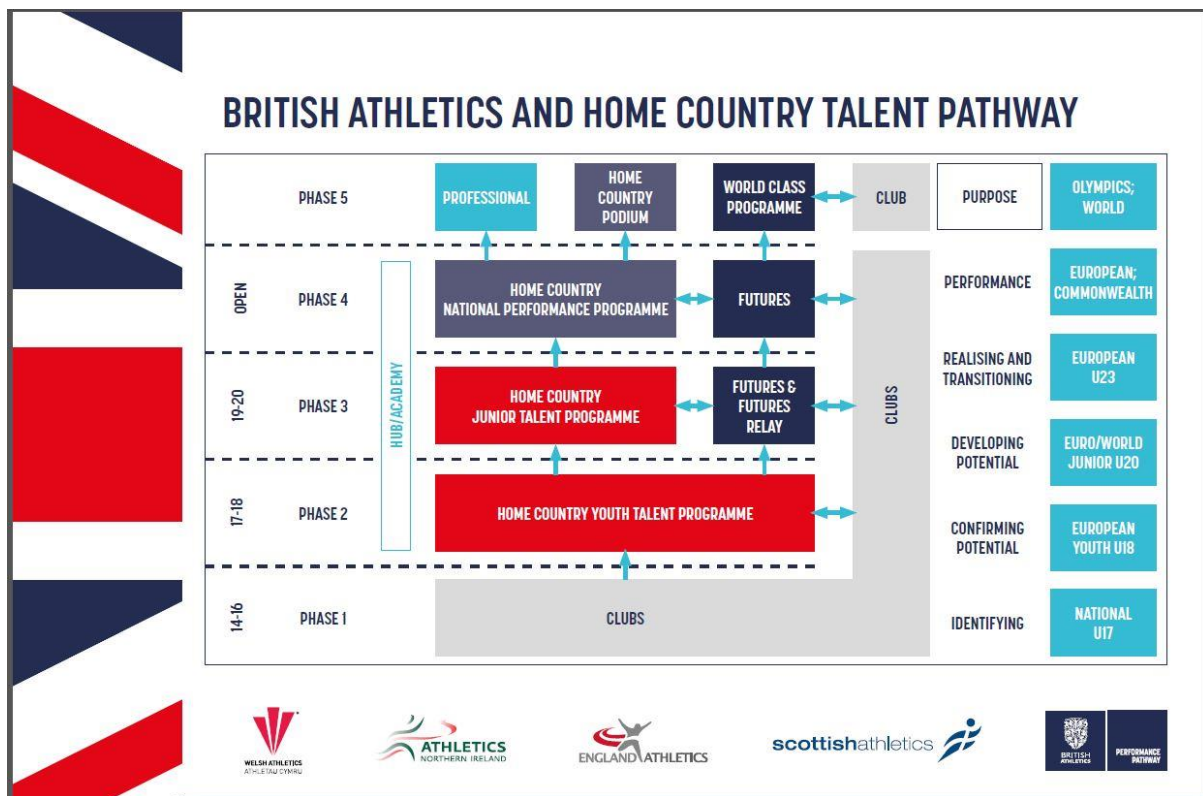


Figure 6 British Olympic performance pathway (British, n. d.)

What can be seen from the Triathlon Canada and the British Athletics use of the LTAD is that it is a top-down structure. It appears to be designed for athletes to pass through and for coaches to understand what stage athletes should be at, but is not useful at the coaching practitioner level. Balyi et al. (2003) created the LTAD model, which was based around athlete development during sensitive age periods, yet it can be seen when the LTAD model is used in practice these sensitive age periods are not always relevant to an athlete's development. Al Ardha et al (2024) undertook a systematic review of LTAD literature. They found that there are still many gaps in the literature and that well-controlled longitudinal studies need to be done, as well as increased international cooperation between NSO's in order to examine if the LTAD model is effective across different sports and cultures. Despite the LTAD model being proposed by Balyi et al. (2003) over 20 years ago, it is still unclear how well a development model, or framework, will work over different sports and cultures.

2.1.2 FTEM

The FTEM framework stands for Foundation, Talent, Elite and Mastery, developed by the Australian Institute of Sport (AIS) to try and help identify the level of the athletes. It also provides a practical tool for helping stakeholders support, plan, and review along the athlete's pathway. The FTEM consists of four macro phases of development which are Foundation, Talent, Elite and Mastery, and within these four macro phases are 10 micro phases to help guide athletes and coaches through the pathway (AIS, n.d.). The following is a breakdown on the four Macro and 10 Micro Phases and the aim of each:

1. Foundation: The Basics
 - F1. Learning and Acquisition of Basic Movement
Objective: Learn the basic or fundamental movement skills.
 - F2. Extension and Refinement of Movement
Objective: Extend and expose to greater movement challenges.
 - F3. Sport Specific Commitment and /or Competition. It is noted that many or even most athletes will not leave this level.
Objectives: Sports-specific skills are refined and developed, via formal and informal competition.
2. Talent: this is the beginning of the performance pathway.
 - T1. Demonstrations of potential
Objectives: athletes have typically exhibited gifts or talent in the physical, physiological, psychological and skill domain, which indicate potential in HP sport.
 - T2. Talent verification
Objectives: Confirmation or verification of talent from T1, with evidence-based testing as well as supplemented by the subjective judgement of coaches and talent scouts within the training and competition environment.
 - T3. Practising and achieving
Objectives: Having confirmed or verified their talent in T2, athletes now show commitment to sport specific practice and investment in higher training volumes, striving for continual performance improvements.
 - T4. Breakthrough and reward
Objectives: Gaining formalised and professional support for continued development is the main feature of T4. Performing well at key events, and in the transition from pre-Elite to Elite performance.
3. Elite: Achieving and Maintaining Elite Performance
 - E1. Senior Elite Representation
Objectives: Achievement of an elite athlete status through selection and representation at the highest senior levels of international or professional sport.
 - E2. Senior Elite Success
Objectives: Medal winning performance at a major senior international competition equates to an athlete in a professional sport achieving recognition within that sport.
4. Mastery:
 - M1. Sustained Elite Success
Objectives: Mastery as the pinnacle of the high-performance sport represents the highest of sporting achievement and performed at the highest level consistently over a sustained period.

The FTEM framework relates to athlete development stages throughout the pathway. The AIS approach is one of promoting best practice within each micro cycle with suggestions on what can be focused on, or what technology can be used, to aid an athlete's development. The FTEM framework is nicely set out to be adapted by different sports, and within the generic framework, a specific pathway can be built for individual athletes. Psychological skills and character are encompassed within the AIS's FTEM framework, highlighted at the T2 and E1 micro phases. This inclusion in the original framework is a positive sign that athlete care is important. A major advantage that the FTEM framework has in relation to the LTAD model is that the progression through the pathway does not conform to time sensitive periods, but focuses on the athlete's personal development and when they are ready to move to the next level. Because no such "sensitive periods" are included in the FTEM framework, it means that athletes can enter the pathway at any time and be developed through it.

Swiss Olympic and the FTEM framework

Swiss Olympic has chosen to use the FTEM framework as its athlete pathway framework. It is not explicitly documented why Swiss Olympic chose this FTEM framework, however, Swiss Olympic believe that the FTEM framework will make athlete development comprehensible, controllable, and optimized in competitive sports (Swiss Olympic, n.d.). They have also required every Federation that is linked to them to have an FTEM framework as part of their requirements to receive funding. Swiss Olympic believe that the FTEM framework is one of the fundamental policy documents that a federation should have. It presents a clear athlete pathway and ensures that each sport under the Swiss Olympic banner has a consistent language about development (Egli, 2018). Swiss Olympic believe that in addition, the FTEM framework allows athletes a clear understanding of the pathways through their sport development, including the critical change period from junior to elite.

Like the LTAD, the effectiveness and relative effectiveness of the FTEM framework has been debated in some detail in scholarly texts. Egli (2018) made it clear this transition to the FTEM framework has not been easy for many sports, due to them having their own development systems. It was also the first time that Swiss Olympic had mandated a framework be adopted, but most NSO's have now established the FTEM framework for their sport. Egli (2018) suggests that with each sport having the same language as other sports for development, talent transfer will be made easier. One major, significant difference between the AIS and the Swiss Olympic FTEM framework, is that the AIS model includes psychological factors, but the Swiss framework does not. However, neither version of the FTEM framework takes athlete welfare into account. These are areas that could be added to athletes' support systems at club, and National Federation level. There is no reason given for Swiss Olympic omitting these aspects from their FTEM framework. Consequently, as of 2024, there are 98 different sports with an FTEM framework presented on the Swiss Olympics website, that focus solely on Sport Development and Career Development of athletes with no mention of athlete welfare.

In the *Journal of Sports Sciences*, a series of three articles examining the FTEM framework were published each reflecting a practitioner approach. In 2013, Gulbin et al. argues that the framework offers a broad utility for all sport stakeholders. Furthermore, they suggest that the framework's ability to focus on smaller micro cycles, not fixed to biological development stages, makes it more practical than other models in use. Gulbin et al. (2013) believes that the FTEM framework fills gaps and offers a better flow through the framework for athletes. In response to Gulbin et al. (2013), MacNamara and Collins (2014) raise concerns with and within the FTEM framework.

It should be noted that MacNamara and Collins (2014) use the terms model and framework interchangeably within their response, which may well be unintentional, but could have ramifications as a framework and model can be viewed very differently. MacNamara and Collins (2014) focused on talent identification (TID), as one of the major factors for consideration for federations. They believe that the FTEM framework does not advance the idea of how to do TID. MacNamara and Collins (2014) suggest that TID is a non-linear development and that using stages does not fully capture this process. MacNamara and Collins (2014) posit that more consideration should be put on what they refer to as the mechanisms of development, rather than a model of development. They also claim that while the FTEM framework may well work for a specific group, like that of groups at the AIS, it may not transfer well to other places and cultures.

There is a clear difference of opinion on how well the FTEM framework works outside of an institution like the AIS. MacNamara and Collins (2014) point out, at a practitioners' level, an important disconnect between the FTEM framework, TID and athlete development. The FTEM framework accommodates the view that if an athlete develops past the foundation stage they are then on the high-performance pathway, which may not be appropriate for the athlete or their situation. MacNamara and Collins (2014) believe that models and frameworks have plagued TID in sport for a long time and point to the large number of published articles about TID. They suggest that the FTEM framework is more of the same. They argue that moving away from prescriptive models of TID and towards a more robust and best practice driven guidelines that can be implemented and applied in practice, is what is needed.

Gulbin et al. (2014) wrote a response to MacNamara and Collins (2014) seeking to clarify the points that were made by them. They state that the FTEM is a framework and not a model, and that it is designed through the lens of a world leading high-performance sports agency. They argue that in MacNamara and Collins' (2014) response, it is possible to identify many false, inaccurate, and misleading statements, which Gulbin et al. (2014, p. 796) believe comes from an "inattentive reading of the original article." They reinforce their view that FTEM is a framework for athlete development and not a replacement for TID. They point out that while not replacing TID, it does try to create a sequence through and beyond TID, and that it does highlight situational psychological skills as part of the framework. Gulbin et al. responded to each of the criticisms that MacNamara and Collins (2014) had raised and showed that the research and idea behind the FTEM framework was clear.

However, it does need to be stressed that Gulbin et al. (2013) were involved in the AIS athlete pathway development and were part of establishing the FTEM framework, therefore arguably they have a deeper understanding of it than MacNamara and Collins (2014), but may have some bias. In Gulbin et al. (2014), Gulbin, himself, is listed as being at the Swiss Federal Institute of Sport in Magglingen, Switzerland and this is the main Sport Science and Development Centre for Swiss Olympic. There is a clear link between the AIS, who developed the FTEM framework, and its use by Swiss Olympic. Although it is unclear why Swiss Olympic chose the FTEM framework, what is interesting is that the psychological factors are in the AIS model and were discussed by Gulbin et al (2013), MacNamara and Collins (2014), as well as being highlighted in Gulbin et al. (2014), but have been left out of the Swiss Olympic FTEM framework.

This omission may be considered surprising and a weakness of the FTEM framework as used by Swiss Olympic, as psychological factors are part of athlete care and Gulbin et al. (2014) argued for the inclusion of bio-psycho-social factors.

Gulbin et al. (2014) examined the FTEM framework and pointed out very clearly that they believe that the FTEM is a framework and not a model. As stated earlier, this is an important difference, as a framework is a support structure, and allows more flexibility in its usage than a model. The FTEM framework, as put forward by the AIS, enables federations/NSO and funding agencies like Swiss Olympic to be consistent across different sports. Hence all sports are talking about the same level of development and have a clear understanding of the development pathway, which potentially makes the FTEM, and the LTAD model, useful for athletes and coaches. However, there appears to be a disconnect between the administration/federation level and the coach and athlete. The LEAD framework aims to offer coaches tools to be able to develop athletes and also provide a connection to federations/NSOs models and frameworks. It does this while creating a flexible framework holding key factors about athletes in focus.

The importance of addressing wider issues of athlete support is clearly evident both in recent reviews into national sports organisations in NZ, as well as research on sport in Switzerland. In 2021, Swiss Olympic carried out a survey of ethical abuses in Swiss sport (Lamprecht et al., 2021). Lamprecht et al.'s (2021) survey found that 8.3% of Swiss *Nachwuchs* and Elite card holders had experienced unethical behaviour during training or competition. While only 48% of these unethical behaviours came from coaches, this still means close to 4% (200) of the 5027 respondents experienced unethical behaviour from their coaching staff. As a direct result of this finding, Swiss Olympic (n.d.) launched the “Are you OK?” campaign to stop

unethical behaviour in Swiss sport. The campaign is aimed at athletes that may feel they are in unsupported or in an unsafe situation. The campaign then offers contact points to get support from Swiss Olympic.

2.1.3 Athlete selection

Literature on athlete selection is limited in the sport of triathlon. Battoni et al (2011) suggest that early talent selection processes for national programmes tends to select athletes that are early developers. Their findings, however, indicate that many who become elite athletes are in fact often late developers and not those who had been selected early for the national system. The conclusion from Battoni et al (2011) that early talent selection in triathlon does not produce the top elite athletes was also noted by Wulff and Hoffmann (2013), who found that athletes who had been selected and then performed well at Junior World Championship level were not the athletes performing well later. Wulff and Hoffmann (2019) also state that some of the world's best athletes did not attend the Junior World Championships. Abbott et al. (2005) suggest that many current TID programmes have an overemphasis on early TID and not on the development of potentially talented performers. They point out that many countries are not selecting the athletes who may have the most potential, but the ones that are performing well as youths. This outcome could be due to poorly defined and or weak theoretical selection tools. Abbott et al. (2005) argue that a more generic and multi-dimensional model for youth TID and TID in general should be created to help balance out the current issues.

Figure 7 shows the complex path from giftedness, which focuses more on aptitudes, than talent or competencies. Gagné (2020) shows how much chance is involved in getting the right gifted person into the correct place, with the right development process to have a chance of

developing into a talented athlete. This process demonstrates how important it is to look passed results and observe the person to see if they have elements of giftedness. As part of a TID programme, it is important to understand that a gifted athlete also has different needs to be able to be fully developed and manifest their potential talent. TID needs to be understood by clubs, coaches, selectors, and Swiss Triathlon, as an athlete needs help and development if they are going to become elite. Gagné (2020) gives a glimpse in a pictogram (Figure 7) of just how many factors need to interact for a talented athlete to be produced. In Figure 7, Gagné shows the difference between giftedness and talent. Giftedness is a person's own abilities. Gifts and abilities being fostered and developed into skills, we see as exhibiting talent. There are many factors that can influence a gifted person being identified and develop giftedness into talent, and these factors are what Gagné (2020) focuses on. With this knowledge, a federation can design and develop an athlete pathway that develops gifted people.

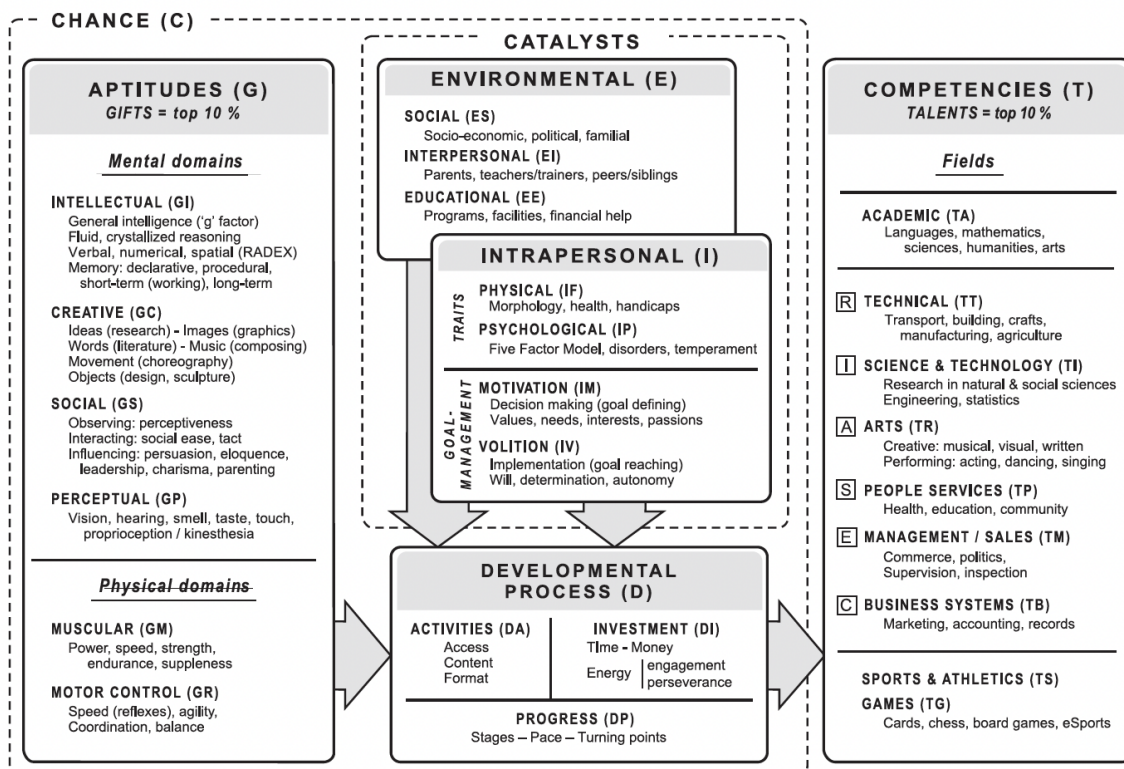


Figure 7 Differentiating giftedness from talent (Gagné, 2020)

Swiss Olympic are aware that early selection does not necessarily lead to elite athletes and performances, and they have created the *PISTE* system (Fuchslocher et al., 2016) to help manage this process. They require each federation under them to use this system, which is why every federation under Swiss Olympic needs to have a testing programme. The *PISTE* system (Fuchslocher et al., 2016) is designed to try and see the long-term development of athletes and their progression over time. It is meant to allow late developers to come through a system, yet this system is only as good as how it is used by individual Federations.

As previously noted, Triathlon NZ has had issues with athlete selection processes with recent cases happening prior to the 2020 Olympics involving female athletes Sophie Corbridge and Rebecca Spence, and particularly the non-selection of male athlete Sam Ward (Cleverer, 2021). The article by Cleverer (2021), stated that the Selection Ombudsman's report about Triathlon NZ's selection processes was embarrassing, highlighting that they did not adhere to their own criteria. Corbridge and Spence appealed their non-selection but were unsuccessful. Ward, an athlete in the top 25 of World Triathlon's ranking also had grounds for an appeal, as by Triathlon NZ's selection criteria he should have been selected. The Selection Ombudsman told Triathlon NZ to redo their selection, yet Triathlon NZ, once again, did not follow their own criteria and stayed with their original selections. The process Sam Ward experienced is a sad example of what can happen with non-selection, resulting in an athlete feeling "broken" and leaving the sport.

This legal appeal of the selection process is the latest in several issues that Triathlon NZ has faced. For the 2014 Glasgow Commonwealth Games, Nicky Samuels appealed her omission from the initially selected team and, in this case, on review, was added to the nominated athletes list (Stuff, 2014). Samuels then went on to place 10th in the Women's Triathlon in

Glasgow (World, 2014). This case had a positive outcome for the athlete, where the appeal and the selection process worked together, which should always be the case.

Athlete testing

Testing is often part of the athlete selection process, yet there is a divergence of opinion as to what forms of testing provide the best data for assessing present and future performance.

Schabert et al.'s (2000) study looked at the effect of swim effort, and its impact on cycling and running performances. Although they found that a harder effort in swimming did affect the performance in cycling and running, their study was prior to the drafting rule on the bike being introduced. As a result of the rule change, athletes are now able to ride as a group, which has changed the dynamic of cycling in triathlon (Etxebarria et al., 2014).

Subsequently, the overall load of the cycling section of a triathlon has decreased, but what has increased are the supramaximal efforts an athlete needs to make. This results in a different type of loading the athletes are under. What needs to be looked at is how the swim effort affects the ability for any athlete to produce these repeated supramaximal efforts.

Bently et al. (2002) also suggests that hard swimming influences the cycling power output.

This outcome is important as the power a triathlete needs to produce is highest at the early stages of the cycling section of a triathlon. They also found that the effort in cycling has a negative effect on running performance. It is suggested that demands on the body are higher when the three disciplines are completed together and lower when each is tested individually.

The study by Bently et al. (2002) implies that testing the events individually will not produce the same results as when the three disciplines are tested together.

One discipline that Swiss Triathlon has not tested athletes for during the period under study is cycling. This is despite cycling making up a significant part of a triathlon. Before the Sydney

Olympic Games in 2000, the cycling section of Olympic distance triathlons was non-drafting. As a result of this, the cycling in a triathlon was primarily an individual time trial, which means that athletes did not have any assistance from other athletes. There have been studies focusing on the effects of running pace after the cycling leg of a triathlon. Bernard et al (2007) looked at the effects of cycling on running performance. Bernard et al. (2007) showed that athletes cycling at a constant intensity (80% of maximal aerobic power) had faster run times than a variable cycling intensity (60-92% of maximal aerobic power). Bernard et al.'s (2007) conclusion was that a constant power output on the bike improves running performance in triathlon. Bernard et al.'s (2007) findings built on an earlier study by Hausswirth et al. (1999) where athletes performed a sprint distance triathlon. In this study, for one scenario, the triathlon was completed alone (time trial), and for the second, the cycling section was performed in another cyclist's draft. Both cycling sections were performed at the same speed, and because of the energy saving from using the draft during the cycling section athletes were able to improve their run performance when compared to performing the triathlon alone. While both Bernard et al. (2007) and Hausswirth et al.'s (1999) studies give important information to inform ways of improving running performance in triathlon, these do not consider the dynamic nature of the cycling section of a triathlon in its modern format.

Smith et al (1999) investigated the power demands of elite triathlon at the then new format of drafting racing. As has been shown by Bernard et al (2007), cycling at a constant power improves run performance and Hausswirth et al. (1999) suggest that cycling in a draft improves running performance. The key part of the research is whether it holds up in racing. Smith et al (1999) showed that racing in drafting events is very different to constant paced research. Le Meur et al. (2009) found that during racing there were not many differences between genders, the main one being that hills have a bigger effect on female athletes. Le

Meur et al. (2009) suggested that the work rates and effects from the different discipline legs of a triathlon are very similar between genders.

Bottoni et al. (2011) note that it is not exactly clear which attributes a juvenile athlete needs to really perform at an elite level. Bottoni et al. (2011) suggest that National Federations use talent selection processes to try and optimise limited resources, but the current selection system of tests is not appropriate for long-term selection. Bottoni et al. (2011) recommended taking a more diverse approach to selection could produce better results and use factors like stress and load tolerance, mental ability and rate of development and skill acquisition.

Buekers et al.'s (2014) review looked at TID in sport and the search for future champions. Although this paper was not specific to triathlon, it does have some important points that need to be considered when looking at athlete selection. They state that selectors have great responsibility for athlete inclusion, as non-selection can have dramatic effects on the athletes involved. Buekers et al. (2014) also suggest that a multi-dimensional approach to selection should be undertaken, as this process should give a better chance to select HP athletes that can succeed in the future. If only a few components or competences are looked at, like testing once a year, then this approach may lead to a false impression of an athlete. Buekers et al. (2014) also stress how important it is for coaches to be involved in the assessment process when selecting potential athletes, as this inclusion allows coaches to express their broader views on the athlete and the specific situation or context they are in, and add a different perspective and detail to the multi-dimensional approach.

2.1.4 Athlete de-selection, non-selection, and retention

The process of developing selection criteria should also lead to the need to address de-selection and non-selection. Selection criteria should be clear and understandable, not just for

the person writing it, but also the stakeholders who must use it. When selection criteria are unclear this can leave athletes who are de-selected or non-selected feeling disappointed and not supported, as they may feel they have fulfilled the requirements. Such outcomes are highlighted by Johnston et al. (2021) who also found that there are clear issues with athlete selection and offered ten points to help emergent selection policy:

1. Consult your nation's and /or organisation's dispute centre.
2. Create a list of variables you have seen in the "best" athletes you have worked with.
3. Examine your existing criteria regardless of whether criteria are formal or informal.
4. Manage and analyse data effectively.
5. Challenge your beliefs.
6. Consider the "measurability" and reliability of your variables.
7. Consult with a more neutral third party.
8. Track your progress.
9. Extend observation periods before selection.
10. Recognize your limitations.

The first steps for a sport organisation in helping athletes deal with de-selection and non-selection are ensuring selection policy is both emergent and progressing each time it is written, while reflecting on the actual local and international situation. In addition, making the policy clear and understandable is important, as well as adhering to the policy during selection can reduce misunderstanding and issues around selection, de-selection and non-selection. Further, stakeholders in sport are becoming increasingly aware of how important athlete care is, and, as in the case in NZ, that funding could be tied to athlete well-being (Targeted, n.d.).

Cote and Hancock (2016) suggest that there are three P's (Performance, Participation & Personal Development) that need to be held in balance when working with youth athletes. If the three P's go out of balance, such as a focus on Participation and Performance, yet not on Personal Development, this can result in an unwanted outcome like athlete burnout and drop out. Talent retention was investigated in the sport of hockey, through the development system of Alberta, Canada. Edwards (2016) noted that the key parts of retention are in the transitions

from one level to the next, as this is the point where dropout can occur. The study was completed in a closed system (a system where there are barriers to entry and can be seen as not being transparent), which Edwards (2016) believes makes retention of talent easier than that of an open system (has no barriers to entry and is transparent) that exists in other countries and other sports. Even within a system that supports athlete retention it is still of enough concern that it is being investigated and ways of reducing dropout are being looked for. This outcome could suggest that this is even more important in open sport systems like that of triathlon.

Athlete non-selection or even de-selection of individuals for teams needs to be carefully considered by National Federations. How this is handled can have major effects on athletes, and implications for retention, as has been illustrated in the second report into Cycling NZ's High-Performance programme (Heron et al., 2022), which highlighted the need for improvement in relation to supporting athlete welfare. Top level sport is very competitive, and selections must be made for national teams or races where not everyone will be happy with the outcomes.

Edwards and Brannagan (2023) highlighted that de-selection can negatively affect an athletes' self-esteem and personal status, as well as leading to distrust of coaches and organisations. It is important to highlight clear reasons and answer questions about the athlete's de-selection. Wrang (2023) suggest questions like “why didn't they choose me”, “why am I no longer part of the team?” and others, are common after a youth selection process. Roles of parents and coaches need to be considered within the selection and de-selection process. The impacts that selections have on youth athletes need to be viewed as a ‘social issue’.

Examples of poor selection processes in both NZ (Knowler, 2021) and Switzerland for the 2020 Triathlon Olympics have been noted, with challenges and reviews undertaken into the selection process. However, the way in which such selections were communicated may help develop more transparent processes for athletes in the future. Such sport selections are always challenging, but lack of clarity related to what criteria athletes are selected on, can be very problematic (Fiander et al. 2023). Fiander et al. (2023) state that there is a real lack of research around what coaches and selectors are looking for in sports and this is an area that is in critical need of investigation.

The All Blacks are considered one of the most consistently winning teams in the world, and are seen as having a positive and supportive leadership culture (Johnson et al. 2014).

However, even this successful team appears to have de-selection process issues. Head coach in June 2023, Ian Foster, told NZ's Sky TV Breakdown show that he had texted some long-term players that were not selected for the All Blacks team and stated their lack of response "hurt" (McKendry, 2023). A head coach not calling de-selected players and just texting them and feeling hurt over not receiving an answer, appears to show a clear lack of empathy for the players in question and a lack of being athlete-centred. It seems Foster has made the athletes response to de-selection to be more about his feelings and not those of the affected athletes.

The NZ Dragon Boat Association also appear to have experienced selection issues.

Johannsen (2023) reported that several athletes had left the sport, as a consequence of dissatisfaction with the selection process. However, the head of the Association laid the blame on the athletes that were not selected and put their complaints down to being "disappointment in not making the squad" (Johannsen, 2023). However, the organisation was

accused of not allowing athletes to have a fair trial, and that there was a lack of communication and transparency.

As noted, many organisations have gone through formal review processes around the areas of selection, de-selection and non-selection including NZ Rugby, Cycling NZ twice, Triathlon NZ, NZ Hockey, Canoe Racing NZ. The summary of the review carried out within Triathlon NZ in 2018 and 2019, posted on their website (n.d.), highlighted the following key points related to the needs and requirements of the organisation in the future related to issues of selection, de-selection, and non-selection:

- High-Performance Structure:
 - A flexible approach, and ability to think strategically especially long term.
 - Ability to effectively engage and maintain relations at all levels.
- Selection Policies and Process:
 - Effectively communicate selection criteria, and ensure coaches and athletes understand policies, selection criteria/qualification, including how they will be applied.
 - Selection should consider both training data and race results; selectors should be independent from coaches; selection criteria must be applied consistently and clearly.
 - The Selection Commission to be clear about who needs to be consulted prior to decisions being made on athlete selection.
 - The GM (General Manager) Performance should not be a member of the selection commission.
 - Ensure decisions are communicated effectively to build confidence/trust in the selection process.
- Sport Culture:
 - HP leaders have an important role in developing a strong and healthy team culture.
 - A positive team culture will ensure favouritism does not play a role within the team environment.
- Other Areas for Improvement:
 - The regional youth academies are very successful with good structure and provide a social environment that supports athletes in their training, but there needs to be a strong connection between the youth academies and the high-performance programme.
 - The role of the centralised programme needs to be reviewed, for example, should it be all year round or only for a defined period; if it consists of a series of camps, should they primarily be aimed at Under-23's, but others can also be part of the programme; should camps be held for elite athletes?
 - NSOs need to be pro-active in looking after the welfare of staff, coaches, volunteers, and athletes.
 - Consideration needs to be given to having a mechanism in place where issues can be raised without fear or favour by athletes, coaches, and staff. This could involve an independent person to be an "Ombudsman" to whom the athletes, coaches and staff can have direct access.

As can be noted from the above list of NSO reviews, selection, de-selection, and non-selection issues occur across many sports and it is concerning that so many sports have recently had reviews, most of which seem to identify selection processes and athlete care as major concerns.

Campbell et al.'s (2021) text, *Developing and Supporting Athlete Well-being*, highlighted key areas for athlete support as being de-selection and non-selection, and that these need to be considered and addressed well to create more positive outcomes. McMahon et al. (2021) discussed these issues in Australian Women's cycling selection and suggest that a humanised selection system and athletes being supported through de-selection and non-selection could help with enhancing athlete experiences. It should be expected that these are not the only federations having these problems and that many others may well be also having the same issues, which have not surfaced in public, or are yet to conduct any review process.

During the course of writing this thesis, there has also been more written about issues around de-selection. Williams and MacNamara (2020) published a study called "I didn't make it, but... de-selected athletes' experiences of the talent development pathway." They interviewed ten athletes after de-selection from a set development pathway. Most were positive about being responsible about their own development, yet this outcome appears to be related to positive coaching environments. However, some care needs to be taken with interpreting the findings of this study, as only ten athletes were involved and the interviews were conducted on average two and a half years after de-selection. It would be expected that this time period can also change the thoughts and feelings as the de-selected athletes move on towards new goals. Added to the literature that has been written, Loughborough University in the UK called for athletes to participate in a study about de-selection (Trussell, 2021). As much of the literature is recent or is in the process of being written, this highlights that the issues noted in this thesis are current and of both scholarly and practical importance.

2.1.5 *Coach education and the process of implementing change*

When looking at the research about coach education, it is important to consider how it can be used in a framework and how it can have a positive effect and long-term benefit for athletes, coaches, clubs and federations. Understanding how a coach can use their own experiences to help develop coaching can be seen in the work by John Wooden, who is known for his success as a basketball coach at UCLA, but also through his reflective inquiry approach to developing his coaching philosophy (Gallimore & Tharp, 2004; Ermeling, 2012). Kaye and Kleiner (1996) suggest that the methods and principles of Coach Wooden can also be transferred to coaching teams in business.

The importance of coach education, particularly the importance of coaches having fellow practitioners as mentors, has been acknowledged by Kidman and Lombardo (2010) and Lascu et. al. (2024). In particular, they identify the benefits of coaches being guided through a reflective learning journey by an ‘experienced other’ in the field, something which will be discussed in relation to the author’s coaching experiences in Chapters Five and Six. Formal coach education has benefits, but there are questions as to its effectiveness for practitioners and the extent to which coaches have access to education. Maclean and Lorimer’s (2016) study of coach education highlighted six themes: values of the coach, the coach’s role on athlete development, forms of learning, barriers to coach education, role of governing bodies, and coaches’ career pathways. The coach’s focus on athlete development is centred around the athlete’s improvement and being a catalyst for this to happen, yet there is no education about how to provide support when an athlete is de-selected or non-selected. Maclean and Lorimer (2016) point out that a barrier to formal coach education can be cost. Both the cost of the course itself and the time away from work and family are potential barriers to participation and raise equity issues.

Another dynamic to consider is that most coaches tend to coach the way that they were coached as athletes, so there can be resistance to change. Smith et al. (2023) suggest in a review article that coaching is still derived from traditions, experience and instincts. Accordingly, they argue that practitioners find it easier to use these inherited coaching methods rather than adapt to newer evidence based coaching practices. This suggests that coach education is ideally practitioner-informed, seen to be relevant by coaches, rather than a 'tick-box' exercise to be completed in order to gain or retain accreditation.

Changing these coaching behaviours can be difficult for practitioners... Sport coaching is dominated by so called 'traditional' approaches that can be summarised as being highly directive, autocratic and prescriptive... The creation of an effective coaching environment for learning to occur is a complex process that involves... the coach's ability to develop and maintain function relationships with athletes (Smith et al., 2023, p. 594).

Bowles and O'Dwyer (2020) point out that "while being *athlete-centred* is identified as being integral to high quality coaching programmes, there has been limited research focus on its practical implementation" (p. 231). They investigated two coaches in their adoption of athlete-centred coaching. These coaches used self-reflection to self and peer examine the process of changing to an athlete-centred coaching style. This transition was not an easy process for them, and especially during some games the coaches found it hardest to adapt their coaching. One significant factor highlighted is the impact on the coaches and players of an athlete-centred coaching style of their past experiences and perceptions. Bowles and O'Dwyer (2020) also focused on the coaches themselves and how they experienced that change to athlete-centred coaching as, 'at the coal face' is what in reality impacts the athletes. Their findings indicated that athlete-centred coaching is a better approach, but not showing how this change can be managed from the practitioner's point of view leaves 'gaping holes' in the research process of how this approach can be truly implemented. The process of change to a more athlete-centred approach to coaching could be helped via well-structured coach education and mentorship.

The process of implementing change is challenging, however research, particularly in business, has provided guidelines that can be transferred to the sport coaching context. Kotter's (1996) earlier work proposed eight key steps and four principles for change, but these were then simplified for easier understanding in the Harvard Business School publication. Kotter and Tathgeber (2017) then summarized change as being about leadership, communication, and relationships. Miller (2020) published an interesting article about change in business organisation, noting sports organisations can take many of the hard-won lessons from business and translate them to sport. Miller suggests that approximately half of organisational changes are unsuccessful and adds that proper planning can then make initiatives more likely to succeed. Miller (2020) provides five critical steps to help the process of change:

1. Prepare the organisation for change.
2. Craft a vision and plan for change.
3. Implement the changes.
4. Embed changes within the company culture and practices.
5. Review progress and analyse results.

From these points change should be part of a strategic management within an organisation, be it business or sport. Being prepared for change and the issues thus arising appears to be an important factor, also choosing how to instigate change appears to make a difference according to Miller (2020). It is clear that implementation is difficult and full change is not certain. Kotter and Schlesinger (2008) suggest that the process may not deliver all the alterations wanted, yet often some of the changes do stay. This outcome suggests that innovation should be undertaken by reaching milestones or part change, rather than expecting every proposal in a particular initiative to be achieved in order to regard the process as successful.

Leading change is a difficult process, yet having it thrust upon an individual or organisation can be very challenging. Leading change, you know why and have the overview, plus you have planned for it, yet other stakeholders involved in the process may not see the reason why it is needed or even wanted. Kotter and Cohen (2002) highlighted how the process of implementing change should run (Figure 8). However, this diagram does not consider the most unpredictable aspect, which is the human component (Orr, 2021). Working as a coach, the human factor is the most important and should be managed throughout the change process. One of Gordon Crawford’s (National Trainer Swiss Triathlon, 2017-2022) sayings is “Coaching is the study of people, and as a result, ideally athletes and stakeholders need to be guided through change” (personal communication, 2019). Cruickshank and Collins (2012) reinforced this process in the case of elite sport performance teams. Miller (2020) stated that change needs to be planned for, and whilst Kotter and Schlesinger (2008) reinforced that there will be resistance, excellent communication skills can help reduce this resistance. Change is a process, it will take time, there are no certainties to the process, yet from personal experience even if it only happens very slowly it can be highly rewarding.



Figure 8 The process of implementing change (Kotter & Cohen, 2002)

2.2 TRIATHLON

Triathlon made its Olympic debut at Sydney 2000, with the men's and women's events (Triathlon, n.d.). It is not clear why triathlon has become so popular, but the growth in the sport has been fast. In a *USA Today* article (Triathlon's, 2016), written after the Rio Olympic Games, it was suggested that the growth has been helped by its inclusion in the Olympic Games. In many countries, triathlon is a popular sport and there are many events throughout the year.

To date, athlete development pathways in Triathlon are a relatively understudied field. To obtain a contextual overview of the development of Swiss Triathlon, it is necessary to draw upon a variety of scholarly publications and triathlon specific websites. Understanding the changing nature of triathlon itself is important in evaluating athlete development pathways in the sport. World Triathlon, formerly called the International Triathlon Union (ITU), had from the start of Olympic distance racing the rule that on the cycling section of a triathlon it was illegal to draft on the bike. Drafting is where an athlete sits behind another athlete and uses the wind shadow behind the athlete to save energy. This format worked well in triathlon's early stages, but it was becoming more and more problematic in the years leading into the 2000 Sydney Olympics, due to its difficulty to police and enforce over the whole field. The rule change for elite athletes moving to a drafting format was inevitable, as managing drafting in large groups was becoming untenable. This change did transform the cycling section of a triathlon. In research pre-2000, the cycling in triathlon was measured as steady power output (Smith et al., 1999), whereas once drafting was allowed the cycling effort became more like a cycling event, lower overall power output, but supramaximal power efforts, which results in different loading on the body (Etxabarria et al., 2014).

From Sydney 2000 to the Rio 2016 Olympic Games only one event each for males and females was held; this was the Standard Olympic Distance race. At the Tokyo 2020 Olympic Games held in 2021, a new event was added, the Mixed Team Relay. There had been a Mixed Team Relay at the 2018 Commonwealth Games, where NZ performed well and secured a bronze medal (Gold, 2018). This was the first time the Mixed Team Relay was used as part of an international games outside of a purely triathlon organised event. The Mixed Team Relay format consist of two female and two male athletes. The order initially was set as female, male, female, and male, however, this order was reversed for the Paris Olympic Games 2024, and will then change back and forwards for each future Olympics. Each athlete must swim 300m, bike 6.6km and run 1km, then an exchange is made and the next athlete races until all four team members have completed the race and crossed the finish line (Welcome, n.d.). The average age of the medallists over the seven Olympics to date in which triathlon has been included (Sydney 2000 to Paris 2024) are:

- Gold:
 - Men's average 27.1 years Oldest 33 years old and the youngest 24
 - Women's average 30.7 years old. Oldest 34 years old and the youngest 27
- Silver:
 - Men's average 27.4 years old. Oldest 33 years old and the youngest 23
 - Women's average 28.4 years old. Oldest 34 years old and the youngest 24
- Bronze:
 - Men's average 25.7 years old. Oldest 31 years old and youngest 22
 - Women's average 29.9 years old. Oldest 35 years old and the youngest 24

Interestingly the ages of gold and silver medallists in Paris were below average but the bronze medallists were above average. This data was taken from World Triathlon athlete website, where the birth year is displayed and then the age at the year of the Olympics was taken. This data would indicate that in the Olympic Games triathlon women are older when competing at the elite level than men. This observation aligns with research by Knechtle et al. (2014), cited in 220 Triathlon, one of the longest running triathlon publications (2020), that the winning age tends to be older in the longer race formats.

At the Tokyo 2020 Olympic Games, held in 2021, athletes were required to compete in the Olympic distance race and then they were able to participate in the Mixed Team Relay. The same rule was in effect for Paris 2024. As a result, each National Federation had an extra dynamic to consider when selecting athletes for the Olympics. Choosing athletes to compete in the Olympic distance race, which takes just under two hours and an athlete that can then perform as part of a team where each leg of the relay takes between twenty and twenty-five minutes is very difficult. As a result of these factors, selection of athletes may have been trying to find a compromise for both events. The average ages for the Mixed Team Relay for the three medallists at Tokyo 2020 and Paris 2024 were:

- Gold: Average age 27.5 years old. Oldest 33 years old and the youngest 23 years old.
- Silver: Average age 28.5 years old. Oldest 33 years old and the youngest 23 years old.
- Bronze: Average age 28.2 years old. Oldest 32 years old and youngest 24 years old.

As can be seen the difference in ages within a team is up to ten years, which is a substantial difference in many respects, especially in terms of physical development and development opportunities. The average age of the athletes winning at the Olympic level is between 27 – 28 years old, and even the youngest at 23 years old. This finding could indicate that selection by a National Federation during the *Nachwuchs* time period, which in Switzerland is aged 12-19, may be selecting too soon. Athletes in their early 20s can have time to develop into athletes that can perform at the elite level, when you take into consideration the age of the oldest athletes to win medals.

The average ages of medallists in the Olympic Triathlon events highlights that athletes have taken time to develop into top Olympic triathletes. This information is important for triathlon federations to understand, as in many countries funding is based on performing at the elite level and especially at the Olympics. Swiss Triathlon's funding from Swiss Olympic is influenced by medals and diplomas (top 8 performances). Currently in Switzerland many

young athletes are being developed through the *Nachwuchs* (youth) *Kader* system, yet at the age of 20 not many athletes are accepted into the U23 and Elite programme. As a direct result the development of athletes within Swiss Triathlon is very limited, even though it may take two Olympic cycles for athletes to have developed enough to win a medal. This clearly supports the LEAD framework's provision that continued development should be supported by Swiss Triathlon, and that creating a D *Kader* would help support this approach.

Along with the inclusion of a support system that allows athletes to stay within the sport development system after the age of 20, it also suggested that early exposure to triathlon may help as well. Triathlon has, over the past 30 years, been growing and has become a mass participation sport. In NZ, Martin et al. (2014), highlighted nation-wide initiatives to increase participation, for example the Weetbix triathlon series for children aged 7-15, which has been running since 1992, with over 450,000 children having participated. Triathlon requires participants to be skilled in three sports, swim, bike and run, yet the sport actively encourages all skill levels to be involved. Long-distance 'Ironman' triathlon events are promoted as mass participation challenges and being active as the goal. Whereas Kennedy et al.'s (2020) research found that high performing athletes' (elite) complete large volumes of training, which can lead to "more overuse injuries, severe over-reaching, overtraining and illness" than some other sports (Kennedy et al., 2020, p. 2). They suggest that overall triathlete welfare can also be affected, reinforcing the following key points for coaches to consider:

- Critical appraisal and application of knowledge.
- Integrated approaches to developing, disseminating and using research and expertise.
- Appropriate development and use of measures for monitoring training and recovery.
- Knowing your athletes, adopting athlete-centred approaches to personal development.
- Challenging accepted cultural and sporting norms.

Although this thesis was started before the research of Kennedy et al. (2020) was published, I was already researching to address these issues at Swiss Triathlon, as evidenced in Appendix A. Wulff and Hoffmann (2012) presented findings indicating that athletes performing well at Junior World Championship level were not necessarily the same athletes that then go on to perform well at elite level. Kennedy et al. (2020) highlighted some of the possible issues, like overuse injury, fatigue, illness and even burnout, that can limit an athlete's ability to continue to develop.

There are many different components that have been examined in these initial sections of Chapter 2, including reviewing the LTAD model and the FTEM framework. With the LTAD model and FTEM framework, the original format and then how it is being used in practice are important to highlight and examine, to observe their strengths and weakness in theory and in practice.

Then the background understanding about issues within triathlon have been presented, such as selection, de-selection and non-selection. The history of triathlon, and at its appearance at Olympics were set out to show how athlete pathways have been developed, and when they are likely to be competitive at the highest level, such as the Olympics. These aspects of the thesis were reviewed, and background information provided, so that later in the thesis the 'bricolage', or the bringing together of other information, makes more logical sense.

2.3 SWISS TRIATHLON

2.3.1 *Athlete development pathways*

There are currently no scholarly reviews of Swiss Triathlon to be found. Most information obtained about Swiss Triathlon policies has been through primary sources on their website, or by talking directly to staff. The following information has been taken from the above sources. Swiss Triathlon has a *Nachwuchs Kader* system which has been running for several years. Until 2023, the *Nachwuchs* system started from age 14 and continued until the athlete turned 20 years old, when they then entered Swiss Triathlon's Elite *Kader* system. In 2023 Swiss Triathlon lowered the age for athletes to attend the *Kader* tests to the age of 12. Swiss Triathlon have stated and suggest that even when athletes enter the *Nachwuchs Kader* system, athlete development is the responsibility of the club they are from, because of the limited time the regional coaches have with the athletes (Patrick Niklaus, personal communication, 16 November 2020).

Swiss Triathlon wants to encourage athlete transfer from other sports as they suggest in their FTEM framework (Swiss Triathlon. N.d.), yet this is difficult within the Swiss system as there appears to be no provision within the *Kader* system to allow newly transferred athletes a chance to develop. This athlete development must be done by the clubs. This process means an athlete who comes from swimming at sixteen years old who swims well, but has limited experience in running, is expected to perform the run test at the same level as an athlete that has a longer history in running. This requirement can make it hard for clubs to support talent transfer when Swiss Triathlon does not appear to have any provision within their system to foster athletes. As a result, athlete transfer is said to be supported, yet only if they meet the *Nachwuchs Kader* standards. If not, Swiss Triathlon is not currently interested. To this end, a small country like Switzerland could benefit from a system like that in the USA, where talent

transfer is actively encouraged and supported by the Federation. Swiss Triathlon use several different structures for their athletes (see Figure 9), although they rely completely on the clubs and individual coaches to develop athletes at all levels.

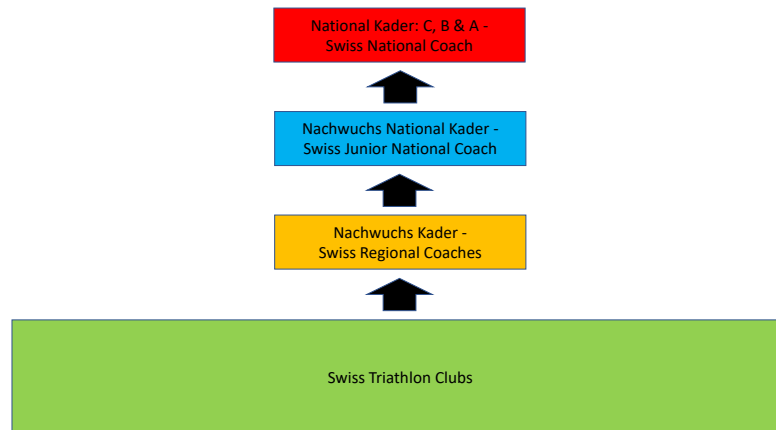


Figure 9 Swiss Triathlon’s club to national team structure (Lamont, 2021)

As illustrated above, the triathlon clubs make the base of the Swiss structure. Swiss Triathlon believes that athlete development should be done in the clubs. This requirement makes it critical for clubs to have skilled coaches to develop talent (Buekers et al., 2015). Swiss Triathlon does not currently review clubs’ processes for athlete development nor actively encourage coach development despite offering courses for coaches to attend. There has been no incentive for coaches to develop beyond the basic level, which has funding support from clubs. Swiss Triathlon does indicate that incentives exist within their Label system, but these only take effect when a club wants to be a top-level club (Gold Label) and a coach is then required to be a *Berufstrainer* (Professional coach). For a coach to reach the *Berufstrainer* level takes between five and seven years, as well as a plethora of experience and weeks away on courses. The time involved, time away from work and costs involved are real barriers for coaches to use the education system. Swiss Triathlon in its yearly general meeting always says the clubs are critical within the Swiss Triathlon system. However, up until 2021, triathlon clubs had very little direct contact with Swiss Triathlon. The two main times of

contact from Swiss Triathlon were when emails were sent out about the clubs' Labels or at the *Kader* test. There was no other effort made to talk to coaches or try and help the clubs develop. Swiss Triathlon does offer trainer courses through the Swiss Coaches Development system, however, these are optional. For affiliated clubs having the lowest level of qualification is enough to access the funding that comes from this system. Swiss Triathlon does not actively encourage coaches to upskill through coach education programmes. They offer courses but there is no incentive for coaches to attend, outside the Label system. Each club that is affiliated to Swiss Triathlon can apply every two years for a Label. To apply for the Label a club needs to fill out a multitude of forms, have several *Kader* athletes, as well as a specific number of training sessions per week, as can be seen in Figure 10 & 11. In addition, the coaches' level of qualification is considered. At the end of this process the club can be awarded one of six levels

Label	Ausbildungsclub	Bronze	Silber	Gold	Regionales Zentrum
Anzahl Nachwuchsathleten die der Club jährlich über Fairgate an Swiss Triathlon meldet	5	15	25	35	/
Anzahl Athleten, die regelmässig (mindestens drei Starts) an den Serien von Swiss Triathlon (Regio League, Youth League, National League) teilnehmen	/	5	10	15	6
Anzahl Talente (lokal, regional, national)	/	1	2	4	4

Figure 10 Swiss Triathlon athlete requirements of Label awards

Label	Ausbildungsclub	Bronze	Silber	Gold	Regionales Zentrum
Trainer, die mit Athleten der Stufe F arbeiten	J+S Grundkurs	Trainer C Triathlon oder WB 1 in einer Muttersportart+ Äquivalenz Triathlon	Trainer C Triathlon oder WB 1 in einer Muttersportart+ Äquivalenz Triathlon	Trainer C Triathlon (J+S WB 1)	entfällt
Trainer, die mit Athleten der Stufe T1 und aufwärts arbeiten	J+S Grundkurs	Trainer B Triathlon (J+S Fachkompetenz Triathlon)	Trainer A Triathlon (Einführung + Portfolio Lesitungssport)	Trainer A Triathlon, DTL oder BTL mit Trainer A Triathlon, maximal 3 Trainer sind für die Leitung der Trainings verantwortlich	DTL oder BTL mit Trainer A Triathlon, maximal 2 Trainer sind für die Leitung der Trainings verantwortlich
Anstellungsart	keine Vorgaben	keine Vorgaben	keine Vorgaben	Für NWF mandatiert oder Anstellungsverhältnis	Mandatiert oder Anstellungsverhältnis

Figure 11 Swiss Triathlon coach qualification requirements for Label awards

In the past, once the Labels were given there was no discussion or pathway to have your Label reviewed. The club was not audited nor checked, meaning that Swiss Triathlon was relying on the clubs being completely honest. As this system has been active for many years, I know that the Wildcats have never been questioned about our Labels documents or on what the club does. Over the eight years I have been at the Wildcats, I received one phone call to say we had changed a level, but there was no recourse nor ability to discuss the change. In 2022, the Swiss Triathlon High-Performance Manager, Tamara Mattis and the *Nachwuchs* manager, Frederique Rol looked to review and change the current Label system with new Labels for 2024.

Once an athlete enters Swiss Triathlon's *Kader* system the level of interest from Swiss Triathlon depends on where the athlete has reached. At National *Kader*, the highest level, athletes are invited to training camps and are contacted every couple of months by a Swiss Triathlon coach. At the Regional level the athletes can be invited to some camps and for the Local *Kader* nothing is done. Such trainings sessions were obligatory for these athletes until the end of 2021, but in 2022 they trialled voluntary attendance, and they also needed to pay for these training sessions with the regional coach. In 2022 and 2023 attendance at the camps and days dropped markedly. However, numbers increased again in 2024 due to the increased number of athletes in the *Kader* system. Swiss Triathlon does not give clear goals for these weekends, resulting in the regions in Switzerland providing very different programme formats for their time with the *Kader* athletes. There are three levels in the *Nachwuchs*

Kader:

1. 'National' *Kader*, working with both the Regional and Junior National coach.
2. 'Regional with talent card', and
3. 'Regional without talent card', sometimes referred to as Local talent.

Swiss Triathlon can issue 50 Regional talent cards and 15 National talent cards in the *Nachwuchs*. 2022 was the first time that all the talent cards were issued, meaning there were more athletes in *Kader* than ever before (Mathis, 2022). However, in 2021, due to the numbers of athletes in the *Nachwuchs* system, the ‘Regional without talent card’ athletes were not included in any communication or coaching days. As a result, these athletes were not helped in any form by Swiss Triathlon. Once an athlete is about to leave Junior and move into the Under 23 category, they move from the *Nachwuchs* system to the Elite C, B and A *Kader* system. However, the elite and U23 coaches do not currently have any input into the *Nachwuchs* development system, hence athletes may not have the skills required to move above the *Nachwuchs* level into the U23 and elite system.

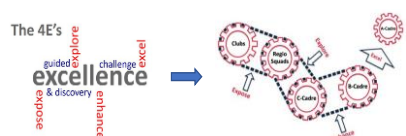
Gordon Crawford designed a document for how athlete development should happen within Swiss Triathlon. He stated that this should also tie into the high-performance strategy that Swiss Triathlon needs to have in place (personal communication, October 2019). The *Development Pathway for Juniors* (Figure 12; Crawford, 2018) fits into Swiss Triathlon’s FTEM framework, even though Crawford was not aware of the FTEM framework when designing his pathway, which he later revised. Crawford (2018) noted the important considerations of athlete development, and the progression it takes for athletes to go from Junior through U23 and into Elite. The significance of this very short time period is often overlooked, but the amount an athlete must change, develop, and learn is enormous and should not be underestimated. This transition is an area where Crawford believes, not managed, it can lead to athlete poor performance and dropout. Currently Swiss Triathlon has not incorporated Crawford’s *Development Pathway for Juniors* (2018) into their athlete development system.

All sports under Swiss Olympic, including Swiss Triathlon (Figure 3), are required to create an FTEM framework, giving an overview of the athlete development pathway. Swiss Olympic have done this so all sports speak the same language about athlete development and where an athlete is in the development pathway. The FTEM framework Swiss Triathlon developed gives indications about how much training is expected and in what discipline. It is not an individualised or detailed development plan, yet some coaches have taken it as such. Much of Swiss Triathlon's testing was governed by the *PISTE* document (Fuchslocher et al., 2016). When Swiss Triathlon were told to develop an FTEM framework, they tried to assert what training should be done, including development ages, and the levels of coaches were expected to attain. While the Swiss Triathlon FTEM document was an important step in formalising the development pathway, it did not consider all of the important transition periods, like school, puberty, and age group changes, which is why in Gordon Crawford's document (Figure 12) he critically focuses on junior development. Crawford (2018) used his knowledge and experience of the work he had done with British Triathlon to give Swiss Triathlon a blueprint to try and increase their ability to support athletes during crucial development periods, i.e. transfer from junior to U23, then to elite.



Development Pathway Juniors – "Expose & Explore"

F
T
E
M



6 pillars of performance

1. Training as Play
2. Informed Choice
3. Learning to Lead
4. Intelligent Training
5. Intelligent Racing
6. One Day, One Race

As a Federation we want to help and support athletes and coaches in their pursuit to excellence. We will make sure that we offer the best support to acquire skills to excel in triathlon and in life. We wish to foster an environment that encourages and exposes athletes and coaches to explore the sport TRIATHLON in their pursuit of excellence?

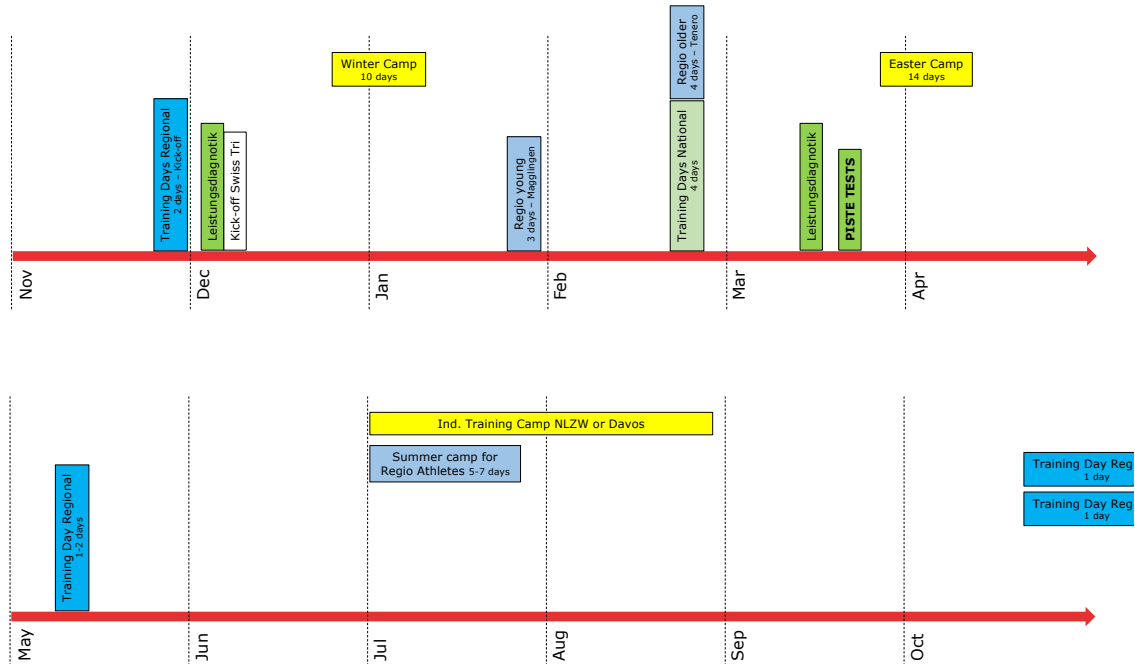
Development Pathway Juniors – "Expose & Explore"

Guidelines

Areas	Objectives	Measures - specifications
Training days (Regiotag)	<p>Athletes should benefit from the quality of the group and work on specific triathlon areas. Those areas are chosen in the document "Development Pathway, Juniors – "Expose & Explore"". This document offers some guidelines to the Regio Coaches in collaboration with the Junior Manager and Junior National Coach.</p> <p>The approach will ensure that there is potential for a common approach and expose the athletes to the specific needs of triathlon and will enable the athletes to explore different routes that will support their improvement and development in order to become an elite triathlete.</p> <p>Coaches will be given the opportunity to join those days and will renew their J&S certifications. A J&S triathlon expert will be in charge of them to help them to develop their coaching skills.</p>	<p>Regio and National Athletes 5 days a year</p> <p>1 Kick-off Regional Athletes (all together or just regions?)</p> <p>Dates: needs to be fixed by Oct 1st? J&S Fortbildung: course needs to be announced 3 months in advance.</p>
Kick-off National Athletes	<p>The aim of this day is to engage and inform the athletes about the upcoming season. Swiss Triathlon will make sure that the athletes, coaches and other stakeholders get all the relevant information (selection criteria, athlete's contract, budget, support from the federation, delegations).</p> <p>This is also an opportunity to train together as a team with Juniors, U23 and Elite Athletes. There is a mutual benefit for all the athletes in the Junior and Senior Squads.</p>	<p>Place: NLZW?</p> <p>Date: November? December?</p> <p>Training: TBD</p> <p>External support: TBD</p>
Kick-off Juniors (national)	<p>The national coach juniors organizes a kick-off to launch the season and work on different aspects as "Team building, work ethic, culture, values".</p> <p>This is an opportunity to work on specific aspects of the FPD (Factors for Performance Development).</p>	<p>Place: Magglingen</p> <p>Date: during tests Magglingen</p> <p>External support: TBD</p>
Camps	<p>The aim of the camps are to offer great training and learning opportunities in a high performing environment. The camps are triathlon specific. The national coach junior will collaborate with the personal coaches to make sure the programme fulfils the needs of each of the athletes taking part.</p> <p>National Athletes have first-priority to take part in these camps. The National Junior Coach will collaborate with the Junior Manager and the regional coaches to develop opportunities for other coaches to join the camp. The athletes invited to the camps should be an added value to the group and fulfil one of those criteria:</p> <ol style="list-style-type: none"> potential to integrate into the national squad good training partners. Add to the training environment socially and developmentally <p>Winter camp: during Christmas holidays it is a good opportunity to offer a first camp to set the basis for the season ahead. To have a good impact, at least 10 days of training would be good.</p> <p>Easter camp: the aim of this camp is to collaborate with the national coach U23 and Elites to run the camp together and integrate some junior athletes that may reach the next step in U23. Two weeks of training would be good.</p> <p>Summer camp: as many clubs are not (consistently) training during July and August, Swiss Triathlon is providing a training environment at the NLZW where the athletes are welcomed to integrate the centre and train there as long as they want. Swiss Triathlon will make sure to build a strong relationship and strong partnerships with the authorities of Wallisellen and the Sportanlagen to provide the athletes with good accommodation and training facilities during their stay.</p>	<p>Assistant coaches: they are part of the team and they will add value to the camp.</p> <p>The national coach junior will make sure to integrate them and play a role in their development as a coach.</p> <p>Dates and places: need to be announced by Oct 1st?</p>
Testing	<p>Swiss Triathlon is offering the opportunity for athletes and their coaches to access tests in Magglingen. They add value to the content of their training and will provide an overview of their current fitness, progress and development and potential areas of work.</p> <p>If the athlete and/or the coach has no use for these tests, they may not take part in them.</p>	<p>Dates: (announced by end of April for next year)</p> <ol style="list-style-type: none"> right after start of training for the season before season begin to make some adaptations if needed.
Delegations	<p>Swiss Triathlon offers support on specific races during the year. The races where Swiss Triathlon will provide support will be announced during the season and kick-off at the end of the year.</p> <p>ST will make sure that the required staff will be traveling with (doctor, physio, assistant coach, PD). For the races where ST will not provide support, the private coaches can ask for an accreditation that ST will provide through the ITU.</p>	<p>Dates:</p> <ol style="list-style-type: none"> official delegations: kick-off staff: end of Jan

Development Pathway Juniors – "Expose & Explore"

Yearly overview:



"A 3 YEAR PROGRAMME LEADING TO U23 / ELITE TRANSITION"

Main measures that may need external inputs:

YEAR 1		YEAR 2		YEAR 3	
Psychology (race and training prep, recovery, motivation)	TC Davos, LD Magglingen	Nutrition (Standard nutrition for sport, Training)		Marketing & social media (sponsoring map, social media)	
Female (RED-S, FAT)	Kick-off Swiss Tri	Psychology (Reality paradigm, Failure)		Nutrition (Race, Recovery)	
Anti-doping	Kick-off Swiss Tri + every second year with SO	Anti-doping	Kick-off Swiss Tri	Psychology (self-confidence)	
Injury prevention	Kick-off Swiss Tri	Health	Kick-off Swiss Tri + individual meetings during LD Magglingen	Anti-doping	Kick-off Swiss Tri
Career planning	LD Magglingen			Health	Kick-off Swiss Tri + individual meetings during LD Magglingen
Health	Kick-off Swiss Tri + individual meetings during LD Magglingen				

Other measures that need good collaboration and planning:

Swiss Triathlon organizes once a year a meeting with the 3 Regional Coaches, the National Coach Junior and the Junior Manager to set a programme for the upcoming year to influence in a positive way the structure of training and the learning of the regional and national athletes. There is a flexibility offered to adapt the content of those days according to the specific needs or the young talent. There is a list of the "Factors for Performance Development" to guide / support the staff in their planning. This list is non-exhaustive and new inputs are welcomed and may be added to it.

Figure 12 Swiss Triathlon development pathway for juniors (Crawford, 2018)

While Crawford (2018) dealt extensively with planning and athlete development, issues around selection, de-selection and non-selection were not mentioned. In any structure or development pathway these issues need to be brought into focus. In the researcher's experience, athlete selection is normally straightforward as selected athletes are happy, yet this is not often the case when it comes to an athlete who is de-selected or non-selected. Therefore, when supporting people who have been de-selected or non-selected it is important to outline how and what can be improved for the future, in order to enable the athlete to understand how to improve to reach the standards required. Also, it is important to frame this information about the athletes' performance and non-selection in such a way that it is not seen as a criticism of them as a person. Taking the time to communicate with the athlete plays an important role in addressing these issues in a mutually satisfactory way. Remembering that the athlete is the key part of any development system, and they need to stay as the main focus in this process. Communication is critical. It is not easy to tell an athlete they are de-selected or non-selected, but this is part of the sport. Listening to an athlete and the nature of their

upset is important, then addressing these concerns is necessary and should be part of the culture of an organisation. Some of the communication should be about how the athlete can re-enter the squad, as many have a significant track record. Are they meant to redo all the criteria, or do they have other options? This approach needs to be formalised and set out clearly, so athletes, coaches and other stakeholders clearly understand the process.

2.3.2 Athlete selection

The Swiss triathlon selection process starts the year before selection is made. This means that the 2019 selection process was for the 2020 *Kader*. There are several steps to the process, the first being the *Kader* test held each year at the end of March. There are six different tests completed for male and female (Figure 13 & 14), two of which are considered important: the 400/800 metre swim test and the 3/5 km run test. The other tests help Swiss Triathlon comply with Swiss Olympics' *PISTE* testing process, which will be discussed later. Points are awarded for the completion times at the *Kader* test. Each year these times are reviewed and can be adjusted. This means that just looking at the points an athlete has achieved over time may not reflect their improvement.

The second part of the process is the racing during the season. Points are awarded for best individual place within selected races and the overall result from the series the athlete competes in. All races and test results are subject to a scaling system, which puts different weighting on different results according to the points evaluated for the selection process. Consideration needs to be given if an athlete is selected to race internationally, as these races are given higher points than the local Swiss races, and favours athletes that are already in the system as they can be selected for international races. This process can result in athletes racing internationally being ranked higher than athletes that do not race overseas, despite

their lack of results locally. These scales are different for each year and gender. Below are the scales for the 2020 *Kader* selection, as these can also change each year (Figures 13 & 14).

Skala und Gewichtung der Selektionskriterien



Sport		Triathlon												
Discipline		Triathlon Boys												
Cadre		Regional und National												
Jahrgang/ Année de naissance	Alter	Wettkampfleistung		Leistungstests Schwimmen			Leistungstests Laufen		Leistungstest Velo/Wechsel	Potential		Biologischer Entwicklungsstand		
		Best result (SM, YL, NL, EM, WM, Int.WK)	Youth/National League	50 m Freistil/libre	400/800 m Freistil/libre	200 m Lagen/4N	60 m	3000/5000 m	Velo/Wechsel Velo/Transition	Potentialeinschätzung/ Estimation du potentiel	Leistungsvoraussetzungen/ Conditions de performance	Mirwald/Trainereinschätzung		
		Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	
		100	100	100	100	100	100	100	100	100	100	100	100	
		Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	
2005	14	15	15	5	5	5	5	5	5	5	5	10	25	100
2004	15	15	15	5	5	5	5	5	5	5	5	10	25	100
2003	16	15	15	5	8	4	5	8	5	10	10	15	100	
2002	17	20	15	5	8	4	5	8	5	10	10	10	100	
2001	18	25	15	4	12	4	4	12	4	10	10	0	100	

Figure 13 Swiss Triathlon testing (boys)

Skala und Gewichtung der Selektionskriterien

		Sport: Triathlon											
		Discipline: Triathlon Girls											
		Cadre: Regional und National											
Jahrgang/ Année de naissance	Alter	Wettkampfleistung		Leistungstests Schwimmen			Leistungstests Laufen		Leistungstest Velo/Wechsel		Potential		Biologischer Entwicklungsstand
		Best result (SM, YL, NL, EM, WM, Int.WK)	Youth/National League	50 m Freistil/libre	400/800 m Freistil/libre	200 m Lagen/4N	60 m	3000/5000 m	Velo/Wechsel	Velo/Transition	Potentialeinschätzung/ Estimation du potentiel	Leistungsvoraussetzungen/ Conditions de performance	Mirwald/Trainereinschätzung
		Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala	Skala
		100	100	100	100	100	100	100	100	100	100	100	100
		Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération	Gewichtung/ pondération
2005	14	15	15	6	7	6	6	7	8	5	15	10	100
2004	15	15	15	6	7	6	6	7	8	5	15	10	100
2003	16	20	15	6	11	5	6	11	6	10	10	0	100
2002	17	20	15	6	11	5	6	11	6	10	10	0	100
2001	18	25	15	5	10	5	5	10	5	15	5	0	100

Figure 14 Swiss Triathlon testing (girls)

As can be seen in Figures 13 & 14, only the current season is valued. At Swiss Triathlon, selection criteria past results or development do not seem to be considered. Nothing about past results or performance increase is listed or appears to be considered. This outcome means that if an athlete is developing on a different timeline to that of Swiss Triathlon, the athlete may not be selected but could develop at a later date. When Swiss Triathlon is designing their selection system, they need to include some requirements from Swiss Olympic. One of these is the PISTE testing system.

PISTE Testing

The *PISTE* is based on searching for talent, TID and talent selection (Fuchslocher et al., 2016). Swiss Olympic came up with *PISTE* which stands for:

- *Prognostisch*: Predict future elite performance, not on current performance level.
- *Integrativ*: Integrate various factors that are relevant for future performance.
- *Systematisches*: Enable systematic and standardised procedures.
- *Trainer*: Include trainers as essential key personnel.
- *Einschätzungen*: Use the trainer's assessment as an evaluation method.

The *PISTE* system was developed by Swiss Olympic, and they require all federations to have a *PISTE* system for funding. Although Swiss Olympic do not state the number of specific tests that need to be carried out within their manual (Fuchslocher et al, 2016), they do want regular testing, at least once a year, to be able to see athlete development. This means that Swiss Triathlon are required to conduct several tests to demonstrate that athletes are developing within their system. It should be noted that the *PISTE* system (Fuchslocher et al., 2016) is looking for predictors of future performance, so is not purely based on current performance. Swiss Triathlon's use of the *PISTE* system unfortunately only looks at the current season's performance and not at the development over time of an athlete, which does not reflect the aim of the *PISTE* system (Fuchslocher et al., 2016) that Swiss Olympic set out. During a presentation from Swiss Olympic (2017) it was stated that, the closer a test is to the

real event, the more predictive power the test will have. As such, it would suggest that Swiss Triathlon should choose tests that are as close to a triathlon as possible. Of course, Swiss Triathlon also need to take into consideration the validity and reliability of the tests to be able to give an indication of athlete development over time for Swiss Olympic. Validity of the *Kader* testing for Swiss Triathlon can be assessed in two ways. First, are the results giving a way to track athlete development through these tests? And second, are the tests providing reliable data that can be compared year to year, and enable Swiss Triathlon to identify and select talent that can develop into elite athletes? Whilst Swiss Triathlon has adapted the *PISTE* system, they appear to only use the previous year's results to see the development of athletes that have attended the test more than once.

Mirwald Tests

The Mirwald tests complement the *PISTE* tests by considering the age-related physical development effect (Musch & Grondin, 2001). The effect suggests that athletes born later in the year have a disadvantage to those born early in the same year. Research has shown (reviewed by Musch & Grondin, 2001) that in all sport the relative age effect exists. Swiss Triathlon tries to utilise this effect in two ways. The first is by awarding points depending on where your birthday is in the selection period. Triathlon use a calendar year, where athletes born in January get no points whereas athletes born in December receive 110 points. Some of the younger athletes are put through the Mirwald Test, which aims to help alert Swiss Triathlon if an athlete is an early, standard, or late developer based on growth. From the measurements of the Mirwald Test, athletes are put into one of those three groups. From these groups, the athletes are then awarded points due to their development, which count towards their overall score. This is a test to measure biological development (Swiss Olympic, n.d.). The use of the Mirwald Test by Swiss Triathlon changes each year, but currently the

male athletes are measured for four years and the female athletes for only two years. I did ask at my second (2017) *Kader* tests “why the difference” and was told it was believed not to be needed. Berk (2011) would suggest that the use of the Mirwald Test to help predict biological development could hold some very important information for athletes’ development. They state that male athletes who biologically mature early have an advantage, which can include increased muscle mass, strength, as well as increase in size. By contrast, Berk (2011) notes that females who develop early can be at a disadvantage, due to the physical development changes that are associated with puberty, for example, increase in body fat, breast development and the hormonal changes that the start of the menstrual cycle brings. These factors need to be considered over the long-term progression of the athletes.

This information would suggest that the Mirwald measurement should be undertaken over the complete *Nachwuchs Kader* testing period to have complementary biological development data of all athletes as another point that may help with selection. The test involves a few measurements, which are done quickly, therefore there seems to be no reason not to do Mirwald Tests for all athletes. It could also offer an insight into how much difference biological development makes on the different athletes and genders. By gathering this information, it could help influence Swiss Triathlon’s selection system in the future. Swiss Triathlon has not been consistent over the time I have been doing the *Kader* tests about who is subject to the Mirwald Tests. It appears that they believe they have collected enough data and continuing to test would not provide additional relevant information. In 2023 when the age limit for attending *Kader* tests was lowered, they specified the ages of athletes subject to the Mirwald Test; 12-, 13-, 14- and 15-year-olds, male and female, will be tested and 16-year-olds from males. As a result, anyone developing later than this will not receive any consideration for their late development. This is despite Ferriz-Valero et al. (2020), showing

that the relative age effect is still present until at least 17 years old in both females and males. For Swiss Triathlon, athlete's points are awarded on their performances in four tests and their best result and overall ranking racing. However, only one test counts to balance this, despite research in other sports suggesting a relative age effect (Musch & Grondin, 2001), and specifically in triathlon (Ferriz-Valero et al., 2020). There are also indications that the relative age effect not only influences sporting performance but can lead to issues in the development of self-esteem (Thompson et al. 2010). Issues that may affect an athlete in a negative way need to be balanced within a youth development programme to make sure that athlete's care is looked after. The relative age effect is clear and this needs to be considered when setting selection criteria, and making sure that athletes are being selected appropriately and then not unfairly de-selected or non-selected due to the relative age effect, over which the athlete has no control.

Sport Tests: 2013 – 2021

Youth Talent Manager at Swiss Triathlon, Nina Eggert (personal communication, March 26, 2020), who devised the *Kader* system for Swiss Triathlon, stated the following reasons for the sport discipline task tests:

- Swimming:
 - 400/800 metre tests were chosen because this is close to the distance that athletes need to race. It is also a test that other countries use for testing around the same time of year. The year-on-year development of the athletes can then be documented. Eggert noted that Swiss Triathlon have a good understanding of what times athletes need to swim to be able to perform in racing.
 - 50 metre test is about the explosive power of the athlete, how quickly they can theoretically get to the front of a swim group and gain a good position before the first buoy. 200 metre Individual Medley has also been used to see that the athletes have an all-round swimming ability and development.
- Running:
 - 3km/5km running test has a similar rationale as for the swimming 400/800 swim test. It is closer to the triathlon race distance. Until 2021, for 16-18-year-olds, the run was a “Jagd” start, this means that athletes would start in order of their swim finish with the same time gap to the athlete in front of them. Swiss Triathlon would take the time and also observe who “won” the combined run and swim. However, this “Jagd” start, was stopped in 2021 after Eggert left Swiss Triathlon.
 - 60 metre test for speed. Eggert stated that she believes the distance is too short to achieve the desired result and this test, as currently performed, is more about explosive power.

- Cycling:
 - This has been a difficult issue as pure cycling can depend too much on external conditions, and Swiss Triathlon does not have the capacity to test every athlete on an ergometer. For these reasons, it was decided to institute a skill-based test on how athletes perform in transition type of events.

Weighting the tests and racing is suggested by the *PISTE* system to make informed selection of athletes, and Swiss Triathlon use these to help compensate if a particular year group of athletes is strong or not. With a strong year group or gender, the race results are weighted a little more heavily to give a clear result for athletes that are performing in races. Conversely, if a year is weak the weighting can favour the testing and may reflect how strong athletes are, because due to the limited numbers racing all athletes have good race results. Overall, swimming has a heavier weighting in the *PISTE* system, as it is felt that swimming performance has a greater influence on the result of both short and Olympic distance triathlon than the other two disciplines. Eggert stated that this is the most important area for young athletes to focus on. Athletes' potential and coaches' assessment are the most difficult areas to accurately assess. There are no set measures, and it comes down to interpretation (Nina Eggert personal communication, March 26, 2020). Swiss Triathlon's coaches have major input into this assessment of potential and the personal coaches of the athletes are also asked what they think of the athletes' potential.

Testing 2020-2022

In 2020, due to COVID 19, testing was only done once, and this was at the end of the season in September. The athletes were only tested on the swim test 400 or 800 and the run test 3km or 5 km, and due to no racing, athletes were selected on these two data points only. Swiss Triathlon decided that no athletes that were currently in *Kader* would be excluded. In 2021, some of the testing was changed by Swiss Triathlon, key changes were:

- 16- to 19-year-olds only needed to do the 50m and 800m swim test and the 5km run test. This means they no longer needed to do the 200m Individual Medley and sprint running test. Also added into the testing was a 3km bike test, which was done riding around the running track.
- The 14- to 15-year-olds still needed to complete all the tests, but the 60m sprint was changed to a 200m sprint and a 3km bike test added.

In 2021, COVID 19 was still an issue. Many athletes were not able to swim from November to February, but Swiss Triathlon wanted to have testing in March. Swiss Triathlon announced that March tests would not be binding as they were in past years, and that a retest would be given in September so athletes could have time to train. It was also decided that the best time over both tests would be the one that counts. In addition, athletes were required to complete all tests on one day, which was done so athlete groups would not mix and could reduce the risks of a COVID-19 outbreak. This process then became standard practice since COVID-19 and all athletes complete all tests on one day. In an unfortunate accompaniment to these changes within the *Kader* testing system, Eggert left Swiss Triathlon in June 2021, and the *Kader* system subsequently came under review.

Sports Tests: 2022 – 2024

With Nina Eggert leaving, Swiss Triathlon saw this as a good time to change the testing. The revision was welcomed by both athletes and coaches. The changes in the testing were meant to highlight the ability of the athlete to perform over shorter distances, which reflects Swiss Triathlon's belief that triathlon events will get shorter, and the Olympic Games will become a shorter race than the standard distance that is currently raced (Swiss Triathlon, 2022). In particular, as the Mixed Team Relay is becoming more popular for athletes, spectators and federations. The swim and run test were shortened and the transition test was lengthened. This approach seemed to work well in 2022, and the tests remained unchanged for 2023 and 2024 (see for example, Table 2, points for running tests, girls and boys, 2024):

- Swimming:
 - 50m Swim test.
 - 200m Swim test (12–13-year-olds)
 - 400m Swim test (14–19-year-olds)
- Running:
 - 1000m for 12–13-year-olds
 - 1500m for 14–15-year-olds
 - 3000m for 16- to 19-year-olds
- Transition & Bike:
 - A 200m run followed by 1500m approximately bike and then a 100m run (12–13-year-olds)
 - A 400m run followed by 3000m approximately bike and then a 100m run (14–19-year-olds)



TEST RUN GIRLS

Distance	3000m	3000m	3000m	1500m	1500m	1000m	1000m
Points	18 years	17 years	16 years	15 years	14 years	13 years	12 years
100	10:15,0	10:20,0	10:25,0	05:08,0	05:12,0	03:30,0	03:35,0
95	10:23,0	10:28,0	10:33,0	05:13,0	05:17,0	03:34,0	03:39,0
90	10:31,0	10:36,0	10:41,0	05:18,0	05:22,0	03:38,0	03:43,0
85	10:39,0	10:44,0	10:49,0	05:23,0	05:27,0	03:42,0	03:47,0
80	10:47,0	10:52,0	10:57,0	05:28,0	05:32,0	03:46,0	03:51,0
75	10:55,0	11:00,0	11:05,0	05:33,0	05:37,0	03:50,0	03:55,0
70	11:03,0	11:08,0	11:13,0	05:38,0	05:42,0	03:54,0	03:59,0
65	11:11,0	11:16,0	11:21,0	05:43,0	05:47,0	03:58,0	04:03,0
60	11:19,0	11:24,0	11:29,0	05:48,0	05:52,0	04:02,0	04:07,0
55	11:27,0	11:32,0	11:37,0	05:53,0	05:57,0	04:06,0	04:11,0
50	11:35,0	11:40,0	11:45,0	05:58,0	06:02,0	04:10,0	04:15,0
45	11:43,0	11:48,0	11:53,0	06:03,0	06:07,0	04:14,0	04:19,0
40	11:51,0	11:56,0	12:01,0	06:08,0	06:12,0	04:18,0	04:23,0
35	11:59,0	12:04,0	12:09,0	06:13,0	06:17,0	04:22,0	04:27,0
30	12:07,0	12:12,0	12:17,0	06:18,0	06:22,0	04:26,0	04:31,0
25	12:15,0	12:20,0	12:25,0	06:23,0	06:27,0	04:30,0	04:35,0
20	12:23,0	12:28,0	12:33,0	06:28,0	06:32,0	04:34,0	04:39,0
15	12:31,0	12:36,0	12:41,0	06:33,0	06:37,0	04:38,0	04:43,0
10	12:39,0	12:44,0	12:49,0	06:38,0	06:42,0	04:42,0	04:47,0
5	12:47,0	12:52,0	12:57,0	06:43,0	06:47,0	04:46,0	04:51,0

TEST RUN BOYS

Distance	3000m	3000m	3000m	1500m	1500m	1000m	1000m
Points	18 years	17 years	16 years	15 years	14 years	13 years	12 years
100	08:55,0	09:00,0	09:05,0	04:34,0	04:40,0	03:12,0	03:16,0
95	09:03,0	09:08,0	09:13,0	04:39,0	04:45,0	03:16,0	03:20,0
90	09:11,0	09:16,0	09:21,0	04:44,0	04:50,0	03:20,0	03:24,0
85	09:19,0	09:24,0	09:29,0	04:49,0	04:55,0	03:24,0	03:28,0
80	09:27,0	09:32,0	09:37,0	04:54,0	05:00,0	03:28,0	03:32,0
75	09:35,0	09:40,0	09:45,0	04:59,0	05:05,0	03:32,0	03:36,0
70	09:43,0	09:48,0	09:53,0	05:04,0	05:10,0	03:36,0	03:40,0
65	09:51,0	09:56,0	10:01,0	05:09,0	05:15,0	03:40,0	03:44,0
60	09:59,0	10:04,0	10:09,0	05:14,0	05:20,0	03:44,0	03:48,0
55	10:07,0	10:12,0	10:17,0	05:19,0	05:25,0	03:48,0	03:52,0
50	10:15,0	10:20,0	10:25,0	05:24,0	05:30,0	03:52,0	03:56,0
45	10:23,0	10:28,0	10:33,0	05:29,0	05:35,0	03:56,0	04:00,0
40	10:31,0	10:36,0	10:41,0	05:34,0	05:40,0	04:00,0	04:04,0
35	10:39,0	10:44,0	10:49,0	05:39,0	05:45,0	04:04,0	04:08,0
30	10:47,0	10:52,0	10:57,0	05:44,0	05:50,0	04:08,0	04:12,0
25	10:55,0	11:00,0	11:05,0	05:49,0	05:55,0	04:12,0	04:16,0
20	11:03,0	11:08,0	11:13,0	05:54,0	06:00,0	04:16,0	04:20,0
15	11:11,0	11:16,0	11:21,0	05:59,0	06:05,0	04:20,0	04:24,0
10	11:19,0	11:24,0	11:29,0	06:04,0	06:10,0	04:24,0	04:28,0
5	11:27,0	11:32,0	11:37,0	06:09,0	06:15,0	04:28,0	04:32,0

Table 2 Points table – running girls and boys, 2024 (Swiss, n.d.)

In 2022, Swiss Triathlon formed a project group, called Project FT, FT meaning Foundation and Talent from the FTEM framework. The name reflects the group's focus. I was part of this group. One issue that was raised is that in the Swiss school system, there are Sport Schools, and places in these are pursued by most athletes as the school give them time to train. The process is long and arduous to enter Sports Schools, and those entering are expected to have a Swiss Olympic Talent card. The entry process starts at age 13, but Swiss Triathlon does not offer carding until age 15. This restriction means many triathletes lose out to other sports that offer a talent card to younger athletes. As a direct result of feedback on this matter, Swiss Triathlon are now offering athletes from age 12 the opportunity to attend *Kader* testing, allowing them to achieve a Talent Card by age 13, with the hope that more triathletes can enter Sports School.

2.3.3 Athlete de-selection, non-selection, and retention

Currently there is no athlete retention programme within the Swiss Triathlon system. Before an athlete enters the *Kader* system there is a short interview with the athlete and their coach. The athlete is then asked to leave the room, and the athlete is discussed with the coach. This interview is conducted by the *Nachwuchs* Manager and the athlete's regional coach. Once an athlete enters the *Kader* system, they must complete an Excel-based training form, but no feedback is given on this form. If an athlete has an injury or any other issue with training, no contact is made by the regional coach. The *Kader* athletes had 5-8 contact days with the regional coach over the season up until 2021, but as of 2022 more days are offered. During these training times there is little input by the regional coaches into the development of the athletes, and mostly no feedback is given to the main coaches from the regional coaches. Yet the regional coaches do have input into whether the athlete retains their *Kader* status.

Within the proposed Lamont Emergent Athlete Development (LEAD) Framework (discussed in Chapter Eight), regional coaches that lead the *Kader* athletes employed by Swiss Triathlon or / and the *Nachwuchs* Manager would be expected to visit a *Kader* athletes training environment. This visit would allow a deeper understanding of the athlete and the coaches within the Swiss Triathlon system. It may also allow a better transfer of information between the athletes, coaches, clubs, and Swiss Triathlon.

The number of athletes attending a regional training weekend has dropped due to it being voluntary. Before COVID 19, it was compulsory for athletes from Regional and National *Kader* to attend the training events and this was the criteria to stay in *Kader*. Then after COVID 19 in 2021, it became optional to attend. In 2022, despite there being a higher number of *Kader* athletes, Swiss Triathlon had very low attendance at training weekends. In August 2022, a review of the regional system proposed changes for the future. These changes included the regional coaches being removed, as everyone felt they had not performed well.

Once it is decided by the *Nachwuchs* Manager and the regional coach that an athlete will no longer be kept in the *Kader* system, there is no dialogue with the athlete or coach to see why the athlete has not performed. They are simply sent an email, with no information as to why or what can be improved upon. Anecdotal information from athletes in my Wildcats Club, as well as athletes outside, suggests they find it very difficult to cope with the lack of information and communication from Swiss Triathlon and the regional coaches. This includes during the *Kader* training, the athletes were not given any warning about their *Kader* status, neither were the athlete's club or personal coach informed that they were not reaching the level required. It could be argued that the selection concept is clear, and posted online, but there are always athletes that fall just on the limits, and this is where the regional coaches

could help the athletes. Patrick Niklaus (personal communication, regional coach at Swiss Triathlon, 2020) stated that there was no retention plan or consideration put into retention processes related to youth athletes within the *Nachwuchs* at Swiss Triathlon. Retention was seen as the club's job to keep athletes motivated and performing, plus knowing how an athlete is viewed by Swiss Triathlon, even though such information is not communicated. Currently, there is no consideration given as to why an athlete is not performing. If an athlete wants to re-enter *Kader*, they need to go through the selection process again the following year, but it does mean one year outside the system. Once an athlete has left the *Kader* system, they are not encouraged to keep going and to try again by Swiss Triathlon or the regional Coaches. The proposed LEAD framework aims to support athletes, coaches, and clubs, and find ways to motivate athletes and retain them in the sport. There may also be ways to accommodate an athlete who falls short of the level required for a talent card, so they are kept close to Swiss Triathlon to help and enable them to achieve the level required to re-enter the talent card system the following year.

2.4 SELECTION COMPARED TO OTHER COUNTRIES

2.4.1 *British Triathlon*

British Triathlon has had huge success on the world stage over the past decade. The Brownlee brothers (Alastair and Johnny) each won medals at the 2012 (gold, bronze) and 2016 (gold, silver) Olympic Games, respectively. At Tokyo 2020, Great Britain's triathletes won a further two silvers (Alex Yee, Georgia Taylor-Brown) and a gold medal in the team's event. In Paris 2024, Alex Yee won a gold medal and Beth Potter a bronze medal in the men's and women's races respectively and Great Britain also won a bronze medal in the team event. Therefore, looking at how their system works provides a good comparison to the current Swiss system. It should be noted that Gordon Crawford was involved with the setting up of the British Triathlon framework, and many of his thoughts and ideas do reflect what is happening there. For youth athletes in the UK, their selection process is as follows (British Triathlon, n.d.):

- Stage 1: Application – done after the season, and athletes are asked to provide evidence of reaching stated swim and run times, which are available on the British Triathlon website (<https://www.britishtriathlon.org/gb-teams/talent/talent-identification>), as well as a calculator to know how close athletes are to the level required. It is also stated that their cycling will be assessed at Stage 3. As part of a talent transfer system, they also encourage athletes who are new to the sport but have not yet reached the level required in swimming and running to also apply. As talent transfer is an important place for athlete recruitment, they believe athletes need time to develop.
- Stage 2: Academy testing – athletes go to a test day and repeat the tests.
- Stage 3: Academy selection day(s) – this is about assessing the athletes and their skills and internal traits. This stage of the selection could last from one day to six months. This process is to gain a broader and deeper understanding of the individual athlete.

At the point an athlete is selected, they are taken into the Academy system, what Swiss Triathlon would call their *Kader* system. In the UK, there are twelve Academies, and these are set up to support the athletes, not only with days and camps but also through support at races and helping athletes along the development framework that has been created in the UK. The Academy system is set up to try and help athletes develop within a complete framework, leading towards HP sport. The athlete pathway is seen within British Triathlon as a guided journey. There seems to be a very clear athlete focus on development and progression for the future, to the point where they class the high-performance part as being its own separate

system outside the development pathway but leading to it. The goal of the British system is getting to the point of one day, one race, and to get athletes to understand that at the top level there is only one chance to perform, yet this is a goal towards the end of the pathway.

There are major differences between the current Swiss Triathlon system and the British system, although both have testing and camps. Swiss Triathlon relies completely on clubs doing the development work for them, and the camps and weekends that are offered are more about training together than athlete development. The Swiss then each year make the selection harder but do not take into consideration any external factors that may have affected the athletes. Whereas in the British system, to support and develop the athletes, they are trying to have more weekends and events for the athletes to attend, as well as communicating with the athletes. Then when selections must be made, they consider what has happened to the athlete, family, school, or injury issues. These factors alone indicate big differences between the two systems.

2.4.2 *German Triathlon*

The German system provides a relevant comparison to Swiss Triathlon for several reasons. First, I have first-hand experience with coach education in Germany and understand how much effort they put into development. In addition, I have coached youth and elite German athletes who have been on the outskirts of the German system, as well as wanting to enter the system fully. Added to this experience, Germany is an example that Switzerland may look to as some stakeholders in Swiss Triathlon would like to have regional performance centres, as in Germany, which was discussed through the FT Project.

Stephan Vuckovic won Silver at the 2000 Olympics and Jan Frodeno won Gold in 2008, however, there has been no further medal success by either male or female German triathletes since. German Triathlon (DTU) have a multi-layered *Kader* system, starting with *Landes Kader 1* and *2*, which is based at the state level and moves to the national level, where there are two levels for the *Nachwuchs* athlete. Within the state system, each state can set their own criteria for entering the *Landes Kader 1 & 2* (Deutsche Triathlon Union, n.d.). At the national level, *Nachwuchs Kader 1* covers athletes aged 16 to 19 and *Nachwuchs 2* covers athletes from ages 16 to 23 (Deutsche Triathlon Union, 2021). For both *Nachwuchs Kader* groups the main focus is development, but the athlete needs to re-qualify each year, and this qualification is done on race results, but for 2022 the following tests were introduced (Deutsche Triathlon Union, 2021):

- *Landes Kader 1* is for athletes ages 13-15 (Deutsche Triathlon Union, n.d.).
- *Landes Kader 2* is for athletes ages 14-19 (Deutsche Triathlon Union, n.d.). Both *Landes Kader* have qualification requirements of testing and race results, but the exact requirements are set by the States individually.
- *Nachwuchs Kader 1* is focused on athletes that have shown some good performances but need to develop to be able to make the leap to the next *Kader* group or to be able to make the transition into U23 racing (Deutsche Triathlon Union, 2021).
- *Nachwuchs Kader 2* is for athletes who have performed at the younger level but have not reached the level for the National team and are also guided through the difficult transition from Junior to U23 racing (Deutsche Triathlon Union, 2021).

The DTU uses the German states as areas, and in each state is a Performance Centre. Athletes can go to the centre to train, but each state has its own qualification level to use the training centre. This process means that in some areas the requirements are lower than others. After the *Nachwuchs Kader 1 & 2*, the German system carries on with *Perspektiv Kader*, which is like a long list for athletes that could be considered for future Olympic Games. There is also *Olympia Kader*, which are the athletes believed to be on the short list for the next Olympic Games (Deutsche Triathlon Union, 2021).

The German system allow the states some freedom to set their own criteria for athlete selection in the *Landes Kader*, then have clear qualification when moving to the National level. Within each level there are crossovers of age so that athletes have a chance to develop through a system, which offers an athlete continuity rather than an abrupt change, as happens with the Swiss System.

2.4.3 Triathlon New Zealand

The imperative to achieve results has, in a number of sports, resulted in a short-term focus on performance at the expense of developing a long-term sustainable culture for developing athletes over time. Triathlon NZ are under pressure to have athletes performing to be able to maintain their funding. Triathlon NZ is funded through High-Performance Sport NZ (HPSNZ) who have two basic types of investment in sports:

- Podium Sports: “These sports have a consistent recent history of performances at pinnacle events and are highly likely to deliver podium performances at future pinnacle events. They’re contributing significantly to HPSNZ’s international performance targets.”
- Aspirational Sports: “These sports have the potential to inspire the nation and its communities and deliver podium performances now or in the future” (Targeted, n.d.)

HPSNZ funding allocated to sports is made up of seven factors:

1. Campaign Investment: “Targeted investment in priority campaigns focused on performance outcomes within this pinnacle event cycle.”
2. Performance Pathways Investment: “Targeted investment in pathways that support athletes and coaches progress for future performance outcomes.”
3. Well-being Investment: “Investment in specific well-being initiatives that enhance NSOs’ performance environments.”
4. Tailored Athlete Pathway Support: “Base Training Grants or Development Training Grants – Excellence Grants – Medical insurance premiums –Prime Minister’s Athlete Scholarships.”
5. Performance Support: “Performance Health, Physiology, Strength and Conditioning, Performance Life Coaching, Psychology, Nutrition, Performance Therapies (Physiotherapy and Massage Therapy), Performance and Technique Analysis.”
6. HP Capability Support: “Performance Team Leadership expertise and support, HP athlete pathway expertise, HP coaching pathway expertise and resources, HP leadership capability programme resources, Campaign planning support resources... access to apply for Prime Minister’s Coach, Officials and Support Team Scholarships.”
7. Preparation and Games-Time Investment: “Investment in Peak Bodies (NZOC, PNZ) for the specific purpose of Games-time preparation and delivery support for NZ teams at Olympic, Paralympic and Commonwealth Games” (Targeted, n.d).

NZ has a long history of producing top female triathletes such as Erin Baker, Jenny Rose, and Andrea Hansen (formally Hewitt). Top male triathletes include Rick Wells, Hamish Carter, Bevan Docherty, Shane Reed, and Kris Gemmell. In 2023, NZ's two top female and male athletes were Nicole van der Kaay, Ainsley Thorpe, Hayden Wilde, and Tayler Reid, respectively. The number of top triathletes NZ has produced is truly amazing for such a small country. This outcome could show that NZ has had a great system that has delivered continually over time. It could also suggest that either NZ has a strong culture of triathlon, or that athletes are being developed outside of the national system and Triathlon NZ is the lucky federation that is taking advantage of such success. Hayden Wilde was coached outside the Triathlon system, by Craig Kirkwood, yet Tayler Reid was coached by Stephen Sheldrake, the High-Performance National Manager for Triathlon NZ. This situation could indicate that a mixture of inside and outside system development has been possible and supported in NZ.

Triathlon NZ (2023) has selection criteria, which seems clear on first reading. However, the criteria do have a statement saying, "The Selection Policy may, in their sole discretion, consider and place weight upon any extenuating circumstances when considering an athlete for nomination under this Nomination policy" (Triathlon NZ, 2023). The issue that arises here is that selectors are allowed sole discretion, resulting in seemingly arbitrary selections, which ultimately undermine confidence in the selection process. Triathlon NZ has had several high-profile issues with its selection policy, for example, Sam Ward (Knowler, 2021). Both Sam and Sophie Corbridge had non-selection issues and filed protests prior to 2020 Olympics. There were also issues around Terenzo Bozzone's non-selection and Shane Reed's selection for Beijing Olympics (Watson, 2009).

In the case of Sam Ward and Sophie Corbridge, they took legal action, and it was found that Triathlon NZ did not follow their own criteria in the selection process. They were told to redo the selection, which once again they did not follow. As a direct result of their non-selection both Sam Ward and Sophie Corbridge have left the sport. Triathlon NZ's history of selection issues calls into question the meaningfulness of their criteria and the way that selection is managed and how the processes work. From personal experience, selections are never easy, and the process is challenging and complicated. Not everyone will be happy with the outcomes. However, when it was stated that Triathlon NZ did not follow its own selection system, and needed to redo their criteria (Knowler, 2021), Triathlon NZ still did not follow due process. Such behaviour leads inevitably to people questioning the integrity of the process, and creates perceptions of athlete favouritism and selector bias at Triathlon NZ. I believe a selection system should be open, honest, and transparent.

Two of the highest-ranking countries had issues with selection for the Paris Olympic Games triathlon, these were New Zealand and Great Britain. Then after illness hit the Swiss Triathlon team another selection process started. At Tokyo 2020, Tayler Reid was selected over Sam Ward, although according to the criteria Sam Ward should have been selected. Then moving forward three years, Dylan McCullough made the Olympic team ahead of Tayler Reid despite being injured, having limited racing in 2024, and being ranked slightly lower. This led to Tayler Reid to post his disappointment on his social media account (taylorreidnz) stating that he had raced 6 from the 7 Mixed Team relay events, including some of the fastest legs of the event, whilst also putting in a huge effort to assist the team. Accordingly, he believed he had done enough to have qualified, and that he wasn't selected left him believing that he had a score card the selectors "couldn't read".

Great Britain has been in an enviable position for the last three Olympic cycles, having so much depth in both the women's and men's fields that many athletes are reaching the selection criteria. Due to having limited places for the Olympics and so many athletes qualifying, this can mean that there will be disappointed athletes who may feel they should have been selected. This situation makes it imperative that selection criteria are clear and adhered to. The last male selection for Paris 2024 came down to Jonny Brownlee and Sam Dickinson. Sam Dickinson was selected and Jonny Brownlee was not despite having been a previous Olympic medallist. Although Brownlee was disappointed, he did not suggest publicly that there were any issues within his non-selection.

However, female selection for the two places does not appear to have been well managed. Three female athletes were possible to fill the last two places: Georgia Taylor-Brown, Sophie Coldwell and Kate Waugh. As part of the selection process athletes were informed that the World Triathlon Series in Cagliari, Italy would play a major part and best placed athletes would have a greater chance of selection. In Cagliari, Taylor-Brown placed 6th, Coldwell 7th and Waugh 10th, this would likely have led Coldwell to believe that she would be selected for the Paris 2024 Olympic Games. However, when the Great British team was announced Georgia Taylor-Brown and Kate Waugh were selected, and it was also noted that Sophie Coldwell had submitted a formal protest against her non-selection, which was upheld (Heming, 2024). Writing on her Instagram account Coldwell stated that "the arbitrator approved (her protest) on the grounds of 'failing to follow the selection policy'. Despite Coldwell's protest being upheld, Waugh was nevertheless awarded the final Olympic place for the Great Britain team (Heming, 2024). Mike Cavendish, who spoke on behalf of the selectors, stated it was very close between Coldwell and Waugh, yet they stayed with their original choice (Heming, 2024).

After the individual triathlon at the Olympics, a Swiss team member Adrien Briffod became ill, and it appeared he would not be able to compete in the Mixed Team Relay. Simon Westermann was bought in as a replacement, and then he fell ill, and a third replacement was needed. Sylvain Fridelance was flown into Paris with 24 hours' notice to start the Mixed Team Relay. This appeared to be a great solution to a really unfortunate situation, and the fact that Switzerland had these athletes that had reached the Olympic qualifying standard was a positive. After the Mixed Team Relay Adrien Briffod did express unhappiness with the level of communication from Swiss Triathlon and felt that once Westermann could not start he should have been contacted, as he was well again. Briffod expressed his disappointment with not racing and Swiss Triathlon via his Instagram account

Many countries and federations seem to have selection issues, and we have seen time and time again that clear information over selection must be made available to athletes, coaches and indeed the wider sporting public. The practice that selections need to follow the selection criteria that has been set out ought to be paramount. While this sounds so simple in theory, as the above examples demonstrate, it has been far from simple to implement in practice for many organisations.

2.5 CHAPTER TWO SUMMARY

There has been considerable scholarly debate on the best ways to develop athletes. In this chapter, two principal pathways, the LTAD development model and the FTEM framework were outlined. Whilst it is generally agreed they are, broadly speaking, effective, they do have limitations, particularly in their ability to address overall athlete care. Whether there is early or late specialisation, what is important is it takes time (at least a decade) for a junior athlete to develop to elite, and progression is more about their personal and sport development stages than (relative) age. Deliberate practice is suggested to be the key and is seen as practising with purpose to get better (Ericsson, et al., 1993). Swiss Olympic has adopted the FTEM framework, adapted it, and asked the federations under their influence to adopt the amended framework. However, what is surprising is that the psychological aspects of the original FTEM framework have been removed by Swiss Olympic, although it is not apparent why, as the literature clearly suggests athlete care should be considered (Campbell et al., 2021). Key insights based on the research reviewed are that:

1. Performance at junior level is not a reliable indicator of performance at senior level.
2. Physical testing in and of itself is not a good criterion for selecting athletes because triathlon is a very dynamic sport, so athletes perform differently in a test than they do in a race. Accordingly, test times are not a good predictor of performance.
3. Talent identification needs to be developed, and athletes and their coaches supported in the pathway for long term athlete development.
4. Personal factors, for example, attitude, and resilience need to be taken into TID consideration when selecting athletes for long term development.
5. There are very inconsistent practices between countries relating to de-selecting and non-selecting, and in many instances athletes who are not selected are not told why and there are no efforts made to tell them what they need to do to get back into the selection frame, or indeed to keep them in the sport.
6. Changing a system is a long-term project and needs to be properly planned for and managed.

There are gaps in research within sport about the consequences and effects of non-selection and de-selection, and how it affects athlete retention over the long-term, and about the methods used for the process of non-selection and de-selection. Nevertheless, the effects have been linked to retention, with athletes leaving the sport feeling disillusioned. These consequences have sparked considerations around athlete welfare and wide-ranging reviews.

The literature review has noted that different countries use different systems to support athletes in their development. Based on results achieved at Olympic level and overall athlete development, the British Triathlon system is arguably the most effective. Given their success, Swiss Triathlon should look to adopt Crawford's (Figure 12, 2018), *Development Pathway for Juniors*, which was informed by the British Triathlon process, but to date this has not occurred.

The importance of the coach in athlete development is widely recognised within scholarly literature on the topic. Of particular relevance to this thesis is the emergence of athlete-centred coaching, which focuses on a collaborative approach between coach and athlete and prioritises understanding the athlete as a person. Because this approach differs from traditional autocratic approaches, it can take time to change existing styles because many coaches tend to coach the way they were coaches. Practitioner-led coach education, particularly in the form of mentoring, has been recognised as having particular value in promoting athlete-centred coaching styles.

CHAPTER THREE

METHODOLOGY

CHAPTER OVERVIEW

It is clear from both recent reviews of national sports organisations and the scholarly literature that the relationship between coaches and athletes is central to achieving both performance objectives and promoting athlete development more broadly. Although policy documents and frameworks are important, it is coaching practitioners who are at the coalface of implementing change. Accordingly, this thesis draws on the researcher's lived experience, complemented by scholarly research and insights from other leading coaches, to provide a case study of how athlete-centred development can be achieved utilising existing frameworks. Hence, the purpose of this study is to provide a reflective practitioner perspective of the researcher's athlete, coaching and policy making experiences (at a regional, national, international level), examining the case of Swiss Triathlon's athlete development pathways. Slade et al.'s (2020) reflective model strengthens the practitioner auto-ethnographic approach through a critical analysis process to get to the "truth of the matter." Due to the nature of the multi-method approach, this study was informed by other data sources, which have been triangulated together to allow for new insights (Guetterman et al. 2015). Each section of the chapter highlights matters informing the study's methodological development process. Research Philosophy (3.1) discusses social constructivism, phenomenology, and a bricolage multi-method approach informed by Bourdieu. Research Design (3.2) examines my world view, a qualitative approach using ethnographic reflexivity, and the research questions. Theoretical and Conceptual Framework (3.3) integrates multi-methods, utilising an emerging, evolving model of auto-ethnographic narrative. Limitations of the Thesis (3.4) and Ethical Considerations (3.5) are also noted.

3.1 RESEARCH PHILOSOPHY

3.1.1 Social constructivism and phenomenology

Social constructivism is a worldview where researchers seek to understand a phenomenon (Creswell, 2007) by constructing subjective meaning from their experiences within a research context, such meanings are varied, multiple and complex. Research within the philosophy of social constructivism relies “as much as possible on the participants’ views of the situation” (Creswell, 2007, p. 20). The philosophy of phenomenology recognizes that a whole set of factors leads to different interpretations of reality. As a paradigm, it underpins all qualitative research design (Merriam, 1998). Cohen and Manion (1994) highlight that:

phenomenology is a theoretical point of view that advocates the study of direct experience taken at face value; and one that sees behaviour determined by the phenomena of experience rather than by external, objective and physically described reality. (p. 21)

Individuals constructing their own meaning is of critical importance in sport. How they experience an event differs, and they will construct their own narrative. Understanding that memories making up this construct are malleable (Arkowitz & Lilienfeld, 2010) is important when conducting for example, autoethnographic research.

3.1.2 Bricolage

‘Bricolage,’ a French term, describes a method of using a variety of tools available to complete a task. In research, “Bricolage... is understood to involve the process of employing these methodological processes as they are needed in the unfolding context of the research situation” (Denzin & Lincoln, 2011, p. 168). A bricolage approach has been important in this thesis in bringing together different sources of information, for example an auto-ethnography reflecting on my athlete and coaching experiences, perspectives of leading coaches in the field, theoretical concepts from literature (for example, Bourdieu – see section below), as well as document analysis of key plans/policies from other international triathlon federations.

This bricolage process has also mitigated potential bias in the autoethnographic work, thus getting to the “truth of the matter” (Slade et al., 2020), and create the LEAD framework.

3.1.3 Bourdieu

In simplistic terms, Bourdieu’s theoretical concepts can be seen in practice as the interplay between habitus, field and capital (cultural, economic, social, and symbolic), as each part of the model will have an effect on the other (Power, 1999). Habitus is a way of describing the embodiment of social structures and history in individuals, it is the set of dispositions, internal to the individual, that both reflects external social structures and shapes how the individual perceives the world and acts in it (Power, 1999). The importance of habitus is especially important when working as a coach. It highlights the experience that a person has had will affect the coach’s behaviour. It also suggests that becoming a ‘reflective practitioner’ (Schön, 1983) is critical to becoming a great coach as this allows the coach to examine and reflect on their habitus and understand the reasons for their individual perspectives and, are they appropriate for the situation? It also highlights how important it is for a coach to provide a positive environment for athletes as experiences will help build their habitus. This point also shows how important this current research is to my development as a coach. Bourdieu’s concept of field is seen as the context and content of a person’s work (Slade, 2018), which leads to Bourdieu’s (1984) idea of social capital, where someone’s capital is derived from their position and status, which leads to their ability to have influence over people (Claridge, 2015), and helps coaches gain credibility and organisational influence. This idea of capital is important and can be increased within a field by experience, education, and position. Bourdieu’s theories have relevance in this thesis within the sporting construct. Using his concepts of habitus, field and social capital has enabled a deeper analysis and understanding of past and current coaching situations.

3.2 QUALITATIVE RESEARCH DESIGN

The use of qualitative data in a case study (Merriam, 1998) aims to understand viewpoints from the different perspectives of participants involved in the research (Stake, 2008). It increases the richness of the data and is suited to gain a comprehensive understanding of the research context and the specific phenomenon of the study (Yin, 2009). In this case, it focuses on Swiss Triathlon and an emergent athlete development framework, which is of importance because the athletes are the ones being developed and actively participating in the system. Along with my own insights as a coach and athlete, inputs from leading coaches, other clubs, and members past and present of Swiss Triathlon and other National Federations has resulted in a ‘bricolage’ approach of many differing inputs to allow critical analysis of the data in getting to the “truth of the matter” (Slade, 2020).

It was decided to adopt a multi-method qualitative approach, including auto-ethnography, consultation with fellow practitioners, documentary analysis and engagement with scholarly literature because such an approach optimised the researcher’s strengths and grounded the study in the experience of a practitioner working in the field. The process of the lead researcher reflecting on his varied experiences as athlete, coach and policy developer allowed both explicit identification of his unique expertise in the field and an opportunity to situate his specific experiences within the wider literature on athlete development. The process of comparing his reflections with fellow practitioners, discussing them with supervisors, and cross-referencing them with formal policy documents provided further rigour to the findings by elevating them above a simple statement of one person’s opinion to a more broadly informed scholarly analysis.

By choosing Swiss Triathlon as a case study, the author was able to provide a real-time overview of the process of implementing change to athlete development frameworks in a real-world context, and in relation to a sport in which over six million athletes participate worldwide and in which there are nearly 100 national federations (Excelleration Triathlon and Multisport, 2025), and is now an established Olympic Sport. Evaluating a sport administered by a national sport organisation, which is in turn affiliated to international organisations, means the issues faced by those involved in participating, coaching and administering triathlon are broadly comparable with the issues encountered by athletes, coaches and administrators in other sports. The athlete development frameworks examined in the thesis, namely LTAD and FTEM, are also widely used in other sports, further enhancing its relevance and potential wider application.

3.2.1 An emergent research process

As an athlete, I never could understand selections. As an individual, coach selections were not always clear. Coaching at the Wildcats Triathlon Club and having to learn a National Federation system, and understanding how it was meant to work and then how it did, things did not always add up. Being presented with the FTEM framework, and athletes trying to fit into it, was not useful at the day-to-day coaching level. In 2020, as a National Coach, greater engagement with Swiss Triathlon and Swiss Olympic led me to focus on areas that can be influenced. I started to write selection concepts and sport policy, learning from where I went wrong, and developing initial LEAD framework thoughts. Reflecting on my experiences as an athlete and coach to try and develop positive change where I can, controlling the controllable, reviewing literature and discussing with other elite coaches, resulted in the LEAD framework. This emergent research process (Martin, 2008) is highlighted in Figure 15.

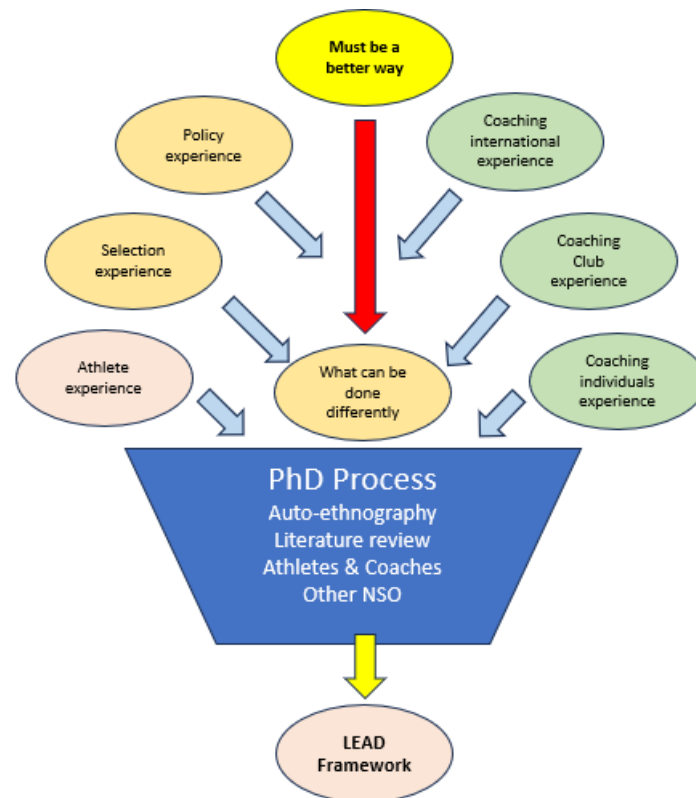


Figure 15 My emergent PhD research process

3.2.2 My world view

Documenting the researcher’s world view is an important part of the qualitative research process. Creswell (2007) notes that “researchers bring their own world views, paradigms or sets of beliefs to the research project and these inform the conduct and writing of the qualitative study.” The researcher then “makes these assumptions, paradigms and frameworks explicit in the writing... and at a minimum, make [author and reader] aware that they influence the conduct of the inquiry” (p. 15). Being aware of my biases has helped me look past my own beliefs and critically analyse other opinions. I am a firm believer in the sceptical outlook that an idea or belief should be able to change and develop as more or new information is learnt. This is a core belief that has allowed me to develop and try to see and review various perspectives within a situation.

I have been through lots of situations and shared many experiences with athletes, as well as reflecting on them to try and view these from all angles. This process has allowed me to have a multi-point lens to view situations. Then taking experiences and situations through a reflective practitioner's point of view has added to my world view. Schön (1983) highlighted that such 'reflection in action', where coaches question, learn from, and understand their own experiences enables adaptation and/or change of behaviours and decision-making processes. Another example of such an approach is provided in Pill's (2018) text, *Perspectives on Athlete-Centred Coaching*, where Karlene Headley-Cooper's chapter details her practitioner's perspectives, as an athlete, coach and researcher through her auto-ethnographic journey of athlete-centred experiences.

3.2.3 Ethnographic reflexivity

In auto-ethnographic research, there is a requirement to "reflect critically on the self as researcher" (Denzin & Lincoln, 2011, p. 124) and Chang (2016) adds that auto-ethnographic study can produce better understanding of culture, others and self. This ontological premise (nature of reality) of self (Howe, 2003) facilitates an interpretive epistemological framework (nature of knowledge) for exploring the phenomenon and constructing subjective insights from an insider's experiences and perspective (Conrad, 1987; Ellis et al, 2011), in this case through my role as a coach at Swiss Triathlon. Within this research the use of the methodology of ethnographic reflexivity provides for a phenomenological analysis (Smith & Osborn, 2008) of how I have made sense of particular experiences and events as they relate to the evolving nature of athlete development in the case of Swiss Triathlon. This reflective process has enabled me to identify epiphany experiences and examine the 'truth of the matter' through triangulating archival documents, literature, and conversations with significant persons (Slade et al., 2020).

3.2.4 Research questions

The aim of this thesis is to help enhance athlete development pathways (youth to elite), within an emergent athlete development framework, that takes into consideration related issues of athlete selection, de-selection, non-selection and retention, and the development of the athlete as a person through developing policy and practice.

Athlete development pathways

- How do existing frameworks provide athlete development pathways?
- What are the roles of coaches, clubs, and federations?
- How should athlete development pathways be managed, changed and enhanced by coaches, clubs and federations?

Athlete selection

- How is athlete selection managed?
- What are the roles of testing, racing and coaches/selectors' judgement?
- How should athlete selection be managed, changed, and enhanced by coaches, clubs and National Federations, e.g. Swiss Triathlon?

Athlete de-selection, non-selection, and retention

- How is athlete retention managed relating to de-selection or non-selection?
- What are the roles of coaches, clubs and federations?
- How should athlete retention be managed, changed, and enhanced by coaches, clubs and federations?

3.3 THEORETICAL AND CONCEPTUAL FRAMEWORK

The research process for this current study, was not pre-determined, it followed an emergent design defined by Pailthorpe (2017, abstract) as:

the ability to adapt to new ideas, concepts, or findings that arise while conducting qualitative research. In contrast to more structured approaches, an emergent design welcomes unanticipated information, often adding to the richness of the data.

Emergent design involves interpretation and developing understanding of research as experience thus providing a more naturalistic, participative process (Garratt & Hodkinson, 1999), informed by the researcher and/or practitioner perspectives (Martin 2008).

3.3.1 Multi-method approach

The focus of this current research is enhancing youth athlete development from a practitioner's perspective. It provides a real-time record, from a head coach in the Swiss Club system and working as a National Coach within an NSO, of the process of trying to implement change (at a regional, national, and international level) in the sports of triathlon and duathlon.

In contrast to mixed methods, a multi-method approach in qualitative research is one in which the researcher combines two or more qualitative methods to investigate a research question or phenomenon (Cresswell, 2015). In this current study, the multi-method approach primarily involved an auto-ethnographic narrative, which provides a reflective practitioner perspective of the researcher's athlete and coaching experiences (at a regional, national, and international level). Onwuegbuzie et al. (2024) argue that auto-ethnography is an important research method, as it allows for experience to be integral to the research, and with other methods used with rigor this approach allows for more understanding of the research.

Triangulation enhances the current study's rigor and credibility through cross reference to secondary data sources, for example document analysis from Swiss Triathlon, results of athlete testing, National and Youth League races, and feedback from athletes, parents, and coaches. This multi-method approach allowed for information and data to be analysed from different sources with the aim of developing more comprehensive findings and innovative solutions to be proposed (Creswell, 2015). This process of trying to implement change

(Kotter & Cohen, 2002) involved:

- Reviewing of the Swiss (*Nachwuchs Kader*) and other countries (e.g., NZ, British, German, Australian and USA *Kader*) systems
- Review of LTAD model and in-depth analysis of the FTEM framework pathways to seek better ways to enhance athlete development within the framework
- Analysis of informal interviews, for example, national/international coaches
- Reviewing testing and racing, for example, athlete results
- Analysis of informal and formal feedback, e.g., athletes, parents, coaches
 - Informal - Discussions with coaches and athletes on camps
 - Formal – Feedback from race system survey
 - Formal – Part of the Project FT with Swiss Triathlon
- Trialing revised model
 - Implementation within the Wildcats Swiss Triathlon Team
 - Implementation within Swiss Duathlon
 - Workshop of new race system and progression at Swiss Triathlon

Bringing all these processes together offered the best feasible way of supporting the key insights developed from the auto-ethnography and establishing an emergent framework for optimal athlete development through the existing FTEM framework. It is argued that the multi-method approach chosen provided the most appropriate way to utilise the benefits of my coaching role, as an insider researcher looking to capture real-time examples and seeking to bring about change. I was also cognisant of mitigating potential limitations, such as confirmation bias and personal subjectivity, by reviewing literature and documents and gaining perspectives of outsiders who are experts in the field and were aware of my coaching context.

3.3.2 *Auto-ethnography*

Auto-ethnography is an auto-biographical form of academic writing. It allows the researcher to draw on and interpret their experiences (Poulos, 2021). Adams et al. (2014, p. 2)

highlighted some key points as to the aims and why such research can be very useful:

- Uses a researcher's personal experience to describe and critique cultural beliefs, practices, and experiences.
- Acknowledges and values a researcher's relationships with others.
- Uses deep and careful self-reflection - typically referred to as "reflexivity" – to name and interrogate the intersections between self and society, the particular and the general, the personal and the political.
- Shows people in the process of figuring out what to do, how to live, and the meaning of their struggles.
- Balances intellectual and methodological rigor, emotion, and creativity.

Poulos (2021, p. 4) states that "auto-ethnography is a method that attempts to recentre the researcher's experience as vital in and to the research process." In this case, the auto-ethnographic method is the starting place to use deep critical self-reflection to see how experiences shaped knowledge and understanding, then draws out and tests beliefs that have been built during my sporting and coaching life. This auto-ethnographical account of the researcher's coaching experiences (at a regional, national, and international level), and as a professional athlete has been supported by triangulation and cross-referencing document analysis from Swiss Triathlon (for example, results of *Kader* tests, National and Youth League races). The researcher has also been working as a triathlon club coach whose programmes deliver athletes into the national system, as well as being part of coaching discussions which seek to generate a good understanding of how the system functions. In addition, during 2022-2024, the researcher was working within the Federation developing the Swiss Duathlon *Kader* system, which provided unique insights into how a system in Switzerland needs to be built while balancing the interests of the Federation, Swiss Olympic (funding source), and the other major stakeholders.

Within the development of the LEAD framework, many factors were considered, including but not limited to, Swiss Olympic requirements, clarity, and ease of understanding for athletes, parents, coaches and other stakeholders, funding restrictions that Swiss Triathlon has, and holding the athlete and their development as the central focus. It is important to have a plan that can be added into any model or framework that a club or federation may be currently using yet can still be used when both resources are limited and when they are not.

3.3.3 *An emerging, evolving model of auto-ethnographic narrative*

The theoretical and methodological approach adopted for this thesis follows the reflective process of practitioner auto-ethnography described by Slade et al. (2020), which outlines three key stages (Figure 16):

1. Allows for a progressive constructive way to create life-history biography or reflective journaling (Angier, 2010),
2. Identifying career stages has provided epiphany or transformative experiences (Ellis, 2012), and
3. Analytical ethnography (Anderson, 2006), supporting the argument through triangulating personal perspectives with other sources archival documents, scholarly literature and discussions with fellow practitioners and stakeholders.

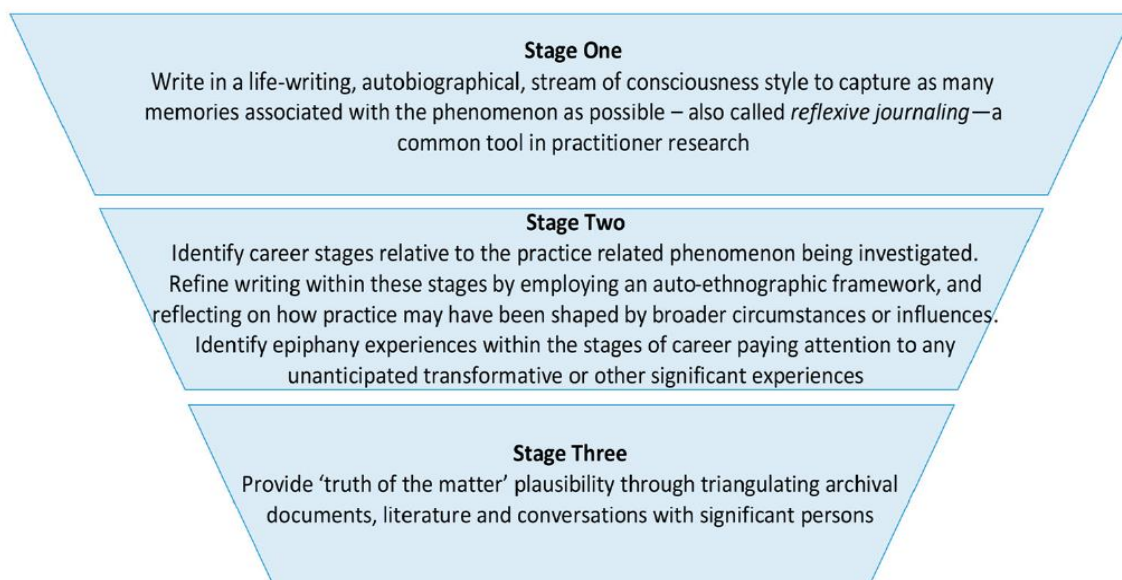


Figure 16 Emergent, evolving model of auto-ethnographic narrative (Slade et al., 2020)

Anderson (2006, p. 378) suggested five criteria to conduct effective analytical ethnographic research, each of which have been followed throughout this current research:

1. Complete member researcher (CMR) status,
2. Analytic reflexivity,
3. Narrative visibility of the researcher's self,
4. Dialogue with informants beyond the self, and
5. Commitment to theoretical analysis.

Slade et al.'s (2020) model (Figure 16) has also informed this current research, as it allows progression, and a clear and constructive approach to the use of auto-ethnographical narrative, but also incorporates other methods to triangulate overall findings:

Stage One

I have had a number of positive learning experiences during my university study, particularly benefitting from critical self-reflection that comes with writing reflective journals. This writing process has allowed me to view thoughts and experiences from different vantage points and examine my own biases that can colour a situation. Then to be able to examine outcomes and how these could be changed, if needed. This cyclical experiential process has been described by Kolb (1984) and Schön (1983), using self-reflection on an experience, then going through steps to adapt what was done if needed. The work of Kolb (1984) and Schön (1983) was expanded on by Gibbs (1988) to provide a more structured reflective process. Gibbs' 6-step Reflective Cycle provides a clear pathway for helping analyse an event or practice, involving: Description of the event; feelings and thoughts – self-awareness; evaluation - judgement about what has happened; analysis; conclusion and synthesis - explore the issue; formulation of an action. In addition, Moon's (2000) sequence of reflection, highlights the importance of utilising a more structured critically self-reflective process, by 'noticing', 'making sense', 'making meaning', 'working with meaning', and in some cases 'transformative learning'.

This process has also made me more inquisitive about learning and personal development, since writing about a subject or event, requires an extremely in-depth level of understanding to be able to write a clear narrative. This insight has meant that writing has become a learning experience about myself, my work, and the pathway I have taken, as well as making me question how I formed ideas and beliefs, thus realising how important that is in the process of learning.

Stage Two

Moving into Stage Two was an important step in critically thinking about the stream of consciousness that Stage One brings. It allowed me to start filtering the important information. During Stage One, I was able to take the reflective process deeper and try to access what were the key moments that have made up my professional thoughts and practices, while at the same time allowing me to see the gaps in my knowledge. During this process of self-reflection, I was able to better understand where I needed to grow as a coach, and where and why I believe that an athlete development framework should be progressed. With the different experiences I have had personally, professionally and with interactions with other coaches and Federations, I was able, through self-reflection, to try and establish a clearer understanding of the importance of my work. Slade et al.'s (2020) model has made this process of auto-ethnography understandable and helpful in getting to the core of this critical reflective process. Additionally, the work on self-reflection by Gibbs (1988), Kolb (1984), Moon (2000) and Schön (1983) has helped me structure and focus information and practices. This critical reflective process has been beneficial to my work as a National Coach, High-Performance Manager, and researcher.

Stage Three

Slade et al. (2020) described this stage as getting to the ‘truth of the matter’. We all have biases that colour our point of view and effect our judgement, however, I have endeavoured to use self-reflection and critical thinking to try and move beyond my own biases. I have also used other methods of data collection and analysis to endeavour to get to the ‘truth of the matter’. This quest to obtain an accurate understanding of what has occurred and why, acknowledges constraints of my own biases. Using other data to come to my conclusions, reinforces that there will always be room for other interpretations of the data. It is my aim to try and to create the best possible framework to allow Swiss Triathlon to manage development, selection, de-selection, non-selection, retention, and for athletes to be happy, healthy, and in the future perform at the elite level.

I have been fortunate to have had access to talk to and be supported by some high-performance elite coaches, such as Gordon Crawford, who have challenged and questioned my training systems and athlete development. Gordon has had many roles as a coach, including being National Triathlon Coach of Switzerland and now the High-Performance Manager for Triathlon Ireland. This review process has led to growth in my own development as a coach and policy maker. Contact with these, and many other coaches, has helped form and solidify my thoughts on coaching and athlete development.

During the past decade I have been able to examine the Swiss *Nachwuchs Kader* system from a coach’s standpoint through reading, and discussion with other coaches, on how the system is meant to work and how it works from the coaches’ point of view. Athletes enter the *Nachwuchs Kader* system at all levels. I have received feedback from many of these athletes on how it works for them, and how they feel inside the system.

I have also had conversations with Swiss Triathlon staff and those involved in setting up the system and maintaining it, plus talking to athletes that are external to my own team to form a different perspective. All these factors together have built up the picture of the system:

1. How it was designed to work, and how it was put into practice.
2. How people running the system view it, and how the system is viewed by National coaches.
3. How the High-Performance manager views the system, and how I view the system.
4. How other coaches view the system, and how my athletes view the system.
5. How athletes' parents and athletes outside my team view the system.

These different stakeholder views have helped inform my review of the Swiss Triathlon *Nachwuchs* development system. I have also investigated other athlete development schemes and looked at the pros and cons of each. This investigation has involved multiple diverse sources: Review of journal articles, development pathway handbooks, and federation websites; informal interviews with federations and athletes. Investigating other countries athlete development systems enabled me to examine the way in which they were designed, and in some cases implemented. Within the English system, I was able to conduct informal interviews with Rick Velati who has been heavily involved with the development and running of the English development programme. Then by researching the LTAD model and the FTEM framework, I was able to triangulate where “optimisations” could happen to help federations with athlete development. The following list summarises these important review and networking opportunities:

- Reviewing the Swiss (*Nachwuchs Kader*) system
- Review of other countries (e.g., British, German, Australian and USA *Kader*) systems
- Literature review of LTAD model and FTEM framework development pathways
- Analysis of informal interviews, e.g., national/international coaches
- Reviewing testing and racing, e.g., athlete results
- Analysis of informal and formal feedback, e.g., athletes, parents, coaches
 - Informal - Discussions on camps and at races enabled them to speak more freely in a natural athletic environment rather than being in a formal interview. Such conversations can also take natural turns and bring in other points of view which make them valuable.
 - Informal – discussions with leading coaches, talking about my beliefs and the thesis, and hearing constant feedback about the direction of work.
 - Formal – Feedback from race system survey
 - Formal – Part of the Project FT with Swiss Triathlon. This work was directly in relation to my thesis, and I was one of the leaders in setting new systems and planning the evolution of the Swiss Triathlon racing system. My ideas from my thesis were used and agreed upon by the group.
 - Implementation within the Wildcats Swiss Triathlon Team and Swiss Duathlon

All systems examined are created with a purpose behind them - to develop athletes and bring athletes to the elite level. However, the ways of getting there differ greatly from country to country. When looking at a system there are different point of views on how it is created, how it should work, and how it does work. No system is created in a vacuum. The person or people designing it are normally part of a National Federation. These designers must meet the perceived needs of the federation. Once a system is designed and put into action, it is hard to change it. Therefore, this development process is important and critical to its long-term success. Once the system is designed, other people within the federation may want it changed before it is released, which may add to or harm a system. Once set, there may be differences in the way that coaches and selectors interpret the system, and if they have the work capacity or personal drive to deliver it as intended. The way this system is perceived by the coaches, athletes and other stakeholders working within it also makes a difference. As the system develops over time, there may be strategic changes within the federation or staffing changes, that can also have impact on the development system, and that is without bringing into play the financial changes that can happen for state funded federations. A system or model must be viewed from all of these perspectives when evaluating whether it is effective and appropriate. This process makes it a very multi-faceted and complex issue. The FTEM framework aims to make this simpler for most federations, yet it is currently missing an athlete care component relating to mental and emotional development. Throughout this reflection process, I have endeavoured to use critical thinking to help keep the focus on building an emergent framework that will help athletes. Edward Glaser (1942) defines critical thinking as involving three things:

1. An attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences
2. Knowledge of the methods of logical inquiry and reasoning
3. Some skill in applying those methods.

Critical thinking calls for a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it, the premises underlying it and the further conclusions to which it tends to lead. I believe strongly that Slade et al.'s (2020) structured process of critical thinking has enhanced this auto-ethnographic narrative, my insights as a reflective practitioner, and the process of creating the LEAD framework. Schön characterises the reflective practitioner approach as follows:

The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds uncertain or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behaviour. He carries out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation (Schön 1983, p. 68).

In addition to the reflective processes noted above, I took care during the writing of the thesis to discuss my reflections with my supervisors, Professor Andy Martin and Associate Professor Geoff Watson. Andy Martin evaluated my reflections from both a scholarly expertise and his personal experiences as a triathlete, a father of three sons who have been triathletes (one at international level), an experienced sports coach, and manager of a very successful kids triathlon series in New Zealand (Martin et al. 2014, 2018). Geoff Watson evaluated my reflections through his scholarly perspective as a sport historian and his experiences in community sport as a participant, coach and administrator. Both challenged my findings and pushed me to make sure that personal bias was not leading the research. Useful discussions have focused on the working of sport and systems, from the past, present and what could happen in the future. Having their depth of knowledge from within triathlon and other sports gave, at times, differing views, which has developed better and clearer understanding. At times there was frustration when some of my ideas strayed from the aims and had to be refocused, however, their questioning has allowed me to critique my work, which has led to the LEAD framework.

3.4 LIMITATIONS OF THE THESIS

The Swiss Triathlon system is only 10 years old, and in the first three years the system was being developed. Testing processes were changed over the period, as well as the range of athletes that should be involved. In addition, different age groups perform different tests, making comparable data sets impossible. Furthermore, the data provided by Swiss Triathlon was also possibly incomplete, that is, with athletes' attendance, for example seemingly random over the first four years. The data for 2020 and 2021 was also affected by the global pandemic of COVID 19, which resulted in limited testing of athletes or testing being carried out in a different format, as well as a limited and constantly changing race seasons. This situation has affected data that would have been of use in this thesis. In 2022 the tests were changed again. There is still a difference in the distance that the athletes run, but the swim distances have become standardised for all ages. There has also been a transition test added into the event, which also tests cycling and running as well. As a result of these changes that have been made over time, it was difficult to retrieve any quality data from a systematic testing process. Consequently, athlete progress through the system cannot be inferred.

The use of auto-ethnography endeavours to analyse periods of my life-history (Angier, 2020). Reviewing where development has happened and how this has affected my perspective of sport coaching has involved critical analysis (Anderson, 2006; Chang, 2016). It is accepted that many of the autoethnographic situations written about within this thesis reflect the subjective opinion of the author. However, this emergent reflective approach to get to the 'truth of the matter' (Slade, 2020) was complemented by a 'bricolage' approach, where other information was brought together to support or challenge the potential biases of my autoethnographic work, which has allowed triangulation and other perspectives to be included in my findings.

3.5 ETHICAL CONSIDERATIONS

This thesis reviews the athlete development system of Swiss Triathlon and uses an auto-ethnographic approach. Other people spoken to or interviewed were shown what has been written in this thesis and were able to make corrections if they wished. When athlete data from testing or race results were looked at, no names were included within this thesis and only trends were looked at or used, assuring anonymity and confidentiality of the data. All testing data and *Kader* system information was provided by Swiss Triathlon. Much of the information is available on Swiss Triathlon's website, therefore the information is already within the public domain. This current research project has been evaluated by peer review and judged to be low risk - Human Ethics Notification 4000025662.

3.6 CHAPTER THREE SUMMARY

This chapter provided a discussion of the qualitative research philosophies, epistemologies, and conceptual framework of this multi-method phenomenological study, acknowledging my world view. The phenomenon to be investigated was in a manner reflecting a social constructivist epistemology, and the research design involved a bricolage approach. The use of ethnographic reflexivity through an emergent and evolving auto-ethnography, was informed by the work of Bourdieu (1984). Triangulation of data collected was in relation to athlete development in the case of Swiss Triathlon through researcher/participant/coach perspectives. The research limitations and ethical considerations are also noted.

It is argued that the multi-method (Creswell, 2015) approach chosen provided the most appropriate way to utilise the experience and benefits of my coaching role, as an insider researcher looking to capture real-time examples and seeking to bring about change. I was also cognisant of mitigating potential limitations, such as confirmation bias and personal subjectivity, by reviewing literature and documents and gaining perspectives of outsiders who are experts in the field and were also aware of my coaching context. Bringing all these aspects together concisely, resulted in valuable insights into how development pathways work and how they are intended to work. These various data inputs were also gathered throughout the time period of the thesis. The multi-method approach brings together information and critical analysis, which has provided filters to create useful information for athletes, coaches, and federations to use. This approach is of importance, as without this insider information, coaches and federations can only hope they are in fact working together to develop athletes for the future.

CHAPTER FOUR

ATHLETE DEVELOPMENT PATHWAY

CHAPTER OVERVIEW

This chapter reflects upon my sporting background (4.1), cycling career (4.2), triathlon and running backgrounds (4.3). A summary of the important experiences and dates are set out below. These are discussed with references to the relevant LTAD and FTEM stages and also with regard to the key themes of the LEAD framework. The phases discussed are:

- **SPORT BACKGROUND:** Learning self-motivation (work ethic), sport as social capital, and experiencing the vagaries of selection.
 - Started Mountain Biking, 1992; Road Cycling, 1993
 - Study at Aoraki Polytechnic, 1995-1998
- **CYCLING CAREER:** Learning the importance of expert coach influence, effective training plans, and experiencing the lack of an athlete-centred training programme.
 - Racing in Europe (Switzerland), 2001; Mita – Medic (Switzerland), 2002
 - Flanders (Belgium), 2003; CK Kronberg (Denmark) Full Pro Contract, 2004
 - Team Pacco (Belgium), 2005
- **TRIATHLON/RUNNING BACKGROUND:** Sport as personal development.
 - Corsair Bay Olympic distance triathlon 2008
 - Ironman NZ 2008 & 2009; Ironman Germany 2008 & 2009; Ironman Regensburg 2011
 - Zofingen Long Distance Duathlon World Championships 2013
 - Lausanne Sprint Distance World Championships 2018
 - Cross Triathlon European Championships, 2022
 - First Ultra; Heaphy Track Ultra 80km 2009; Eiger Ultra Trail 101km to 51km
 - Saltflats 100 mile, 2013; Ultra Trail De Mont Blanc 170km, 2015

During my sports career I was not aware of any athlete development models or frameworks that were being used. The internet was in its infancy and information was harder to access. Although there were regional selectors, very little information ever came from them if you were not in the system. With the advent of social media, however, information about sport, including youth sport, has become much more accessible.

4.1 MY SPORT BACKGROUND

4.1.1 1980s: An active start growing up in Christchurch and FUNDamentals

Key themes and insights:

- Athlete-Centred Focus: Foundation F1 (Learning and acquisition of basic movement) and F2 (Extension and refinement of movement)
- Coach Education: Learning self-motivation and the importance of work-ethic
- Giftedness/Talent ID: Sport as social capital

I was raised in a one parent household, and my mother, Dr Allison Lamont, worked extremely hard during my upbringing. As I was becoming a young adult, my mother returned to university while working and earned her PhD. This work ethic and determination to self-improve to “be the best you can be” has left an enduring mark and expectation on me. I firmly believe that having her example and drive has aided me through all I have done. This work ethic has laid the critical cornerstone for my life. This belief was a major factor in my sporting life, owning my own business, as well as through my coaching, university, and professional development. A constant drive to be better and wanting to learn more and improve, has all been made possible by her. This expectation has also extended to all things that I do, to leave them better than when I found them.

When I was very young, we lived in a small village 40km north of Christchurch, NZ. The primary school was approximately 3km away from our house. I biked there every day from the age of five. It was not normal in the early 1980s that a parent would take their children to school. This distance seemed like an exceptionally long way to me, but at the time it was normal. Running and playing games during the school breaks was normal.

High school was where sports became more important. I went to St Andrews College in Christchurch, a prestigious and expensive private school, which coming from a single parent household, my mother had no chance of affording. I was able to go to St Andrews College

because a family friend had inherited money and sponsored me. As I was not from an affluent household, this set me very much apart from the average St Andrews student's background. There, all students had to do school sport and an after-school sport. Students had to pick a summer and winter sport. Summer was easy as I wanted to play cricket but choosing a winter sport was much more difficult. I did not want to play rugby or soccer, so ended up choosing to play table tennis. I enjoyed cricket and was good at playing it, but with no great talent. The coach of the team was a teacher from school. We had practice, but I never remember any form of coaching or guidance from the teacher/coach. This situation was repeated with table tennis, where I remember practice, but no coaching. During this time, I was also learning to play the bagpipes. After two summers of playing cricket and getting frustrated that I was not getting better, I got an allowance to not do after school sport but use the sport time to be part of the school pipe band. I was still in normal school sport and later took sport class as an elective subject.

In my fifth form year, I discovered cycling – mountain biking. At this point I was becoming frustrated with the pipe band, again there seemed to be a lack of improvement. As I had started cycling, there was a conflict in the timing so I asked the school if I could do cycling as my sport. They said I was the first to request this activity and, after some time they confirmed that I could as long as I presented regular results to show I was competing. This outcome turned out great for me as I had the freedom to train and enjoy a sport outside of school. I did have to regularly prove that I was competing for the school to the Head of Sport. Due to this level of contact and showing results, I achieved my Blues and Colours awards for the school. At St Andrews College, the Blues award was to indicate that you had reached an elevated level of performance within a sport, and when getting this award, a white strip could be added to your blazer, which was part of the school uniform. This award gave me increased social

capital, as noted by Bourdieu (Power, 1999), within the school for having such success. Above the Blues award was the Colours, which was presented to athletes who had reached a level of excellence in a sport. To achieve your Colours was a major achievement at St Andrews College, and you were able to wear a special tie. Although this award had less dramatic impact on the school uniform, the level of prestige for having been awarded your Colours was much higher. Both were especially important honours to gain at St Andrew College, and I was the first ever to have them for cycling in the history of the school.

Both cricket and the pipe band I actively enjoyed, but when I stopped improving, I lost interest. This situation is where a development system and coaching are important to show interest and help athletes improve. This is a critical aspect in my coaching and in the creation of a framework.

4.1.2 Mid-1990s: Foundations at High School

Key themes and insights:

- Giftedness/Talent ID: Talent T1 (Demonstrating of potential) & T3 (Sport specific commitment and / or competition); cycling as personal development
- Selection Protocols: Experiencing the vagaries of selection
- Athlete-Centred Focus: The importance of caring coaching
- Coach Education: Understanding motivation and delayed gratification

As a youth I struggled with self-confidence. I had a learning difficulty, which my mother tried her best to help me overcome. However, I did not work enough to help myself, which meant that I did not achieve scholastically in school as I should have. These factors added to being an introvert and painfully shy. I was a bit of an outcast at my school. I just did not fit in anywhere. My mother was exceptionally good at supporting me no matter what I was doing, and she valued effort that was put in. This work ethic was regardless of whether it was the bagpipes or sport, the effort was what was important, not the results. Then at age 15, I was

introduced to mountain biking by a friend and that first ride was such hard work. I could not believe it. After a couple of rides, it was clear I needed my own mountain bike, and my mother supported me fully in getting a bike and me taking up the sport. My mother did not understand cycling or mountain bikes as a sport at all, but she took me to races and let me go riding. She was happy to see me engaged in something I was passionate about. I started racing my mountain bike, but I was not good at it. I enjoyed it, but it was a new sport for me, and I had to learn. I did as many races as quickly as I could. As I started getting better at racing, I wanted to get better, and it was suggested that I get a road bike to cross train for mountain biking. My mother agreed and I got my first road bike; this moment was pivotal for me! Most notable along this entire process was the unwavering support from my mother. Cycling is an expensive sport, not just the bikes but the entry fees and everything that is needed to race. My mother worked hard for the money we had, and we were not well off, but she did everything she could to support and help me in a sport she had no understanding of at all.

Once I started to train on my road bike, I fell in love with cycling. I started to race on the road more and more, and less and less on the mountain bike. In road cycling I had success very quickly at a club level in Christchurch and was very soon one of the top school cyclists. Christchurch had three different cycling clubs and during the summer, racing was every weekend. This was a mixture of club racing and inter-club racing. I was a member of Papanui Cycling Club and within the first summer, was one of their strongest riders. During winter there was schools racing, held on a Wednesday afternoon, which in Christchurch was the day where we had a shorter school day so that we could play sport. This opportunity is where I really started road racing. Within a couple of months of road riding at schools racing, I was competing against NZ Junior representatives and beating them. One of the NZ selectors at the

time, Bruce Dawe, told me it was a shame I did not start racing a couple of months earlier or I could have been selected for the Junior World Championships. This one comment has stuck with me. I was beating the NZ representative riders despite them having much better equipment, and because of a few weeks I would not be given a chance. At the point I was told the selections had just been made, I had no idea that there was a junior team, nor of the criteria for selection. This example was pre-internet, so Cycling NZ needed input from regional selectors, and Bruce Dawe was one, yet the selection did not allow late comers to come into the team. From this point I really started to take cycling seriously.

Over the last two years of school my focus was cycling and not school. It was during this time that I dreamed of going to Europe and becoming a professional cyclist. Cycling really started to teach me about delayed gratification, where I would work hard in training and the benefit would come later in racing. I was racing most weekends and improving, so I got known quickly in the small but strong cycling community in Christchurch, where there were several group rides that went out on Sunday. There was one main group that left at the same time and place every week, and this was a ride anyone could go on and always did the same route. There was no coaching, but I was learning by listening to and observing everyone – experiential learning through trial and error. Then there were a couple of rides that individuals had, and these were by invite only. I was invited to join a training group with older riders by the ride leader, Stuart Lowe. He was a great rider and was one of the few that had beaten Brian Fowler at his peak (Fowler competed at four Olympics, and won six medals at the Commonwealth Games, including gold in 1990). Being part of this group increased my social capital (Power, 1999) and helped me develop as a cyclist and shaped my ideas on how sport can be a positive influence on someone's life.

Bruce Dawe and Stuart Lowe did what had not been done for me in cricket and pipe band, they showed an interest. I am sure they were not aware of the influence they had. In the LEAD framework, it can be seen that coaches are active in TID, and in athlete care to try and create the same effect that Dawe and Lowe had, showing interest from a high level and encouraging athletes to develop.

My mother had no experience with cycling or what it entailed but was always there with encouragement and support. This gave me the confidence to keep training and racing and helped me to have the confidence to look for my first coach, Tony Laplanche. Laplanche was part of the Papanui Cycling Club. One of the other riders said they were coached by him, so I approached him to see if he would coach me. Laplanche helped me to understand that if I wanted to do well in cycling, I was going to have to work hard. This approach reinforced what I was learning at home, hard work is required to do well. Laplanche said I would not always want to, but the work had to be done anyway. This advice was the first time where intrinsic motivation was being discussed with me. Although it was not put in those words, it meant the same thing, the work had to be done to see the results later. Cycling is a sport where understanding that work today will lead to improvement later is essential to succeeding. As such, it is a great teacher of delayed gratification.

Laplanche fed me stories of Chris Jenner, a former athlete of his who was then a professional cyclist, saying if you want to be good you must work hard, and not just do what I tell you; “I would tell Chris to do 15 intervals, and he would do 20. He worked harder and that is why he is so good.” I was told this every couple of weeks for three years, and after the first few months of hearing this, I pushed harder and did more than was asked. Laplanche’s training methods, which were based around cycling many long hours, steady kilometres, and big gear

hill climbing for strength, yet most importantly, he cared about me as a person first and an athlete second. He wanted me to do well and helped me develop as an individual and cyclist. He often invited me to his house to chat and relax over a coffee or meal. At times it was like being an extended part of the family. Being close to Laplanche and hearing him talk about cycling and the work it took to be good, as well as his old cycling tales, made me want to improve, to train harder. I wanted to be a professional cyclist and although I never met Chris Jenner, hearing all the stories made me want to follow his example. As a result, I would do everything Laplanche told me and, like Chris, a little bit more. Although in hindsight the training he gave may not have been the best for me, the care, support and understanding laid an important cornerstone for me and for my future and are still important to me today. Findings from research undertaken into the team culture and leadership of the NZ Silver Ferns netball team highlighted the importance of developing a caring culture (McCarthy et al., 2021).

Long term effects are important. As a *Nachwuchs* athlete the time you need to be in the sport and develop to reach the top can be well over a decade. The LEAD framework for Swiss Triathlon is trying to take more athletes into the elite squad so that athletes have time to develop. They need to understand that this takes time and that they are allowed to develop. Athletes have to understand that Swiss Triathlon values them and wants to help long-term, which is the approach of the LEAD framework.

4.1.3 Late 1990s: Experiential learning – outdoor education

Key themes and insights:

- Athlete-Centred Focus: Coaching as a role model and mentor
- Managing Athlete Resources: Situational leadership, personal connection, and understanding.
- Coach Education: The importance self-reflection, honesty, and integrity

When finishing school, I really did not know what I wanted to do, and my mother found an Outdoor Education course that looked like it could suit me. The Outdoor Education course was based at Aoraki Polytechnic and was a three-year course to become a qualified Outdoor Instructor. I applied and took the interview but was not accepted. My mother encouraged me to write a thank you note and to ask what would help make my application more attractive next year and I received a nice message in return suggesting some different options. At this point I looked for a job, and after my first day, my mother very calmly asked me how the job was and asked if I wanted to do it for the year. After I answered, she then informed me that I had been first on the waiting list for the Outdoor Education course and that someone had not taken their place and I was offered it. I accepted and headed to live on my own for the first time in another city and start studying Outdoor Recreation and Leadership.

I was very lucky to have Gaike Knottenbelt as the course organiser. He believed in working hard to improve, but also that development is not just skill based, but also how important is showing personal interest in someone and helping their personal development. Sadly, Knottenbelt left Aoraki Polytechnic after my first year and was a real loss to the programme and to me personally. He was an inspiration in the way he cared about the individual, how he showed that you can have fun and be a clown, yet at the same time have everyone's respect. He was the perfect example of how a role model can change a life. This was an important point in my life; the fact that someone can joke and clearly enjoy life, while holding a level of authority was a critical moment. It was my first look at situational leadership (Pill et al, 2021), yet I was not aware of the theory at that time. Knottenbelt was fun and encouraging and at the same time he would be able to stop and give the 'kick in the arse' that is often needed with teenagers. He also helped me understand the importance of self-reflection, and that creating high standards for yourself is part of learning and growing as a person. This one

year with Knottenbelt, helped form me into who I am today. His approach to dealing with the people in our group has left a permanent mark on me. His caring open approach, using humour as a teaching method, while doing so keeping his place of authority is a method I use in my coaching. He is a very special type of person, who was in a position of authority which gave him a high level of Bourdieu's (1984) social capital, yet this was enhanced by his character and the way he led us. He was able to display his vast knowledge, instruct us and lead us on guided learning, which as Billett (2000) pointed out, is where the learner initiates and advances their learning, while being guided through this process by a more experienced person. This type of leadership has been influential in designing my coaching framework.

After this fantastic first year at Aoraki, the next two years were a struggle. The organisers and staff members did not take that personal interest and focused on teaching technical skills, and not understanding the individual and what they needed. Although I completed the course, it was not the enjoyable period of self-development and self-reflection the first year had been. The year with Knottenbelt had been about learning to really believe in myself and gain confidence. For the next two years the leaders were not like that. During my third year we were instructed to do a 20-hour written assignment on one of our specialisations. I was working as a paragliding instructor and spent many hours creating a manual for flying and doing some special turns. At the end of the year meeting to discuss the year with my instructor, the assignment marks were given out. I was told that the assignment was very well done and that it was worth an A, but he thought that I may not have done the assignment myself so I would get a pass mark of a C. This still, some 20 years later, ranks as one of the most devastating things that I have ever had done to me. I was outraged that anyone who knew me would ever think it was possible for me to cheat in this way and that I was not approached before such a decision was made. I protested the change in mark and offered to

show my knowledge and even called where I was working to have them say that they had not done my work. I was given the A grade back, but it really highlighted that if my instructor knew me at all then he would have understood I had worked hard to achieve this level of assignment and would never try to pass others' work off as my own. This was the first real encounter of an organisation not adhering to their own criteria or qualification guidelines. My experiences at Aoraki really show the importance once again of a coach's personal interest and managing a programme effectively. If the staff running the programme had been managed and educated better, the experience may have been better.

I did not train for or race cycling much when I was at Aoraki Polytechnic. I did a couple of local club races in Timaru and a little training, but the outdoor lifestyle and heading away for climbing, tramping, and paragliding did not leave much time for cycling. Once I had finished my course in Timaru I moved back to Christchurch and worked as a paragliding instructor for Phoenix Paragliding. During this time, the weather was not always optimal for paragliding, so I would work in the morning when the weather was good and then in the afternoon would wait and fly myself, but often the wind was too strong. So I started loading my bike in my van and went for a ride when I could not fly. Towards the end of the summer, I would work and then just go home to ride.

It was at this point I was offered a part-time job at Dominion English School as their activities co-ordinator. I was able to train in the mornings and afternoons, plus it provided a consistent form of income which paragliding had not been. Once I started working at Dominion English School, I got serious about cycling again. I joined Stuart Lowe's cycling group and everything I did was focused on cycling. I still had Laplanche as my coach, and I trained hard. Normally I would train twice a day, once early in the morning before work and

then once after work. On Saturday I would race and go on a long ride Sunday. During this time, I had also rejoined Papanui Cycling Club and was one of its strongest riders. I was also nominated as Club President by Dr John Hellemans. This selection had come as a surprise as I was 23 years old and being part of the club committee was a new experience. This recognition from Hellemans, who was and is a well-known sports doctor and sport figure in triathlon and cycling, was a great honour for me. I had seen him on TV talking about triathlon and the athletes he was training. If anyone needed to see a doctor, it was only ever Dr Hellemans who was recommended. His opinion and skill as a doctor were highly valued. This appointment added to my social capital (Elaine, 1999), as having such an outstanding person nominating me was an important boost to my confidence.

4.2 MY CYCLING CAREER

4.2.1 *Early 2000s: Learning to train, training to train, elite*

Key themes and insights:

- Giftedness/Talent ID: Talent T2 (Talent Verification) and T3 (Practising and Achieving)
- Coach Education: Learning the importance of expert coach influence and effective training plans
- Athlete-Centred Focus: Experiencing the lack of an athlete-centred training programme
- Managing Athlete Resources: Bridging the gap between being a good junior and a professional cyclist

In the early 2000s, I was still working with my first coach, Tony Laplanche, and after three years of hard training, racing, and working, I wanted to go to Switzerland and try racing in Europe. After I finished my study, I had started working at Dominion English School as the Activities Co-ordinator for overseas students. The working hours were acceptable for training, I could start at 10am, training before work, finish at 5 or 6 pm and then train after work again. At times, working between 30-40 hours a week was not great for recovery, but this job allowed me to focus on cycling. Although this left no time for a social life, I was dedicated to training and racing. I had a few contacts and I planned to go to Switzerland in the NZ winter of 2001. I organised a leave of absence for three months from my work and headed off to try my hand at racing. I had a place to stay and that was about all when I finally arrived in Winterthur, Switzerland. After a couple of weeks, I contacted an elite team called Mita-Medic, and as they had had some bad luck with sickness and injury, I was able to start with them. This situation is where I learnt that luck is also a real thing in sport. This becomes more apparent as a coach when you see athletes giving their best and just being unlucky with events such as a bike issue, a crash, or even sickness. These events can be beyond anyone's control, so it is important not to dismiss the ability of an athlete simply because one particular result or test may be below the stipulated level. It is the process of getting to know the athletes and what is happening in their development, that yields much more valuable information than relying solely on test or race results.

Going to a country where I did not know the language was a real learning experience. I had to manage everything for myself for the first time and doing this in a country that was completely different to everything I had known made me become much more independent. This was an amazing opportunity for me, I raced hard and towards the end of the three months started to race well and impressed enough to be given a contract for the 2002 season. During this time riding with some of the team, I realised that I was not strong enough and that I needed to get better if I wanted to race well in Europe in the future. When I got back from Switzerland, I knew I would need to change my training approach if I wanted to develop for the next season. I talked to Laplanche about the situation and we both decided it could well be best to look for a new coach. I talked to a number of possible coaches, but it was hard to find one I wanted to work with, who also had space to take me on as an athlete. I then talked to Tim Carswell who was an excellent cyclist and had represented NZ at the Olympics on the track. I had also raced with him and we got along well. Carswell coached a couple of athletes and was looking at heading into coaching. He had mainly worked with track cyclists, but after talking to him I believed he would be able to help me and my performance.

Carswell's training was different from Laplanche and was the first time I worked in cycles of three weeks of building, and one easy week. This system is called mesocycles. My average training distance and time increased, and like Laplanche, this stage of training was very much long slow distance. My training volume went up to over 1000km a week, which was approximately 36 hours of cycling. I was also working 40 hours a week. From Carswell's training, I did get a performance increase. At times, I was very tired, but I enjoyed the time and the training. I felt much stronger, and I was racing well in Christchurch. Even during the big weeks of training and work, I could still race well on the weekends. We had the long-term goal of racing in Switzerland in 2002.

My weekends did not leave much time for anything other than training. Most weekends I would ride between 300 and 420 kilometres. Due to not being able to train during the day, as with Laplanche, I would train early morning and in the evening. I quit my job and headed to Switzerland for the 2002 season to race as an elite cyclist for Team Mita-Medic. I was excited to be going to Switzerland for the first full season and looking forward to the opportunities ahead. However, I did get a massive shock to the system right from the start. I was not prepared for how cold it was at the beginning of March and struggled over the first two weeks in Switzerland to get the training done, until we went to Massa Maritima in Italy for a two-week training camp. This was amazing, and a completely new experience for me. At training camp, I was one of the stronger riders and the work that I had done with Carswell was showing its benefits. Over the two weeks my confidence for the season really increased and I was ready. When I left NZ, Carswell and I had spoken that I could not afford to pay him while I was racing in Europe. We had made an outline of a plan and I would also train with teammates. During this time Carswell kindly offered to be an advisor if needed.

Then came the racing, and I started to struggle. The intensity and speed of the racing was too much for me. It is important to remember that communication back to Carswell in NZ in 2002 was not easy, email was the only way, and often I did not have access to a computer. When I wanted to access a computer, I would have to go to the library and the hours there were not always convenient, as I was also working. If the library was open, I often had to wait for a computer to be available. Carswell suggested interval sessions and I started to do them, but I did feel that without a coach controlling my training and building into my plan what needed to be done, I was not performing how I wanted too or training how I should.

This is where communication and coach awareness of what is happening for the athlete is so important. Of course, access was more difficult than it is now, but still, I believe that communication is key and helps the coach really understand what is happening for the athlete. With easier communication Carswell may well have been able to help me more. I became very despondent during the 2002 season in Switzerland. This coupled with my first real brush with depression, also highlighted how hard and sometimes dangerous it is for an athlete to be left alone. Depression can arise when an athlete is performing to their expectations, but especially when they are not. Again, due to the communication situation it was hard to contact my mother, who had, as always, been there when I needed help. With digital communication tools such as Whatsapp, Zoom or Skype, it is now easier to stay in touch and get help, but these media platforms are still different from meeting in person. This type of communication needs to be a consideration within a centralised system when you are taking athletes out of their normal environment and their support structures. This change can have an enormous impact on an athlete. Over time it may improve for the athlete. For some, this may be a huge positive and for others a negative.

During the 2002 season I was thinking of what I should do for winter. I knew I would have to work and also, I was trying to plan my 2003 season. My Mita – Medic team was folding, and I knew that I needed to go somewhere else to try and race. Carswell put me in touch with a team in Belgium called ASFRA Flanders. I contacted them and they said that I would be welcome to come and ride for them. Details were very few, they just said to contact them when I would arrive, that I would need to get to Oudenarrde, and they would pick me up. For the winter I was able to receive an Ancestral Work Visa for the UK. With the higher pay and not having to pay for a ticket back to Europe, I believed this would be the best option to try. If it did not work, I still had a return ticket to NZ, although that would expire within a month

of going to the UK. I was able to find accommodation for a week or two at the maximum in the UK with a friend of a friend. This situation meant I was under pressure to find work and accommodation. When I moved to High Wycombe, England, I was very lucky to find a job and a new place to live within seven days. On the first weekend of riding, I met some cyclists and they told me about a group ride that went out every weekend. The next week I joined them and met up with Rob English, a good cyclist. As I did not have a coach at this time, it was good to have someone to train with over winter. We trained most evenings together in the cold and dark winter. English and I did as I had done in the past, long slow distance training. I also did some racing in the UK, but only as part of my training.

The move to the UK was hard for me. Making this choice and staying in Europe while working was a tough decision. It would have been much easier to go back to NZ, stay at home and find work there with less pressure, as well as being able to train in summer. But I chose the harder path to try and make more money, but it meant having to be much more independent and not having friends or family to help, plus having to train through an English winter. On all fronts except money, going to the UK was not the best choice, but this experience made me stronger as a person and I believe more resilient as an athlete. While this worked for me, it might not for most athletes. It was a hard choice, and I was fortunate that I was able to find work and meet Rob English. Yet if going to the UK had not worked out, the results could have been very disastrous.

This is an important lesson when dealing with young athletes if they are moving away from home for a centralised system or moving for work, the support an athlete has is important, as is how they react to the situation. During this time of my cycling career, there are many learnings. A change in situation can have a big effect on performance. Just because an athlete

commits to training and racing does not mean that their development is automatically assured. A change of training location, school, or coach has different effects on people. These changes can affect development, and athletic performance is the outcome of so many inputs. If an athlete experiences a loss of form or a dip in performance, coaches and stakeholder need to address this with care and understanding. Not just judge without knowing the circumstances. This understanding is an important part of a development framework.

4.2.2 2003-2005: Training to compete, training to win, mastery

Key themes and insights

- Managing Athlete Resources: Elite E1 (Senior Representation); E2 (Senior Success)
- Athlete-Centred Focus: The importance of athlete well-being and resilience
- Selection Protocols: Testing is different from racing

In the Spring of 2003, I headed to Belgium and into yet another completely different world. It was a real shock to the system. Belgium is different to everything I had experienced; the buildings, the people, the streets, and the racing were a shock. The Flanders team was about 10% organised and 90% find out and do it yourself. For example, I had contacted the team to say when I would arrive and was told that once I arrived at the Oudenarrde Train Station to call and they would come and get me as they lived close by. Once I arrived, I called, and they said they would be there very soon, so I waited and three hours later they arrived and drove five minutes to the team base. Why I had to wait three hours, I do not know nor did they say anything about why it took so long. They had a room in a flat for me and said I would be sharing with an Australian coming in a couple of weeks. In the rest of the house was a Polish family - not a very nice group of people. This meant I spent a majority of my time in my room or training. After a few days in Belgium, it became easier to understand the system and to find races, and in Belgium there are many races. At the time I was there, a magazine came out every two weeks and in it was a list of races in each area of Belgium, and from this I

needed to look at maps and workout where each race was and the distance involved. As I was in Belgium early in the season there were only a few races each week and not many near where I lived. Due to the limited number of races, this meant many riders turned up to ride. Racing in Belgium was different to every other kind of event I had experienced. Entering the race was done in a café, which in Belgium means a bar, and was full of old men smoking, drinking, and watching the riders very carefully. Watching the riders, I found out later was because they could bet on the race, and they were trying to see which riders they wanted to bet on. My first race was 120km on a 6km loop course. As this was really early in the season there were many riders; 280 were on the start line and most really early. I was warming up and got to the start just before the race began so was near the back. I stupidly thought this would be fine, as for 120km there would be a nice roll out like in NZ and Switzerland and I would have time to work my way closer to the front before it really got hard. This was not the case at all. Within one km of the start, we were at 58km/h and going through corners faster than I ever had! The pace just kept going up and I was quickly off the back. I watched in amazement as the race just kept going at that pace for the first hour and then, once the race was broken into groups, the race pace settled down a little.

Showing how little, I really understood at that time, I carried on training as I had in the past and also joined a group ride that was fast, but the racing experience did not get better. I may have got smarter about getting to the start line earlier, but the high race pace and my ability to stay in the races did not change. I was quickly out of the races and felt frustrated and started to feel depressed. I knew I could do it; I just could not work out what I was doing wrong or why the racing was just so far beyond my limits. I was really starting to think that I just could not do it, maybe it was just a dream. I had to try something different before I gave up. I talked to the Flanders team manager and asked about a Belgium coach, he answered, “Why do you

need a coach, some people can race in Belgium and others can't, you will get better, maybe.”

This was not what I had been expecting to hear but I was lucky another rider overheard the conversation and pulled me aside and said, “If you want a coach here, call Andre, he may be able to help you” and he gave me the number for Andre. I called Andre and explained what I wanted, and he invited me to see him. I arrived and he put me straight onto an old exercycle with a heart rate monitor and told me to ride at a resistance value for twenty minutes. This test is now what is known as a Functional Threshold Power Test but it was a set value sub-maximal test. The basic idea was to find out, using a set resistance on the exercycle (power would be used now), how hard I had to work to maintain that effort for twenty minutes. From the test the only thing that interested Andre was the heart rate download, due to the other parameters being set. This activity was the first time a coach had done this type of testing with me, as at the time the training data/technology we now have was not available. Once he saw my heart rate profile, he looked at me and said, “You should not be racing, you are not fit enough.” This shocked me. I had done so many hours of training and thought I was prepared for the season. He then very simply wrote on an A4 piece of paper, two heart rate zones and gave me the following training: 30 min Zone 1, 60 min Zone 2, 30 min Zone 1, and do this twice a day. I had to ride next to the canal, as I was not fit enough to ride hills and was not allowed to race for at least two weeks. Andre instructed me to do this for two weeks and come back and see him. I left Andre and did not really know what to say. I kept looking at this basic sheet and was thinking this cannot be it. Andre was the first coach that I believe really understood some of the physical adaptations needed for racing. This coaching knowledge was important to understand, knowing the required physical level that was needed to race. The testing allowed him to see this, even though he had never seen me ride my bike, race, nor seen any training.

The next day I got ready and was looking forward to starting my new programme. Once I got on my bike and started to ride and lift my heart rate up to the Zone 1 rate, I knew I was in trouble. The warm-up was harder than I would normally have been 'training' at, and after Andre's warm up was done, I found it hard to lift the pace for an hour. I was pushing as hard as I could just to stay in Zone 2, the level of effort felt astronomical, and seconds felt like minutes. The first hour of Zone 2 was the hardest training hour I had ever done. That first session showed me just how unprepared I was to race. Then I had to do that again in the afternoon. That first week was a real struggle and I could not have raced if I'd wanted to. The training was killing me, I felt completely wiped out after every session. The other riders saw the state I was in after training and just said I was going too hard.

However, I kept following the plan and towards the middle of the second week I was getting into the rhythm that was being required, and it was getting easier to work at that level. I was looking forward to going back to do the test. Andre asked if I had done the training, he had asked me to do, to which I replied yes. So on to the exercycle for the test. Once he looked at the results he just said, yes you have done the training, and I can see the improvement. He said many athletes say they have done the training, but have not, and there was little improvement, yet when you do the work, the improvement is there, which was the case with me. He said do the same training again and you can race on the weekends, but only the weekends, and the day before the race just one session in the morning. Off I went and followed his instructions. The first race on Andre's plan was the best I had had in Belgium. I finished the race and only just missed out on prize money. As I could feel the difference, I carried on following this simple but brutal training regime, and the hard work it involved. After another visit and another test, he changed the training a little, but the basic session stayed the same.

I did this at least once a day for the whole season, but what was critical to this experience was in six weeks I went from not being able to finish half a race to winning prize money.

Teammates used to ask to come training with me, because they had seen the change in my racing, but all of them only ever asked once, and mostly did not survive a complete training session. These athletes used to complain that racing in Belgium is too hard and that everyone must be on drugs to race as hard as they did. This training showed me once again how important is hard work, and pushing your limits to be the best you can be. Thus, reinforcing the critical lessons first learnt from my mother. I believe that my mother teaching me early about hard work, honesty and integrity was a major part of the development of my cultural habitus. Andre's coaching really showed me about keeping the basics simple and doing them day in day out with consistent effort over time.

During my time as a cyclist there was a large amount of doping, yet for me it was never an option. I believed, and still do, that being honest to yourself is more important than the results. Honesty and integrity were part of my upbringing, and critical to my self-image. I had teammates and flatmates that doped and, at the time, I was annoyed and hated it. I also found it ironic that often the cyclists doping did not train hard and therefore they could take as much as they wanted, and they still could not race well. I lost any respect for them, and this loss of social capital meant that I no longer associated with them or helped them in anyway. There was doping control during my time racing. It was very random, and I only got tested three times. My first one shocked me, the control people were genuinely nice and friendly, and they walked me through the process. One of the first parts of the control is telling them what medication you were on and giving them the doctors allowances for the products. The fact I did not have any was a surprise to them. I was asked if I had taken any medication. I got scared because the race was 220km long and during some of these long hot races I got

cramps. I had been told and tried taking an Aspirin to help stop them. I told the doping control people about taking two Aspirin, and asked if this was going to be an issue. They looked at each other, laughed, and said no Aspirin was not an issue. They then asked what else I had taken and when I said nothing, they seemed a little shocked and we proceeded to the sample collection. This was strange to me; my cycling shorts had to be at my ankles, top up to my ribcage and arms not covered. They had one person on each side of me to watch me pee. Then the samples were split and that was the end of my first doping experience.

During this first season of racing, I was building social capital in Belgium without knowing it. Once I started to race well, it was not just the riders I knew who noticed the difference, the other racers did too. The best example of this is once I started to be able to complete races, I would move to the front of the race. There I would have to really push in and the Belgian riders would try and keep me out of the pace line, and when I got into a small group in an attack they would not work with me. In the latter half of the season there was a change. I would move forward in the race and the Belgians would let me into the pace line and in an attack they would work with me. They now knew I was strong enough to help and work. This change was in riders I did not know personally nor had ever talked to, but the social capital was received by earning their respect.

During this first season working with Andre there was one especially important moment for me. Before I went to Europe to race, I had been part of a study at Canterbury University, for a student's PhD, looking at the difference between athletes doing normal training and athletes using an altitude simulator. As part of this, I was taken through some lactate tests and given heart rate values. At the time I asked the student about the lactate threshold because in the test it was lower than my average heart rate during racing.

The student was very dismissive and told me I was wrong, and it was not possible to race like that. I offered to show him data and was again told I was wrong and that cannot happen. I left the issue feeling confused and could not get a clear answer until I talked to Andre. Andre noted that of course it is, why wouldn't it be? During racing hormones, nervousness, and mental willingness to push harder, play a role that they do not in a test. Therefore, the test is different from racing. This moment was like a light going on for me, such a simple clear understanding of an athlete, and not being totally fixated on just numbers which can change due to situation. Testing has become a recurring issue. I have talked to many athletes about testing and real-life racing and most say that they cannot go to their limits in lab testing. Most need the element of competition to push to their limits. I have even noticed this limitation with my athletes during Zwift training sessions. Many athletes are limited on how hard they can push but get them to do a race after training and they produce so much more power. Because Zwift is an online cycling system, the athlete's environment has not changed but the internal motivation changes. This is an important point to remember.

As a note on testing, many federations use testing and see it as part of development tracking. It needs to be understood that testing does have limitations. As indicated by Swiss Olympic (2017) in a meeting about their *PISTE* system, that the better a test replicates as close to possible the sports event, the more predictive power the test has (Pinder et al, 2011). As a result of this, we need to understand that although the tests can be used to show development, they may not be a good predictor of race performance. On the other hand, there are many factors that affect the sport environment. To make a test close to a sport event means that it is not as repeatable and therefore can lose its ability to be compared to past tests. This would also indicate that testing should be weighted appropriately and not as a direct comparison to racing.

In the winter of 2003/2004, I once again headed to England for work. This time I was really lucky and Rob English, who I rode with the winter before, helped me find work in a bike shop as well as offering me a place to stay with his mother. This made my winter planning much easier, and I was able to train well and hard as well as working and learning to be a bike mechanic. I needed to train in the dark and cold, but having a good job and place to stay made a big difference. I was also training with a plan from Andre. During the early part of the off season, I was offered a Professional contract with a Danish Pro team, CK Kronberg. This was a small team and had been running for two years. When I called ASFRA Flanders to say I had been offered a contract, they also offered me one with their Professional team. This left me in an interesting position, I suddenly had two offers, yet only one had sent me the contract. In hindsight I should have pushed Flanders for a firm offer, but I chose to sign for CK Kronberg. I was also offered a place to stay with a family in Belgium for the next season, and when I spoke to them, they were fine that I did not race for Flanders. Even though I was racing for a Danish team, I could have a base in Belgium. I thought I was in a great position for the 2004 season and worked hard to get better. I headed to Belgium early for the 2004 season. The early season was completely different from the year before. The racing was just as hard but I was ready for it, and did well getting prize money from the first race. Then I headed to Denmark to start with the new team and to ride in some early season races there. The Danish experience went bad right from the start. The team's bike sponsor provided terrible bikes, the team did not really have a place for me to stay, so I was sleeping on a sofa that was too small. I was tired from winter and found that in Denmark I was really unhappy and just could not recover.

In one race I worked for the team and then had a flat tyre. I rode back to the race and once again worked for the team, then had another puncture and once again got back to the bunch. At this point a break had gone from the front and I was not in it. I was questioned by the team manager (and rider who was in the race) why I was not in the lead group. I explained and he was angry with me for not being in the front group. The team rider that was in the front group came to my defence and said I had been working for him and that without me he would not have been in the front group. This made the team manager a little less upset, but he was still unhappy. I could not understand this situation as all the other riders from the team had not helped and I got in trouble? Within a few days of this race, I went back to Belgium to carry on racing there and raced well. I started getting good results, was in contact with the Danish team, and I was the only athlete getting regular results. I stayed in Belgium and got results for the team there.

My Danish experience was not a comfortable one, and I still feel confused and upset by it. The team promised so much and delivered nothing. The issues with the team manager made the situation very uncomfortable. I was fortunate to have a place I could go to in Belgium, but without this I would have been stuck in Denmark and been very unhappy. If this were the case, I would have had very few options as I was contracted to the team and could not find another team until the next year, or I would have had to go home. Nowadays, with modern communication it can be easier for athletes to have a support structure when in difficult situations, but the options athletes have are still very limited if they are in this predicament. When young athletes are looking at signing contracts, they need to understand what they are signing and make sure that teams can deliver what they say they will, as well as making sure they have a fallback position.

The experience with my Danish team helps highlight what was stated earlier about a centralised system. When I was with my team in Denmark, I lost all my support structure, and communication to my network of people was very limited, so I was left feeling lost and unmotivated. The culture of the team was very different to what I was used to, and although the members of the team were friendly, it was not a supportive environment. These aspects really affected how I performed in Denmark, and once I left and headed back to Belgium and the environment I was used to and enjoyed, my performance improved considerably. My own experiences demonstrate that the environment and culture the athletes are in does have a major influence on them and their performance, as suggested by Walinga et al. (2021).

During the 2004 season my mother asked me to head back to NZ for the European winter. She was concerned about my grandmother and wanted me to go home. The thought of heading back to NZ was attractive for many reasons, seeing my family and getting to train in a summer rather than another winter in the UK. The downside was my girlfriend Verena, who was German and studying in university, would not be able to come with me. My mother paid for a ticket for me to go to NZ and after discussion with my coach and team, I headed back.

I was also looking for a new team and got offered a place on an Elite Belgium Team Pacco. Pacco only took on good riders and were a force in Belgian cycling. Getting to race in their jersey was huge social capital and when other cyclists saw the Pacco uniform they knew it was going to be a hard day. This added to the self-esteem I had built over the previous two years of racing in Belgium by racing well and athletes knowing who I was and how strong I could ride.

Also, just before heading back to NZ I asked Verena to marry me. I also decided that 2005 would be my last year as a full-time athlete so I headed back to NZ to get ready for the next season. This would be a massive change for me but I knew it was the right time. Many things would change but I was really looking forward to it. Back home, I was mainly using Andre's training programme and also joined Stuart Lowe's riding group again. The first ride with Lowe's group really showed how much I had changed as a rider. I was riding my old bike from NZ as I did not take my European bike home with me. Although the bike at home did not feel quite right, once we hit the big hill climb, I just rode away from the group easily. I had never ever been able to do that in the past, and it felt easy. I was strong. Cycling often classifies athletes in specialisations, one of these is a climber. This is someone who can climb mountain passes very quickly, one thing I had never been as a cyclist was a good climber!

The next part was to find a job to make some money. I had reached out to some old contacts about working in a bike shop but nothing was forthcoming. I headed to the local small bike shop to see if they needed a mechanic. I walked in and nearly did not ask, as the shop looked fine but more for designed for children than previous shops. Finally, I did ask and got a positive response. Tony Weeks, the new owner of the shop had been looking for a mechanic but had not found anyone and had stopped looking. I offered to work for a day and see if I was what he wanted. I got the job and started working in Cycle Workz. Weeks and I got along and worked well together. Within a couple of weeks he felt comfortable with me there to take some time off, which he had not been able to do in the past. As the summer went on, we talked about the future for both of us. We talked about a partnership in the bike shop, then he suggested I should buy it from him.

After talking with Verena and my mother, we all decided it could be a great plan for the next year. The biggest talks were with Verena, as she would still have a year and a half of study to go, and she would be in Germany, and I would be in NZ. This was going to make our long-distance relationship (her in Germany and me in Belgium) into a very long-distance relationship. Still, what it meant was that when she was finished, she could come to NZ, and we would already have a base and a business running. I was not fluent in German at all so me working in Germany would be difficult. Many sports people, when they finish their sports career, feel lost for something to do, as they often do not have skills they feel are suitable for the work force. By purchasing a bike shop, I would be able to have a goal to work for. I headed back to Germany in late February to see Verena and to get the last month of training done before heading to race for Team Pacco. The winter that year in Germany was very cold and it made training difficult, but I had done it before and just needed to get the work done. Heading into my last season it was very bittersweet. I was looking forward to a new chapter of my life but had not reached the full limit of my potential. Heading to Belgium for the start of the season, I was racing well and had solid results, yet I knew there was more in me. As the season went on my form started to come and my results were tracking up. I was looking forward to the last half of the season. At a competitive race in late June, I got a solid sixth place and tactical mistakes had cost me a better result. The next day I was out on a recovery ride and got hit by a car and broke a bone in my hand. I was devastated. It was the first bone I had ever broken, and it came just as I was really hitting good form. There was nothing I could do; it was going to be six weeks in a cast and because of the nature of the break, I could not put weight on it or ride properly for four weeks. I got an indoor trainer and started to train to see if I could keep going, but it was clear that it was the end of the season and cycling career.

One of the issues I personally have about my time cycling is that I was never selected for a NZ team. I was good enough but was non-selected. It is the one thing I wish would have happened during my time racing and still find it unfair I was not selected. However, my non-selection for a NZ team, did not change my motivation or love of the sport. I wanted to race and compete. I wanted to get better and develop as an athlete. The reason for me racing was not to be on a NZ team but it would have been a great reward along the journey to become that best athlete possible. I was retiring from cycling as it was the right time not due to de-selection or non-selection. Yet if I have been within a federation or club, I would have expected to have been asked why I was leaving? This is a process that is used within the Wildcats Triathlon Club when athletes choose to leave, to make sure that we are doing what we can to retain athletes' long term.

4.3 MY TRIATHLON AND RUNNING BACKGROUND

4.3.1 *Mid-2000s: Active for life, sport as personal development*

Key themes and insights:

- Talent Transfer: Leaving the FTEM framework
- Coach Education: The importance of physical and mental training
- Athlete-Centred Focus: Athlete well-being and awareness of depression

After marrying Verena, I headed back to NZ in the middle of December so I could take over Cycle Workz on 1st January 2005. As Verena would be carrying on with her study in Germany, I would be alone in NZ. With the loss of racing, I was able to turn my normal training effort into working in the shop. Added to this, the pressure I felt from having debt had me working long hours, which from week one was 70 to 80 hours a week. From this I was able to quickly increase the shop's turn over, which made servicing the debt fine. I set very high expectations for what I wanted to achieve with the shop. For 18 months, I was focused on working hard but I was really missing sport and activity. The natural thing to do was start cycling again. The issue with cycling was I knew I did not have time to start riding again, and with the time available to train, I would not get my fitness up to a point where I felt satisfied. I thought I would try running, which for an ex-cyclist was a major undertaking. I still remember the pain and suffering of that first 17-minute run. Half-way through I thought I was going to die. I had sore muscles for three days, but I kept trying and after about a month I could run slowly for 40 minutes without dying. After six weeks I had built up to one hour and this was a major achievement.

Because I like working towards a goal, I started thinking about doing an event. I considered running a marathon. Then I thought why just a marathon as there is no cycling, and a marathon changed into an Ironman triathlon: 3.8km swimming, 180km cycling then a 42.2km marathon. I was running an hour but not cycling and not swimming. There was an Ironman in

Frankfurt, Germany, where my wife was still studying dentistry, and this made Frankfurt a great place to look at doing a race. I started looking for races in November, and the Frankfurt Ironman was at the beginning of the following July. I thought I could try and get fit for that, but the registration was closed, and the idea left my head for a couple of weeks. But I kept thinking about doing an Ironman, and in the end, I wrote to Ironman Frankfurt, explained my position, and received an email saying they would have a few places that would be offered online in January. As it was now mid-December, I did not see any harm in waiting. But in the meantime, I saw that NZ had an Ironman and that was in March but felt that event would be too early. Now I was running an hour at a time and riding my bike on the weekend but had not been swimming for 10 years. At New Year, after a couple of whiskeys, someone said I should just sign up for Ironman NZ as it was closer than Germany. So, I did, and then panic set in.

On 3rd January 2008, I started my Ironman preparation for a race in three months' time. I called Aquagym to find out about swimming lessons, and was asked how old my child was, and had to explain it was for me. This started panic training. I contacted Scott Molina, who was an ex-professional triathlete and a coach. I had met him years earlier and asked if he would help me put a plan together not only for Ironman NZ, but also by this time I had also signed up for Frankfurt Ironman. Molina's training plan required a huge amount of training, which I had been used to, but as a business owner this became hard to manage. In the end I was still working 70-80 hours in the shop and training 20 hours for Ironman. This worked well leading into Ironman NZ in Taupo but after this race I really started to struggle. I could not understand at the time what was going on. I was getting fitter and training hard, but I was feeling extremely flat and tired all the time and was unable to complete training the way I wanted or expected myself to. After a run with Molina, he saw something was wrong. I

decided I should see the doctor to get blood tests. The doctor also sent me to get my heart checked and some other tests. The EKG showed my heart was abnormal but to be expected having been a professional sports person, and everything else came back fine. I was at a loss to what it could be, and after talking to my mother, who had a doctorate in psychology, she suggested it could be mental. We talked through the warning signs of depression, what can be done to avoid it and strategies to recover from it. She also pointed out the mental and physical pressure I was under, long hours working and running my own business, which included servicing debt at a higher than required rate, plus adding in training and that we were heading into winter. My mother helped put all the issues and factors into perspective. This was integral as it was evident that I scored highly for the warning signs for depression.

Knowing my own personal warning signs for depression really assisted me as I could try and manage some of it, and I could and did talk to my mother. I continued to work and train, and with a new staff member at Cycle Workz, I was able to take a couple of hours once a week to do some training. I felt guilty for doing this but I more than made up for it over the week. Yet this couple of hours made a real difference. I completed more Ironmans and shorter triathlons and had also started my own Sunday ride group. The business was running well but I was still putting in massive hours, working very hard to make the business successful. After having Cycle Workz for four years and created a successful business, my wife who had finished her dentistry study and had started her two-year probation time as a dentist in Germany decided that she would not come to NZ, as had been planned. We had been going through all the information and paperwork required for her to come to NZ. It was problematic just for her to stay in the country, added to this were the difficulties of transferring her qualification for NZ recognition. It was exceptionally daunting. This was a factor in the choice to stay in Germany, but mostly it was that Germany was her home and she did not want to leave. This

left me wondering what to do, but in reality, the choice was clear. I started the process to sell my bike shop and move to Germany. After a few months this was accomplished. Once again, I had to start from scratch, which included learning German, which I could not speak at all. Because I was also emigrating to Germany, I was required to do an integration course, which involved a German Language course and an exam to reach B2 level, the minimum required to be able to communicate in German, as well as a test about German history and culture. Once I had arrived, we went to the local town office to register and to find out about starting the course. Registration was easy and as it was the first time they had had a New Zealander living in the area they were quite excited. They were interested in why we wanted to live in Germany when everyone in Germany seems to want to move to NZ? The registration for the integration course was another story and proved much more difficult. I had just missed the start of one course, told it was a bad group and they would not let me join. We did ask what was meant by a bad group and we were told that they did not want to learn German nor integrate! I was put on the list for the course starting in April, and it was currently November. Though this was a little bit of a setback, I thought it would be good as I could train for my next Ironman and have time to relax after close to five years of hard work.

It did not work out as planned, and I learnt that when I did not have anything really to do, I got lazy. I was in a country where I could not communicate to anyone other than my wife. I had no job or any fixed point in the day where I had to do something. This was the first time in my life I could remember where I had no real goals. The Ironman was in August the next year and I had no pressure to train or work. I found myself with time but no drive to do anything. After a few months of this I was driving myself crazy with how much time it took me to do nothing. I was happy once the German course started as at the same time, I was offered a mini job at a local bike shop. A mini job is a tax-free job in Germany. This is a way

for a person to have some work without needing to pay tax, but the income is limited to 400€ a month. Having work and starting to learn German assisted me get moving and increased my motivation again. It had surprised me how much I had just stopped. I had not expected that from myself as I had in the past been so motivated and driven. This started to show me also how important it was for me to have goals and structure of some kind. With these two things, it was easier for me to get everything done and I seemed to have more time in a day.

In August 2011, I completed Ironman Regensburg, I had trained for it without a coach and my training was going fine, until six weeks before the race when my bike broke and it took five weeks to replace it. The week before the race I was sick. It was uncertain if I would be able to start the event, but I did, and while I did not come away with the result I wanted, I was satisfied with what I achieved on that day. During the training for Regensburg, I had met a German named Joachim, who was a runner. We started running together and we started to plan to do some ultra-marathons. An ultra-marathon is anything longer than a marathon.

After two years of living in Germany, I felt settled. I had two different jobs and was integrating well. I had a couple of close friends and was starting to speak German better. I was comfortable, and doing some cycling but was mainly focused on running at this point. My wife visited good friends who worked in the south of Germany at a dental clinic. During this visit Verena talked to the boss of the clinic and was offered a job. This position was a sizeable pay increase and step up from where she had currently been working. It was a clear move to advance her dental work and her carrier. We moved to the south of Germany to the bottom of the Black Forest, right on the Swiss Border.

4.4 CHAPTER FOUR SUMMARY

As a cyclist I worked hard to reach the level of being professional, yet I was never selected for the National team. I changed my focus to have results that would be attractive to professional teams. I had more success with professional teams and the harder I worked the better my choice of team could be. I had always wanted to wear the NZ silver fern as an athlete and have subsequently in both NZ Duathlon and Triathlon age group teams, but not as a cyclist. From this experience, I learned that the desire to achieve selection in teams can be a powerful motivator but should not be the only one. The continual improvement of yourself as an athlete is more important than any selection or non-selection. This critical reflection on my experiences as an athlete has reinforced the importance of character (self-management) as an important attribute in selection. Based on my experiences, I believe that the key characteristics which contribute to athlete success are:

- appreciating sport as providing social capital, as a source of personal development
- understanding the importance of work ethic, honesty, and integrity
- self-motivation, self-improvement, self-accountability, self-reliance
- resilience, well-being - striving to improve, be better, learning from mistakes.
- perseverance, maintaining one's mental health, awareness of depression.

The idea of delayed gratification becomes critical. Having success at a young age can happen quickly, yet later in the elite ranks this most likely will not happen, and it may take years of work for athletes to develop. An athlete must be motivated to do the work themselves as no one else can or will do it for you. Without this knowledge and understanding the chances of reaching the top level in sport are very limited. Intrinsic motivation is important - no one will reach the highest level without it. So too is long term investment in athletes - there is a massive gap between being a good junior and succeeding at elite level. My experiences also taught me selection is not always fair nor understandable. Now in the digital age, most selection criteria are online. These criteria can be viewed and should be understandable for all stakeholders. However, the Federation is still responsible for following their own criteria.

Selection at junior level is often arbitrary, and testing is of limited use unless it replicates a racing environment, and takes account of the relative age effect.

Having good coaches or mentors that have a personal interest in the athlete is important, as highlighted by Kidman and Lombardo (2010) and Lascu et al. (2024). The athlete should feel they are valued as a person, as well as an athlete. This personal interest can make a difference in how athletes personally feel about the sport and can affect development. Ideally coaches and mentors should also have the technical skill and understanding of the sport. The environment surrounding the athlete is also vitally important (Walinga et al., 2021). This is not just the training conditions but the coach and home habitat as well. All environments play an important role for the athlete, for support and motivation.

A coach needs to be a reflective practitioner, by reviewing what they are doing and why, considering whether best practices being used, and if the situation needs a different coaching style. The aim of a coach should be to actively encourage athletes to develop, while developing themselves at the same time. As the sport advances and changes a coach should also innovate, continually evolve, and adapt.

CHAPTER FIVE

COACH DEVELOPMENT PATHWAY

CHAPTER OVERVIEW

This chapter reflects upon my emerging experiences as a coach, with reference to key themes in the LEAD framework. It commences with a discussion of my introduction to coaching (5.1) and how I initially learned from what I now recognise as trial and error. The discussion then focuses on my aspiration to be an athlete-centred coach and a transformational leader (5.2), and the obstacles I encountered endeavouring to put this into practice. It outlines how studying coaching at Massey University both improved my specific coaching skills and taught me how to be a reflective practitioner, enhancing my understanding of the mental side of sport. Finally, it discusses how I implemented what I had learned at Swiss Triathlon and the influence of fellow practitioners, particularly Gordon Crawford, on my coaching philosophy.

5.1 MY EARLY COACHING CAREER

5.1.1 2010s: Coaching as professional development

Key themes and insights:

- Coach Education: Learning the art and science of coaching fundamentals
- Athlete-Centred Focus: Athlete-centred-coaching, transformational leadership, and adapting coaching styles

We moved to south Germany and, once again, I found myself starting over. This time I had to consider what I was going to do with myself. I started asking, “what do you want to be when you grow up?” I had few options; did I want to work in a cycle shop again, or start my own? It was difficult and I felt a little lost. I thought that becoming a coach and personal trainer would be a good idea. My first thought was cycling as this is what I knew, and I had coached some athletes since I was a professional. This had not been a serious undertaking, so I decided it was time to get coaching qualifications. The first place I turned was Cycling NZ, and they said, “No.” Their expectation was that I would have to travel to NZ to do a two-day course if I wanted to have a qualification from them. and they would not consider letting me complete this course online. Instead, I turned to Triathlon NZ, as I had coached two triathletes and I thought this could be another option. They were happy to help me online and my first coaching qualification was as a triathlon coach.

I still thought I would work in cycling and started to get my German Cycling coaching qualification and at the same time my German Triathlon coaching qualifications. I suddenly wanted to learn and get a deeper knowledge about sport. I had watched my mother decide to start doing some study at Massey University and seen a ‘couple of papers’ develop into a PhD. This university time had helped her find a new career and path in life. It had stood out to me and with moving locations and searching for a new path, I started to think about getting a degree. When I said this to my mother, she was fully behind it, and I started looking for

what I wanted to study and where. I could choose to study distance from NZ, or I could try and enter the University system in Germany or Switzerland. NZ became the best option as I could study part time and it was in English. In both Germany and Switzerland, I needed a higher level of German. Now it came down to what I wanted to study, it was clear it would be sport. However, I really was thinking about doing Sport Science, but with Massey University I could not do most of the courses via distance learning. I took some sport science papers but had to head into the Sport and Exercise Department, which at the time I found disappointing, yet transpired to be the correct path for me.

I started to study a Bachelor of Sport and Exercise at Massey University as well as working through the different coaching levels in Triathlon and Cycling in Germany, and the Triathlon coaching levels in NZ. This transition was a landmark moment for me as it was that point where I chose to be a coach, and I wanted as much information as possible to not only be a coach but be the best coach in the world. The forced choice of not being able to do sport science became a real positive once as I moved into coaching. The mixture of science and the learning about the art of coaching that the Bachelor of Sport and Exercise offered became critically important in my development. I was gaining a deeper understanding of the field I was working in, and an understanding of how to coach, which set up the next steps of my coach development well. As a coach I have always tried to be athlete-centred (Kidman, 2005, Kidman & Lombardo, 2010). I have also sought to become a ‘transformational leader’ (Bass, 1998), to lead my groups through encouragement and creating an environment where we all work towards a shared vision of improvement (Nazari & Soharbi, 2014). Transformational leadership provides coaching that inspires others to go further than what they are capable of – exceeding expectations. Bass and Anolio (1994) argued that leaders and followers help each other to advance to a higher level of morale and motivation.

The coaching vision I employ is about the team pulling together to help each other improve, although naturally each member of the group has their own special needs within this group (Bass & Anolio, 1994). I have found that working in this way, and with the athletes understanding, creates the controls within the group. Thus, the group norms and work ethic, align with the shared vision of improvement and development. What is interesting is that once athletes enter my training group, they appear to naturally adhere to the group work ethic. This alignment has been seen with many athletes and, most interestingly, initially young athletes tend 'to mess around' and not concentrate on their own training but once they join my group, their behaviour changes and they train more and work harder than within their own group. This athlete-centred approach and being a transformational leader also needs to be balanced with the group and the context, situational leadership (Hersey & Blanchard, 1988), where awareness of the environment can dictate which type of leadership to use. For example, if the risk is elevated, I change my leadership style and become more autocratic (Pill et al. 2021). In this way I can help protect the group and they have clear boundaries they must work within. As the group becomes more experienced and understands the boundaries, my coaching style then adapts. An example of this approach is when I started training with my main cycling group. I had to set out the boundaries and expectations for the group, and throughout the ride I would need to remind athletes of road rules and of the expectations. Now when I ride with this group, at training camps, I may outline the expectations for a new member before the ride, but the group regulates itself, allowing me to focus on specific athlete needs rather than the safety of the group.

I believe having this flexibility within my coaching to move fluidly between the different coaching styles, as proposed by Pill et al. (2021) make me a more effective coach. I naturally move through different coaching styles to manage the environment and level of the athlete to

ensure smooth and safe training is carried out. This process is now so internalised I do not have to think about it to realise it is happening, but this needs to be done, to make sure that I am using an appropriate style for the athletes and the situation. Pill et al. (2021) highlights such a range of coaching styles:

1. Autocratic, Authoritarian, Command, Coach-Centred - Decisions made by the coach.
2. Task Oriented - Coach focuses on performance and the results.
3. Co-operative - Coach-Athlete-Centred.
4. Democratic or Athlete-Centred – Coach considers the athletes first – empowering approach (Pill, 2018).
5. Submissive or Laissez-faire – Coach’s input is minimal.

Pill et al (2021) covers these five main coaching styles, yet when coaching within a group, these styles tend to mix and cross over one another, as well as using assorted styles within a group with different athletes. This is where I have seen differences between coaches’ level of expertise. A high expertise coach moves through these styles and is given a high level of social capital, whereas a lower expertise coach tends to be much less fluid in moving through their coaching styles and seems to get stuck in one style for all the athletes in the group. This difference may be to do with experience or confidence, or more likely a mixture of many factors together.

5.1.2 2010s: Wildcats coaching

Key themes and insights:

- Managing Athlete Resources: Developing a HP culture
- Managing Staff Resources: Change management
- Selection Processes: Developing selection processes
- De-Selection, Non-Selection: Developing non-selection, and de-selection processes

I had been a personal coach for a number of years. This consisted mainly of writing a training plan and talking to the athlete, a reflection of how I was coached. I was asked to coach in a club setting at the Tri Team Hochrhein where I worked mainly as a swim trainer. For the first time I was working in a coaching role that required me to be in the same location on fixed

days – also called ‘being on deck.’ This approach was a different way of coaching for me. Standing in front of athletes’ day after day and working on technique, and seeing first-hand the performance improvement was fantastic. It also presented the challenges of what I see as ‘real’ coaching - being answerable if something is not working, or when athletes come to one session and then you do not see them for weeks, and they want to know why they have not improved. Whilst working at the Tri Team Hochrhein, a few athletes approached me about personal coaching, and I found that being able to see them regularly made a tangible difference in the coaching practice. These changes included seeing the effects of loading and recovery, which also had great transferability for my athletes I coached from a distance. Coaching at the Tri Team also helped with learning German, coaching communication skills, and working with groups. It made me consider how I explained ideas and dealt with athletes of different ages and sexes. It was a fantastic place to learn and develop as a coach. During my time at the Tri Team, I got to see first-hand the differences between male and female athletes. For example, developing technique was different due to males tending to try to swim with more power from the upper body and females not having the same upper body strength but being able to have a more efficient body position and better ability to kick well. I saw each individual as being on their own development pathway, even though I had not yet been introduced to development pathway models.

I had been working with the Tri Team for about three years when one of the athletes emailed me the job description for the Head Coach at the Wildcats Swiss Triathlon Team in Basel. It was a 0.2 role, 8 hours a week. I thought it could fit well with Tri Team, study, and the coaching courses, so I applied. I was nervous about the interview as, first of all, it would be in German and also in Swiss German, which has many dialects, thus making it hard for even Swiss people to understand each other. The interview was 90 minutes and we covered many

areas, about training, athletes and the group. The next day I was offered the position. This one event changed many of my perspectives. I suddenly felt that I could really make a living as a coach and, more surprising, it was in triathlon and not cycling. I was starting to feel like a coach and not someone just wanting to be one. I had personal clients, two fixed training groups, and was working hard at study to improve myself and be better at what I do.

Once my work visa was sorted, I could start and was looking forward to the experience.

During the interview, the Wildcats were sold to me as an organisation with a great team, committed coaches, and due to the old head coach stepping down they were ready for a new replacement that could push the Wildcats to improve and inject new life into the organisation. When I walked into my first training session this was not the case. The other coaches did not want to be there anymore and were just waiting for a new coach so they could leave. Some of the coaches were paid and others were voluntary, and they all seemed to have had enough of taking training and working with athletes. They were uninterested in helping the athletes at all and were just there to cover the few trainings sessions. There were less than 28 athletes in the club and there was a power struggle between some of the athletes, because a small group of them were allowed to pick teams for races and were trying to influence how the club was run. This situation made a couple of people happy and others very unhappy. Most of the club was just going through the motions. The Wildcats were dying; membership had been dropping, and the results the club had achieved were dropping as well. After the first training I had to beg the trainer there to do one more session with me, before she stopped. She was not happy about this and said she would come, to show me the pool, but I was expected to run the training. This situation was a deep-end experience, and became a sink or swim moment; could I really coach, or was I hoping I could? With my terrible German, I jumped up on the swim start block and started to work. I was different to any of the other trainers the Wildcats

had in the past. I talked to the athletes, I corrected them, and I expected them to work and work hard. The coaches that had been at the club were more about passing time and having fun than working hard to achieve and develop. The coaches were also very unmotivated and this had been passed onto the athletes. I worked hard with the athletes and was positive, motivated, and wanted to present a growth mindset, and help the athletes develop. From the first day I wanted to create a positive environment for the athletes to be in and make them want to be training and to train (Walinga et al., 2021). I led by example. From the first training I took, athletes started to come to thank me for the training and the effort. They were seeing the difference in the training and enjoying it more.

Even though I started at the Wildcats in January and the new triathlon season started in May, athletes started to feel the benefit of what I was doing. I encouraged them to race more than they had in the past and the Wildcats started to get some results - podium places at races started to increase. I was told by the organising committee of the Wildcats, that the athletes had achieved more results in my first season than they had for many years. From this first season, I was given some freedom but it was limited. I was asked regularly about my training and what I was doing with the athletes. As the first season progressed, athletes started to perform. Also, after the first season, I did not have to get permission for changes I wanted to make, and if I did ask, I was told to use my best judgement. Athletes and other stakeholders were seeing the changes, and the club membership started to increase for the first time in five years. However, a couple of athletes were not so happy with the changes, as I held them accountable for their actions. The main issue were athletes in the Pro Team. They came and did what they wanted, they walked round like rock stars, and did not present themselves as role models, which was written in their contracts. I applied the same rules for everyone,

which they were not used to and two members left the Wildcats. This was more than offset by the number of new athletes joining.

Some of the early issues I had at the Wildcats, were around some athletes not being happy. I wanted to create a positive environment and promote all athletes to develop. This was a change for the Wildcats, and very different to what had happened before. This meant there were going to be massive changes from the perspective of the athletes. I did not plan for change or understand how big the changes were. I was not prepared for the personal conflicts or athletes and other coaches having their own agenda's that they were trying to push. I naively believed that all athletes and coaches wanted the best for each other and the club. I was wrong and although most athletes wanted change, some did not. Given that I had no formal idea about change management, it is in fact surprising that there were not considerably more issues and unhappy stakeholders. If I had known about change management (Kotter & Cohen, 2002) and planned for them, I believe that they would have been conducted more effectively and the changes would have been smoother.

The Wildcats had a Pro team. This was a small group of athletes who got some money from the Wildcats and started in the top racing events around Switzerland. This was a group that everyone wanted to be in, yet there were only a few places available. At the end of my first season, I was required to make selections for the team for the next year. I found this difficult and was unsure what to do. It was the first time I had to make selections and I asked for advice from the Rookies trainer as she had been at the club longer. The advice I received from her was different from what I personally felt, but I took her advice. This choice was a mistake. I regret this decision but learnt from it. One member of the Pro team was de-selected and I offered to talk to the athlete to explain, but he chose not to engage and then sent emails

saying how bad I was to sponsors, Swiss Triathlon and others. He left the club and went to another team. The decision of de-selection was the right one and I stand by it, yet I should have managed the athlete more effectively, which was a learning experience. Now I would use a better structure in informing him about the issues and talk about what needed to be done to remain or return to the system. Apart from the couple of unhappy athletes, the club got stronger and stronger, and the atmosphere was improving and becoming friendlier.

My position at the Wildcats started out as 20% employment. However, this percentage did not reflect the amount of coaching and administration work that I was doing, and what was required to stabilise the structure at the Wildcats and start to develop for the future. I wanted to create a development programme for young athletes to be personally coached, with the aim of helping them learn and give them the tools required to be elite athletes. I had worked with young athletes in the past, but this was the first time of attempting to build a complete development system, rather than helping individuals. As part of the project each trainer involved would also have a small percentage increase in their salary. This project was called Wildcats 2.0 and started with the Rookies coach for the 12-14-year-old athletes, and I was handling the older athletes. Due to the size of the Wildcats, we had little choice of athletes, and this was especially true for the younger ones. The Rookies coach chose an athlete 'Peter' (not his real name) for her part of the programme. I was against his selection as he had not shown a commitment to triathlon or any real potential. The Rookies coach stated that as this was her area of the Wildcats 2.0 and she felt Peter was the only athlete that could do well, she would select him. In total, five athletes in total were selected for the Wildcats 2.0 programme, and this included Peter. Due to the nature of the training times at the Wildcats, I did not see the Rookies coaching and because their coach had been given a list of her responsibilities in the Wildcats 2.0, I assumed that everything was running as it should. At the first race of the

season Peter performed badly and was one of the last athletes to finish. This started me asking questions. First, I talked to the Rookies coach, and she was evasive with her answers in what she was doing. From discussions with Peter and his parents, it became clear that something was not working. I requested a meeting with the Rookies coach, and she came to the meeting and made it clear that she did not want to be part of the Wildcats 2.0 programme. The result of the Rookies coach pulling out of the Wildcats 2.0 and her bringing Peter into the programme, setup a series of long-term issues for me personally, and for the Wildcats. This situation illustrated that I needed to follow my instincts with athletes, and make sure they were committed, as well as the fact that not all coaches will do what they are meant to, and what was agreed upon. I needed to be more proactive in making sure that the required work was being completed, as my work ethic is not always shared.

5.1.3 Mid-2010s: Wildcats 2.0 development of processes

Key themes and insights:

- Selection Protocols: *Kader* testing and its limitations

The Wildcats 2.0 was established to help the development of young athletes. It also turned out to be a good way of developing my own coaching and working with young athletes one to one. This adaption of training from what I would like to what the athletes needed and could cope with, was a learning experience. Also, I needed to consider how the athletes reacted to the training and the results that came from it. This first group of athletes in the Wildcats 2.0 aided my development as a coach, and additionally I wanted to develop and improve. One of the main reasons for setting up the Wildcats 2.0 was to bring athletes on to a performance pathway that led to them entering the Swiss Triathlon *Kader* system. During the early phase of the Wildcats 2.0, I had to learn about the *Kader* system, how it worked, and how the athletes found it. I also needed to understand the people in Swiss Triathlon who were

responsible for this system since the people running it were also the selectors. This learning was critical even though we did not send the first intake of the Wildcats 2.0 to the *Kader* test. The aim was to build a base for the future. By the second year of the Wildcats 2.0, I found that the step into the Wildcats 2.0 was too big, and not always appropriate. To cover this situation, I made the Development Wildcats 2.0. This gave an opportunity for athletes to have a chance to try the system, see if it was what they wanted, and if it would work for them. In the first intake of the Wildcats 2.0, we had three athletes that came over from the swim club. They were already fit, and this was the first group we prepared for the *Kader* test and entering the *Kader* system. A group of four athletes attended the first tests. This was a learning experience for the athletes and me. I had worked hard before the test to understand what would happen and talk some trainers through the tests beforehand. This approach meant I was well orientated about what was going to happen and what to expect. I had prepared my athletes what to expect, but they all underestimated the pressure that they were under. Three of the four athletes performed well. Peter was the fourth athlete and his parents had insisted that he be included.

During the first two years of the Wildcats 2.0 Project, I had variable results from athletes. Some had major performance shifts and improved, others did not improve to the same extent, and one did not improve at all. These varying outcomes caused much thought and reflection about what I do and how I work. During this time, I had started a Sport Coaching Practicum at Massey (see more details later), which focused on integrating theory to reflective practice, and helped me consolidate my thinking as a coach. It made me more able to appraise what I had done and where I was going. It made my work more challenging and, at the same time, more rewarding.

Evidence of the success of the long-term work that I have been doing with leadership, culture (Walinga et al. 2023), and the use of the LEAD framework are indicative in the Wildcats results in 2024. During the 2024 season, Wildcats athletes won five Swiss Championships and four other Swiss Championship podiums, a European Elite championship, a 2nd place in another Elite European Championship and an Age Group Ironman World Championship. What has made these results amazing is that they are from eleven different athletes. It is clear that the Wildcats are now one of best clubs in Switzerland, if not the best club. In addition to this success, we have qualified ten athletes for the Swiss Triathlon *Nachwuchs Kader* system and this outcome is the most the Wildcats have ever had at this level, and five other *Kader* places. This success has come from a decade of development and the use of the LEAD framework.

5.2 STUDYING COACHING

5.2.1 *Mid-2010s: Study as professional development*

Key themes and insights:

- Coach Education: Development as a reflective practitioner; the importance of mind management

When I was working towards my coaching qualifications, as previously stated, I also started studying at Massey University. I had decided I wanted a bachelor's degree. My university experience was not what I had expected, for even when studying from distance I had expected more interaction with the professors and was shocked that most were not interested in the distance students. Often it was a data dump at the start of the course and you would get a comment on an assignment, but that was all the interaction you had. This response left me feeling disconnected from the university and I only continued because I wanted to study for my professional development. However, in 2015 I started the Sport Performance course with Associate Professor Dennis Slade. Slade was the first professor at Massey that wanted to interact with me and wanted to find out more about who I was. The Sport Performance course was the first time in a long time that I was required to focus on my own training. It was perfect timing, as after a few years of ultra-running I had an entry to The Ultra Trail du Mont Blanc (UTMB). The UTMB is a running race around Mont Blanc and is 170km with 10000 metres of ascent going through three countries. After years of being an athlete and totally focused on my performance, I had moved on and was coaching and my own training was haphazard to say the least. With the Sport Performance course, I had to go back and see myself as an athlete and in a different sport to what I was used to doing. This focus was very refreshing for me. Slade got me to focus on the process and worked with me in my build up to UTMB.

As I moved through the season, the Sport Performance course reminded me to trust my training process. In the lead up to UTMB I participated in two preparation races and in both I performed better than I had predicted. Finally came the time to run UTMB, an iconic event in the sport of Ultra running, and stand on the start line with 2800 others. UTMB is a special race as it starts at 6 pm in the evening, which means you run straight into the night, after being awake and nervous all day. After 35km I had a little fall in the dark and banged my left knee, it hurt a little but nothing bad. As the distance went past at about 100km into the race my knee really started to hurt, causing me to change my running and walking style. Added to this was extreme fatigue and lack of sleep. As the second night started to close in, my body and mind just wanted to shut down and stop, but something deep in me would not let me stop. It was a drive and determination to just keep putting one foot in front of another. This drive made me continue over the brutal course that is UTMB. I was in pain and exhausted, but the thought of stopping was not an option. It was a complete and total commitment to reach a goal. There is a moment that a friend recorded on his mobile phone. I am limping out of the last aid station, and he joked, commenting that “it is only a half marathon to the finish.” In my mind I answered him quickly but, in the video, there are seconds of time before I answered, “Yes, but a half marathon with 1500 vertical metres of climbing in it.” This was shocking for me to see at the end. I completed UTMB, but not in the time that I wanted, but the true goal was to get to the finish of this epic event. The most important information that came out of the Sports Performance course was:

- Having a professor who takes an interest in you as a person and wants to support you. Slade made a real difference to me in how I committed to the course and how I learnt.
- Trusting in my process and seeing this from a different perspective. I know what I do works, but using the process myself made me see the process very differently.
- Seeing what I do from another angle was critical. I was able to learn about myself and my coaching, yet also see how much me, as a person is important in the coaching, not just the plans I write.
- Commitment to a goal and pushing through despite other issues and seeing a process through to the end is important. This made me wonder how many people would push as I had. To enter UTMB you must qualify, and qualifying is an exceedingly difficult undertaking. Despite this, over one third of the start field do not finish. What makes people push or suffer more than others? This question still needs answering.

In 2016, I chose to do a Sport Coaching Practicum course, which turned out to be the best decision I made during my time at Massey University. The course advanced my coaching and my personal development significantly. The course coordinator was Professor Andy Martin. Once again, he took a personal interest in me and my coaching. At the time I did not know that Martin and his sons were active triathletes. He really helped me learn about my coaching process, as well as challenging me to think deeper about all aspects of my coaching. This process was not only knowledge about coaching and the different aspects that are involved in triathlon, but also the real reflective nature of coaching. I have always thought of myself as a person that reflects on the work that I do, but with Martin's guidance, this was lifted to a higher level. I was able to reflect to a deeper level and understand the outcomes for my thought processes better.

During this period of doing my Coaching Practicum, I was also doing a Sport Psychology course. This was of great interest to me as I was hoping to learn about how to help my athletes perform better in races. As part of this course, our text was Professor Gary Hermansson's *Going Mental in Sport* (2011). This text changed my thoughts around sport psychology and how to address athletes who need help in racing. His mind management model highlights 'Thoughts affect Feelings, which influence Actions.' All these three things are connected and interplay with each other. This was a moment of understanding for me. In addition, the use of cognitive behaviourism for helping modify self-talk and influence the mind management model was a turning point in my understanding. As a result of this insight, I try to help with my athletes' mental state well before racing. The process of trying to make positive thought patterns starts during training and builds from there. By using cognitive behavioural approaches during training, I am endeavouring to help create positive outcomes at races. This process also became integral in my day-to-day work, keeping a positive

mindset for the athletes, when they have a bad day, managing that and bringing in the positive. In truth, it is about keeping in mind the big picture for the athlete and leading them in steps to get there. This focus sounds simple, but this is where the art of coaching is critical - leading and helping each athlete where their needs and support are different. The knowledge of the mind management model has really aided me support the athletes.

5.2.2 Late 2010s, early 2020s: Coaching in practice, Wildcats 2.0 evolution

Key themes and insights:

- Giftedness/Talent ID: TID and developing athlete pathways
- Coach Education: Developing my coaching philosophy
- Managing Staff Resources: Leading, managing, and being a catalyst for change

After the start of the Wildcats 2.0, and then the start of the Development 2.0 group, more athletes achieved their goals of entering the Swiss *Kader* system. My systems were becoming clearer and working better. At the Wildcats, we had a long-term issue that triathlon in Switzerland, and especially in Basel, is a niche sport, and most children want to do other sports or have never heard of triathlon. I had been discussing with the swim club about transferring athletes to triathlon, yet nothing eventuated. I chose to change some of the ways I looked for young athletes and give more people a chance to join in the Development 2.0 programme. The first new round was achieved by approaching athletes between the ages of 14 and 17, seeing if they wanted to join the programme. This method was hit and miss. It was a scatter gun approach in the hope that some athletes would commit to the plan. Some chose to, and this group really started to pull together. As some of the triathletes talked about the programme, a couple of other athletes joined the Wildcats. One of these was Matteo. He came because of another athlete and his swimming was terrible. It was so bad that I was unsure how much we could improve it. In Matteo's second training, I got him to swim 100m for me, he swam over 2:35, a time which is poor. I was close to not offering him a place in

the Development 2.0 group but my gut told me to do it. Earlier I said I should not go against my gut feelings, so I offered him a place and the results have been remarkable. Currently, at the end of the 2024 season, Matteo is 17 years old, has won the Swiss Junior National Championship and performed well internationally, as well as being in National *Kader*. His improvement has been astronomical in 18 months. My concern is that we do not push him enough and he loses his motivation. I am focusing on improving and managing his development so that he can have a long career in triathlon, as he has the talent to be successful. This outcome is a real success story within the Wildcats programme, but I am cognisant of the risks that are associated with such early success.

Now I am always looking for the next athletes to enter the programme, which is making the Development 2.0 and the Wildcats 2.0 a large group. At times, this puts strain on my and the Club's resources. Trying to manage me as a resource is also part of the learning process and part of my own development. The Rookies section of the Wildcats has had a number of trainers since I have been at Wildcats. Right now, I am fortunate as for three years the Rookies have been run by Cinja. She was in the first group of athletes in the Wildcats 2.0 and then made the transfer from athlete to trainer, hence came to the role with the understanding of what needs to be done to help young athletes develop. When she took over, the Rookies were small and there to have fun. Since then the group has more than doubled and the performance from the athletes has greatly improved. This increase has allowed me to have a greater range of athletes to select from, as well as having a dependable and good trainer for the athletes in a critical period. Sadly, Cinja then stepped back from her role due to her medical studies. This was a major loss for the Wildcats and my coaching team.

The establishment and evolution of the Wildcats 2.0 systems has been about TID and creating a development pathway like the LTAD (Balyi & Hamilton, 2014) or the FTEM (Gulbin et al., 2013). I had not formalised my own model or framework, as I saw it as part of a natural coaching process, yet now, having a formal LEAD framework helps others understand how I work. I also did not limit or segment the athletes' development but saw it, and still do, as part of a continuum of athlete progression, and each individual also progresses differently. This approach does not fit with how the LTAD and FTEM are set up, where athletes development is expected to progress along a linear timeline. This, from a coaching point of view, is very unlikely nor realistic. I was first informed about the Swiss Triathlon FTEM framework in late 2017, which was well into my process of setting up at the Wildcats 2.0 youth development system. It took until 2021, when working for Swiss Duathlon, to go through the Swiss Triathlon FTEM framework. I found that Swiss Triathlon had produced the FTEM framework for Swiss Olympic but did not use it or push it for use through the clubs. Swiss Triathlon had the FTEM framework printed, but you could only get a copy of it if you asked. It was used at one set of *Kader* meetings when I was asked to pigeonhole athletes' development into the framework, regardless of the relation to their overall development or their development over the last year, but just where they were at that moment. This way of using the FTEM framework made it simple to assign numbers to athletes but did not really reflect where their training or performance was nor their potential for progression.

As part of the coaching practicum, I was required to write a coaching philosophy, which at the time I found challenging. With much thought and consideration, I produced six key points for my coaching, which quickly became seven as the last point below was clearly missing from my first draft. Although at the time I was unsure why I should write a coaching

philosophy, it did become clear that having it written down integrated it into my thinking and actions more clearly, as suggested by Collins (2021).

Cameron's Coaching Philosophy:

1. Athlete-centred: I believe that every athlete is an individual and needs to be treated as such. I endeavour to help every athlete become the best they can, not only to improve as an athlete, but also as a person.
2. Utilise best practice: I will maintain my knowledge and understanding of current best practice training theory and do my utmost to put this into practice for the benefit and safety of all athletes.
3. Caring coaching: I will be approachable and maintain open, honest, and supportive communication between myself and my athletes at all times.
4. Maintain work-ethic: There are no shortcuts and there is no substitute for hard work.
5. Focus on physical and mental well-being: Mental preparation is as important as physical preparation. Every athlete has their unique mental state, which allows them to perform at their best.
6. Ethical coaching practice: I have a strong commitment to sound ethical practice and personal integrity.
7. Have fun: enjoy the process of coaching, training, and the athlete-coach relationship.

I still look at it this coaching philosophy regularly, written in 2016, to make sure I am holding to my core values. It still holds true, is important to me, and is ingrained in everything I do. I never stop trying to improve and for this reason behind my computer on the wall I put points that I really want to see and be constantly reminded of. My philosophy is self-explanatory, whereas the points on my wall are more personal. Currently in 2024, I have the following:

1. *'Comfort the troubled and trouble the comfortable'*. This was taught to me by Gordon Crawford, and it really resonated and has become an important working point. This quote is originally attributed to Dietrich Bonhoeffer.
2. *Create an environment where individuals can grow, as an athlete and a person:* For a while I had a similar statement on my wall... *where champions can grow...* However, when I showed this sign to someone, they felt I was only interested in the few who could be great. Hence, I revised the above saying, leaving out reference to champions, or winning, instead focusing on growth as athletes and people, which is at the heart of my coaching.
3. *Transformational Leadership:* This approach inspires positive changes in those led, investing in the success of every single member involved in the process (Ugochukwn, 2014). Personally, I want to be part of positive change and development. I try and be a transformational leader to allow change, athletic and personal growth happen.

These three points have been on my wall for a while. As I am always trying to develop as a person and a coach, these will stay there and will be added to or changed as I believe is needed. This approach is part of my personal development. The next steps will be to re-assess my philosophy and bring in some of the new learning, that will make my philosophy stronger, and will make it more current.

During my Diploma Trainer course in 2021, we were made aware of a study by Mallett and Lara-Bercial (2016) called ‘Serial Winning Coaches: People, Vision and Environment’. They interviewed fourteen coaches from eleven countries and ten sports, to find out what had enabled them to become serial winning coaches. Their key findings were, get the right people on the bus, be athlete-centred, partnership not dictatorship, emotional intelligence matters as much as sport intelligence, thick skin is a must have accessory, work-life balance matters, serial winners suffer from serial insecurity, clairvoyant skills help, develop belief in others, and take risks. While this list may not be revolutionary, it is interesting that these points were held as important by so many across different countries and different sports. This study has become of relevance to me in different ways. The first is that in the different places I work, I see not only how these factors influence the way a system operates, but also how they limit how effective the system can be.

In 2022 Gordon Crawford resigned from his position as Head Coach for Swiss Triathlon and took up a position as High-Performance Manager at Triathlon Ireland. Crawford was offered a free hand to develop Triathlon Ireland’s future. I have been very fortunate to be able to talk and meet with Crawford on a regular basis to hear how Triathlon Ireland is developing and what his plans are for the future. I was then invited to go on a training camp with Triathlon Ireland as a coach and got to see first-hand how Crawford was changing the old system within Triathlon Ireland. During his time in Switzerland, I watched and worked with Crawford to see how he acted and tried to be a catalyst for change. In many ways this worked and created many positives for Swiss Triathlon, as he was required to drive the change. Now having the chance to see Crawford working in a new system and being in a position to lead and drive change showed the importance of the list from Mallett and Lara-Bercial (2016), see overleaf:

- *Get the right people on the bus:* Crawford has made some staff changes, yet he is giving everyone a chance to embrace change and develop with the system.
- *Be athlete-centred:* Athletes stand in the centre of focus, helping athletes get to world standard. Triathlon Ireland had left the Youth and Juniors completely alone. However, Crawford is already making sure that they are going to be managed and developed. While the current standards at Triathlon Ireland are not where he wishes them to be, he is allowing athletes time to develop and making a progressive system so that athletes have a chance to reach the standards.
- *Partnership not dictatorship:* Crawford is trying to work with athletes and staff. He wants them to be empowered to develop and be challenged. In meetings he asks for opinions and wants people to challenge him. Crawford also asked staff members to undertake specific tasks, and the outcomes and responsibility were made clear.
Talking to the staff members they indicated to me that they were happy, they felt valued and understood. Crawford managed this while still keeping in mind his main goals for development at Triathlon Ireland.
- *Emotional intelligence matters as much as sport intelligence:* Emotional intelligence is seen as a potentially important factor in leadership (Higgs & Aitkin, 2003), and Landry (2019), suggests this attribute is what sets apart the top high performers from others. Landry (2019) defines emotional intelligence as understanding and managing your own emotions, as well as recognizing and influencing the emotions of those around you. It has been shown how important emotional intelligence is, and Crawford demonstrated this when working with athletes and staff. He went out of his way to communicate with athletes and staff, he was open to helping them train to meet their individual needs, regardless of how he felt within a situation. They are “buying into his plans and system changes.” Such change is challenging, but Crawford handles this with care and understanding, while at the same time leading through change.
- *Thick skin is a “must have” accessory:* As Crawford leads, he understands that not everyone will be happy or understand what he is doing. He is allowing time for people to change and come on board. This has not always happened, and some staff have left Triathlon Ireland unhappy. While Crawford has taken care and tried to understand each person’s point of view, a time of change will not suit everyone. Crawford believes in giving everyone a chance and if they choose not to be a part of positive change, they are welcome to leave, and then he moves forward to bring the right people into the bus.
- *Work-life balance matters:* This is often the hardest, yet Crawford can work from home in Scotland and travels when needed to Ireland. This means he can try to achieve a balance.
- *Serial winners suffer from serial insecurity:* Crawford said to me, when he was offered the High-Performance Director position at Triathlon Ireland that he was told that change was needed and he would be challenged, but it was an opportunity that may never come again. He was fully aware of just how hard and difficult creating change would be, and was unsure if he could do it, yet he wanted to take it on to try and push his limits. Although Crawford suffered from insecurity, he still wanted to take the position on.
- *Clairvoyant skills help:* Trying to predict where a sport will go and how the other teams will manage this change. Triathlon is performed in a very dynamic environment; each racecourse is different, and athletes have to deal with many different variables. During his time at Swiss Triathlon, Crawford was making predictions about the evolution of racing and his predictions have happened. It is now time to plan for the future and see how it plays out.
- *Develop belief in others:* Crawford has done this effectively, by giving people a chance to change and develop, then rewarding this change with more skilled, important tasks. This testing and development that Crawford does, relates to having the right people in the bus. Everyone is going in the same direction.
- *Take risks:* A number of conversations with Crawford about leaving Swiss Triathlon and taking on Triathlon Ireland can be summed up as following. Crawford had a well-paid position at Swiss Triathlon, which he could have carried on until he decided to retire. Or he could take on Triathlon Ireland where he could influence, change, and develop. The move to Triathlon Ireland included massive responsibility and risk. If he could not do what he said, he would lose his position and the social capital he has spent years building up. As a result, he may well have found it difficult to find another job at the level he was used to.

Watching Crawford work in his new position at Triathlon Ireland was an excellent learning opportunity. Seeing him lead by example, addressing matters referred to in this study, and living ‘strategic management’, highlighted how important it is to create an athlete development structure that is clear, understandable and enables everyone to have clear roles and responsibilities.

My first big change was managed at the Wildcats Swiss Triathlon Team. At the time I was not prepared for creating change nor had any theoretical knowledge of how to implement change effectively. It was learning by doing (Boud et al., 1993). When I took on the position at the Wildcats, I thought I was joining a team of established coaches and would lead and support the club’s development. However, I found that the coaches were only there because they had to be and wanted to leave. A small group of athletes controlled everyone to the point where they ran the club and told the coaches what to do. The athletes were friendly and welcoming, but the base culture of the club was not open or positive. The underlying culture was not a place I wanted to work at, so I set about trying to change it.

At that time, this change process was not managed, or thought through as well as it could have been. I tried to create a positive environment where all athletes were welcome, not just the few good ones. Although the club began to work better in general, I could have managed some athletes better to lead them through change and allow them to be part of the system. I did not do this, and two good athletes left the Wildcats that I should have been able to keep. With more information and experience, I could have implemented the change better. However, because of the change in environment and increases in performance across the board, more athletes joined the Wildcats.

When I joined Swiss Duathlon, one of the aims was to create a junior development section, which required developing and implementing change. To implement change at Swiss Duathlon, I started to plan and see where I believed Swiss Duathlon needed to develop. What was important was to approach the current athletes with care and understanding, while listening to their concerns and responding personally to them. This approach worked well, and change happened in a way that grew the number of athletes in the Swiss Duathlon system. Within Duathlon, changing the system has been mostly straightforward, although it has been harder to change the mindset of some people. I had been ready for this situation, yet for some it was harder than expected. For a very long time the most important event in the race season has been Powerman Zofingen, which is the Long-Distance Duathlon World Championships. This is a brutal race. It is the home race for the Swiss, which means it is perceived as important. For many years, this was the sole focus for athletes. However, with my involvement, encouraging juniors, as well as adding sprint and standard distance international events into the calendar, there has been a change in the focus being solely on Zofingen. This change has been challenging at times, yet as athletes start to perform well over the shorter distances, more understanding has come that the pathway is working. It has had the added bonus that the development of a shorter race team has also been interesting for some of the “long” distance athletes who have started to race short distance internationally.

Without the experience of implementing change at the Wildcats, I do not believe I would have been able to manage the process of implementing change at Swiss Duathlon in the way that I did. The experience was important, yet honest reflection on what I did well and what I did wrong was critical. We all make mistakes, yet moving forward and learning to avoid those mistakes in the future is what learning is all about.

Learning from the Wildcats about planning and what change can mean for individual athletes was shown to be important, and this time I was prepared and planned. As a result, the changes worked better, and I was able to make most athletes part of the change and most have expressed that the situation within Swiss Duathlon, and how I work with the athletes, is better than in the past.

5.3 CHAPTER FIVE SUMMARY

My role as an athlete development coach has highlighted the importance of developing selection, non-selection and de-selection processes linked to TID and athlete pathways. My experiences in coaching have taught me that athletes respond well to clear guidance, particularly when they see improvement. I also learned the importance of backing my own judgement. Over time I developed a caring culture in my teams, which was premised on an athlete-centred philosophy. It comprised the following key components:

1. Effective use of guided learning (Billett, 2000) – the art of coaching athletes to take primary responsibility for their own development.
2. Developing a good support infrastructure – backing myself that I had the right impulse, made decisions at the right time and offering encouragement to athletes while always acknowledging the role of luck.
3. Coaching as a role model/mentor – adapting coaching styles to suit athletes/groups.
4. Transformational and situational leadership - personal connection, understanding.
5. Coach influence through effective training plans - the science of coaching.
6. Deliberate, meaningful practice (Ericsson et al., 1993) – developing a High-Performance culture which becomes self-regulating over time for athletes.
7. Leading, managing, and being a catalyst for change.
8. Understanding and teaching the importance of mind management (Hermansson, 2011).

Caring for athletes is one of the critical functions of a coach. The eight points above are not complicated, yet are keys to developing performance with athletes. Each one is a meaningful part of the overall coaching practice. It is about providing athletes with an environment in which they can develop and having coaches being adaptive to their needs and coaching with the athletes' best interests at heart. Leading an athlete-centred programme should be about more than just keeping the athlete as the focus of the programme. It is also more than just delivering a performance programme, where the focus is on understanding of the science behind performance and load management. The fact is that athletes need to be seen and treated as people first rather than simply being viewed impersonally as an athlete. The coach needs to be able to create an environment where athletes can grow and develop over time. This can be very difficult as many programmes, like NSOs, are funded on results and not personal development. The coach also needs to lead and be a role model inside this environment.

For any changes the coach would like to make, it is important that they are the catalyst to lead positive purposeful change. It is the responsibility for the coach to prepare athletes for racing and testing, as well as helping them deal with other stresses in their lives. Of course, a coach cannot cover all factors all the time and it is important that there are support structures around them and the athletes. Working as a coach and administrator in a dynamic and changing environment, seeing and accepting philosophy and systems as emergent, is an important part of development. For example, my coaching philosophy has evolved to be focused on the following key points, which I believe are applicable to any sport:

1. *'Comfort the troubled and trouble the comfortable'*: Caring and athlete-centred focusing on physical and mental well-being, whilst utilising best practice.
2. *'Create an environment where individuals can grow, as an athlete and a person'*
3. Transformational leadership demonstrating ethical coaching practice and strong work-ethic, whilst having fun.

CHAPTER SIX

HIGH-PERFORMANCE COACHING

CHAPTER OVERVIEW

This chapter provides an overview of my professional development as National Coach and High-Performance Manager for Swiss Duathlon (from 2020). The following section (6.1) has insights from several high-performance coaches that have informed this study and my athlete-centred coaching approach. Like Chapters Four and Five they do so with reference to the key themes of the LEAD framework. Section 6.2 elaborates on how I have led, managed and implemented change as a National Coach and High-Performance Manager relating to the systems and structures within this context, with a particular emphasis on developing selection criteria. A chapter summary (6.3) draws together matters of relevance to a high-performance coach's effectiveness.

6.1 MY PROFESSIONAL LEARNING

6.1.1 2016 until current: Learning from other coaches

Key themes and insights:

- Coach Education: Learning from Coach Gordon Crawford, Swiss Triathlon and Coach Rick Velati, Triathlon England

Coach Gordon Crawford, Swiss Triathlon

Gordon Crawford became the Swiss National Coach in 2018. I asked Crawford if I could see him regularly at the National Leissungszentrum Wallisellen (NLZW – National Training Centre). Crawford welcomed this opportunity and made a regular time to meet. Very quickly, he started to ask me to coach, and if I could be coach cover for him at the NLZW. We would discuss coaching and theory as well as practice. This coach mentoring opportunity provided a good learning environment for me, and became an important form of coach education, as highlighted by Lascu et al. (2024). Crawford challenged my ideas and how I worked as a coach, by asking questions and then digging deeper into each answer, unpacking how I worded thoughts. As a result of this questioning, I had to think deeply on my ideas and how I communicated them. Crawford added his thoughts on how to structure training. He quickly became a key part of my coach development support, helping me to improve and push boundaries.

Coaching athletes you deal with every day is comfortable and you get to see development and progress, as well as knowing the athletes as people. Going into coaching at the NLZW, I knew most of the athletes' names and could talk to them but did not know them as athletes. Knowing an athlete as a person is very different from as an athlete. As an athlete it is getting to know how they train, do they push or not, what do they need to improve and understanding their moods. This made presenting a plan and delivering a session exciting, with many

different dynamics at play. At the NLZW were many of the top Swiss athletes, as well as the up-and-coming athletes from Switzerland. Crawford trusted me to write plans for the sessions, showing a high level of trust. He was there and is there to support me and for me to ask questions. This level of trust from a trainer, who has produced good athletes over a long period, has made me strive to be better and prove that I can be a world leading coach. This mentoring support was a landmark period in my development.

Crawford invited me as coach to the National Elite training camp at Fuerteventura in the Canary Islands. This three-week camp involved the biggest group of athletes that had gone on camp. I went for the second week, as there would be no other coaches. During this week Crawford was busy as there were 25 athletes and he was the only trainer. He also had to attend to administrative tasks. He requested that I cover some of the sessions alone, allowing him to get other tasks completed. This was a good opportunity for me as I could work with many athletes I did not know or did not know well. I was very aware of integrating myself within the group and keeping the positive environment that Crawford had created.

Gordon created this positive environment from the start, through leading by example and being a manager and planner. He turned a once small and unhappy group into a much bigger group that was positive and harmonious, despite there being athletes from all over Switzerland, speaking three different languages. For the first time in a long time, a Swiss group of athletes were really working together to create a fantastic training camp. I was impressed how Crawford worked with such a group, how he checked on the athletes and spoke to them. He also used me to talk to the athletes, wanting my opinion on how they were and how they were feeling. It was integral for me to be there and support Crawford, and we worked well together for the benefit of the athletes. I enjoyed the eight days in Fuerteventura

and learnt much of value. Crawford expressed that he would have liked me to stay and that he was happy with the work that I did. During the time I spent with him, we would converse about coaching, and also the support structures needed to allow a coach to work effectively. These conversations about establishing support structures included setting up a coaching environment and a training centre all the way to federation level. One thing he kept reiterating, and being of central importance, was strategic management and planning.

Omalaja and Eruola (2011) describe strategic management as “the process and approach of specifying an organisation’s objectives, developing policies, programmes, paradigms and plans to achieve these objectives, and allocating resources so as to implement the policies, programmes, paradigms and plans” (p. 61). I realised that Omalaja and Eruola’s (2011) strategic management approach should be applied to federations and clubs, as it brings many parts of running an organisation together, making sure goals, resources, development programmes and plans all head towards the aim of making the organisation more competitive. In early 2022, Crawford resigned from Swiss Triathlon. He took up a position at Triathlon Ireland. However, he offered to continue to mentor me as a coach, and we continue to communicate regularly. He extended the offer to join him on future training camps for the Irish team. This is a chance to continue to learn from Crawford and an offer which I will take up. The chance to move up to an international level, even as an assistant, is a good chance to learn and develop and adds to my social capital.

Coach Rick Velati, Triathlon England

In January 2022, I was able to have an informal interview with Rick Velati, who is a World Class Programme National Coach for Triathlon England and was also instrumental in setting up the current development systems within Triathlon England and British Triathlon. Within this informal interview Velati covered and elaborated on much of the development programme and how it is put together.

Selections: British Triathlon's selection process was a little more in depth than was stated on their website. Velati stated that there are selection days, not just one day or a weekend. The first day has the formal tests, and on a separate weekend are endurance tests, for example, swimming 10 x 300m or 30 x 100m. This follow-up is to examine how an athlete is trained and to see if there could be a selection bias in the shorter tests, that can be checked against the endurance-based tests. What was stressed by Velati is that during these days each athlete is talked to one-to-one, to learn more about the athlete and their systems around training. This idea of getting to know an athlete personally is a key feature of Crawford's and my programmes. After these days, selection for their Academies is made, for the regional athletes as well as the national athletes. Velati stated that although they are wanting a high standard of athletes within the Academy system, selection from 13-17 years old is made through reaching the set standards, yet athletes who perform close to the standard can also be selected, thereby giving more athletes a chance to enter the system. From 18 years old or over the Junior ranking, selection becomes harder. By having easier selection criteria in the early stages, athletes have a greater chance to develop. British Triathlon endeavour to keep as many athletes as possible in the sport during development and having them access the Academies means that if a late developer is there, they have time to start developing. Velati pointed out that during this development period from 13-18 athletes go through many challenges with

school, family, and other issues, and the Academy system is built so these athletes can be supported. A dip in performance is looked at with a broader approach and reasons for this change are examined, and athletes are supported. The academy system is there to help the athletes develop, with a focus on technical and tactical aspects of triathlon, as well as support for programme planning. Velati stated that once selected for the Academy programme, it would be unusual for an athlete to be de-selected. Most often, athletes self-select or withdraw from the system, as a performance pathway is not for everyone. British Triathlon also has a strong age-group system and transfer to this can be very attractive for some young athletes.

Selection numbers: Within the ten Academies in England, there are approximately 180 athletes between the ages of 14-19 and, of those, 15-20 athletes are on the British Development Team. The British Team is the best of the Academy programme athletes. Selection is harder once athletes hit the Junior level, which is at 18 years old. This is also the age in Britain where school finishes and athletes head to university or begin working. It is also the end of the Academy system and athletes then move into the Performance Centres, of which there are five in England. These performance centres are based at universities, allowing athletes to study and train. Velati stated that these performance centres host different squads, so they cater to different levels, from national and international through to development. Because most universities in England have a triathlon team, these are places for all levels of athletes to be able to train and progress. For the squads that are run by Triathlon England at a university, an athlete does not have to be part of that university. Velati did talk about the fact that Triathlon England invested much into young athletes. Not only with the Academy system, but getting to know the athletes, helping them through difficult times, like examinations and life changes. This is integral in allowing individuals to develop, not only focusing on the person as an athlete. Triathlon England is aiming to set up long-term success,

and performing at the junior level or before is nice, but not the goal of the programme. The goal is to deliver athletes into the performance programme who can succeed as elite athletes.

Investment: the investment made by Triathlon England has grown over the years, from £30,000 to the current £250,000 per year. This investment is seen by Velati as being crucial, and he stated it could be done with less but to maintain the current level of achievement without it would be difficult. As the investment has increased so has the pressure to deliver successful athletes. Velati spoke about the London Olympic Games 2012 factor, and that the medal success of the Brownlee brothers grew interest in triathlon. This outcome has had positive long-term effects for triathlon. Because the youth programmes have been running since 2004, Triathlon England has learnt that there are cycles to talent development, and sometimes there can be periods where the pathway to elite talent can be less populated as other times. However, Triathlon England has learnt not to go into panic mode, but to keep focusing on the basics.

Athlete support: Velati believed the amount of time that is spent on the athletes, not just in the performance centres, but visiting athletes at their home training centres and athletes' homes is one of the key differences between the British Triathlon system and many other countries, and other sports. Athletes are held as the centre point and supported, as people. Training camps are provided approximately every eight weeks. Velati made the following statement that sums up their approach: "Talent ID is one thing, but supporting an athlete makes the difference... Selection is one thing, but investing in athletes is more important." These statements highlight the athlete-centred focus, and athlete development is held key, even within a pressured high-performance system. This approach has taken Triathlon England and British Triathlon to the levels of international medal success they have achieved.

6.1.2 2020s: Switzerland – Professional coaching qualifications

Key themes and insights:

- Coach Education: The importance of professional development

When I applied for the Head Coach role at the Wildcats, I had no Swiss Coaching qualifications. I had qualifications from NZ and Germany, but I was asked to get the Swiss qualifications, as I would need them to work within the Swiss Triathlon system. I quickly learnt that as part of the development strategy for clubs in Switzerland, Swiss Olympic wanted all the clubs that are working with the Federation to be accredited and ranked. All aspects of the club are looked at and then the club is ranked, and these rankings influence your standings with Swiss Triathlon, as well as the funding you may be able to receive. These classifications are called Labels and are awarded by Swiss Olympic through Swiss Triathlon. Swiss Olympic can also change the criteria, which can make it hard for clubs to maintain or reach the next level. The classifications are:

- No label
- Bronze, Silver, or Gold – which is where a club will receive more funding and be classed as a development club
- Regional Performance Centre
- National Performance Centre

When I started at the Wildcats, they were lucky to be classed as a bronze club and my first major goal was to work towards becoming a Regional Performance Centre. This is where my quest through the Swiss coaching development system started. Talking to the responsible person for coach training at Swiss Triathlon became a frustrating affair, as this position seems to get moved from person to person every few months. As a result, learning that the Swiss Coach Education system was a challenge, getting answers on how to proceed and get my qualifications was an even harder process. Eventually, the Coach Education role was staffed, and I could start finding out what could be done, and if there was any chance of getting some recognition of prior learning.

This process took over a year. I was also informed that the Swiss system of coach education was the best, and that the German system was not as good. Therefore, with an A Licence from Germany, I could be awarded the B Level Licence in Switzerland. This meant I did not have to do the base courses for a third time. The Swiss coach education system is more complicated than I was used to. It is split into many different levels and these levels have two different responsible governing bodies. First, Jugend & Sport (J&S), which is focused on general sport and the development of youth in sport. J&S is part of Swiss Olympic. After the J&S course is finished, responsibility for coach education moves to Swiss Olympic themselves, which is focused on HP sport. Below are the coach education courses and who they are organised by (Swiss Triathlon, n.d.).

- Jugend & Sport (J&S)
 - Basic coach, C Licence; Weiterbildung 1. B Licence; Weiterbildung 2, A Licence.
- Swiss Olympic
 - Breuftrainer Ausbildung (BTL) or Professional Trainer
 - Diploma Trainer Ausbildung (DTL) or Diploma Trainer

J&S courses are mainly sport specific, meaning you are together with coaches from your sport. Whereas at the Swiss Olympic level, the courses are general, and all sports are mixed together. Heading to my first J&S course, I was excited to be part of this great education system that I was told Swiss Triathlon had. I had already been through the German and NZ systems, and I had high expectations. However, the course, Weiterbildung 2, turned out to be very short and basic, and that level of course I would have experienced in the low levels of the NZ and German systems. Moving past J&S and into the Swiss Olympic education system with the BTL, was also not what I expected. The course was an eclectic mixture of science-led information and applied kinesiology, which was poorly done. I complained about the parts of the course that were substandard and was informed that in the future the BTL would be changing its structure to better reflect the modern sporting world. I am now part way through my DTL, which is the final stage of Swiss Olympics' official education pathway.

The DTL has been more about coaches' soft skill development, which is a change from the BTL. This whole Swiss coach education system has affected me in many ways. I have found that systems do not always deliver what I was led to believe they would. The most important part of learning and wanting to improve is to be self-driven and to challenge yourself. I do not expect any course will give me a great amount of learning but if I can come away interested and having learnt a couple of small things, then it is worth the effort of taking part. The qualifications that a coach education system gives you are important for Swiss Triathlon's Label system, and in most courses you can learn something, and most important is the destination of learning and the development as a coach. As part of the Labels system, coaches are not encouraged to attend coach education. Once every four years a coach is required to attend a refresher course, but this is only to keep the J&S qualification and is not an in-depth course. As a direct result of this approach very few coaches try to move their way up the coaching course system through the Swiss Triathlon and J&S coaching courses. Swiss Triathlon need to actively encourage coaches to attend more courses and try to improve the level of coaching within Switzerland. My personal conversations with members of Swiss Triathlon indicate many are very concerned about the level of coaching Swiss coaches offer, yet to date this issue has remained unresolved. In 2024 I completed my J&S expert course, which means I am now able to deliver courses for Swiss Triathlon's coach education. I am excited to be able to help Swiss Triathlon to develop coaches for the future, yet it still falls to Swiss Triathlon to hold courses and encourage coaches to attend and develop their coaching ability.

A qualification is only a small part of the true learning and becoming a 'reflective practitioner' (Schön, 1983). As part of my continuing coach development, I started the process of doing the Diploma Trainer course in Switzerland, the highest level of coach

qualification run by Swiss Olympic. The process for entering this course is complicated. First you must apply to your sports National Federation. Once they have accepted the request, your name is put forward to Swiss Olympic. If you are accepted by Swiss Olympic, you are asked to attend a three-hour test and interview process. Written tests are completed, and you are taken through a further interview process. When this is finished, you wait two weeks before you are told whether or not you have been selected. I was accepted on my first time applying and started the process of signing up for the course. For the Diploma Trainer certificate, I needed to attend a set course, write five different examinations, write a written report, make a poster about the report, and have two interviews, one about the report and the other on an open topic. Within one of the interviews, there was a post event debrief with an athlete. This was staged, lacked the emotion and the depth of knowledge that I believe is needed within this situation. As the interviewer wanted to present a situation where the coach was talking to an athlete after a poor performance, when I started asking questions on exactly what the athlete was feeling and their build up to the event, as well as the thought processes during the race, the examiner became flustered and could not answer my questions in any meaningful way. This situation was the only part that dealt with managing interpersonal relationships with athletes. In all the courses I have experienced in different countries, the subject of selection, de-selection and non-selection has not been raised at all. Even though coaches have to make these decisions, there is no guidance about making them nor how to manage criteria for selection, de-selection or non-selection. For these top-level coaching certificates, which are for coaches wanting to coach elite athletes, this is a major issue in coach development.

The most important part of completing the course is the written report, which is sport focused and a wide spectrum of options are available. Some federations may ask for a particular area to be investigated. My Coach Developer had agreed I could use part of this current doctoral

research for the Diploma Trainer report. However, I was told to make sure it was not too academic as the idea is that it is for practitioner coaches looking at a particular subject. After I had finished the course and was looking at doing the Diploma report, which consists of a 20-page written assignment and a poster, I was asked that I complete my report on Swiss Triathlon and their development of Smart Competitions (Swiss Olympic, n.d.), which is a new development from Swiss Olympic. As part of this process, I would be included in the workshop with stakeholders of Swiss Triathlon and be part of the work group with Swiss Olympic to finalise a Smart Competitions concept (Swiss Olympic, n.d.). This work group with Swiss Triathlon has started and is close to coming to an end, and I will be required to write the report for Swiss Olympic. This report is in the process of being written and is influenced by the Project FT from Swiss Triathlon. This is an exciting time for the development of young athletes and highlights the importance of the research for this thesis. To have the information and research in one place means a federation or governing body can look at the current standing and then take the suggested framework and have an aid in their process.

As part of the report, I created a survey for stakeholders to fill out about the different race series. This was done as a Google survey and was in three different languages; English, German and French. Swiss Triathlon sent the survey out. I received 52 responses. What became clear is that many of the responders were not happy with the current system but did not have a solution to fix it. More than 70% of the responses about the Regional League stated the activities before the races were fun for the first two years, but thereafter the children did not want to compete in these pre-race activities anymore. One of the main areas of improvement was the race series structure for the younger athletes. The Regional League needs to change format and the length of races, as the athletes progress through the four years

where development should be the focus. The Youth League needs to help athletes develop towards the National League. Currently the jumps from Regio League to Youth League and from Youth League to National league are too big, and there needs to be a better transfer so athletes can adapt to the change in race distance and format.

Before I was asked to do this report for the Diploma Trainer, I had already written to Swiss Triathlon's High-Performance Manager with my proposed model for the races to make the progression simpler and planned to be easier for the athletes. As a direct result of this report, the proposed model for athlete race development will be modified and adapted from the information and research gleaned from this study, thereby allowing me to propose a possible solution model to the Swiss Olympics work group.

6.2 MY NATIONAL COACH ROLE

6.2.1 2020s: Swiss Duathlon – High-Performance Manager

Key themes and insights:

- Managing Staff Resources: Implementing system change

At the end of 2019, I was looking at the Swiss Olympics job website and saw that Swiss Duathlon was looking for a High-Performance Manager. This was a 0.2 full-time (20%) role, and I believed I could get it to fit well with my job at the Wildcats. After submitting my application, I was invited to an interview and then to attend a second interview with the Duathlon Commission. For this interview, I appeared before a four-person panel, a new experience for me. The next day I was offered the position as High-Performance Manager for Swiss Duathlon. As the job description was not clear about what all my roles would be, it was going to be important to have a good handover from the last High-Performance Manager. This ended up being three emails and a short phone call. This level of induction did not offer any help to identify issues there might be or offer information about the athletes in *Kader*. It was a true deep-end experience and one that had me questioning the operation of Swiss Duathlon from the beginning. I was told that one of the reasons I was taken on was that Swiss Triathlon wanted to develop a *Nachwuchs* programme and no one currently at Swiss Duathlon had done or could do this. Swiss Duathlon consisted of a long-distance group of athletes. During the discussions with Marc Widmer, the President of Swiss Duathlon, I asked about who the National Coach was, and he told me I was. That had not been listed in the job description, but for me was a bonus to my position.

Once I had started, and was coming to terms with the basic requirements of the job, I started to review the systems that Swiss Duathlon had in place to look after the athletes and all the paperwork that is required by Swiss Olympic, who fund Swiss Duathlon. I was surprised to

find there was nothing, and when I asked Widmer, he did not know anything about what was required for Swiss Olympic. This was an issue and showed me how much work I had to do for Swiss Duathlon, and that this position really would give me a chance to develop as a person, coach, and administrator. I started to investigate what was required to have

Nachwuchs (Youth) Talent Cards. The main documents that Swiss Olympic required were:

- FTEM framework – The athlete pathway from Foundation, to Talent, into Elite and finally Mastery.
- PISTE Model – PISTE is a testing system that should not only show where the athlete is, but also to show improvement over time, and assess what future development could be. This must include a series of tests that are repeated at least once a year.
- *Nachwuchsförderungskonzept* – This is the youth development plan and all the measures that Swiss Duathlon plan to develop youth athletes.
- *Kader System* – A clear structure for the athletes and clear criteria for athletes to enter the system.
- *Selektionskonzept* – for *Kader* and international races
- *Leistungsförderungskonzept* – The development concept for athletes when they leave the *Nachwuchs* and head into the Under 23 and Elite categories.

When I started at Swiss Duathlon none of the required documents had been started let alone completed, with the exception of parts of the *Selectionskonzept*, which was selection for international races and an entry requirement for the long-distance National Team. There was nothing for *Nachwuchs* or elites at Sprint or Standard distance duathlon. Everything was focused around Powerman Zofingen, which had been for many years the Long-Distance Duathlon World Championships. Heading into the process of setting up some of these documents, it suddenly became clear that each document needed the others before it could be written.

Once Tamara Mattis became the new Swiss Triathlon High-Performance Manager, I started to get the support that I needed to start to understand the system. Mattis had previous involvement in other sports and worked with Swiss Olympic setting up *Nachwuchs* systems, and was very clear in saying that the requirements that Swiss Olympic ask for are changed every year. The change is due to the number of applications they are receiving. If too many, they make the process harder therefore not all the concepts are accepted. If they do not

receive many, the system is made easier. How you will be judged and how high the bar needs to be set is completely unclear, and changes.

Mattis understood the time-consuming nature of creating all these base documents and communicated ways of supporting me in their development. She was focused on what needed to be done first, leading me through a very frustrating process. Mattis was also aware that I was working for more than the 20% than I was paid. This situation led her to find some funding for the development of the FTEM framework into what is called a Poster (Figure 3), which provides an easy-to-understand description and explanation of the emergent FTEM framework I have created. The extra funding for this project has created support for the work that I am doing, and has added to my drive for the development of Swiss Duathlon into the future. This support is a confidence booster to me in a job that would be difficult in my native language and is very challenging in my second language. This process was going to be conducted in depth and would be critical to the future of funding for Swiss Duathlon, and this thesis should provide valuable insights to complete the development work.

When I started at Swiss Duathlon, I was in contact with Crawford, and he had asked me to cover training sessions at the National Performance Centre (NLZW) when he was not able to be present. This I accepted, wanting to help him as much as possible. When I started taking the sessions at the NLZW, Swiss Duathlon was not a part of Swiss Triathlon, and Swiss Triathlon's administration were not happy that I was taking the sessions. They believed that the Swiss Triathlon regional coaches should cover these sessions. Crawford refused, saying that the regional coaches were not at a sufficient level to take training at the NLZW but that I was, and he would only accept me being there. This was an honour for me, but also made me want to continue my development as a coach to be the best and to show that I can work at this

level. This ‘dispute’ illustrated how divided Swiss Duathlon and Swiss Triathlon were. At the start of 2021, Swiss Duathlon changed its structure to be fully integrated into Swiss Triathlon. I was part of this process and due to my relationship with Swiss Triathlon through the Wildcats, I was able to help Swiss Duathlon and Swiss Triathlon integrate. As part of this structural change, I am more involved with Swiss Triathlon and some processes were made easier for Swiss Duathlon, as we could use the same office staff. This change also helped increase my social capital, coach credibility and organisational influence, as I became one of the three National Coaches employed by Swiss Triathlon.

During the course of the 2021 season, I was approached by a growing number of athletes who were asking about the Swiss Duathlon *Kader* system. This mostly came from athletes who were active in triathlon but were not able to swim with the fastest athletes and were looking for other options. The first part of the conversation was always the same, “It is great that there is someone who is contactable at Swiss Duathlon.” It appears in the past that the people in my position were not actively trying to develop a system that could support athletes, were not present at races, nor actively talking to people. As a result of my work, Swiss Duathlon now has the situation that we have more athletes wanting to be part of the *Kader* system than we have places for them. This is the first time this has occurred.

In 2019, when I started as coaching cover for Crawford at the National Leistungszentrum in Wallisellen (National Performance Centre), he received positive feedback, and stated it was his goal that I should be the third coach for Swiss Triathlon if he or the Junior coach were not there. He explained that he wanted the athletes used to my presence; seeing it as normal. Crawford has also expressed that he wanted to expand my role inside Swiss Triathlon and take me on as his assistant trainer to the national training camps. He had started to map out a

career plan for me, which unknown to him also matched my own career planning.

Throughout the time I have been working at Swiss Duathlon, I have focused on planning, leading and implementing change (Kotter, 1996). Much of the planning related to underpinning the structures of Swiss Duathlon and getting the administrative paperwork set up correctly in the background. The athletes and other stakeholders were kept informed of the development and changes as they were being made. Those that affect the athletes were clearly communicated and there was time for these changes to happen, as well as allowing for athlete feedback, their personal situations and how that affected their ability to deal with changes. These changes have been mostly well accepted and understood.

In 2023, Swiss Duathlon were required to finish the Performance Plan for the next Olympic cycle. I was responsible for writing this document and it was a project that took a large amount of time. Then in January 2024 I was invited to discuss the Performance Plan with Swiss Olympic. This was the first time anyone from Swiss Duathlon has had any meeting directly with Swiss Olympic. Swiss Olympic offered suggestions where improvements could be made, and were happy with the Performance Plan and to see the development over the last four years and that Swiss Duathlon were really moving forward. As part of the Performance Plan, the LEAD framework was included. When asked directly about this inclusion they indicated they liked it and could see how it will work and help development. They did point out that as they expect every Federation to use the FTEM framework that this needs to be retained. Once it was pointed out that the LEAD is a support for the coaches and athletes that can help support the FTEM framework, they were more than happy to have it within the Swiss Duathlon Performance plan.

6.2.2 2020s: Swiss Triathlon – Selections and criteria

Key themes and insights:

- Selection Protocols: Developing and implementing selection criteria

As an athlete I did not think too much about selection criteria. I raced hard to achieve good results but I should have really looked at the criteria more to understand what selectors were looking for. When I was racing at my top level, the internet was new, and information was not as easy to have access to as it is now. I did meet selection criteria but was not selected. As a result of my own experience, I have become focused on understanding selection criteria and wanting to make sure athletes can meet the relevant criteria and reach the level they want. At times, some of the criteria may not make sense but it is important to know and understand what the selectors are focusing on.

In 2017, I took athletes for the first time to the Swiss Triathlon *Kader* test. I had spent time reading and understanding the *Kader* system and how points were allocated, as well as trying to understand why the tests were structured the way they were. It was a big learning year for both me and the athletes that attended the test. The biggest learning was how to look at criteria and use that knowledge to help the athletes. Since this first time at the *Kader* tests, I have come to see the good and bad side of selection criteria. Sometimes it can be very restrictive for athletes that have had back luck or been injured. However, the biggest issues have always been around selectors not sticking to the selection criteria. Within the Swiss *Kader* system, selectors do have an input into what they ‘think’ of the athlete. This is subjective and should be, but the selectors really need to be at races and watch athletes, not just how they perform, but their development. This development is fundamental and different for each athlete. It needs to be remembered that we are dealing with young athletes who will have different issues, and we need to give them room to improve and develop.

I had a junior athlete who went through a Triathlon NZ selection process and have seen first-hand that, even though an athlete completed the selection process appropriately and fulfilled every criterion asked (for example, better race performance and testing results than others), was not selected. In early 2021, they had the opportunity to qualify for a development team that was being set up by Triathlon NZ. The criteria seemed clear, a 'star' system, where athletes could perform tests themselves and have their times recorded for a 200-metre swim and a 1500 metre run. Athletes' times were ranked from one to three stars. The more stars the better. I suggested to the athlete that they do the tests multiple times as that way they learn the requirements, which generally means an athlete can perform better at the tests. This was done and the athlete achieved a total of 5 stars, the only athlete in NZ to achieve this standard. The other part of the criteria related to performance results when racing. Here the athlete had a little bad luck with timing of university exams and sickness, but he had looked at and planned the races he needed to target. The results were not his best but he was the only athlete that had completed the series of races that had been listed, including a top five performance in a national event (the top two were later selected for the 2020 Tokyo Olympics). All the information was submitted to Triathlon NZ and I believed my athlete would be selected for the team. It came as a shock to the athlete and me when he was not selected. Both the athlete and I were in touch with the General Manager of Performance at Triathlon NZ. His reasons for the athlete's non-selection were not clear, nor did they have anything to do with the selection criteria. When this was pointed out, he could not explain the lack of selection and did say the athlete had performed well, but not as well in the races, hence his non-selection. When it was pointed out that the selection panel did not select on the races stated nor the points system that Triathlon NZ had set up, there was no answer. He did say that if the athlete performed well at the National Championships, then maybe they could reconsider. This left my athlete and I very confused, as the criteria were fulfilled, and other

athletes did not fulfil all the criteria, yet were selected. There seemed to be a selection bias, and athletes coached by the selector were selected, and athletes not coached by a selector were less likely to be selected. This did not look good when looking from a non-selection point of view.

At the National Championships, my athlete outperformed all athletes that had been selected in the Development Programme set up by Triathlon NZ. The General Manager congratulated my athlete on his result but stated that he would not be selected for the Development team. This was a such a blow to the athlete who had worked hard to meet the set criteria and made race choices based on these criteria, which other athletes did not do but got selected. They were left with no understanding of why when they met and exceeded the criteria they had not been selected. Such experiences could call into question the integrity of the selection process and of the selectors, and subject TNZ to legal appeal.

As a direct result of this non-selection and the apparent disinterest of Triathlon NZ in the athlete, and them not adhering to their own criteria, my athlete stopped participating in triathlon, became disillusioned with Triathlon NZ and the sport of triathlon. Sadly, this is not an isolated case with Triathlon NZ. They do not seem to be able to adhere to their own selection criteria, for example Sam Ward's non-selection for the Tokyo 2020 Olympics (Knowler, 2021). As a result, it has become critically important to offer simple and clear selection criteria for athletes to follow, and once an athlete has fulfilled these criteria and met the standard required, they should be selected. On the other side, if athletes do not meet the selection criteria, then they should not be selected. There needs to be some flexibility built into a system, but the basic premise needs to stand, and most importantly, sports to adhere to the criteria that are set.

6.3 CHAPTER SIX SUMMARY

Seeking advice and mentoring (Kidman & Lombardo, 2010; Lascu et. al. 2024). from experts in the field has played an important role in extending my coaching philosophy to the high-performance field. Observing Gordon Crawford first-hand exposed me to a more systematic approach, which I have applied in my national coach roles at Swiss Triathlon. Selection of athletes into a programme, team or *Kader* is always a challenge. Often there are a limited number of athletes that can be selected, and there are more athletes seeking selection. There will always be athletes that are not selected that believe they should be and athletes that were selected that should not have been. My experiences have reinforced my beliefs on the importance of a transparent selection policy. I am currently involved in the following different selection processes:

- Swiss Triathlon and the selection of *Kader* athletes for the national programme.
- Swiss Duathlon and the selection of athletes for the national programme
- Wildcats' selection of teams and development programmes.
- As a coach having athletes trying to enter *Kader* and national programmes.

Being involved in these different contexts, and having different responsibilities, I see many different aspects and levels of selection. I have had some key experiences that have led me to my current understanding and thinking. Starting at the Wildcats was the first time I was solely responsible for making selections. For the first round of selections, I did use input from other coaches, and was influenced by them, even when it was against my own instincts. This was a mistake, which was compounded by allowing coaches within a programme to make their own selections without oversight. Therefore, I wanted to create a new system. The previous system was targeted towards or favoured the athletes who were already in the system. However, this time I wanted the selection process to be more transparent, and to allow athletes, not normally given a chance to enter in a performance programme, the opportunity to do so and develop as athletes.

My expectations of athletes in the group are clearly defined and explained when members are brought into the group. I know that not all will succeed in the performance environment, but believe that athletes should be given a chance. Over time, athletes not participating to the level expected will be supported through the programme – how long should they be in the programme and at which point is enough effort given to them to perform? This question is a significant part of my evaluation and athlete support process, and will be reviewed continually throughout the development programme.

One of my criticisms of Swiss Triathlon is the very early de-selection of athletes if they are not constantly improving. Swiss Triathlon starts the culling process from *Kader* at age 14, and it gets harder and harder as athletes move to age 19, where they must enter the Elite system. This process includes athletes who may struggle for a period or later on could end up improving if given a chance. If I criticise Swiss Triathlon for this, I need to make sure I hold myself up to a higher standard. I have tried to have a more open system and see coaches like Crawford work, as they have success with an open system and believe in giving athletes a chance.

CHAPTER SEVEN

THE CASE OF SWISS TRIATHLON

CHAPTER OVERVIEW

This chapter addresses the research questions by examining the case of Swiss Triathlon and how it implements athlete development pathways, as well as selection, de-selection, and non-selection processes, and how these have changed over the years. They are addressed by considering the insights/experiences/learning of the researcher through the auto-ethnography of his athletic and coaching career, as discussed in Chapters Four, Five and Six. The chapter commences (7.1) with reference to the research questions outlined in the introduction to the thesis related to athlete development pathways, and an examination of current practice before assessing the roles of Clubs, National Federations and Swiss Triathlon. Section 7.2 then reviews athlete selection process with respect to Swiss Triathlon, how this process is managed, the roles of testing and racing in athlete selection and assesses ways in which athlete selection might be managed, enhanced, and changed. The next section (7.3) then addresses athlete de-selection, non-selection, and retention, and the respective roles of Clubs, National Federations, and Swiss Triathlon in these processes. Finally, it explores potential strategies for enhancing athlete retention. Section 7.4 then discusses the genesis of Swiss Triathlons FT Project as their organisational structure. In particular, the process of emergent pathways and implementing change at Swiss Triathlon is also brought into focus along with potential approaches to improving athlete development pathways, before providing a summary to the chapter, section 7.5.

7.1 ATHLETE DEVELOPMENT PATHWAYS

7.1.1 How do existing frameworks provide athlete development pathways?

In this thesis, I have written about my experiences of athlete development pathways through being an athlete, a coach at different community and regional levels, and becoming a national coach. In addition to existing models (e.g. LTAD) and frameworks (e.g. FTEM), I have designed and implemented athlete development systems and selection criteria, often as a process of learning by doing and trial and error (e.g. LEAD). Added to these experiences, I have seen how an athlete development system is operating through a top-down approach that I am coaching within (at a club or regional level), and that athletes are trying to enter (at a high performance or elite level). However, it has often been a system beyond my control and where I feel somewhat frustrated at how it has been working and the lack of an athlete-centred approach. There is also the extra layer of complexity of a sports funding body setting expectations e.g. Swiss Olympic for the National Federations, such as Swiss Triathlon, providing conditions (e.g. FTEM framework) or criteria for funding, that is stipulating what they want to achieve from the funding level.

These experiences started my process of considering how Swiss Triathlon/Swiss Duathlon, and I, can better support the development of athletes and give more a chance along the pathway to become elite athletes. As part of this process, I examined different development systems from other countries, as well as looking at research around athlete development. During the process of writing this thesis, the pressure on athletes and issues around selection, non-selection and de-selection was highlighted with many reports and articles. I wanted to build a system to try and embrace early and late developers, as well as allowing athletes to be helped through transition periods in both sport and life. Transition periods can be when an athlete moves from one category to another, transferring schools or entering university, an

apprenticeship or starting work, while trying to balance the needs of the athlete and that of the federation and the pressures it has with result-based funding. At the same time, it means being mindful of providing useful solutions for Swiss Triathlon and other federations that may not have the resources for major system changes.

7.1.2 What are the roles of coaches, Clubs and National Federations?

During my time working within Swiss Triathlon and as a club coach getting athletes ready for *Kader* tests and putting them into the Swiss Triathlon system, I have noticed a few issues that could be approached in a manner that would benefit the athletes and, in the long run, Swiss Triathlon itself. When I started having club athletes attending *Kader* tests and regional meetings held by Swiss Triathlon's staff, it quickly became clear that the current system was built from a top-down approach to be easy for the administrative staff and not focused on athletes. Swiss Triathlon selected athletes and started making difficult selection decisions, removing athletes from *Nachwuchs Kader* early and quickly. This approach, with the numbers of athletes that Switzerland have, is not sustainable nor warranted in terms of the effect on athlete development.

Relevant to the wider Swiss Triathlon environment, Gordon Crawford the former Swiss National coach, stated that no one from Swiss Triathlon, the *Nachwuchs* coaches or managers had talked to him about youth development or what he wanted to see happen in athlete development. This disconnect and lack of communication between the *Nachwuchs* and the Elite system is a systematic weakness and needs to be addressed in a revised framework that recognises a practitioner led system that is clear and easy to follow, and which benefits federations, already subject to resource constraints.

7.1.3 How should athlete development pathways be managed, changed and enhanced?

In recognition of a need to change the athlete development pathway process, the Foundation-Talent (FT) Project was designed and implemented:

FT PROJECT TIMELINE

- Part of the FT Project: 2022 – On going; FT Project starting to take effect, 2023

2020-2021

During 2020, I had conversations with the Swiss Triathlon High-Performance Manager, the National Elite Coach and Junior Coach about the racing system in Switzerland and the ways that the current racing and *Kader* system were not performing as Swiss Triathlon expected them to. The culmination of these conversations was me preparing a draft document for Swiss Triathlon outlining my thoughts on how the system could be adapted (Appendix A). The main goal was to start to structure the Swiss system into a clear framework where development could be tracked and fostered through racing and structured development. This was in fact the origin of the LEAD framework. This document was sent to Tamara Mattis on 01.01.2021. In 2022, Mattis asked me to look at the racing and how the Swiss Triathlon racing could be converted into Swiss Olympics new SMART Competitions framework. This work is still in the process of being completed.

2022-2024

Swiss Olympic want the Federations that it works with to be close to the clubs that are in the Federations, and because of this requirement, Swiss Triathlon decided that the Project FT (FT meaning the Foundation, Talent sections of the FTEM framework) was the place to get input from the clubs. On 04.05.2022, the Project FT began. The original idea was that four working groups would be created, focusing on different areas. Below is the first draft of the Project FT members and the breakdown of the working groups (Figure 17).

The members of the Project FT did change and new members were added, but the only topic under consideration became about racing.

Liebes Projektteam FT

Danke für euer Interesse am Projekt mitzuarbeiten.

Wir haben folgende Gruppen zusammengestellt:

Squad (actions)	Squad (system)	Race (manuals)	Race (smart competition)
Ivan	Valérie	Mélanie	Doro
Pierre	Peter	Reini	Cameron
Nico	Joël	Beni	Roland
Coach?	Christian	OK League?	Patrick (spowi)
			National coach

Figure 17 Swiss Triathlon Project FT overview (2022)

During 2022, Project FT became focused on races, and I was clear of the direction that I believed the racing should go, I shared the document I sent to Mattis over a year earlier. Within the discussion with the group, my ideas, and beliefs of where the racing should go became the dominant ideas and there was a group consensus that this was how we should move forward. One member of the group did not agree. He agreed on most areas we discussed and the changes that were put forward, but when a change came that might affect him and the race he organised, he was against it. At the end of 2022, a Project FT document was presented to all stakeholders, which was well received and the changes to the race system, that would be brought in over two years, were regarded as a positive outcome. One particular change that was well received, other than in one area of Switzerland, was that athletes in the Regio League could race outside their own Regio, and that one race from outside the region would count towards an athlete's points for the overall standing of the Regio League. Due to the negative response from a small number of clubs in the French speaking area of Switzerland, this rule was changed.

The Project FT has been a positive step forward and has shown that the clubs and other stakeholders involved have a lot to offer Swiss Triathlon. It seems unclear how much Swiss Triathlon planned for the Project FT outcomes, as the way the Project FT was run, with goals changing every meeting, and many of the ideas and groups developed at the start of the process, were dismissed and left behind. It is unclear how the Project FT will carry on in the future. The first major change was that athletes could attend *Kader* testing at the age of 12 and be selected for *Kader* at age 13, two years earlier than before, which will create more load on the current *Kader* system in Switzerland. The second major change was opening the Regio League, from athletes competing only in their region to giving athletes a chance to race outside their region. The Regio League divided Switzerland into three regions, and in each there are generally four Regio League races. The athletes collect points at these races and the top athletes in each region are able to attend the final. The final is all the regions combined. The idea was suggested that we make all the Regio League races open and remove the regions completely.

Whilst some welcomed the idea, others stated that their Regio League race could not cater for so many athletes. The compromise was suggested that athletes could race outside of their region if the race they wanted to do had space for them. As a way of encouraging the athletes to race outside their region, they could accrue points for the Regio League in one race. The response from clubs was positive, they appreciated that the young athletes could race more. A couple of clubs, who are from the south of Switzerland that are successful in the region they race in, were against the points being awarded outside their region. They believed it may affect their athletes' chances of being able to participate at the Regio League Final. These clubs have great success at the Regio League level, but not at Youth League and above.

Because of these complaints, athletes could race outside their region but not be given podiums and points. This became the compromise to keep as many clubs happy as possible.

The Wildcats hold a Regio League event every year and due to the open region system, we had more athletes attend and that made the event more successful, and more positive for all athletes. The feedback from most has been positive. I believe that the Project FT was a step in the right direction for Swiss Triathlon. It is clear that there is still a disconnect between the different regions in Switzerland. It is a very small country but with four different languages, it does make it harder to achieve effective communication and mutual understanding from all parties. Added to this situation, the different club politics and how different clubs focus on their athletes, makes it challenging to keep everyone content with the direction the Federation is moving in. This needs to be considered by Swiss Triathlon. They must also try to reconcile system wide national interests and objectives with practical objections that may exist at regional and club level. Their aim needs to be to focus on the long-term development of athletes, even if in the short term a couple of people are not content with the decisions that are made.

7.2 ATHLETE SELECTION

7.2.1 *How is athlete selection managed?*

In 2012, the current *Kader* selection system was designed and managed led by Nina Eggert, until 2020. In 2022, the system was managed by a new *Nachwuchs* Manager, who stayed in the position for ten months. The next *Nachwuchs* Manager started in 2023. This changing of staff in the *Nachwuchs* area has made it difficult to maintain consistency of any selection process. Once an athlete has gone through the selection process, they then enter the *Kader* programme. In the *Nachwuchs* there are three levels of *Kader*, and each of these is treated differently. Regional with no talent card are not offered an introduction or support from Swiss Triathlon. Regional with talent card are given an introduction, now done online. National cards have a kick-off event to start the season where all the athletes are together and easy training is conducted, talks are given, and games are played to get to know one another. This process shows how each level is viewed by Swiss Triathlon, indicates the importance of each *Kader* level, and sets out Swiss Triathlon's goal to develop athletes that are already along their path of development. Yet athletes that are not at the appropriate level of development are left with their coaches and clubs. This paradigm may need to be re-examined if it adversely affects athlete retention in the sport, or has an adverse impact on development progress, as Swiss Triathlon want to develop more athletes in the future.

After an athlete reaches the age of 20 years old, they transition to what is referred to as the Elite system. Athletes do not appear to be guided through this transition by Swiss Triathlon. It is assumed that their coaches and clubs provide this support, and although some athletes are taken into the C *Kader*, many are not.

If an athlete leaves *Nachwuchs Kader*, and is not taken into *C Kader*, there appears to be no further communication with the athlete or coach, and the relationship with the athletes is effectively ended. Athletes that are taken into *C Kader* are currently expected to develop quickly to be able to stay in *Kader* for the next season. As a result, the pressure to perform is constant and performance ‘de facto’ becomes more important than long-term development. Over the period that the *Nachwuchs* programme has been running, it would be expected that athletes being selected for the *Kader* at the different levels would also be developing towards elite athletes. Given the demands of high-performance sport, what percentage of athletes that are selected for a development system would make their way into Elite sport, and what measures should be placed on a system to see if athlete selection is working as it should? Indeed, it begs the question of what successful athlete selection should look like, given it would be expected that the athletes leaving the *Nachwuchs* system would enter the Under 23 system and be developed to elite athletes. Swiss Triathlon does take more interest in athletes once they have left the *Nachwuchs*. However, it needs to be recognised that with Swiss Triathlon’s current system, once they select the athlete their development is left completely to the clubs and individual coaches. As a result, Swiss Triathlon’s current success has mostly not come from its own system but from external coaches. This could be seen at the 2024 Olympic Games as all four athletes selected did not train with the National Centre. This holds true for the 2020, 2016 and 2012 Olympic teams, with athletes qualifying and being selected, but being developed and trained by external coaches and not the National Centre.

I have examined the NZ, British, and German systems, and looked at the use of the LTAD model in Canada. The German system does have some parallels to the Swiss system. However, the German approach recognises one of the key transition points is when an athlete

moves from Junior to U23, and they have created a *Kader* group that is tailored to help athletes make this transition successfully. The Swiss approach does not do this.

The British system is more structured in helping their athletes develop, not only providing an equivalent *Kader* structure but also a clear process of development, progress and movement within it. British Triathlon support their athletes throughout their time in the system, and offer more time with coaches within their structure. As British Triathlon have so many athletes performing at the international level, it could indicate that their athlete selection process and athlete development provide a model that deserves more detailed review.

The NZ system has several similar features to the Swiss System. They rely heavily on the clubs to develop athletes and to ‘deliver’ them to the federation but unlike Switzerland, the selection criteria appear to be more flexible in determining who enters the development programme. However, NZ Triathlon runs a very small programme, with limited numbers of athletes and appears to offer very little support for their coaches to help with development.

7.2.2 What are the roles of testing, racing, and coaches/selectors’ judgement?

Test results play a dominant role in selection with little weight given to the judgement of coaches and selectors. The first contact that young athletes have with Swiss Triathlon is *Kader* testing, which is a high-pressure moment, currently early in the season. Athletes are welcomed, are subject to testing, and points are assigned for the times. The tests have changed over time, and athletes only seem to be valued on the test results they produce for the selection period. No review of athletes past testing results appears to be done. As a result, an athlete that has started to really make progress, but still needs time to develop, is not selected if their times are currently not good enough. Added to the testing are the race results.

Racing performance / results are often weighted more, depending on how Swiss Triathlon sets the scaling they use. International races are rated higher than Swiss races, although the Swiss series are important.

However, the selection process still focuses on athlete performance at a point in time, and the focus is on how the athlete is performing now and not over the long-term. At the end of the season the points via the criteria are calculated, and then the rating for the season is complete. The athletes' coaches are asked to fill in a feedback survey, and then the Selection Commission from Swiss Triathlon decide who is selected and at what level of *Kader*. The athletes are then informed of their *Kader* status. Before 2022, this was done via email and only new athletes of interest would receive an email. In 2022, athletes whose *Kader* status would change attended a meeting but just to tell them of the change. No discussion was entered into about the reasons for changing the athletes' status.

As stated earlier, Swiss Triathlon relies on the club system to develop athletes. Indeed, athletes taken into *Kader* have only four to five days with the regional coach. The regional coach does not give nor is required to give feedback to the athletes' coaches about what they have seen on those days. Club coaches carry the responsibility for developing athletes that perform and once an athlete performs, Swiss Triathlon takes the credit. Former Swiss Triathlon National Coach, Gordon Crawford did try and change this system by giving clubs and coaches credit for athletes' performances, but no one else seems inclined to do the same. Currently, very little is done by Swiss Triathlon to support athlete development at the club level. Although there is awareness that clubs need support, and this issue has been raised and requested in Swiss Triathlon's General Assembly, there has been limited action in helping to provide support at the club level.

The current testing that Swiss Triathlon are doing as part of their *Kader* test programme does not reflect the nature or demands of racing in triathlon. The test data that has been collected to date, appears to be ad hoc, incomplete, and the tests have changed over time. Hence the test data supplied by Swiss Triathlon, which is openly available, has not been meaningful to analyse in any consistent form for the purpose of this thesis.

For example, Swiss Triathlon's current weighting of the various test results is being changed from year to year in an arbitrary manner. In addition, Swiss Triathlon do not appear to use it in the way it is intended by the *PISTE* system from Swiss Olympic, which states that tests should be used to assess the development over time of athletes. Past results and athlete development do not seem to be taken into account or valued at all, and the focus is only on what the athlete did this year in the test. Most young athletes (aged 13 to 19) have one chance to perform in the *Kader* testing two months before the season starts, and Swiss Triathlon is expecting the clubs and coaches to take responsibility for preparing athletes for these tests.

Testing

Testing is done at the Swiss Triathlon *Kader* tests; these are held in March each year and as of 2021 Swiss Triathlon have started to offer a retest in September. Pre 2021, athletes had to attend the March tests but if they could not attend then, could attend the testing in September. Now athletes have two chances each year to perform well. The criteria are set at least six weeks before the March tests, so the athletes know how they need to perform and how the scaling is done for their age group. Swiss Triathlon are trying to improve their testing system to allow athletes to perform in tests relevant to racing performance. Once the September tests are completed, Swiss Triathlon add up all the points an athlete has acquired, these athletes and coaches are asked to fill out a questionnaire, and the final results are compiled. Pre 2022,

athletes were informed of their *Kader* status by email, and there was no discussion. In 2022, all athletes with a change of *Kader* status were invited to a Zoom meeting and were informed of their new *Kader* status. The athlete was asked about how they felt their season went. Even though some changes are being made to the *Kader* system, one part that really remains unaddressed in the selection process is why an athlete may not have performed well. If the athlete does not perform, they are very quickly taken out of *Kader* or have their *Kader* status downgraded. This approach shows that even though Swiss Triathlon is meant to be evaluating the athletes via the *PISTE* system from Swiss Olympic, which looks at development and not current performance, Swiss Triathlon are only selecting athletes that are currently performing well, and any dip or period of struggle results in athletes being quickly de-selected.

I have been critical of Swiss Triathlon informing athletes over their loss / change of *Kader* status via email. Athletes and coaches that I have spoken to have been upset by the lack of information and understanding of their situation. Recently, Swiss Triathlon have reviewed complaints about this process and have at least started informing athletes via a meeting. However, the feedback I received about these meetings indicates that athletes felt nothing they would say could affect the outcome of the meetings, and they were not given specific feedback on areas to develop or improve. There is still room for improvement, yet there are some signs of change, for example using Zoom meetings. Yet, many athlete's situations are not being dealt with well.

Racing

There are three current levels of racing in Switzerland: National League, Youth League, and Regio League. These are viewed differently by the athletes and Swiss Triathlon. The National League is the highest level of competition offered in Switzerland. Swiss Triathlon believe this

is where their best athletes should be racing and use these races as preparation to race overseas. These are also meant to be a development place for athletes leaving the Youth league to get better and race at a high level.

However, athletes view this series very differently to the federation. The athletes coming up from Youth League see it as vitally important and the level of athletes is the best they have raced thus far. The Juniors also see this as important to stay in *Kader*, as they want to perform well. However, the Elite athletes do not see this as being important and mostly do not attend. They are required to attend only one race per season, which is normally the National Championships. However, these athletes would rather race in the French or German League races because they get paid, or will race overseas. As a result, the actual level of the Swiss races is lower and is not a good predictor of international performance.

Youth League: Swiss Triathlon wants this to be a place where young athletes really start to develop. However, there are not always representatives from Swiss Triathlon at the races to watch the athletes, and although these athletes can start to enter *Kader*, they do not appear to have been observed for their development. In contrast, the athletes take the racing very seriously, especially since these races are their first exposure to drafting races. As a result of the new format, they have much to learn and a chance to develop. The Youth League is for 14- and 15-year-old athletes, and this is where early and late developers can really be seen. Some 15-year-olds have almost completed puberty, but some 14 year-olds have not started. This stage of growth can result in the athletes biological age being very different to that of other athletes, creating large differences in physical development between athletes in the same age group.

Regio League: Swiss Triathlon want this to be poly sportive, having transferable skills that can be used in other sports, as well as learning about triathlon. The athletes do some games and short triathlons. Athletes race the same format for four years. Swiss Triathlon does not look at the athletes during this time, and do not see it as important to rank the athletes nor to see how they are developing. The athletes tire of these games or activities before doing a race. This makes athletes feel they are not completing a real triathlon as they are required to use mountain bikes, which makes it feel very different from a normal triathlon. Many prefer doing other events, so they do not have to compete in the games. My experience from athletes within the Wildcats, from talking to other coaches, and from the questionnaire that I completed, suggests the athletes do not enjoy the Regio League format as used currently.

National League: This is the highest level of racing in Switzerland, but many of the Elite *Kader* do not race as they are not required to, or there are conflicts with other events like international races, e.g., French Grand Prix, or the German Bundesliga. The age range of the National League is large. Athletes start racing the National League at 16 years old, and can be racing some of the best athletes in the world. This step also changes the dynamics of the racing for the younger athletes. They are no longer racing their peers as in the Youth League but much older athletes. The advantage is young athletes are exposed to a high level of racing before they hit the junior ranks at 18 years old. However, the disadvantage is that many athletes are still developing and are placed out of their current ability level. Also, if an athlete is a good swimmer, yet poor in other areas, they can take advantage of their swim placing and are able to be in a better group on the bike. This makes it difficult for athletes to catch up who are not as good at swimming, but are better at cycling and running. These development opportunities can skew selection and makes it challenging for athletes who are still developing to keep their place in the current *Kader* system and continue their development.

This is where having a specific youth age group type race may offer different results. Finding a way to take out as much as possible of the external influences should be considered.

7.2.3 How should athlete selection be managed, changed and enhanced?

Nachwuchs System: Youth until the age of 20

As the previous two sections have demonstrated, both the testing and racing currently used to determine selection have significant limitations. Current testing does not offer meaningful insight into an athlete's development potential and the race results are skewed towards athletes who develop early. Moreover, there is very little feedback given to de-selected and non-selected athletes about how they can improve. The following paragraphs outline ways in which these issues can be addressed.

Athlete selection is always going to be a challenging issue, as there will be athletes that are unhappy with their de-selection or non-selection. This outcome is a reality of performance sport, and the management of athletes that are de-selected or non-selected is critical. The first part of selection is thinking about what the long-term goals are within Swiss Triathlon.

Another consideration must be how athletes are intended to be developed and how the pathway will support this development. Once this is determined, the number of athletes that could be developed in the system can be established. Added to the case of Swiss Triathlon is they limit the number of talent cards that are given. Swiss Triathlon needs to consider how they develop and support their Local talent or Regional with talent cards, as many of these athletes can be developed through Swiss Triathlon's development system. At the Swiss Triathlon *Kader* tests in March 2023, a total of 125 athletes participated. Eleven of these were over the age of 20, leaving 114 *Nachwuchs* athletes. This number grew in March 2024 to 159 athletes with only 10 of these aged over 20, leaving 149 *Nachwuchs* athletes. This number of

athletes is large and difficult to keep track of, but from this a good development group can be chosen.

Nachwuchs (Youth Development):

National *Kader* with Talent Card: These are top athletes in the age group that have shown talent and demonstrated ability to perform. National *Kader* is only open for athletes that are 17 years old because it is designed to develop athletes into junior (18 & 19 years old) for international racing and prepare them for the step up to U23 and Elite.

Regional *Kader* with Talent Card: These are athletes that have shown potential yet have not demonstrated the same level of performance as National *Kader* athletes. This level is open from 13 years old and is meant to help athletes prepare for the future. These athletes are being developed by the clubs with the aid of Swiss Triathlon. The athletes need to be seen by Swiss Triathlon and how they perform, not just their overall results.

Regional *Kader* without Talent Card (Local Talent): These athletes are starting to show potential or have been talent identified or performed in testing or racing. This group is more open and needs to catch more athletes. At this level, the athletes are on the radar of Swiss Triathlon and starting to be involved in the process but without taking much of their resources. It is vitally important to keep this pool of athletes open and to make them feel included in the system of Swiss Triathlon. Development in the *Nachwuchs* is the key factor. The rate at which an athlete develops is very different, some develop fast to start with, and others more slowly. It is the end of the development stage that is important, and the development process needs to be given time to happen.

De-selection: When an athlete is in the process of being de-selected, or their *Kader* status being changed, the athletes should have a chance to give input about their situations. For example, if the athlete has been injured, or has experienced school issues (examinations, transferred schools), home issues, club, or trainer issues. The circumstances may have had a major impact on the athlete and athletes should be able to add more detail to their overall profile. Using the simple two-dimensional aspects of test and race performance may not tell the full story, and losing *Kader* status may not be justified for the athlete.

When an athlete has not reached the required *Kader* criteria, or does not look as if they will do so, Swiss Triathlon need to be aware of how they are going to communicate this outcome to athletes and coaches, and if forewarning coaches and athletes may be appropriate. When an athlete is de-selected or their *Kader* status changes, even after the athlete's input is considered, the athlete needs to be informed in a meeting (online can be appropriate), with clear reasons given, and the steps required for athletes to improve, develop and come back into *Kader*. In the case of an athlete believed to have the potential to perform in another sport, like duathlon or aquathlon, the National trainer should contact them, or the athlete provided with contact numbers. It is important to make the athlete still feel valued and that they have options. It is also important to answer questions that the athlete may have. It is always uncomfortable for all involved in these meetings, and it needs to be understood that the athlete will not be happy about de-selection, but it is the responsibility of Swiss Triathlon to work with understanding and care

Non-selection: This is more challenging as the relationship with Swiss Triathlon is less established. This is where an email first to the club and then the athlete is enough to say that they were not selected but that it is hoped that the athlete will continue to develop and try

again in the following season. These athletes can be valuable to Swiss Triathlon, as they may develop later. Again, caring and understanding will help these athletes through the disappointment of non-selection. In addition, contact with the club about athlete after care may be needed.

Talent Transfer: This could be an important resource for Swiss Triathlon. In a conversation with Tamara Mattis (High-Performance Manager Swiss Triathlon) in early 2023, she explained that Swiss Olympic were going to start offering athletes that do talent transfer to another sport would be awarded the same level of *Kader* for a year in the new sport as they had in the old. This would be for *Nachwuchs* and Elite. If athletes could transfer and hold their *Kader* status for a year, it would give the new Federation (like Swiss Triathlon) time to see if the athlete had the ability to perform in the new sport comparable to their performance in their former sport. If Swiss Triathlon actively encouraged athletes to transfer and offered them contact with a coach who could help them, it could lead to some positive development for Swiss Triathlon, with minimal costs. This is the system that USA Triathlon has used successfully. It is also to be understood that an athlete at any age transferring into a new sport may not have instant success and that athlete development is the important factor. Depending on the age of the athlete, the speed of development may differ and needs to be taken into consideration. The standards for testing need to be seen a little differently for the athlete. For example, a swimmer transferring over, would be expected to swim fast but may be allowed to have slower run times, as this is the new part to them and vice versa for a runner coming to triathlon. The important part would be to see how the athlete develops.

7.3 ATHLETE DE-SELECTION, NON-SELECTION AND RETENTION

7.3.1 *How is athlete retention managed relating to de-selection or non-selection*

Currently Swiss Triathlon does not do anything when athletes are de-selected or not selected, and there appears to be no open document reflecting a retention policy. They see this as the function of the clubs. However, *Kader* de-selection or non-selection in the *Nachwuchs* makes it hard for clubs to keep athletes motivated if they feel the federation has little or no interest in them. The way that the transition from Junior to Elite is handled, alongside how quickly some athletes fall out of the system, would suggest that there is very little support to help athletes to transfer, to develop and also to stay in the sport.

Currently Swiss Triathlon is relying on clubs to keep athletes in the sport. They also rely on clubs to prepare athletes for *Kader* testing in a harsh alien environment where they are confronted with a pressured situation alongside the best athletes across Switzerland. If athletes do not perform on this day, they can feel that their season and dream of being in Swiss Triathlon *Kader* is over for this season. Swiss Triathlon currently has no programme or support for clubs related to athlete retention.

7.3.2 *What are the roles of coaches, clubs and the National Federations?*

Depending on the country, and the infrastructure around local triathlon, there are many different ways that people first come into contact with the sport; from watching the Olympics or knowing friends doing triathlon. There are now many opportunities for young children, for example, the Weetbix Kids Triathlon Series in NZ or the Nicola Spirig Kids Cup in Switzerland. These types of events allow young athletes a way into the sport. It is then hoped that the young athletes will get motivated and want to do more races, and train. This is where access to a club is important, as it can start to play a role in the athlete's development.

One way that a federation like Swiss Triathlon can impact athletes' development is through setting up a coach development system to encourage coaches to continually work on their coaching skills and development, as well as providing an athlete development structure and pathway. By doing so, the federation can have early influence on athletes and their development. Whilst this requires resources to be devoted to the early stages of athlete development, as well as to development of elite athletes, a federation can see this as helping set the foundation stones for future champions to develop. Whilst it may not always be the case, once an athlete is in a club, they need to have access to events and races, either organised through clubs or with federation input. Engaging with clubs, events and races, means that the National Federation is active at the grass roots level, influencing and developing the sport from very early on. Rick Velati from Triathlon England said that whilst the cost was high, he believes it is money really well spent. Once athletes have started to race and develop, a federation has the choice about setting up a youth development system. If they choose to set up a youth system, it needs to be decided to what level and extent that will be. There are so many questions that go into this, and where lines are drawn will be difficult to determine and will always be controversial. Some of the considerations need to be:

- What are the goals of your system?
 - How will this system be managed?
 - How many resources do you have to devote to a youth system?
- What is the expected peak age for an athlete in your sport?
 - What age is the Federation actively involved in an athlete's development?
 - Will the system focus on athletes that are performing now or take a long-term view?
 - Does your sport favour early or late developers?
- How does environment effect your athletes?
 - What external factors could affect development?
 - How will you deal with these?
- How long are athletes allowed to develop within your system?
 - How are transfers managed from within and external to your sport?
 - How is the transfer from youth to elite managed?

- How is the system funded?
 - Do the athletes need financial support?
 - How is this support accessed?
- What role does the Federation and the club play together?
 - How does the Federation deal with athletes' individual coaches?
 - What role can they play?
- How can the Federation support athletes, clubs, and other stakeholders during athlete development?
 - Is a centralised, de-centralised or mixed system used?

Moving on from a Youth Development system, is the Elite System. Many sports are focused on an Olympic cycle or for non-Olympic sports it may be World Championships or equivalent events. Again, many of the questions pertinent to youth development programmes are also relevant for the elite athletes. The distribution of funding and resources to support elite athletes is always problematic in terms of amounts and timing, and even more so when athletes are subject to periods of poor performance, sickness, injury, and accidents that may lead to de-selection or non-selection. The management of a federation's fund and resources is complicated, and there needs to be strategic purpose and effective management in the way all sport systems, federations and clubs are co-ordinated and managed.

7.3.3 How should athlete retention be managed, changed, and enhanced?

The centre point for athlete development at Swiss Triathlon has been the clubs. Therefore, the Federation must see and create value in supporting them. There is the current Label accreditation and classification system, which is the funding and support that comes from Swiss Olympic; Swiss Triathlon is a manager of this system. Swiss Triathlon needs to be more involved in the grass roots of the sport, supporting clubs. There are many ways of doing this, from actively rewarding clubs that develop coaches and athletes, to visiting clubs to open up communication channels and helping them utilise resources better.

Elite Selection

There are three levels of Elite *Kader* at Swiss Triathlon: A, B and C *Kader*. These are set by Swiss Olympic and athletes at these levels have access to funding from different organisations. The number of athletes leaving the Junior ranks and making the jump to the Elite team is limited, due to the standards that are set to reach these levels. Swiss Triathlon can only affect how these levels are interpreted a small amount, as the general standards are set by Swiss Olympic. However, offering an extra introductory level, D *Kader*, where the amount of funding and time is limited but the members of D *Kader* are still held ‘inside’ Swiss Triathlon, given access to National Coaches, and the National Training Centre, would expand the athlete pool. These athletes are pushed to develop and be part of the C, B and A *Kader*, and have a place where they feel valued and part of the Swiss Triathlon team. These athletes are ones that may need longer to develop and may be talent transfer athletes who take longer to adapt, but they are also the athletes that are pushing the top athletes to improve. They add to the whole squad and they bring different skills to the table, allowing the whole team to perform better. This new D *Kader* could enhance Swiss Triathlon’s performance with respect to athlete development and elite performance, and could be an area of development for the future, and help athletes make the transfer from Junior to U23 and Elite.

7.4 DEVELOPING & IMPLEMENTING CHANGE AT SWISS TRIATHLON

When I started coaching, I did not think about the overall structure of plans or of development per se. It was about getting the athlete to complete the training. Over time, as I learnt and developed, more and more structure was built into my training plans. When I started at the Wildcats at the beginning of 2015, I was confronted with trying to develop structure for a group of athletes; developing new athletes as well as existing athletes. There was no written structure or information on what was done before I started. As a result, my work was a case of trial and error to establish systems and development pathways. This development process evolved as an emergent programme design, which still evolves today. This development was created by me as there was limited external examples or information I could find to help. When I started at Swiss Duathlon in 2019, I found the same situation as when I started at the Wildcats. There was no written record of anything being done previously. As I started to create structure and development plans at Swiss Triathlon, I had the experience from the emergent programme design from the Wildcats, which helped in developing pathways, criteria, and policies for Swiss Duathlon. Because I had been learning by a trial and error method at the Wildcats, it helped me understand that such work was an emergent process and that development required me to start, change, learn and develop, as I found parts of the system worked, and change parts that did not.

During 2019, I started to consider the systems and structure for Swiss Triathlon and how they could better develop athletes for the future. I sent my initial concept of the Lamont Framework (Appendix A) to Tamara Mattis on 1.1.2020. From this, I have been creating a framework with a clear structure to help Swiss Triathlon and the clubs affiliated with Swiss Triathlon to develop athletes through *Nachwuchs* to elite, while all the time keeping the athletes' needs in focus.

Swiss Triathlon has limited funding and is subject to set requirements from Swiss Olympic to have access to funding. These requirements from Swiss Olympic can be difficult and complicated as they regularly change. This makes it integral for Swiss Triathlon to work inside the rules laid down by Swiss Olympic and, remain focused on what needs to be achieved for athletes to develop through the *Nachwuchs* and elite pathways. A framework that sits inside Swiss Olympics requirements will help keep this focus. A set of key activities, and goals Swiss Triathlon must have in place or meet, are:

- Funding levels are maintained and increased with Swiss Olympic
- Effective and ongoing communication channels are in place with clubs
- Clear *Nachwuchs*, U23 and Elite development pathways are in place
- *Kader* selection systems, including de-selection and non-selection are transparent
- A multi-sport approach is in place where more than just Olympic disciplines are included in Swiss Triathlon.

These activities and goals are significant and complex and require staff to be working in different areas at the same time.

7.4.1 Current structure of Swiss Triathlon

Figure 18 provides an overview of the structure of Swiss Triathlon (as of November 2024). The structure of the *Leistungssport* (HP) section is important (Figure 19), as this is where most contact with athletes is maintained. The High-Performance Manager is the leader for the *Leistungssport* section. The Youth Development Manager also runs Coach Development at Swiss Triathlon; both these roles are full time. There are two National coaches. The first is the National Coach Junior, who manages the Junior athletes and helps them develop towards the elite programme, as well as helping to coach at the National Centre. The second is the National Coach U23 and Elite, who manages the elite programme and is the main person running the National Centre. It was set out that each had clear areas of practice and with only a small overlap at the National Centre, where the National Coach Junior would fill in when the National Coach U23 and Elite was at races or had other responsibilities to take care of.

Currently the National Coach for the Juniors runs the National Performance Centre, which mostly hosts Elite and U23 athletes but only has limited contact with most of the National *Kader Nachwuchs* athletes, at camps or through emails. The National Coach U23 and Elite spends little time at the National Centre, and mostly appears to be managing athletes when traveling to races. There are two assistant coaches who coach and provide coaching cover when needed at the National Centre.

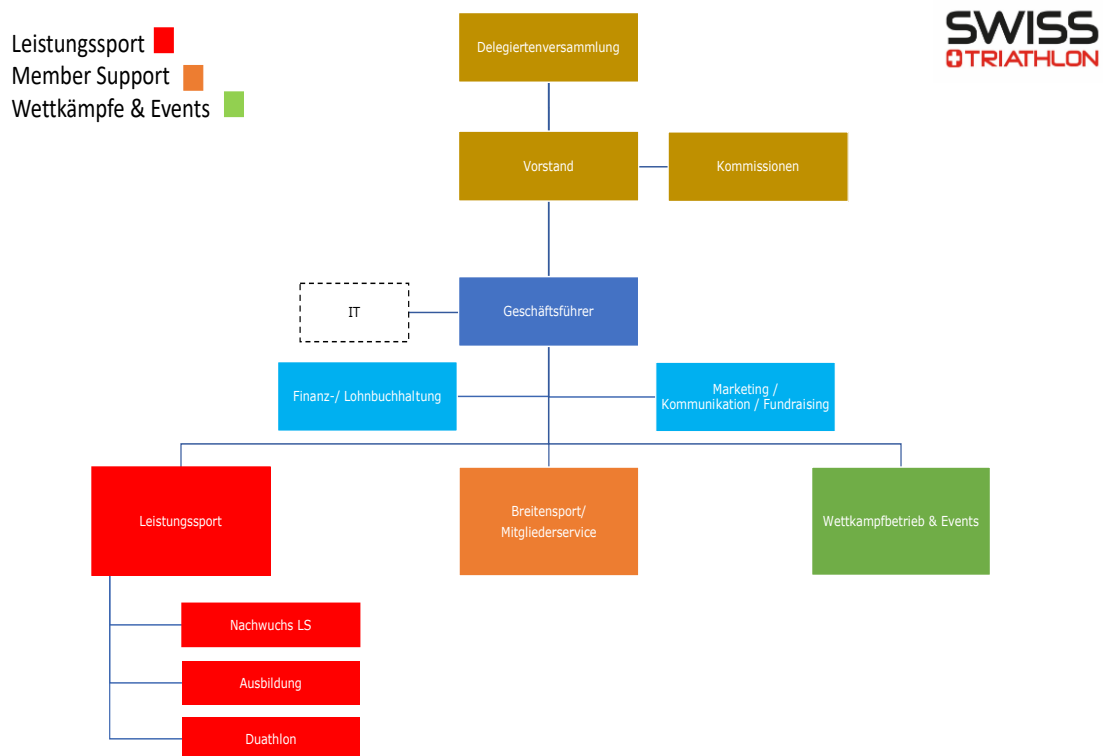


Figure 18 Swiss Triathlon organisational structure (2024)

In 2024, I hold the position of High-Performance Manager and National Coach at Swiss Duathlon with two separate but interlocked areas of responsibility (employed 20%). My duties at Swiss Duathlon include:

- Work with the Swiss Triathlon board and part of the Swiss Duathlon Commission.
- Part of selection committee for Elite *Kader* and International races.
- Lead contact for Swiss Olympic, also responsible for policy with Swiss Olympic.
- International race entry of athletes; National Team Management.
- Create and manage selection concepts and policies for Swiss Duathlon.
- Special project lead.

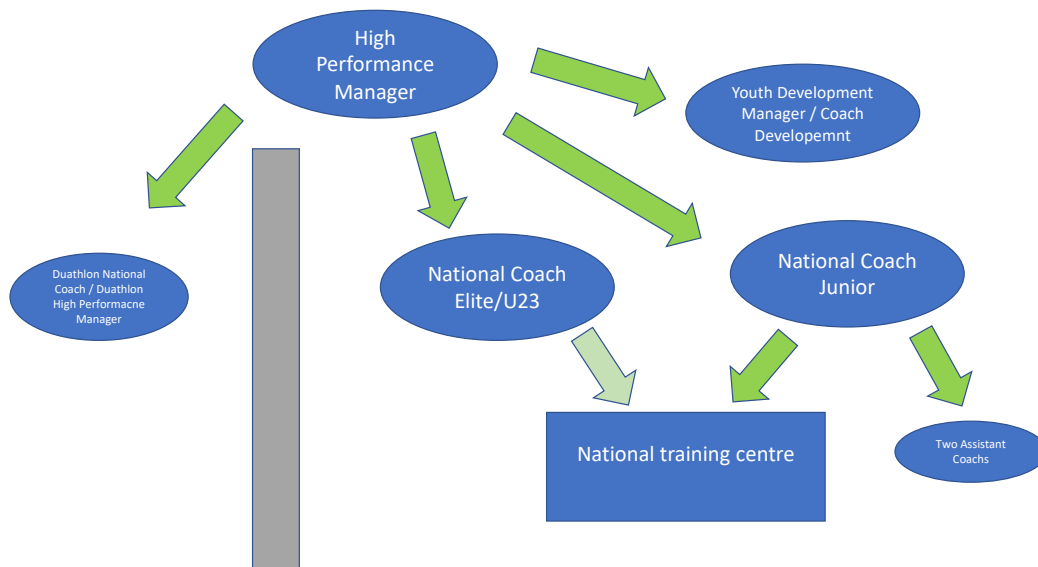


Figure 19 Leistungssport Swiss Triathlon organisation (Lamont, 2024)

Each member of the *Leistungssport* section at Swiss Triathlon has a dynamic and complicated role. There are a couple of critical points that need to be addressed. Some of the positions at Swiss Triathlon are required and funded by Swiss Olympic, yet the use of that position is determined by Swiss Triathlon. One issue that does exist is that the National Centre is run by the National Coach for the Juniors, even though most athletes at the centre are not juniors. As a result of this situation, the National Coach Junior only deals with the ten athletes in the *Nachwuchs* National *Kader*. He runs the camps for these athletes and has some meetings with them and their coaches, yet most of the time he is coaching at the National Centre. The National Coach Junior running the National Centre came about because of the National Centre being moved from Wallisellen to Campus Sursee. The National Coach at the time did not agree with the move, which resulted in Swiss Triathlon changing the National Coaches job description to be more strategically focused. The lead is now taken at the National Centre by the National Coach Junior, using most of his time there and not on the *Nachwuchs* athletes' development.

7.4.2 *Emergent structure for Swiss Triathlon*

This section outlines the current system at Swiss Triathlon in key areas and identifies where change needs to start. My belief in an emergent design concept has evolved through years of experience and personal development. Understanding emergence as a concept is critical, the creation of any system or structure requires time and reflection to see where it has worked and where it has not, and then to adapt the system or structure. This willingness to change and develop can lead towards more positive outcomes for the stakeholder. Change and development is never easy. This is a valuable part in the evolving emergent structure. The following process is advocated for the development of Swiss Triathlon's emergent structure:

Step One: Look at the long-term strategic goals and strategic behaviour for Swiss Triathlon.

- Policy: Like most high-performance organisations, making sure they are financially stable is key. In the case of Swiss Triathlon, this entails ensuring that all requirements can be met long-term for Swiss Olympic. Swiss Olympic base funding on varied factors and results is one of those. Long term development is key to assuring these results are achieved over multiple Olympic cycles.
- Stability in Development: Ensure there are long term athlete pathways and structures in place. These need to be robust and not reliant on one person, as changes in staff should not affect the overall goals and management of a system.
- Events: Manage race series to offer events that elite athletes want and can do.
- Honesty: Be honest about the issues, be willing to confront and, deal with them, then move forward.
- Performance goals/targets: Set by the Performance Team, while also understanding the needs of Swiss Olympic, coaches and systems within Swiss Triathlon.

Step Two: Use of limited personnel.

- Swiss Triathlon has limited personnel it can draw on; therefore, it is key that staff are utilized in the best way to reach long-term goals (Walinga et al. 2023).
- Emergent strategies and planning, ensuring that if something is not working, that you can change and develop from it.
- Making sure that Swiss Triathlon has the right staffing or the right people on the bus (Mallett & Lara-Bercial, 2016), and clear athlete management systems.

Step Three: Implementation

- Strategies management. Execute strategy to an acceptable level.
- Identify positions responsible for tasks.
- Develop and implement a clear athlete care plan, including physical and mental care and management.
- Develop and promote clear policies/management for selection, de-selection, and non-selection.
- Provide flexibility in systems to adjust to a dynamic and changing sport.
- Manage staff to have the best outcomes.

There needs to be system-wide consistency and co-ordination in all things a club and federation do, and most importantly regardless of staff changes. Since I started at Swiss Duathlon in 2020 until November 2024, Swiss Triathlon has had ten staff changes within its nine full time positions. This high rate of staff turnover may be unusual but overarching

strategies need to be in place, so staff changes do not result in changes in goals, processes or outcomes. All such goals, processes and outcomes should be documented as agreed policies that support the overarching strategy.

7.4.3 Emergent policy for Swiss Triathlon

There are many different policies that need to be documented for an organisation like Swiss Triathlon. However Swiss Triathlon has not documented many of these policies. They should be in place, shared and made public. When a document is not public, an organisation cannot be held accountable for its actions. Such transparency is important for all stakeholders, and would likely lead to Swiss Triathlon being more trusted by the athletes and other stakeholders. Such documents fulfil requirements for organisational tasks to be oriented to strategic and operational goals, to ensure co-ordination with and between different levels of the organisation, and send a signal to external stakeholders about the organisation intent and values. It is important that the following plans are made widely accessible:

- Strategic Plan – Long-Term overarching planning for the development and future proofing of Swiss Triathlon. This is a structured plan and not to do with the athletes.
- Elite and youth development plan: Required by Swiss Olympic every four years and is built around the measure and activities Swiss Triathlon will take to develop athletes, clubs, and coaches.

Working with all athletes in a coordinated manner across the system is where Swiss Triathlon could make a greater impact. Resource management is a concern for Swiss Triathlon, as they have limited staff hours and want to make the best use of their resources, to gain the best possible outcomes for their stakeholders. Currently, Swiss Triathlon is in a position where talented athletes are ‘delivered’ to them from clubs, but Swiss Triathlon has no active role in the development of youth athletes. It is only once athletes attend the *Kader* test and have reached a required level, that Swiss Triathlon may invite an athlete for a short interview, if selected. Co-ordination here is essential for the wider system to be effective, allowing all stakeholders to understand how all selections are transparent.

There are also the Regio League events for athletes 9-13 years old. In the past these races have been used to train skills and try and keep athletes ‘poly sportive,’ which was intended to allow athletes to have transferable skills to other sports. Nina Eggert (personal communication, September 2018), who originally set up the Regio League, noted that the Regio League was not initially used for TID, nor value placed on it by Swiss Triathlon, but was there to get athletes active and racing.

7.4.4 The Project FT for Swiss Triathlon

The Project FT led by Swiss Triathlon was the first time that they chose to engage with the coaches in a meaningful way and create change. The Project FT was focused on different areas of the Swiss Triathlon system and suggested ways of adapting the system to deliver what the clubs and coaches believe it should be. Various stakeholders involved with Swiss Triathlon were asked to be involved and, in the end, the focus for the Project FT just became the race system. One of the strong messages from the Project FT group was that most stakeholders believed that the Regio League format was not working, and that change was needed. The main points were:

- The games / activities were not enjoyed by the athletes
- Racing in your own region is too limited and athletes should be able to race all over Switzerland
- Bring the entry age of *Kader* to a younger level to make it easier for athletes to apply for Sport School
- Swiss Triathlon accepted and has started to bring these changes into effect. It has also finally been noticed that Nicola Spirig Kids Cup series of Triathlon is much more attractive for athletes to participate in than the Regio League.

A key goal for the Regio Cup is to make the racing more attractive and open for athletes from all over Switzerland, removing the games and activities, preparing the athletes moving forward. As the athletes can choose to take the *Kader* test when they are racing in the Regio League, it would make sense to start TID here. At this age, it is not about their results but how the athlete is developing as an athlete. This development comes in many different forms, one being their performance increase but also how they develop as people, their

responsiveness to instruction and feedback, how they complete a training session, and how they handle the training load.

All these factors are important when looking at athlete development and are part of the training process to take into account higher performance later at the elite level. A coach needs to be able to see the development over time, keep the long-term development in view, and not just focus on athletes excelling in the Regio League. So much could be developed out of the Regio League, if the resources were used and managed, by coaches and Swiss Triathlon.

There have been many changes to the Youth League. Athletes must use mountain bikes in the Regio League but in entering the Youth League athletes have to use road bikes and also use a drafting format, where athletes can ride in each other's wind shadow, as in cycling. Drafting makes the transition from Regio League to Youth League a major step, let alone adding in the biological difference that can appear between 14- and 15-year-olds. This stage is the first of many transitions that happen for athletes in triathlon and needs to be managed empathetically with respect to physiology so that athletes can successfully navigate this transition. The Youth League takes on the same format, albeit over a shorter distance, than the National League races, and some are held in the same venue as the National League races. Swiss Triathlon pays more attention to the Youth League than the Regio League, in terms of results and performance but not in terms of how an athlete is developing. This means that if an athlete is winning, they are seen as having promise, yet if an athlete starts the season in last place and progresses over the year to be in the top five, this is not noted and perhaps not thought to have significance. Only the top athletes are paid attention to, but not how they race. Although there is normally a Swiss Triathlon representative at the races, this is not often a coach. This would be a suitable place to look at athletes and see how they are performing

and developing, regardless of athletes' results. Even within the *PISTE* document, it is written that current results are not the most important factor, which should be how the athlete could develop and be successful later.

The current *Kader* system only allows athletes to enter *Kader* if they have the required results and meet the set of criteria, it is not about how they may develop in the long term. As such, the development of a more comprehensive TID system would be beneficial, especially with skilled staff to see beyond the quantifiable results and scores, and recognise the athletes that could have potential. Currently, athletes that could have potential are effectively discouraged from carrying on because they are not performing well in the moment and there is no external support from Swiss Triathlon to say, "Hang in there and keep going. You have potential, you will improve, and you are developing."

7.5 CHAPTER SEVEN SUMMARY

This chapter has reviewed the research questions related to Swiss Triathlon's systems and structure and how it implements its athlete development pathways, as well as selection, de-selection, and non-selection processes. It identified a number of problems with the present pathways. The National Federation oversees the selection criteria and organisational structure of the sport but in practice athlete development is largely left to clubs. With regard to selection, much emphasis is placed on test results yet these are poor predictors of an athlete's long-term potential. Similarly, the way racing is conducted yields little in the way of indicative results as it is skewed towards early developers and the elite athletes are often absent. In addition to the testing and racing being of limited utility, selection processes offer only minimal information to unsuccessful candidates as to why they have missed selection or been de-selected. Nor are potential pathways to re-selection discussed. The FT Project has started to address some of the issues highlighted above, yet the focus changed very quickly and appeared to be solely about the role of racing, especially within the Regional League and the Youth League. The original idea of discussing and forming plans for the development of Swiss Triathlon as an organisation were put on hold and may be addressed as the FT Project continues, however will be dependent on how Swiss Triathlon decides to lead the project.

The chapter highlighted a set of factors that are integral for the development of the LEAD framework that is introduced in the next chapter, and how that can be developed to enhance the current structure to endeavour to promote athlete development within the clubs and through the Swiss Triathlon Athlete Development Pathway.

Key factors identified requiring attention by Swiss Triathlon are:

- **Giftedness** (Gagné, 2020), **TID and talent transfer**: Athletes need support in their development, in transition from different race series, and when moving from junior to elite. Talent transfer should play a greater role, be supported by Swiss Olympic, and Swiss Triathlon need to be more active in the promotion of talent transfer and have systems in place to allow this to happen. An example is the USA Triathlon system, where athletes are offered a year of coaching to help enable this to happen.
- **Athlete-centred focus** (Pill. 2018) **and coach education/awareness**: Athlete development should be the most crucial factor, not the time scale within which it is happening. Coaches need to be aware of processes to support athletes related to issues such as de-selection and non-selection.
- **Managing athlete and staff resources**: Swiss Triathlon should resource clubs to meet development objectives. Currently Swiss Triathlon rely on regional clubs for athlete development, and are not active at the club level, until athletes start to reach the *Kader* level. If Swiss Triathlon wants to have more athletes moving through their development system, then they need to have more input at the club level. The current organisation structure of Swiss Triathlon is set and is not flexible or adaptable to working effectively with the clubs. It will require change for continued development and for the future. Development and change at Swiss Triathlon is a slow process. It is starting to happen and the FT Project, where stakeholders engage in helping shape and mould what could happen in Swiss Triathlon, is a step forward. This has not been a simple or fast process, but there is starting to be movement within Swiss Triathlon to enable them to move closer to the clubs and other stakeholders needs. Looking at the systems and structures at Swiss Triathlon shows where there are possible areas to develop and improve so that Swiss Triathlon can have an emergent athlete development system.
- **Selection protocols, de-selection and non-selection**: Protocols should meet the needs of Swiss Triathlon and the athletes. Selection factors should be appropriate and measuring what is relevant to assessing potential at a higher level. Testing results are not always reflected in race results. Is racing highly influenced by others? Selection through racing and testing needs to be considered carefully. Athletes need to know why and what can be done for them to gain re-selection, along with other possible development options.

CHAPTER EIGHT

AN EMERGENT ATHLETE DEVELOPMENT FRAMEWORK

CHAPTER OVERVIEW

This chapter introduces and outlines the progression of the Lamont Emergent Athlete Development (LEAD) Framework, which has evolved from an initial document submitted to Swiss Triathlon at the beginning of this research study in 2020 (see Appendix A). The LEAD framework is designed to be athlete-centred and focuses on using available resources in a way to encourage development. The emergent properties of the LEAD framework are important, as the sport of triathlon is dynamic and changing. This means that any framework, model or system needs to be adaptable in such an environment, and meet the changing needs of the athletes in particular, which the LEAD framework sets out to do. The LEAD framework is built on the theoretical and conceptual foundations of prior models (LTAD) and frameworks (FTEM), but with added focus on the athlete, treating them as the central focus of management and individual development. Key features of the LEAD framework are set out in the subsequent sections:

- Framework Design: (Section 8.1)
 - Giftedness, talent identification (TID) and talent transfer
 - Athlete-centred focus and coach education/awareness
- Theoretical and Conceptual Foundations (Section 8.2)
 - LTAD model and FTEM framework
- The LEAD framework (Section 8.3)
 - Managing athlete and staff resources
 - Selection protocols, de-selection, and non-selection

The applicability of this LEAD framework across sporting codes can be summarised in terms of five higher level principles: adaptability, reflexivity, partnership, pragmatism and transparency.

The principle of adaptability recognises that while it is useful to have broad categories in athlete development frameworks these ought not be applied in a rigid age-bound manner. It is essential that any athlete development framework is adaptable and takes into consideration both the overall development of the athlete as a person and allows for entry of athletes from other sports. The principle of reflexivity recognises the need for constant review of athlete recruitment, selection and pathways by coaches, practitioners and policy makers to ensure they remain fit for purpose. This approach is further reflected in the model's explicit recognition of the emergent nature of knowledge creation.

The principle of partnership recognises the need for collaboration between athletes, coaches and national sport organisations to ensure that athlete development frameworks cannot simply be imposed in a top-down fashion rather they need to be mutually agreed among stakeholders. The principle of pragmatism reflects that practitioners in athlete development are often working within frameworks imposed on them; hence the emphasis on working best within existing systems. Finally, the principle of transparency recognises the overriding importance of the need for clarity around selection criteria by ensuring they are both formalised and visible as policy, and also become 'lived values' that are reflected in everyday practice. Athlete development programmes should provide clarity around criteria for selection and the implications of non-selection and de-selection. In the cases of non-selection and de-selection it is important to provide the athlete with a clear pathway to possible re-selection and attend to both athletes physical and personal needs as part of this process.

8.1 FRAMEWORK DESIGN

The aim of this thesis is to help enhance athlete development pathways (youth to elite), within an emergent athlete development framework, that takes into consideration related issues of athlete selection, de-selection, non-selection and retention, and the development of the athlete as a person through developing policy and practice. I have spent over 15 years working as a coach trying to develop athletes, yet even during all the coaching courses I have completed, not once was a framework offered to help set up a system to ‘develop’ athletes. In the courses I have undertaken, the course leaders talk about development, but not what that really means and how to achieve it. Swiss Triathlon now has the FTEM framework in use, but this is at the Federation level, and has little use or bearing at a club level. The proposed framework is designed to help athletes, coaches, and federations have a clear development pathway that can be easily followed.

Frameworks and models already exist to inform development but they are all very prescriptive and linear in terms of the rate of athlete improvement. This underlying premise of uniform linear progression among athletes is flawed, as clearly there are early and late developers who continue their progress at different rates. Therefore, a framework needs to be set up that can help athletes develop at their own pace, dependent on their sporting background and stage of development. This framework needs to be available as a tool to use at all levels from the smallest clubs to the largest federations. The framework needs to be easy to understand, but also to have the scope and depth to manage complex situations, and individual and group development. These factors make it very complex to design a framework that will meet these development goals and still allow freedom for athletes, coaches, and federations to make changes to meet the needs of all parties.

In 2020, as a pilot study for this current research, I started working on a framework to make Swiss Triathlon’s development structure better and to enhance it for the future. This process culminated in my first version of an emergent design for Swiss Triathlon, which was presented to the High-Performance Manager (Figure 20).

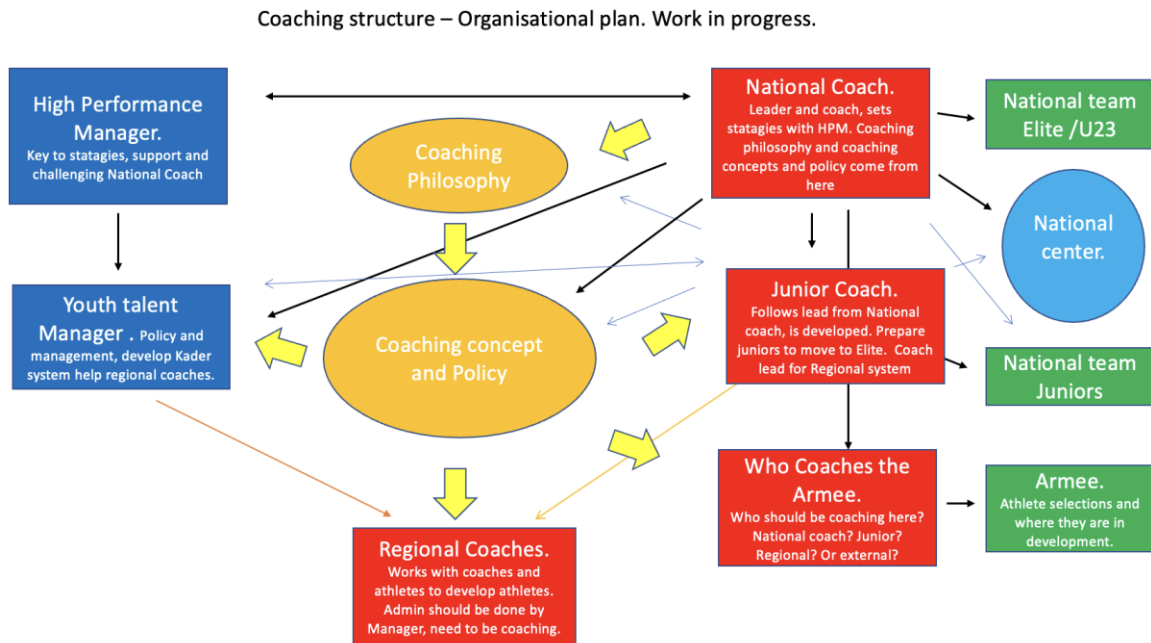


Figure 20 Swiss Triathlon emergent athlete development framework (Lamont, 2020)

From this starting point, the LEAD framework (Figure 21 & Appendix B) started to take shape over the next four years, driven from a practitioner perspective, based on my coaching experiences, outside and within Swiss Triathlon, and those of athletes entering and staying in the *Kader* system. The following sections review the key features components and characteristics that are presented in the LEAD framework.

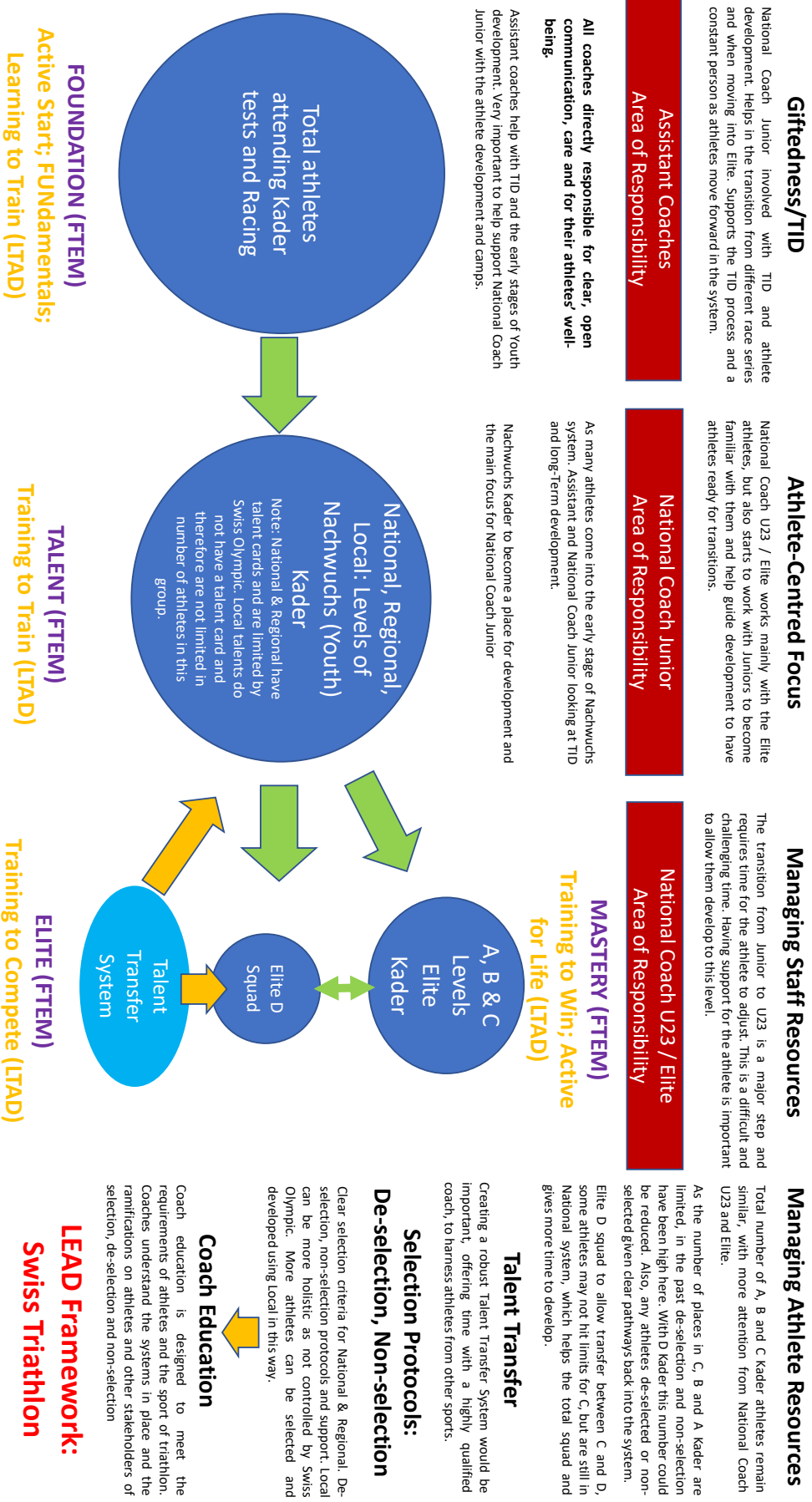


Figure 21 Swiss Triathlon LEAD framework (Lamont, 2024)

8.1.1 Giftedness, talent identification and talent transfer

Giftedness/Talent ID

Gordon Crawford talked at a Swiss Triathlon Trainer Day in 2019, about Gagné and his belief that TID should differentiate between Giftedness and Talents. Gagné (2020) developed his model through an emergent process (Figure 7). He believes that giftedness through training and development leads into talent. Swiss Triathlon has been reliant on clubs and coaches to find gifted people and develop them. During the period I have been working in Switzerland as a triathlon coach, Gordon Crawford was the only person looking at athletes for their giftedness and not their results. What Crawford was looking for was how an athlete moved in the water, on the bike and running. Along with knowing basic athletic structure and race sense, it is important to find out how long athletes have been in the sport and how their coach works with them. Although more intangible than a race result, these factors could be a better predictor of future performance. However, Crawford was not able to attend as many races as he would have liked. He wanted this form of TID to be done by Swiss Triathlon and stated (personal communication, July 2020) that he believed in having fun events, like aquathlons (swim and run), with as many athletes attending as possible, and having the Swiss Triathlon coaches go and watch for giftedness.

TID, has never been directly undertaken by Swiss Triathlon coaches, and it is proposed that it becomes a part of Swiss Triathlon coaches' responsibility and part of the coach development pathway. As such the National Juniors Coach for Swiss Triathlon needs to be actively involved in accessing giftedness and TID at Swiss Triathlon sanctioned events like the Regio League, Youth League, and the Nicola Spirig Kids Cup. Swiss Triathlon needs to be proactive in seeking out giftedness with potential talent that they can help guide into clubs. This process could help improve the chance of keeping gifted, but yet to be developed

athletes in the sport. Finding gifted athletes to develop would result overall in more athletes being in the development pool and lead to higher numbers making elite sport. A TID system, that goes beyond just results and test scores, could be a way of trying to develop more young talent for the future at Swiss Triathlon. In addition, trying to get coaches to up-skill through coach education, so they can play a more effective role in athlete development, would increase the chance factors noted by Gagné (2020), which are environment and the development process.

Talent Transfer

Swiss Triathlon has a small footnote in their FTEM framework about talent transfer, yet the actual practice of talent transfer is very different. In the FTEM framework, Swiss Triathlon highlights talent transfer and a possible pathway for potential athletes to enter the development system. Yet in all Swiss Triathlon's documentation there appears to be no such pathway, and if an athlete does transfer across from another sport they appear to be expected to meet the same requirements as all other athletes. As a result, within the current Swiss Triathlon system, athlete transfer is very difficult, and is mainly reliant on the clubs assessing an athlete's potential to be converted, and then taking athletes to *Kader* testing and to races, hoping they can perform. This approach can work with younger athletes, yet for older athletes it is harder, and development takes time. Tamara Mathis (personal conversation, 2000) said that Swiss Olympic was planning on offering athletes that have a Talent Card or Elite Card in one sport and wish to change sports, the opportunity to keep their card for a year in the new sport. This approach is still reliant on clubs to manage and coach the athletes and support their development. Swiss Triathlon is not actively searching for athletes to transfer, and indeed many athletes may not have considered triathlon as a possible sport.

As a result, clubs and coaches who are aware of the talent transfer opportunities have been, and will be, critical of the current Swiss Triathlon talent transfer system. This situation will carry on until Swiss Triathlon appreciates the value of talent transfer and then takes some responsibility for it.

A good example of how a talent transfer system could work is from the USA (Newland & Kellet, 2012) where USA Triathlon actively look for possible athletes to transfer, and then offer them a year of training with an experienced coach to see if the athlete can develop. If adopted, this approach would mean that the athletes would be offered something of value, and attention from Swiss Triathlon. This is one area where Rick Velati (2022) suggested British Triathlon has had success in retaining athletes who had other sporting options. He believed that because the federation took a personal interest in triathletes, they were more likely to remain involved in the sport.

It is challenging for athletes to change sports, something I know through personal experience. I had the dream of being a cyclist and performed at a high level for a long period of time, but was not going to hit the level required to be a top professional cyclist. If I had been approached and offered a chance to do another sport, and had support from a National Federation, it could have given me a new lease on life as a professional athlete.

In countries like the United States, with a strong University sport system, it helps that there is a great pool of athletes that could be approached, yet this should not be a barrier to talent transfer. By starting the process and setting up a network of coaches and using the National Training Centre, then starting to develop an emergent system to allow athletes time to adapt, a stronger pool of athletes could emerge for Swiss Triathlon.

8.1.2 Athlete-centred focus and coach education/awareness

Athlete-Centred Focus

Swiss Triathlon's role is to support athletes, their major funding stream for doing this is Swiss Olympic, who fund success achieved at international races and Olympic Games. If Swiss Triathlon wants to increase funding, it is required to produce the necessary documentation and results. Hence, it is understandable that Swiss Triathlon focus on the areas that will bring them funding. After my experience with Swiss Olympic, it is clear that they are looking for two main areas for funding, one is the work with *Nachwuchs* (which caters for athletes until the age of 20); the other is results at the elite level. Swiss Triathlon does not appear to be funded on TID, as this is seen by Swiss Olympic as part of *Nachwuchs* development, but are funded on the numbers of *Nachwuchs* in triathlon and racing, then how many are tested. This means that the results of the tests and the level of athletes' racing is not the most important, until the *Nachwuchs* are aged 17-20 years old, when they are expected to race internationally and to achieve results, which do count for Swiss Triathlon funding. This situation can work well in the short term but in the long term, if TID and pathways are not managed then athlete development may not progress relative to how Swiss Triathlon needs to achieve results and therefore funding. Swiss Triathlon needs to have an eye on getting and keeping funding, but also keeping an athlete-focused system of TID and development, so in the future they have athletes that can deliver the results that are needed by Swiss Olympic. For Swiss Triathlon this athlete-focus should be about observing and evaluating athletes, which clubs are working well, and creating development opportunities when clubs or athletes may want some help in these areas. Helping clubs to create athlete-centred structures which are more focused on long-term athlete development, rather than pushing athletes for short-term success and a higher chance of burnout, is an important priority. If the clubs are supported to develop athletes, then the development systems in Swiss Triathlon will have

more athletes to work with, and hence more athletes able to enter the elite system. This requires all the systems, from top down, to be adapted and coordinated to allow the pathway systems to function. During my time working in Switzerland, I have observed Swiss Triathlon and how they have worked with clubs. There is the expectation that the clubs will independently produce athletes for Swiss Triathlon, without them helping the clubs. Until this dynamic changes athlete development will be hit and miss for Swiss Triathlon.

Coach Education

Coach education is a very significant area and J&S (Jugend & Sport) has a large infrastructure in Switzerland for coach education. Having been through the J&S coach education programme and now being a J&S expert, means I am now able to lead coach education courses. Through these courses, I was taught the basics of being a coach: Planning a training session, running a training session, long term planning, safety, the FTEM framework, loading, programming, and lots about how the J&S system works. What was not covered in these courses, is supporting athletes after de-selection and non-selection, along with dealing with the other stakeholders during this process. These issues have been highlighted repeatedly in this thesis as an important element of coaching. One suggestion could be to hold a meeting before the *Kader* tests each year to educate coaches, as a requirement for having athletes attend the tests.

8.2 THEORETICAL AND CONCEPTUAL FOUNDATIONS

8.2.1 LTAD model and FTEM framework

In this thesis I have primarily utilised the theoretical and conceptual approaches embedded in the LTAD model (Balyi & Hamilton, 2003) and the FTEM framework (AIS, n.d). Both have strengths and weaknesses. In particular, how organisations choose to adapt the model or framework can also affect the model or framework's effectiveness. An example of this adaptation is how Swiss Olympic (n.d.) chose to remove aspects of the original framework related to well-being. Also, Triathlon Canada (n.d.) have removed the age sensitivity period considerations from their LTAD model. These examples show that even though a model or framework may be adapted, some aspects may be removed or refined to meet the requirements of the federation using them, creating an emergent flexible system, Hence, the Lamont Emergent Athlete Development (LEAD) Framework can function effectively even if not every part of it is used in the same manner as originally intended.

Having a simple and clear framework for athlete development that is easy to understand for all stakeholders is important. Within the LEAD framework, athlete development is the central key component. Understanding how selection, de-selection and non-selection works for teams and development squads should be part of this approach. During my time as an athlete and as a coach, the systems I have worked in have made their processes overly complicated and not user friendly for the main stakeholders. As a result, it may make it more difficult for new athletes or coaches to enter the system and gain understanding of the processes. Part of the LEAD framework is to create streamlined and simple processes that are easy to understand yet will work within a complex Federation environment.

The LEAD framework is founded on the notion that despite the existence of many complex issues and systems, the framework will bring clarity to the development process so external stakeholders get simple clear and accurate information and a structure that they understand. It must be noted that when working as an athlete and a coach, some criteria are set by funding organisations, can appear complex and challenging to work with. Now being inside a federation and writing policy, I see how complicated it can be. For example, although a funding organisation may ask for specific testing, some can be adapted to meet the specific needs of the sport and the federation to best serve the athletes' development. Otherwise, it should be clearly stated if there are requirements that the federation must adhere to in all circumstances.

All changes within an organisation, or any system or framework need to be agreed, adapted, and supported from the top whether it be an individual (CEO) or a group (Board, Executive or Committee). Without this clear evidence of support or buy in from the top, buy in from elsewhere in the organisation may be compromised. The overall goals need to be decided upon with the strategic plan structure. If a board or organising committee is not involved in day-to-day running of a system, it is recommended that they involve the operational staff into strategic planning. Without understanding from the staff executing the strategy, the strategic goals may not be achieved.

8.3 THE LEAD FRAMEWORK

In this section, the LEAD framework is used to examine Swiss Triathlon's structures and processes related to athlete development that have been changed to more effectively address athlete development requirements. In particular, examining processes that relate to the management of selection, de-selection and non-selection plus protocols, talent transfer and TID. The LEAD framework is intended to be used from a practitioner's point of view. It is also designed to sit under an existing system, such as the FTEM framework that Swiss Triathlon and Swiss Duathlon are required to use. It supports coach education, and creates an adaptive system between athlete, coaches and the framework above. The following are changes to Swiss Triathlon proposed by the LEAD framework (Appendix B.)

8.3.1 Managing athlete and staff resources

Managing athlete resources

Having identified some issues in the Swiss system, it is important to develop one which is clear and purposeful to use, with the resources available allowing the development of athletes to be optimised for the future. Any emergent system needs to be robust enough to change where it is needed, yet retain clear goals for the development of athletes. An important aspect of the LEAD framework is that it focuses on the person first and athlete second. More effective staff management will allow better support for athletes in the system. In triathlon athletes are grouped together in age groups, which lead up to elite level. In 2023, Swiss Triathlon lowered the age for athletes to attend *Kader* testing. The athletes age groups are as follows: Under 14 (U14), Under 16 (U16), Under 18 (U18), Under 20 or Junior (Junior), Under 23 (U23), and Elite.

One of the first steps is to ensure staff are being used effectively and in the appropriate places. Figure 22 shows the current and the proposed changes to the system, with staff roles corresponding to their position title. Overlapping areas of responsibility should help athletes as they transition through the different Swiss race series and how they relate to Swiss Triathlon. It should also support them as they make the leap from junior to elite, as was highlighted by Gordon Crawford in Figure 12 (Crawford, 2018). In the proposed redistribution of the staff, it will be important that the transitions are well managed, with coaches from above and below actively supporting the athlete before and during the transitions.

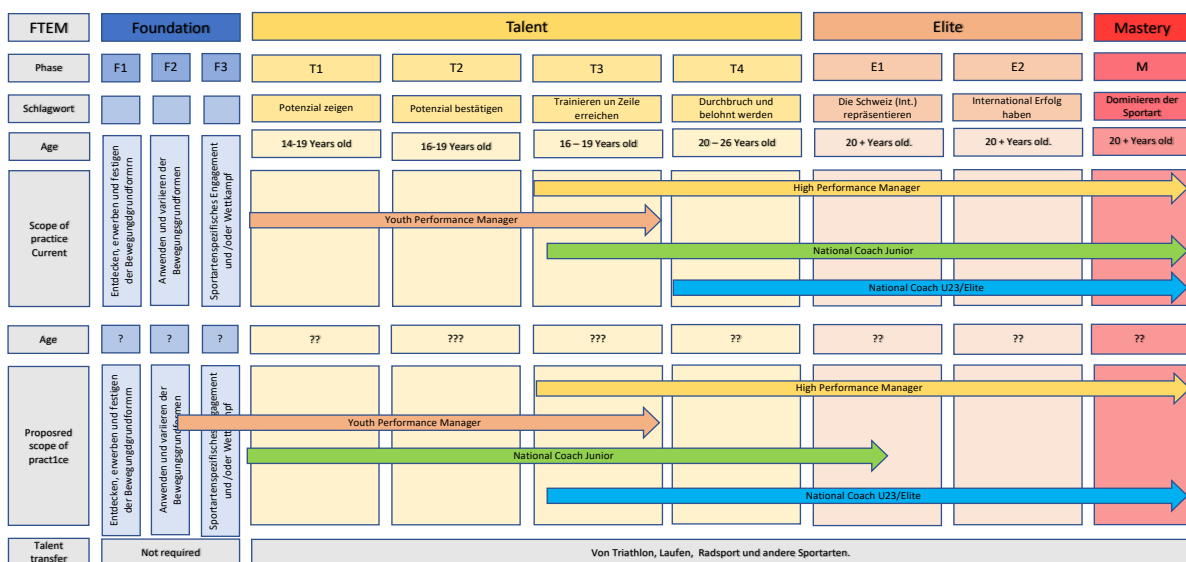


Figure 22 Current and proposed staff usage at Swiss Triathlon (Lamont, 2024)

Nachwuchs Development (Youth Development)

- Under 14 (U14) & Under 16 (U16) Development

As selection for Swiss Triathlons *Kader* system is now starting with athletes at the age of 12, a system needs to be set up to receive these athletes, rather than just accepting them into a system that is not finished or ready to develop athletes, as was the case in the Swiss Triathlon Development Concept (2023). It is important to note that the first round of testing was held

18 March 2023, and the selection criteria had not then been completed. It also should be understood that testing and results will not necessarily be an effective predictor of future performance as athletes are in different stages of development, not only in the sport of triathlon but also biologically. The focus at this age should be about participation and development. As of 2024, athletes will be entering *Kader* at the age of 13 and 14, which is the youngest age group accepted. In the past athletes entered the system at age 15. These athletes should now be viewed as one group, U16. These U16 athletes are early in their long-term development. The work that Swiss Triathlon does with these athletes need to be targeted at helping support the training structure at the clubs the athletes are in. These athletes should be offered a set number of weekend training camps, where they are brought together and engage in a skills-based training plan. It is also the time they should be introduced to the coaches of Swiss Triathlon and made to feel like an important part of the system. In the youth system, more athletes are better than less. The development system needs to be looked at as inclusive, rather than selective. The aim of entering the *Kader* system needs to be learning and development, not results. This is highlighted as the biological development of these athletes is extremely different, so results do not indicate the latent potential of an athlete in this age group. These are young athletes, and the long-term goal is to develop athletes towards elite performance. Thus, elite performance cannot be expected from U16 but helping them to develop skills for the future is critical for development, and should result in more and better prepared skilled athletes leaving the U16 level.

- Under 18 Development (U18)

In this age group, some athletes have experience of triathlon, others are transferring into triathlon, and large biological development differences still exist, and makes using testing and results less a reliable predictor of future performance. Focus here should be on development and skill development to increase the athlete's potential to perform later.

Having contact time with the National Trainer team is increased and skill development becomes more about athletes practising under pressure. By bringing athletes together, it allows a greater pool of athletes around the same age to train together than can be offered by a club. The approach to this age group still needs to be inclusive, yet standards need to be set for selection in international races that maybe available. Athletes that are more advanced in performance and biological development could also be moved towards the U20 group. By having this flexibility, the system should strive to benefit everyone, and aid development. Input from National Coaches becomes important, not so much to coach the athlete themselves, but to provide an extra set of eyes and input so an athlete's coach may help development. It is important that the National Coaches talk and give feedback to the athletes main coach, as the National Coach does not always have all the information or know the history of the athlete. The aim of the national system is to help the athletes progress and not work against what their coaches are doing. These athletes need to be given an opportunity to race in different situations, for example squad races or racing in other countries like France or Germany. Changing the setting allows for different learning.

- Junior U20 Development (Junior)

Although at the U20 level performance becomes more important, the focus should still be on development, where athletes should be heading towards key performance indicators and evidence of development in the swim, bike and run. The skills of triathlon should start to become second nature, the racing environment should become familiar, and the basic underlying skills of race craft should be developed. Time with the National Coaches becomes more important and introduction to the Lead National Coach starts to take place. They should have influence to ensure that the skills have been developed that will lead that athlete into the U23 and Elite level.

The main coach of the athlete is kept informed and helped if needed to ensure the athlete is developing. The National system needs to help support coaches and guide performance. Training with the National coaches is more structured, and the athletes can also train with the U23 and Elite athletes, to see how they train and work. At Junior level results are again not critical, but it would be expected to see athletes starting to perform. Juniors need to be exposed to more international races, and racing at the World Triathlon Junior level. As with the other age groups, clear goals need to be set for athletes to manage expectations. Initially, junior athletes should focus on taking the learning and skills from their past experiences and applying these at international level, as well as learning what is required to race at that level. Then the athletes must be guided through international racing and what they need to expect, and managing the post-race experience. During the athletes last year as Juniors, improvements would be expected to be seen as the athletes should have taken the learning from the previous year and translated that into better racing. However, National Coaches need to be aware that Junior performance is not always the best indicator of later Elite performance (Wulff & Hoffmann, 2013). The athletes need to be well prepared as they transition from Junior to U23. This is one of the most challenging jumps that athletes encounter and there is a need for understanding about what is to come. This transition normally comes as Swiss athletes also have large changes in their education and schooling, which should be planned for. In Switzerland, most students will leave school between the ages of 19 (middle stream) and 21 (upper stream) - later than in NZ, where the leaving age is 17 or 18. Most schools have examination periods in May and June, which is the main racing months of the first part of the triathlon season in Europe. The two years in Juniors need to be focused on what is coming after, and not on pressuring to perform at this level. The National Coach U23 and Elite need to be involved so that the transition is smooth into the U23 squad and ensure all the skills are ready for entering U23 and Elite racing. There needs to be an

awareness that time allocated for the National coaching staff is limited with more time given to the National *Kader* athletes and less for the other *Kader* sections. If possible, National coaches should visit the National *Kader* athletes training environment, and provide support to their coaches. There should be programmed appointments, weekends and other events where all the *Kader* athletes can join and work together. The amount of time the athletes have together as a group needs to be planned, and the form the training takes will depend on the group.

- Under 23 Development (U23)

Many Under 23 races are raced in conjunction with elite events, meaning that as athletes leave junior racing they can go straight into elite racing, which is a large step for athletes. Once athletes reach U23 level, development needs to be faster, as the athletes have to quickly adapt to racing at U23 and Elite level. However, athletes still need to be given time to adapt to this level (typically two years) and to establish a world ranking. World Triathlon has a ranking system which for many athletes and coaches can be difficult to understand. Based on the criteria for the ranking system, it takes two years to properly establish an athlete's World Ranking. World Triathlon allows an athlete to have six 'current' races and six 'previous' races to count towards their ranking. If an athlete participates in more than six races, only the top six races count toward the ranking in each period. Race results last 52 weeks in the current rankings and then move to 'previous', and then last another 52 weeks in 'previous'. Races are also ranked, Olympics and World Championship being the highest ranked, down to Continental Cup races. Depending on how a race is ranked, will depend on how many points are allocated to the races. This system is complicated and can be hard to understand, yet it is fundamental that athletes and coaches understand it. Because it takes two years to achieve a ranking set (six current and six previous races), and entering some races is based on an athlete's current world ranking, means athletes starting their elite career, coming back from

injury or even just having a period of poor performances, often have limited access to top level racing. Unless an athlete starts to perform over a longer period, they will not easily get start places in higher ranked races. Therefore, coaches and athletes need a long-term view of getting their athletes to top level races. Currently Swiss Triathlon has A, B and C *Kader* for all athletes over 20. In November 2024, there were 25 athletes in Swiss Triathlon Elite *Kader*. I believe that keeping the A, B and C *Kader* limited to the athletes that have achieved the required standard is correct, but a D *Kader* should be established. D *Kader* would accommodate athletes that may have been de-selected or non-selected for the A, B or C *Kader*, and would ensure they have a clear path for selection in the future for those whose performances are improving but are not yet at the standard for the main *Kader*. D *Kader* athletes may not receive any funding, but would have the advantage of being closer to the National coaches and system, as well as being able to join the National Training Centre and be invited to train with other *Kader* athletes.

- Elite Development

As athletes' leave U23 they become full Elite athletes. Whilst this may not make much difference to the races in which the athletes are competing, it does make a difference for those in the national programme. At this level, the skills and the abilities are set, and race craft is understood, thus athletes are expected to start performing at a higher level, and to keep improving. Standards and expectations need to be set by the National Coach U23/Elite and the High-Performance Manager. Currently in Swiss National *Kader* Elite, some athletes train in the National Centre, whilst others have their own coaches and groups. This requires the National Coach to co-ordinate and be in contact with many people and different groups. As in the U23 group, the D *Kader* can really add value here to the Elite athletes. Keeping athletes that have not reached the standard expected for A, B and C *Kader*, can still add real value to the system, and cater for the later developers and talent transfer. The selection

criteria are set every year by Swiss Triathlon for the *Nachwuchs*, as well as the U23 and Elite. However, there is currently no allowance within any selection criteria by Swiss Triathlons for talent transfer.

Managing staff resources

One of the key parts in applying the LEAD framework is the strategic use of limited staffing. It is expected that staff need to know their role and what is required, as well as their scope of practice. Additionally, co-ordination is required to ensure that athletes do not fall between the gaps. The Executive Director and High-Performance Manager roles are critical to the smooth running of the systems that Swiss Triathlon operate, and these two people are critical to effective transformational leadership (Bass & Anolio, 1994) and strategic management (White, 2004).

- National U23/Elite Coach

This role would change. As well as leading delegations and training camps, they would also take the lead at the Leistungszentrum and have overall control of the planning and development of the centre with the High-Performance Manager. They would still work with the Elite athletes and manage their programmes. As of September 2024, there were 26 athletes listed in the Elite *Kader*, which is a large number of athletes to manage. However, as Swiss Triathlon does not run a centralised system, athletes can have their own coaches and do not need to be coached by the National Coach. The National U23/Elite Coach should have oversight and may offer input into the athletes planning with regard to the Junior National *Nachwuchs Kader* athletes. While the main responsibility for these athletes may still be with the club coaches and the National Junior Coach, having some contact and input into their development may allow for a smoother transfer to the U23 squad.

- National Junior Coach

This role would go back to what was originally planned. The focus would be athlete development through the *Nachwuchs* system at Swiss Triathlon. This person would be key to communicating with athletes who are in the *Nachwuchs* system, as well as the athletes' parents and coaches. The goal of the National Junior Coach would be to help athletes and coaches develop and guide athletes through the system. They would be critical in looking at athletes as a whole and helping from the federation side when dealing with selection, non-selection, and de-selection. The National Junior Coach also needs to look at the feeder groups for the juniors, the Under 18 and Under 16 athletes, and to look at what the clubs are doing to make sure athletes are being developed with the skill set needed to progress through the junior system towards elite. This process would try to limit the difficulty of the transition periods that have been identified.

- Youth Development Manager

This person would be responsible for the systems and management behind the National Junior Coach. They would create the criteria requirements and 'set the stage' for the National Junior Coach. These two roles co-ordinate to make sure athletes are being developed as expected, as well as managing the issues around selection, de-selection, and non-selection policies and subsequent issues. The Youth Development Manager should have a deeper reach into the clubs than that of the National Junior Coach, as the Youth Development Manager should be looking for talent or enabling and supporting clubs in their efforts of TID (Gagné, 2020) from Regio League through to National League level. This TID process needs to be deeper than that of just racing, but also identify potential athletes with their possible abilities noted and such athletes should then being directed to clubs. Then, by having set up systems within clubs, coaches can be utilised to see if there are athletes who could have potential to be developed into talented athletes. With the identification system working, the information

about the athletes and possible potential athletes can be shared with the National Junior Coach to see if their development can be supported. The Youth Development Manager is also responsible for formalising and documenting the *Kader* selection concepts for the *Nachwuchs*. As of 2024, the base document and concept was written approximately eleven years ago by Nina Eggert. Since Eggert left Swiss Triathlon in 2021, three different people have filled the Youth Development Manager role. This rapid turnover of staff has meant that the selection process has not been reviewed or changed in a meaningful way. Instead, changes have increased its complexity. It is hard to understand and comprehend how an athlete's scores are calculated. In addition, some aspects that are assessed by Swiss Triathlon staff, in-house, are not openly available for the athletes or coaches. Hence, the result of the "true standing" of the athletes, is not able to be assessed by anyone outside of Swiss Triathlon's main staff group, and its direct employees.

- Regional Coaches / Assistant Coaches / Assistant Junior National Coach

Three regional coaches were formerly employed at Swiss Triathlon and used to run training weekends and analyse Excel training sheets, but were subsequently replaced by two assistant coaches. Through the proposed LEAD framework, these coaches would be utilised in an athlete-focused way, with TID, and help athletes in the early stages of the athlete pathway. They would substitute for National Junior Coach absences and be directed by the Youth Development Manager as required. The assistant and regional coaches would be managed by the Youth Development Manager.

8.3.2 Selection protocols, de-selection, and non-selection

The process of selection, de-selection, and non-selection needs to be the focus of Swiss Triathlon from the start of the athlete's involvement in the selection system right through to when an athlete retires. In March 2023, Swiss Triathlon had its first testing date for athletes

wanting to join *Kader* in 2024. This was also the first time that they allowed athletes aged 12 and 13 years old to join the *Kader* system. Before this, 14 years old was the youngest age possible to join. With this change, Swiss Triathlon had 125 athletes sign up for the March testing (My, 2023), whereas the March tests in 2022 for *Kader* 2023 had 75 athletes sign up (My, 2022). This is a 40% increase in the number of athletes participating from one year to the next. This result is the most *Nachwuchs* athletes Swiss Triathlon have had attending annual March *Kader* tests, which is a very positive outcome. Yet with so many young athletes all wanting to reach *Kader*, Swiss Triathlon needs to ensure they have the most appropriate criteria for selection in place, as well as policies for how they are going to deal with substantial de-selection and non-selection issues. Swiss Triathlon need to be proactive and approach the matter from different perspectives to ensure the best possible outcomes for athletes.

- Selection criteria

When starting the process of creating selection criteria, the desired athlete outcome needs to be considered. Of course, it is not that simple, for the likes of Swiss Triathlon, as there are many different points that need to be considered when starting to write a selection criteria. In Figure 23 possible considerations are set out to help start the process of establishing selection criteria. These need to be specific and as simple as possible to allow understanding by all stakeholders, without creating misunderstanding and upset. Selection criteria is always difficult to set at the right level to achieve the goals wanted. From personal experience in the development of selection criteria, it is difficult to get right, hence it should be an emergent process. It takes time, and each time I have set selection criteria, I have missed something, or a detail is missing. It is hard to make the criteria clear and not to overcomplicate it. From this mindset, the following Swiss Duathlon Policy / Practice Nexus (Figure 24) and the Selection Feedback System were developed (Figure 25).

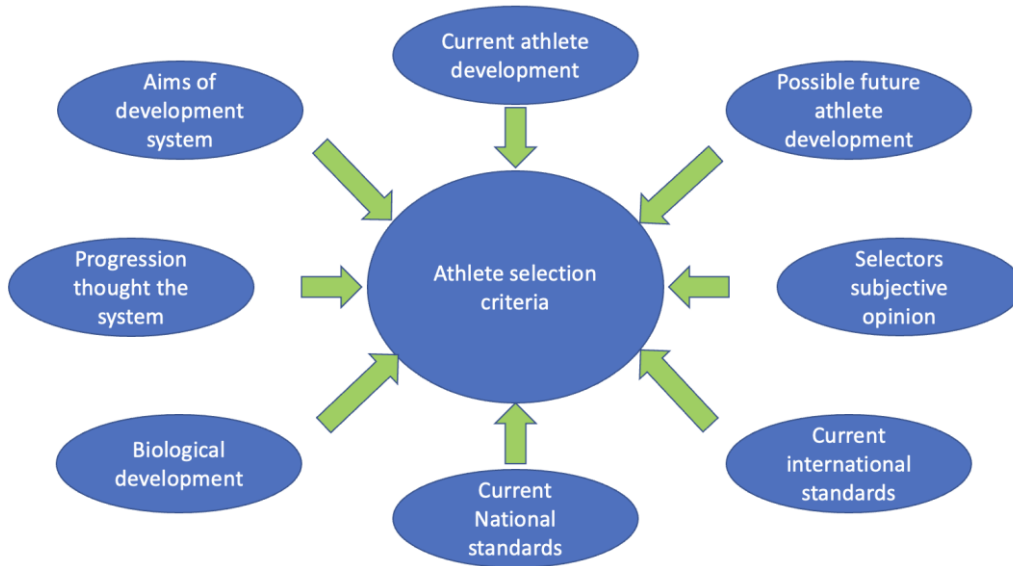


Figure 23 Athlete selection criteria setting process (Lamont, 2024)

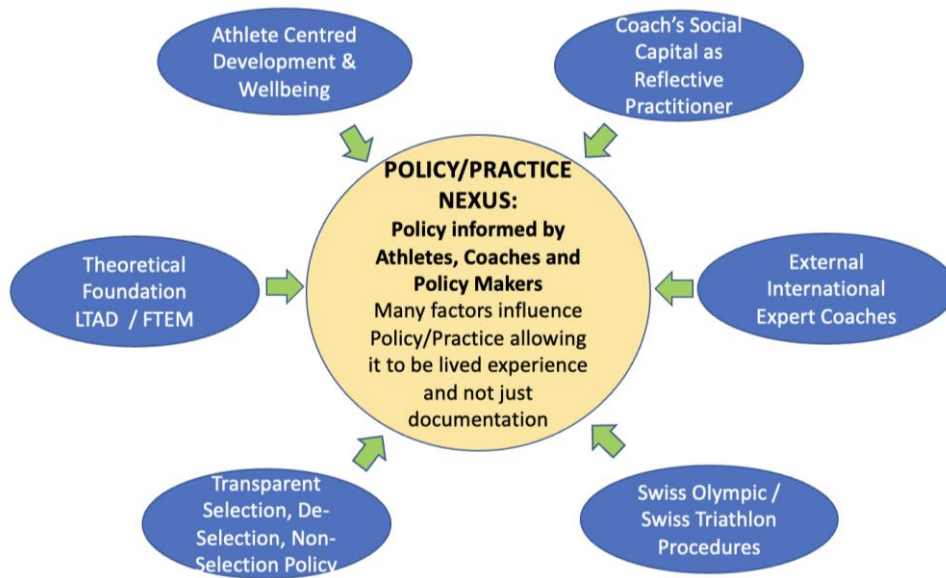


Figure 24 Policy/Practice Nexus for Swiss Duathlon (Lamont, 2024)

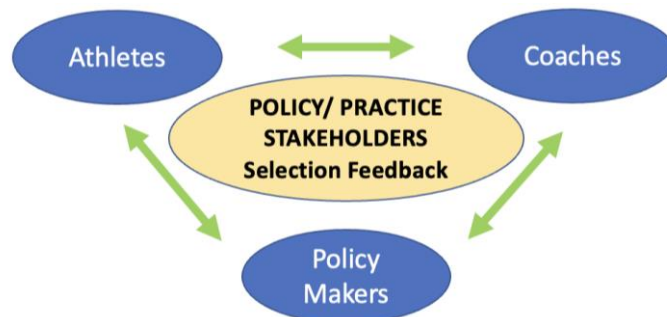


Figure 25 Selection Feedback System for Swiss Duathlon (Lamont, 2024)

- Selection communication

Communication and / or workshop activities about setting athletes' expectations related to *Kader* and the level are required. It is important to talk to and work with other coaches, about selection, de-selection, and non-selection, as most do not understand how systems work and they build up the expectation of the athlete. The role of the coach should encompass helping athletes manage expectations in relation to selection, de-selection, and non-selection.

Although there is information within Swiss Triathlon's Selection Concept document about the number of points an athlete is required to reach a particular *Kader* status, this is often complicated to understand for athletes, with the language used confusing. Compounding the situation, coaches also do not understand the system and cannot explain it to the athletes, which suggests the concepts need to be simplified to be more user friendly.

- Coach Assessment of Athlete and Club Assessments

Once the season is over, the athlete's coach is asked to fill out a survey for each athlete and to submit it. In this document, coaches are expected to be honest about their athletes. It is clear that these surveys will count towards their score and the better you present your athlete, the better chance they have of entering *Kader*. Additionally, a club is rated on how many athletes they have in *Kader*, therefore it is in the coaches and the club's best interests to say how well the athlete is progressing, even if the assessment is not correct. This process is not well thought out. The coaches have a strong motivation to be "selective with the truth" about their athletes. Once the surveys have been handed in, the Swiss Triathlon Selection Kommission meet and decide on who is selected, de-selected, or non-selected. Swiss Triathlon invites some athletes to meetings and pre-2022, athletes who had a chance to enter *Kader* were asked to a meeting and then the decision on *Kader* places was made. In 2022 this changed and the meetings were only for athletes changing status - the first-time athletes were told in a meeting about their *Kader* status change. For athletes that were selected or moved up a level, the

meeting was easy, and the athlete left happy. When it was about the athlete being de-selected, the meeting of course was more difficult. The meeting flow was as follows. The athlete was told of their de-selection and then asked if they had any questions as to the reasons and what recourse they may have. For most the response was no, as they had not had time to consider the information they had just received. It was also clear that nothing the athlete or coach could say would change the level of selection, and no concrete reasons for the de-selection were given, or what the athlete needed to do to be considered for reselection. No thought appeared to have been given to providing a contact pathway if an athlete had questions at a later date. Such meetings left the athletes feeling negative, with no recourse to come back into *Kader*. This process needs to change. I have proposed having a structure for de-selection and non-selection, so that athletes can be led through and given options. The establishment of a de-selection protocol is discussed below.

De-selection and non-selection protocols

- *Nachwuchs* non-selection

Over one hundred and fifty athletes signed up for the Swiss Triathlon *Nachwuchs Kader* tests in March 2024 creating a large number of athletes and parents to deal with and making it difficult to find practical and appropriate solutions to inform the athletes that they have not been selected for the next year's *Kader* tests. The time demands are large, for example, if 60 athletes make it into *Kader* and 20 are new that means 20 x 20-minute interviews, plus 20 changing *Kader* level, which is also 20 x 20-minute interviews. Each athlete would be spaced 30 minutes apart, which would result in 20 hours of time being needed to talk to the athletes that are new or have a change in status. Being aware of the time needed to inform athletes about non-selection is important to manage. It also needs to be considered that non-selection will be hard for some athletes and while others may have been prepared by their coaches,

they may not have been given clear pathways to try and enter the system. This may mean athletes are lost to the sport. Appropriate protocols and processes need to be found to communicate effectively and empathetically with athletes and coaches, whether it be an email, individual meetings or calls, or a group meeting. In the case of de-selection or a change in *Kader* status, a meeting is critical but a clear protocol needs to be established. It also needs to be decided before the meeting if the decision can be changed, for example, if the athlete has not given information that may come out in the meeting that could explain poor performance, such as a parents' divorce or a change in school. Will this information be taken into consideration or not? These meetings are stressful for the athlete and need to be led in an understanding way, as it is my experience that an athlete being removed from *Kader* does result in a negative experience. From feedback I have received, the athlete feels they were not given a way to return to *Kader* or the steps that need to be taken to achieve this return. I try and be proactive about athletes' chances for selection, de-selection and non-selection. Although no coach education programme has told me how to deal with athletes that are de-selected or non-selected. Swiss Triathlon just finishes with the athlete and coaches are meant to comfort the athlete with no experience or education on how this should be done.

- Suggested protocol for de-selections

Before the protocol is used, coaches should be given education about de-selection, and know what needs to be done to help athletes through this exceptionally difficult time, that can have effects on their welfare. There is information in the business world about how to terminate an employee, and this idea of terminating someone in the right way is crucial. Sport can learn from business. The U.S. Chamber of Commerce (Barton, 2023), offer the following advice. Plan your script, yet not prescriptive, schedule a termination meeting, do not make it personal, and explain severance benefits if applicable. Whilst it is clear we need to adapt the

above advice and actions; they do lead us in the right direction. A possible format for Swiss

Triathlon selection and de-selection could be:

- Gather information from the season
- Gather feedback from athletes about their season and issues they may have had.
- Compare an athlete's past years' performances and align with the athlete's development and believed possible development.
- Selection Commission meets and selects or de-selects athletes. The use of the selection criteria is critical for all athletes.
- Make sure there are clear, understandable, and consistent reasons for all selections and de-selections and document them.
- Schedule the selection / de-selection meeting.
- Inform the athlete of the Selection Commission's decision and the reasons why.
- Inform the athlete on how to move forward and ways they can re-enter the system, offer other options within the Federation if appropriate.
- Allow the athlete to ask any questions they may have. Answer questions as clearly as possible.
- Do not personalise interactions, for example if the athlete is upset, do not take it personally.
- Finish the meeting.
- Show the athlete that they are still important to the system by remaining in contact.

Although there are many more steps suggested above than are currently in the Swiss

Triathlon process of de-selection, all of them are important. Making it clear why an athlete has been de-selected is crucial, and making sure that the same protocols and criteria are applied to everyone across the selection process is essential. Ensuring the athlete being de-selected understands the reasons, and that Swiss Triathlon have completed due diligence to make sure that all athletes are treated fairly, and are seen as doing so, can help athletes understand that they are being managed fairly. In doing this, athletes may lose their *Kader* status but understand why this has happened. This can mean an athlete knows what needs to be done to return to *Kader*, or for an athlete leaving the system in a more positive way than would have been the case in the past (Williams & MacNamara, 2020).

8.4 CHAPTER EIGHT SUMMARY

This chapter demonstrates how key features and characteristics of the LTAD model, and the FTEM framework, have been woven into the Lamont Emergent Athlete Development (LEAD) framework for Swiss Triathlon (Figure 21). This is a deliberate decision and allows the LEAD framework to be used in conjunction with both the LTAD model and FTEM framework, which are used by many national sports organisations. The LEAD framework highlights a coach's duty of care for the athlete's physical and emotional development (Bouchard et al., 1994). The LEAD framework is an emergent design by a practitioner which reflects the author's extensive experience as an athlete, coach and policy maker. It orients around five key principles: adaptability, reflexivity, pragmatism, partnerships, and transparency. These principles are transferable to other sports. The key features of the LEAD framework are listed below:

1. **Giftedness** (Gagné, 2020), **TID and talent transfer**: Coaches that are responsible for TID, should go beyond testing and race results to try and enable more athletes to enter the development programme, perform in the system, and develop through an athlete pathway. Create a structured pathway that allows athletes to transfer from another sport and develop in the sport of triathlon with coach support.
2. **Athlete-centred focus** (Pill. 2018) **and coach education/awareness**: Development as both a person and athlete are important. Athletes need to be supported through the challenging transitions from Junior to Elite and ensure these have overlap from coaches to allow them a better chance to succeed. Educating coaches in supporting athletes during and after de-selection and non-selection is also important here.
3. **Managing athlete and staff resources**: Create squad structures so that more athletes can develop, have access to the National Training Centre, feel valued, and are given a chance to make the step to the next level. Staff resources should be used throughout the athlete pathway to establish TID, athlete development within the system, and smoother transitions from one level to another.
4. **Selection protocols, de-selection, and non-selection**: Making sure that clear protocols are in place for selection, de- and non-selection. If an athlete is de-selected, make sure the athletes understand the process, the reasons why they have been de-selected and the pathways back into the system.

CHAPTER NINE

CONCLUSIONS

CHAPTER OVERVIEW

The purpose of this current study is to provide a reflective practitioner perspective of the researcher's athlete, coaching and policy making experiences (at a regional, national, international level), examining the case of Swiss Triathlon's athlete development pathways. The LTAD model and the FTEM framework were examined from a theoretical point of view and then how these are used in practice (see Chapter Two). It was argued that both the LTAD and FTEM are pushed from the top down to NSO's, however, they do not appear to have any direct applicability with the coaches and athletes at the "coal face" of coaching. With these shortcomings in mind, a multi-method research approach has been employed involving an auto-ethnographic narrative and triangulation through cross referencing secondary literature (see Chapter Three & Figure 15) to create a revised conceptual framework - the LEAD framework. The purpose for the LEAD framework is to fill the gap between where a LTAD or FTEM stop and give coaches a framework to help them to develop athletes. The LEAD framework has been developed from reflecting on years of being an athlete, coach and then moving to working in a leadership role in a federation (see Chapters Four to Six). As a result of these varied roles, I have seen and experienced where the current models and frameworks are unsuitable. The LEAD framework endeavours to consider what is missing in the top-down models and frameworks, as well as what is missing within coach education to help coaches develop athletes and specifically provide strategies for dealing with issues of selection, de-selection and non-selection. This process of change to a system has highlighted how these changes can be managed and how they can fit into long-term athlete development pathways (see Chapters Seven & Eight).

The LEAD framework highlights five higher level principles that are important to consider for future athlete development programmes, and leadership of organisational dimensions of high-performance sport:

- **Adaptability:** Selections systems/frameworks across all sports need to move away from being strictly age-bound to allow for late developers, athletes transferring from other sports, and be open to transferring their athletes to other sports.
- **Reflexivity:** Undertaking continual reflection and improvement to enable more supportive transitions between levels. Ensuring oversight from the start to the end of an athlete's developmental journey from club through to national/international level.
- **Pragmatism:** Need to work around existing systems as athlete development frameworks are often prescribed by national sport organisations.
- **Partnerships:** There is a need for national sport organisations and coach educators to work collaboratively, reinforcing the importance of athlete development focusing on the person first, as well as a potential elite athlete.
- **Transparency:** In terms of selections criteria, there is a need for transparency, clarity and consistency in its phrasing and application, and interactive communication and feedback to athletes (and their coaches/clubs/families) on de-selections and non-selections decisions highlighting potential future pathway options. Such systems/frameworks need to be both formalised and visible as policy, and become 'lived values' embodying transparency of selection criteria and pathways for re-selection and further development for non-selected athletes.

The LEAD framework's contribution raises awareness of the need for a mentoring approach to sport coaching, as advocated by Jones et al., (2009). Such approaches recognise and respond to athlete's personal and physical training, the need to adjust principles of coaching to the specific needs of each athlete, to have greater clarity and transparency about selection criteria, and most importantly, greater attentiveness to supporting athletes' (physical and personal needs) during periods of de-selection and non-selection to retain (and extend) them in the sport.

9.1 INTRODUCTION

The importance of getting athlete pathways right, both in terms of ensuring the best athletes are selected and that selection processes are clear and transparent has become a matter of top priority for sports organisations. There are both pragmatic and principled reasons for this. First, at a practical level, high-performance funding is often dictated by results so correct selection is vital. At a deeper level, however, selection processes and the ways in which they are implemented by coaches play a significant role in determining an athlete's experience in sport and whether or not they are likely to remain involved.

As noted in the Introduction (Chapter One), many national sports organisations (NSOs), both in NZ and overseas, have undertaken reviews into their high-performance culture in response to complaints and issues raised by athletes. Key findings across these reviews were that there was a misalignment between formal policies ostensibly promoting athlete well-being and the actual culture of the high-performance environments that athletes were in. Selection policies were consistently identified across these reviews as playing a significant role in negative athlete experiences, with many athletes complaining that selection criteria were either unfair and/or that sports organisations did not follow their own rules.

Whilst it is important to formalise and document policies, the operationalisation of these policies has typically been the de facto responsibility of coaches, particularly in the area of selection. The coach-athlete relationship is particularly important here as coaches are closely involved in both the initial selection of athletes and then in ongoing coaching to enable them to achieve their potential and thereby merit further selection. Accordingly, it has become apparent that best practice in selection requires clarity in both policy and practice.

Clear protocols around selection and de-selection are essential to athlete retention, as in many instances grievances arise when athletes are unclear why they have not been selected or de-selected and are not given any indication as to how they might be re-selected in future. Again, the coach, in conjunction with selectors, is central in communicating and implementing these protocols.

This thesis has used the case of Swiss Triathlon and auto-ethnographic narrative (see Chapter Three) of the researcher's experiences in the sports of cycling and triathlon, providing an athlete and coach's perspective about how these issues have occurred (see Chapters Four to Six), and what needs to happen in order to improve the status quo.

Chapter Four highlighted the author's experiences, as a junior and professional athlete, of the often arbitrary nature of selection policies and the importance of skilled coaching in helping athletes manage the transition from youth to adult level, which is particularly important in triathlon. Chapter Five focused on how he developed an athlete-centred coaching philosophy through being a reflective practitioner, at a regional, national, and international level.

Chapter Six explored his ongoing development, as a National Coach and High Performance Manager, through discussions with experienced mentors, and the difficulties he encountered in seeking to implement change. Having charted the evolution of his athlete development philosophy, the researcher then discussed their role in formulating and implementing both policy and practice at Swiss Triathlon so that a degree of change was achieved and outlined the LEAD framework as a blueprint for ongoing development (see Chapters Seven & Eight).

The key findings relating to this process are outlined in the following sections, commencing with a discussion of the specific findings about athlete pathways and coach education in relation to Swiss Triathlon and athlete selection, de-selection, non-selection. The LEAD framework, based on higher level principles of adaptability, reflexivity, pragmatism, partnerships, and transparency, has been created for practitioners and has applicability to other high-performance sports. The chapter concludes with the implications of the study, as they relate to contributions to methodology, theory, the knowledge base for coaches, and for practice. Key areas of focus have been outlined and in the case of Swiss Triathlon specific recommendations made under each of these areas of focus. Yet within the LEAD framework the focus areas are emerging so can be developed and changed as progress is made.

9.2 ATHLETE DEVELOPMENT PATHWAYS

A revised framework for the youth development pathway (*PISTE*) for Swiss Triathlon has been proposed, which considers a more athlete-centred approach to selection, testing, retention, and development. When looking at ways to develop or change the Swiss Triathlon *Kader* system, it needs to be considered that Swiss Olympic does place some requirements on Swiss Triathlon. These include using the *PISTE* system and testing athletes, as well as different levels in the *Kader* system itself. In addition, Swiss Olympic require Swiss Triathlon to use the FTEM framework for athlete development and providing documentation on development concepts, which is meant to make it possible for Swiss Olympic to make assessments across all sports. From this starting point, Swiss Triathlon does have freedom to design the tests themselves. They then need to develop the documentation, which needs to be signed off by Swiss Olympic, which is a lengthy process, yet Swiss Olympic wants athletes to be tested and will most likely approve any tests Swiss Triathlon believe are appropriate.

Creating a system that is more athlete-centred is possible, despite the restrictions. The first step is to review the systems of successful countries like Great Britain to see what they have implemented to create not only long-lasting success but the depth of success they have had. Part of this approach has involved using the work that Gordon Crawford has already supplied (Figure 12) to Swiss Olympic, as he was involved in setting up the British system. Crawford has had years of experience in guiding athletes from Junior to U23 and to Elite, and training the skills that are vital to success at the international level. Crawford has already written and outlined a structure (Figure 12), which could be adapted to produce a more athlete-centred system.

Creating testing that closer matches racing yet still complies with the *PISTE* requirements, and where athletes' progression is evaluated over time, is integral to better athlete retention. Currently athletes see that their chances to enter *Kader* come down to one of two days. One of these is very early, two months before racing start, and the other is right at the very end of the season just after racing has been completed. Also, no matter how well athletes have raced and performed over the season, they must test well to be considered for *Kader*. This means young athletes are not being asked to perform well for one day but are expected to perform at their top level the whole year, or they may not get selected. It also needs to be considered that young athletes also have school and other pressures on them other than just sport.

Accordingly, Swiss Triathlon need to assess if their system is supporting athletes' development over the long term. A long-term investigation of the tests results needs to be conducted. Points that need to be examined are:

- Are the tests providing information that can lead to meaningful long term athlete development?
- Are the tests giving data to show that athletes can perform internationally?
- How is retention managed of athletes who enter the system?
- After how many testing days do athletes start to reach the level required for *Kader*?

Understanding the outcomes to these questions and making sure the correct outcomes are happening is the purpose of development, including understanding that athletes develop at different rates, and a short-term deficit can be a long-term advantage. One of the most important ways of looking at athletes and how they are developing is watching them race.

Watching races like Regio League, Youth League, and National League, is an opportunity to view how athletes move and not just the front few, but all the athletes, especially the young ones, to see if there are movement patterns that have not been developed or if an athlete has not yet attended a *Kader* test, should they be encouraged to do so.

There is a significant quantity of information that needs to be brought together to make up a truly well-developed athlete-centred pathway, as well as keeping in line with the requirements imposed by Swiss Olympic. The development of this approach would be a large part of the future of Swiss Triathlon and its *Nachwuchs* Development Programme. The LEAD framework, utilising higher level principles of adaptability, reflexivity, pragmatism, partnerships, and transparency, would assist with this change process. Such an emergent system should help review and react to the dynamic and changing demands of the sport of triathlon, and other high-performance sports. The LEAD framework with its emergent nature can be built on and enhanced for areas that need to be developed.

Another consideration for Swiss Triathlon to undertake relates to their coach education system and the way athlete development is understood and taught. Coaches need to understand not only the Swiss Triathlon pathway for athlete development, but also require a deeper understanding about what this means for athletes. Each athlete develops differently and understanding what development can look like is required. Educating coaches about development and what it means, may help coaches develop athletes more effectively over the long term. Coach education needs to consider the consequences and challenges facing athletes as they try and qualify for *Kader*, what awaits them and what is required. Most importantly coaches need to be educated about what happens when an athlete is de-selected or non-selected for *Kader*. Athletes need to be guided through this process and how they can, if they choose to, return to *Kader*. It is important to convey that selection decisions are not a reflection on their character as a person. Even though athlete de-selection or non-selection is carried out by the federation, and not the coach, it will in the end be the athlete's home coach who will have to communicate with the athlete and ensure they are receiving the appropriate level of care.

A coach who has not been trained in how to manage these situations, or is not ready for this outcome, can leave the athlete feeling alone and lost, which of course needs to be avoided. During this adaption of the current system is where change management will be important. Although some aspects can be introduced quickly with no foreseen or little issues, other aspects will require more time and effort. The management of staff resources will result in some members of staff changing their roles, who will need to be guided through this change. Many staff will have a narrower focus but a deeper responsibility, and this will take time to get right and for each person to understand how it all fits together. This period of change will need to be handled well with a step-by-step strategic management plan making positive change for the future. The effects on athletes and external stakeholders will also occur, as the staff members' roles start to change, so it is important to determine who is responsible for responding to their questions. It is also clear that as new systems are set up there will be issues and confusion at times, but as all current staff will be utilised in similar positions the overall result should be more positive outcomes for athletes, coaches and Swiss Triathlon themselves.

9.3 ATHLETE SELECTION

As of 2024, the Swiss Triathlon selection process covers two areas, testing and racing, which allows athletes a pathway into the Swiss *Kader* system. This process benefits athletes by giving them the opportunity to show their ability in different ways. However, the question remains whether Swiss Triathlon's system is selecting the best athletes. The structure of the tests gives athletes one chance at the start of the season and one at the very end of the season to perform, and because of the way the tests are structured and the value put on them, athletes feel under pressure to perform well ahead of the season. This outcome could have a positive or negative effect on an athlete's season. However, with the tests conducted pre-season athletes do have time to develop and an athlete can improve in time for the season.

Unfortunately, using these tests as a one-off measure means athlete progression over time is not considered, only their current time. As a result, an athlete that is developing slower, but at a steady rate may be overlooked, even though they are a late developer, whereas an early developer has a better chance for selection. This is not what the *PISTE* system from Swiss Olympic was designed to do. It was developed to be gradually progressive, meaning that for athletes who are developing, but may not currently be at the expected level, their progress can be seen over time, thus allowing later developers a better chance of being selected. The results from testing and racing can be a good mix for a selection process, yet age groups and different development rates can skew results. Swiss Triathlon has developed over time. It used to be the case that testing carried a higher weighting, but now selection is based on a mixture of race results and testing. Nevertheless, athletes who are early developers, will still have a better chance of achieving better race and test results, and hence a better chance of selection.

During my time at Swiss Triathlon, I have been acutely aware of the way that selection criteria have been developed, in what is perceived as a top-down approach. For Swiss Duathlon, I used my experience as an athlete, coach and selector, as evident through my auto-ethnography, to write criteria that were logical and simple to understand. I then listened and talked to coaches and athletes to see if this had worked. Then if I was questioned or points were raised, I endeavoured to take these on board and adapt the criteria to develop clarity for the future, and allow better understanding for all stakeholders (see Figure 23, Athlete selection criteria setting process). From this mindset, the following Swiss Duathlon Policy / Practice Nexus (Figure 24) and the Selection Feedback System were developed (Figure 25).

Testing

There are some issues with the testing procedures. The first being that, as has been stated by Swiss Olympic, the closer a test replicated the event for which the athletes are being tested, the better the results will make the sport. Swimming 400 or 800 metres, which has now become 200 or 400 metres, in a pool alone is very different from being in a race, where you are normally in open water and with many athletes. Therefore, Swiss Triathlon is only looking for the fastest pool swimmer and not the best open water swimmer. This outcome brings us back to the point of testing and whether it is yielding the right information for selection purposes.

Are the tests specific enough? Or should there be other options for testing? Swimming controlled in a lane alone will give us some important information, but adding an open water test may give us a deeper understanding. The run test on the track becomes a run about control. Athletes are needing to run a time, and this means that they do not need to race but

pace correctly to get the time they need. However, the run is done at the end of the day resulting in athletes being tired from being tested all day.

Up until 2021, the 16–19-year-olds had a “Jagd” start, which does represent racing a little more, as slow swimmers have a time deficit they need to make up. The current test event being a stand-alone run, is very different from how triathletes’ race, and does favour a runner over that of an all-round triathlete.

The distance over which the athletes do the test changes, meaning that over time their tests do not relate well to each other. The current testing structure is simple to manage but may not achieve the best results. Swiss Triathlon could be clearer in communicating why they have chosen such tests. When the tests were shortened in 2022, Swiss Triathlon stated it was to reflect that racing is becoming shorter internationally.

Now that these tests have been conducted for three years, it will become simpler for Swiss Triathlon to identify athletes who are progressing over time. Such athletes may not yet have achieved the levels currently set for athletes at their particular stage of development, but could well have potential to do so in future. Now that longitudinal data is available it allows athlete development to be seen in a longer-term context. If Swiss Triathlon wants to stay true to the values set forward in Swiss Olympics PISTE guidelines, they will utilise this data over the years to track athlete progression, rather than just the current results, to make better informed selection decisions. Swiss Triathlon already have data tracking software they use for races, which could be used in a different manner for all levels of the Swiss Triathlon development pathway. Therefore, the extra work of setting up better tracking of athletes can be done through improved staff resource management.

9.4 ATHLETE DE-SELECTION, NON-SELECTION, AND RETENTION

This research has highlighted the importance of accurate, fit-for-purpose, longitudinal information in regard to selection decisions. What is the selection rate? How many athletes continue to attend *Kader* tests when not selected? The selection rate is difficult to determine over time. Swiss Triathlon does not have a list of all the years and the athletes that were selected, or how the selection was made, and using what standards? They do have part lists for some years, but in 2015 – 2017 only Elite and National *Kader* athletes' information was kept. This means that all the regional athletes' information, and those without a talent card, have been lost. Others have some information missing. As a result, it is impossible for Swiss Triathlon to have an overview of what has happened to their athletes. It is not possible to see trends over time of retention rates in Swiss Triathlon *Kader* because this information is missing or not easily obtained. Therefore, any conclusions here would be made over a short time period and not be worthwhile for a long-term view. In most systems, there will naturally be athletes that leave due to personal reasons, or change of interests. This loss in retention is part of sport and most other activities, yet Swiss Triathlon does have a duty of care to find out why they are losing athletes or at least track the loss of youth athletes from within its system, which would be a good process for Swiss Triathlon to pursue. Looking at the numbers of athletes moving from one competition series to another, could give an idea of the dropout rates as athletes move up through the various Swiss Triathlon race series. This information could be used to delve deeper to ascertain whether there is a significant dropout rate, why the athletes are leaving, and if there is more dropout in particular areas or age ranges. These issues could be addressed internally at Swiss Triathlon, and with the clubs, coaches, and athletes. The outcomes could then be built back into the coach education system, but need to be done with a purpose and understanding of the benefit to the athletes.

9.5 IMPLICATIONS OF THE STUDY

9.5.1 Implications for research methodology

The use of the case study and auto-ethnographic narrative was to create an understanding of the author's unique insights of being an athlete, an individual coach, a team coach and then more recently a national coach, including writing sport policy for Swiss Triathlon/Duathlon. Having all these extensive experiences has combined to provide a strong basis to build a credible narrative of athlete development from a practitioner's perspective, thus providing a positive addition to the field of research methodology.

It is argued that the multi-method approach, using a case study (Merriam, 1998), auto-ethnographic approach (Ellis, 2012; Ellis et al., 2011), and literature review, to filter down to the 'truth of the matter' (Slade et al., 2020) provided the most appropriate way to utilise the experiences of my coaching role, as an insider researcher (Onwuegbuzie, 2024) looking to capture real-time examples and seeking to bring about change. Slade et al. (2020) highlighted that practitioner auto-ethnography provides sport coaching scholars with an approach to framing and discussing issues and enhancing their ability to resolve problems in various contexts. This approach also addresses Lyle's (2018) questioning of the transferability of sport coaching research for practitioners and it not being incorporated into coach education.

I was cognisant of any mitigating potential limitations, such as confirmation bias and other personal subjectivity biases, by reviewing literature and documents and gaining perspectives of outsiders who are experts in the field and were aware of my coaching context. The purpose of this approach was to gain a deeper understanding of how other expert coaches, as reflective practitioners, view the role of a coach.

Discussions of coaching philosophy challenged me to express and review my ideas in an understandable way. As a result, this multi-method approach (Creswell, 2015) has provided a robust way to analyse the case study and auto-ethnographic experience. This reflective process has been enhanced through an academic lens, review of literature and insights from other experts to challenge and then support my findings, thus enhancing the rigor of the auto-ethnographic research process (Onwuegbuzie et al. 2024). This methodology has been effective through analysing this qualitative data, manifested in the researcher's extensive athlete and coaching experiences, to make a positive contribution.

9.5.2 Implications for the field of coaching

The findings in the thesis have highlighted that there is a need for much greater training and education of coaches and administrators around selection and de-selection. As Edwards and Brannagan (2023) highlight, de-selection can negatively affect an athletes' self-esteem and personal status, as well as leading to distrust of coaches and organisations. It is important to highlight clear reasons and answer questions about the athlete's de-selection. Wrang (2023) suggest questions like “why didn't they choose me”, and “why am I no longer part of the team?” and others are common after a youth selection process. Roles of parents and coaches need to be considered within the selection and de-selection process. The impacts that selections have on youth athletes need to be viewed as a ‘social issue’ (Wrang, 2023). The need for greater support for athletes during and after de-selection and non-selection is an important addition to Swiss Triathlon's coach education programme, particularly in a documented form.

Most coaching qualifications/instruction focuses on techniques - both mental and physical - rather than issues of selection and de-selection. Arguably, this is needed at all levels of coach education. In addition, there is a need for greater focus on a long-term incremental approach for athlete development. The status quo suffers from 'short-termism', so there is pressure and expectation for immediate results whereas the reality is, especially in triathlon, that developing an elite triathlete will generally take at least a decade because there is such an enormous jump from Junior to Under 23 level, and then another jump again from Under 23 to Elite level. Even though these transitions are common knowledge, creating ways withing a system to deal with them is not commonplace. The LEAD framework reinforces the philosophy of ensuring athletes grow as people, which is central to this development process. In ensuring an athlete grows as a person, they will become more resilient and more likely to develop into a top triathlete. If they do not make the elite level, they are more likely to have developed transferable life skills, which might be applied to other sports, business or future employment. This process needs to be under continual review to make sure implementation is working as planned (Astle et al. 2018). My research as a reflective practitioner focused on insights from my experiences as an athlete and coach, which has created the following coaching philosophy:

1. *'Comfort the troubled and trouble the comfortable'*: Caring and athlete-centred, focusing on physical and emotional well-being, whilst utilising best practice. This phrase has been attributed to Dietrich Bonhoeffer, but I heard of it first from Gordon Crawford. I believe that it is at the heart of coaching.
2. *'Create an environment where individuals can grow as an athlete and a person'*: This statement has been personally modified from "We create a place where champions grow". I felt this was only focused on the sport side of an athlete and not seeing the person as a whole. Seeing an athlete as more than a sportsperson has been at the heart of my experiences through my sporting career as an athlete, coach and national coach.
3. *Transformational leadership*: This approach demonstrates ethical coaching practice and strong work-ethic, whilst having fun, my coaching aims to empower athletes to go further than what they thought they are capable of – exceeding expectations. Bass and Anolio (1994) argued that such leaders and followers help each other to advance to a higher level of morale and motivation.

An overarching finding of this research is the importance of being a ‘reflective practitioner’. Schön (1983) points out that through reflective practice and questioning professionals become more aware, subsequently adapting and/or changing their subsequent behaviors and decision-making processes. With reference to my own experiences, this thesis has demonstrated how I applied lessons learned from being a reflective practitioner as an athlete, coach and administrator. This self-reflection has helped create the LEAD framework, with a belief that there are better ways we can help athletes, which was supported by the literature review and discussing these points with other coaches. Honest self-assessment is an important part of development, because when I have asked practitioners to reflect on their results, it makes personal responsibility and agency the default point of reflection rather than simply looking to attach blame to other people or on ‘the system’ generically. This approach does not mean the wider environment in which coaches and athlete’s function ought to be overlooked, but it is important to use an evidential basis and practical understanding to identify how and why things are not working rather than instinctively apportioning blame to others. To find solutions to issues needs to be the focus, not just finding the issues. Utilising higher level principles of adaptability, reflexivity, pragmatism, partnerships, and transparency will help to challenge and deepen coach and national sport organisation stakeholders’ reflection processes.

9.5.3 Implications for practice

Swiss Olympic require Swiss Triathlon to utilise the FTEM framework. The LEAD framework for Swiss Triathlon (Figure 21) is designed to further support the athlete’s development. The LEAD framework highlights four key areas:

1. Giftedness (Gagné, 2020), TID and talent transfer.
2. Athlete-centred focus (Pill. 2018) and coach education/awareness.
3. Managing athlete and staff resources.
4. Selection protocols, de-selection and non-selection.

These factors have been examined together and a practitioner-led process created. At the beginning of this doctoral research process, an initial pilot was presented to Swiss Triathlon (Figure 20), which has evolved to the current version of the LEAD framework (Figure 21). This critical reflective process, involving an auto-ethnography of the researcher's athlete and coaching experiences, has examined the "truth of the matter" (Slade et al., 2020), addressing issues of selection, de-selection, and non-selection, and providing a clear athlete-centred development pathway through this case of Swiss Triathlon. This 'athlete-centred' coaching approach puts the needs of the athlete at the forefront of the coaching process (Vinson & Bell, 2019) enabling them to take greater ownership of their development and performance (Kidman & Lombardo, 2010).

Any change that is undertaken by a NSO needs to be managed and considered. This change process has been used in the development of the LEAD framework (see Chapters 7 & 8). The following key points were identified in this context:

- Clear communication for the change and why the proposed changes will address the identified problems.
- Changes should be based on an underlying set of core values and principles.
- Be prepared to be adaptable throughout the process to incorporate evidence-based arguments, while maintaining your core values.
- Accept that change is a long-term process rather than a short-term fix.
- Change needs to be managed and stakeholders guided through the process.

9.5.4 Implications for theory

The LEAD framework was designed for Swiss Triathlon and versions of it are in place for the Wildcats Swiss Triathlon Team and Swiss Duathlon. Examples of the use of the LEAD framework are at club level through the Wildcats results in 2024, through my role as National Coach of Swiss Duathlon, and developing National Sport/Federation Policy:

- Wildcats: Eleven different Wildcats athletes won five Swiss Championships, four other Swiss Championship podiums, a European Elite championship, a 2nd place in another Elite European Championship and an Age Group Ironman World Championship.
- Wildcats: 14 *Kader* (squad) places within Swiss Triathlon, Swiss Duathlon and German Triathlon (DTU), doubling the athletes' involvement since I became coach, and 17 *Kader* places for 2025.
- Swiss Duathlon: Enhanced athlete selection processes with short distance duathlons now part of the national programme - grown to 11 athletes, after not having any athlete since the early 2000.
- National Sport/Federation Policy: The new Athlete Development pathway 2024-2028 for Swiss Duathlon has been written and presented to Swiss Olympic. Coach education/development includes the LEAD framework as a corner stone for the future. The athlete development approach is structured to be used within an existing framework, specifically related to issues of selection, de-selection and non-selection.

It is believed that the practical application can be transferred to clubs, teams and National Federations (see LEAD framework: General; Figure 26). As stated earlier in this thesis, the LEAD framework is the culmination of years of being an athlete and having had practitioner experience at many different levels of coaching. The LEAD framework brings the key points into focus for federation and coaches.

As the LEAD framework is practitioner led it makes it very different to the LTAD model (Balyi & Hamilton, 2004) that wants athletes to progress through the pathway at a set rate according to time-sensitive periods, or that of the FTEM framework (Gulbin et al., 2013), which again outlines a series of rigid stages athletes are expected to reach before progressing on to the next level. The LEAD framework on the other hand is there to support the athlete's own development over time. It is based on the principle of addressing the athlete as a person first and athlete second, creating a pathway for athlete development and talent transfer. Then at the same time allowing staff to be managed in an appropriate manner and also keeping coach education in focus. The LEAD framework also allows the athlete and coaches to understand where they are in the framework and where that relates to the LTAD/FTEM stages. The key points of the LEAD framework are there to aid the development of the athletes from the TID stage right through to elite, and doing this in an athlete-centred way.

The LEAD framework is the culmination of not just this thesis, but over 30 years of experience as an athlete, coach and academic. The LEAD framework has come from a practitioner's experience and having first-hand experience of what is missing or needs to be addressed within the sporting system. Using a multi-method research approach integrating auto-ethnography, literature review, and other practitioner's experiences has resulted in the creation of the LEAD framework, a practitioner's framework for practitioners.

Through a rigorous academic process, the LEAD framework arrived at key areas that are at the heart of athlete development, as well as highlighting issues around selection, de-selection and non-selection. Application of the LEAD framework for Swiss Triathlon, utilising higher level principles of adaptability, reflexivity, pragmatism, partnerships, and transparency, has shown how a development system can be more athlete-centred, how staff and other resources can be used to ensure athletes develop now, but also into the future. The use of the LEAD framework within Swiss Triathlon aims to support athletes to develop their potential over the time they need to achieve success. The LEAD framework has been introduced to Swiss Olympic, and positively received, as the direct link to their FTEM framework can be seen, which can make the LEAD framework appealing to any sport that needs a structure to support coaches and athletes. The LEAD framework has contributed to method, coach practice and theory, and due to the nature of its emergent design will continue to do so.

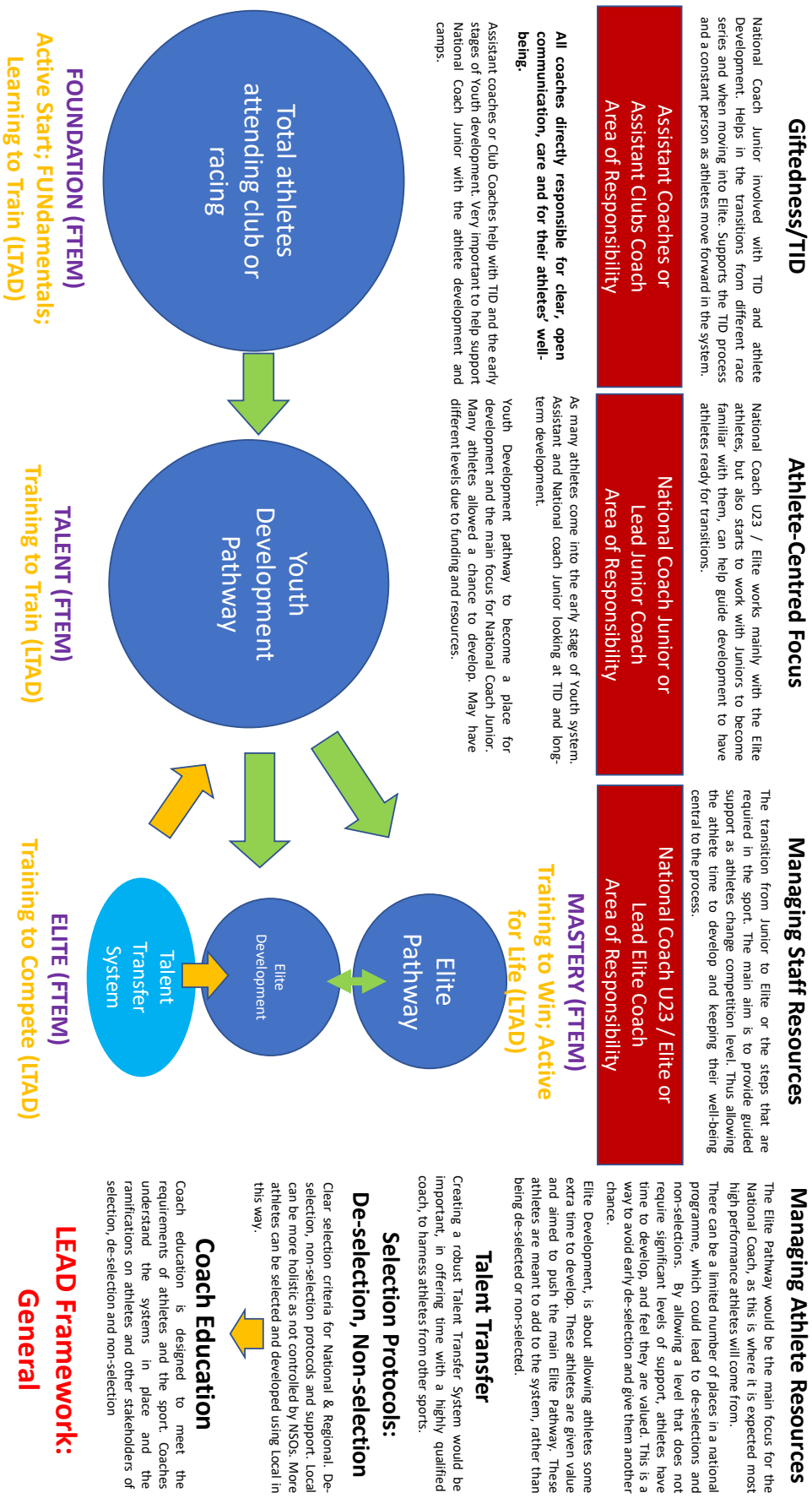


Figure 26 LEAD framework: General (Lamont, 2024)

9.6 FUTURE RESEARCH

Prior to this current research project with Swiss Triathlon, there had been a paucity of other academic work undertaken. Potential future research initiatives related to athlete development include, for example:

- Examining the implementation of the LEAD framework at Swiss Triathlon and how the change is managed.
- Reviewing the retention rate after athletes have been de-selected or non-selected. This approach would include how many continue to attend *Kader* tests, after de-selection or non-selection. Once an athlete has achieved *Kader* status, how long do they remain in *Kader*, and when do they leave the system and if they are de-selected how long will they remain in the sport of triathlon? This study could also include contacting the athletes and asking about their experiences in *Kader* and leaving *Kader*, what support was offered during de-selection and what were the influences that kept them in the sport or why they decided to stop triathlon.
- Using multi-method practitioner focused approaches, as used in this thesis, to help develop understanding of systems and create clearer selection criteria and processes. This approach can be done in a similar way to the *FT Project* that was run by Swiss Triathlon or via an external person with relevant expertise. Over a short amount of time, Swiss Triathlon may understand how the non-adherence to guidelines truly affects athletes, coaches, clubs and stakeholders.
- Using practitioners' experience to expand and develop coach education courses in areas that traditional programmes have not covered, especially around de-selection and non-selection, and managing these processes. This approach can be managed as above, use the experience of coaches that have been through the system and see where they believe that the coach education system could be improved.
- Conducting a longitudinal study of athletes moving through the LEAD framework within Swiss Triathlon and seeing where the athletes are performing or not would be of value. For example, are the *Kader* tests giving outcomes that are consistent to that of the race results? Are the results of the *Kader* test predictive, as athletes progress through the *Kader* testing as required by the *PISTE* test system from Swiss Olympic? Is the athlete development at the same rate as the tests, or is athlete development non-linear, and is there a predictable period where development is faster or slower?
- Reviewing how athletes are selected, and then de-selected, how they move on to elite and then into retirement. Are there specific periods where athletes are most likely to leave the system? How can the system support athletes to stay in the system longer? This information can then start to present a more detailed picture of how athlete development is happening long-term in Switzerland.

Wider research possibilities include examining how the LEAD framework is implemented by different sport organisations, and how the framework is adapted to meet the needs of the athletes, coaches, clubs and federations. This approach could lead to the next evolution of the LEAD framework and how it can be adapted to reach more organisations. Further study in monitoring change management within other sport organisations, how that is managed, and how quickly change takes place would also be of benefit. Monitoring resistance to change and investigating reasons why there is resistance to change, as well as how this resistance can be overcome is another area of study that would benefit sporting organisations.

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APPENDICES

APPENDIX A INITIAL LAMONT FRAMEWORK (2021)

Lamont Framework. Sent 1.1.2021 to Tamara Mathis (High-Performance Manager Swiss Triathlon)

Taken fully from work done for Swiss Triathlon

Issues and solutions for the Regio cup to U20 and the *Kader* system.

By Cameron Lamont.

Head Coach at the Wildcats Swiss Triathlon Team.

High-Performance and National Coach at Swiss Duathlon

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1.1. Key for understanding my thought process:

What is our end goal of Swiss Triathlon? It is to produce athletes that can and do perform on the World stage. Is the current system designed to help this happen? If yes then great and how can it be managed to carry on doing this, if not what changes need to be made to allow athletes to perform.

1.2. Introduction:

First, coaches need to be found that have experience and understanding of the system Gordon is creating. Gordon has firm ideas on what coaches need and should have to be at the different levels within Swiss Triathlon. The National should in conjunction with the High-Performance Manager set the tone and direction of the organisation. The success Switzerland has had in triathlon is sadly not being delivered from the Swiss System, it is coming from external coaches. This needs to be accepted and understood. Change is happening with Gordon, but it needs to grow. Of course, no matter what system there is it will not keep everyone happy, but this is not the main goal, which should be to give athletes the best chance they can to succeed.

1.3. Current situation with races as seen by Cameron:

The issues start within the Regio Cup: The Regio cup is meant to be an introduction to triathlon, and also involves, games and team events, and all the events are very short. The idea is nice, but the athletes compete in the same events for 4 years. This has resulted within the Wildcats that athletes have stopped wanting to compete in the Regio cup because it isn't a real triathlon. As part of this I have heard coaches, athletes and parents complaining about the Regio cup system, this has been pointed out, but nothing is changing. While the Regio cup is seen as a development area and the focus is on "Building Skills and Team Spirit", this can and should also be done within the Triathlon clubs. Swiss Triathlon also have stated that the Regio cup is not about selection, it is also stated that this is not the start of Swiss Triathlons selection process. As a result, athletes that want to go to *Kader* are not only suddenly faced with longer races, but also into a testing programme. The Youth league is a big step up from the Regio Cup and there is more pressure to perform. Then after racing for 2 years in the Youth League athletes have to then enter the National League at 16 years old and race a longer distance against Juniors, U23 and Elite athletes. The step from Youth League to National league is massive in my experience is brutal for the athletes.

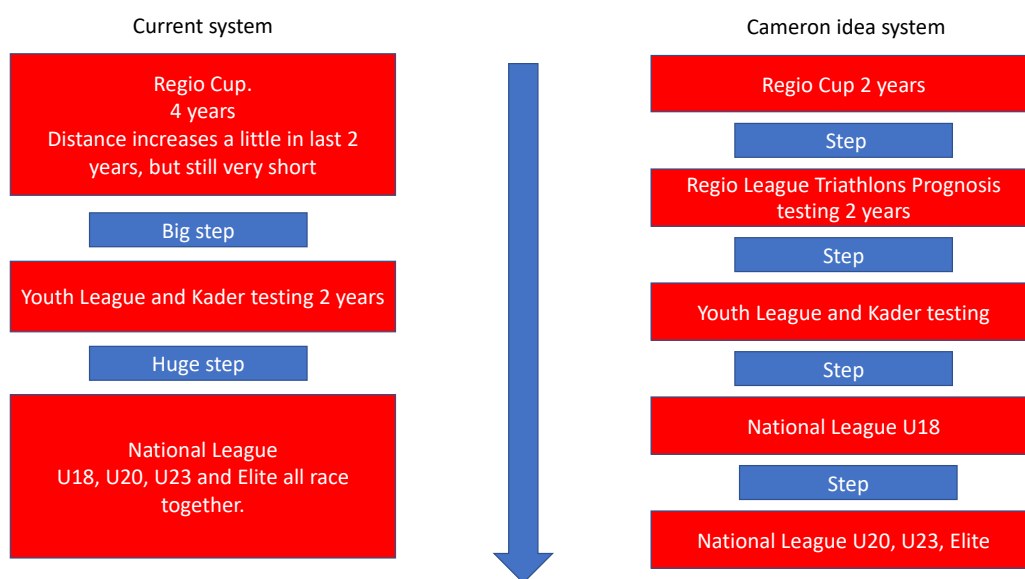
Currently there are 2 very large steps within a short amount of time in Swiss Triathlon. The step from Regio cup to Youth League and then 2 years later to National League. These steps I believe are too big and make it really hard for athletes to enjoy the sport of Triathlon. Added to the above issues, events like Nicola Spirig's Kids Cup are growing and having great impact. I have heard from athletes going to these events is they like it because they don't have to do games and can do a real triathlon. And the Regio cup is not growing at anywhere near the same rate, and the impact is limited, or could be seen as being negative, due to athletes not wanting to do the events. I know from personal experience and also talking to other coaches that experience the same, athletes do not like the Regio cup. By the time they come to the end of it they just don't want to do it. This should be seen as a warning sign.

1.4. Cameron’s ideas around racing.

I would suggest that these steps are made smaller and after 2 years in Regio cup, a Regio League is developed for the next 2 years. The distances would be closer to Youth League and add a testing day in there so athletes can set a standard at the distances they will be tested at later. This would add some pre-loading to the athlete’s development and Swiss Triathlon can also start to get a better predictive development over time, than they currently have. The Prognosis testing can also have a ranking, it may not count to the overall ranking but could be independent but allow athletes and coaches assess where their athletes sit overall in Switzerland. Then the Youth League distances should be lifted a little to bring them closer to the National league distances. Then an U18 National league series could be started to allow the U18 a chance to race the National League distance without having to race Elite athletes. The Regio League can be run with the Regio cup, but more laps of the current courses. The Youth League already exists, and distances can be increased with doing more laps. The U18 National League could be run with the National League with a delay in the start, or before or after the main National League race.

1.5. Overview of the Current system to Cameron idea system.

Idea for Regio cup and youth league development



Note: Athletes that achieve a podium place at National League U18 are able to choose to race on the National League if they wish.

1.6. Kader selection – Outlines, and information

Currently athletes can start the *Kader* selection process at the age 14. Then after this age the selection criteria gets harder making it harder to stay in *Kader*. As a result of this athletes the current system athletes are filtered quickly from an early age. Then once an athlete reached the age of 20, they have to enter the C *Kader* or move out of the Swiss Triathlon system. Taking into account information from Wulff & Hoffman (2013), who state that athletes performing well at international level as youth are not the athletes that go on to be Elite. This idea is backed up in many studies including Abbott et al. (2005), that selection based on test and race results at a young age does not result in these athletes becoming Elite, let alone Olympic medallists. Added to this Severin (2019) who talked at Swiss Triathlon’s own Coaches Conference stated that athletes achieve on average their first 10 ten at a World Cup race at the age of 27 for Women and 26 for Men.

Triathlon is currently a sport that athletes transfer into. Single sport athletes that are not good enough in a single sport transfer across to triathlon, in fact Newland & Kellet (2012) as part of the American triathlon system found that they were doing most of their athlete development from single sports. They were offering high-performance athletes that could not quite reach Elite level a year of top-quality coaching in triathlon to see if at the end of a year there would be any transfer of talent. What is also important to note, talent transfer was not seen as results it was about personal athlete development. Triathlon is a sport that athletes develop over a long time, so knowing this, does the current Swiss Triathlon system take all the known issues into account. Of course, it would be great to have all the athletes in Switzerland in a development programme, but this is not realistic. Therefore, Swiss Triathlon needs to do all it can to hang on to athletes and try to develop as many athletes as possible to allow future success.

1.7 Swiss Triathlons Selection 2021 *Nachwuchs*

Currently National and Regional *Kader* had athletes from 23 different clubs (54 athletes), this is from 76 triathlon clubs that are members of Swiss Triathlon. Added to this is the Regional *Kader* Ohne talent card (9 athletes).

How this breaks down:

National *Kader*:

- 16 in total

Regional *Kader* with talent card:

- 13 Ostschweiz
- 13 Zentralschweiz/Tessin
- 12 Romandie

Regional without talent card:

- Nine in total.

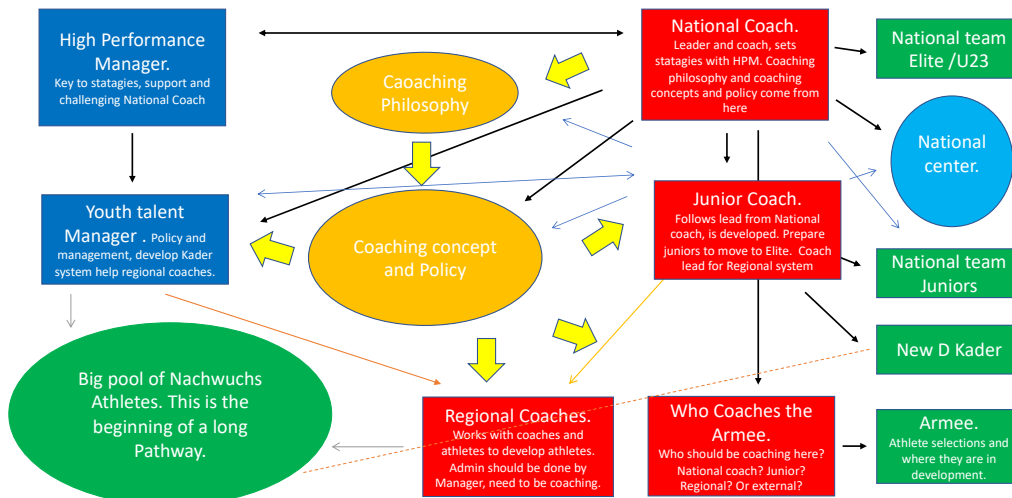
National *Kader* athletes seem to get attention from both the Junior National coach and a regional coach. Regional with talent card get attention from a regional coach Regional without talent card are not looked after at all. I have been told that this is because it is too much work to include them, but they will be invited to sign up for the camps if the maximum numbers are not reached.

1.8 How areas of responsibility could break down.

How this breaks down in areas of responsibility: Of course, I have missed lots of what they need to do, this is only the start of what I believe should be done in the area I am currently looking at.

- Head Coach: Is to set the training philosophy for Swiss Triathlon and how this breaks down into Concepts and practical applications as well as control over high-performance plan and strategic planning. Also responsible for National Team selections and has final say in *Kader* selection process: Direct influence on sport areas inside Swiss Triathlon. Runs the National team and coach's athletes where he believes it to be appropriate, Runs National Centre.
- High-Performance Manager: Communication with Swiss Olympic, administration of the complete Swiss Triathlon Structure, help National coach set policy and support the National Coach were possible and needed.
- Junior coach: Supports Head Coach, runs the programmes that are assigned to them from the national coach. Manages Junior team and make sure the development is appropriate to the wishes of the National coach, so the step from Junior to the National team is a flow rather than a step. Runs the National Centre with the head coach. Visit clubs and scout talent. Learns from national coach.
- Race Organiser: Runs and manages the different races that are under the Swiss Triathlon Banner (Regio Cup, Regio League, Youth League, National League U18, National League, Duathlon League). Works with race organisers to deliver great racing that is accessible to all. Be in charge of the material required for race organisers.
- The Youth develop manager: Organise and Manage the *Kader* system. Check that all athletes have current information required. Set up dates for testing and establish testing standards. Develop and keep current Swiss Olympic requirements for *PISTE* and youth development. Support the information flow between Head coach, junior coach and regional coaches.
- Regional Coaches: Run camps for athletes to come together and train. Pass feedback to club coaches or invite club coaches to attend the training camps. Visit triathlon clubs that currently have youth athletes. Is a place for coaches to contact about athletes and to help coaches develop so that athletes develop. Due to not being responsible for athlete development they only need to give some feedback on training and to look at potential athletes, the number of athletes they work with can be high. Due to this I would make sure the regional talent pool is big so that these athletes can be observed, and their coaching developed to be able to try and produce more athletes into the national system. Because the Regional coaches are looking at a lot of information, they do need to use a good coaching platform, where they can get on overview of what is happening, because they are not responsible for athlete development they only need an overview and not get bogged down in any form of detail, as this is only a waste of time and an area they are not responsible for. These Regional coaches need to be experienced, because as they bring athletes together from so many different places, they need to understand that all athletes are not coming into the camp at the same level, and some will be rested, other tired. As a result of this they may need to change the training plan depending on reach individual athlete. For example, a heavy swim focus may result in some athlete being very tired in the water, so they may not do all the plan and leave the water early. During this time, they can be given something else to do, or the same could happen for the other activities, but it takes an experienced understanding to allow this process to happen.

Coaching structure – Organisational plan. Work in progress.



1.9 Kader system an idea:

In *Nachwuchs* selection Swiss Triathlon already has 3 levels, these can be kept and developed:

- National *Kader* is selected and kept small; it is the main funnel into the C *Kader*.
- Regional *Kader* with Talent Card is where a good pool of athletes is kept and can be monitored, and development looked for. These athletes more attention than the group below, and the coaches are also supported. They will have weekend events
- Regional *Kader* without talent card. This pool of athletes can be kept large, as the amount of monitoring is lower and may only be invited to a day of the weekend events, depending on the structure, but these athletes are the mass and are important.

By keeping a mass of athletes, the law of probability will suggest that a good athlete will come out of the system. Also, if this system is kept longer and developed, athletes that transfer into triathlon at a later date could still have a pathway to the top. From U23 and Elite.

- A *Kader*: the absolute Elite – World Class athletes
- B *Kader*: Real potential to become world class.
- C *Kader*: The development ground for the A and B *Kader*.

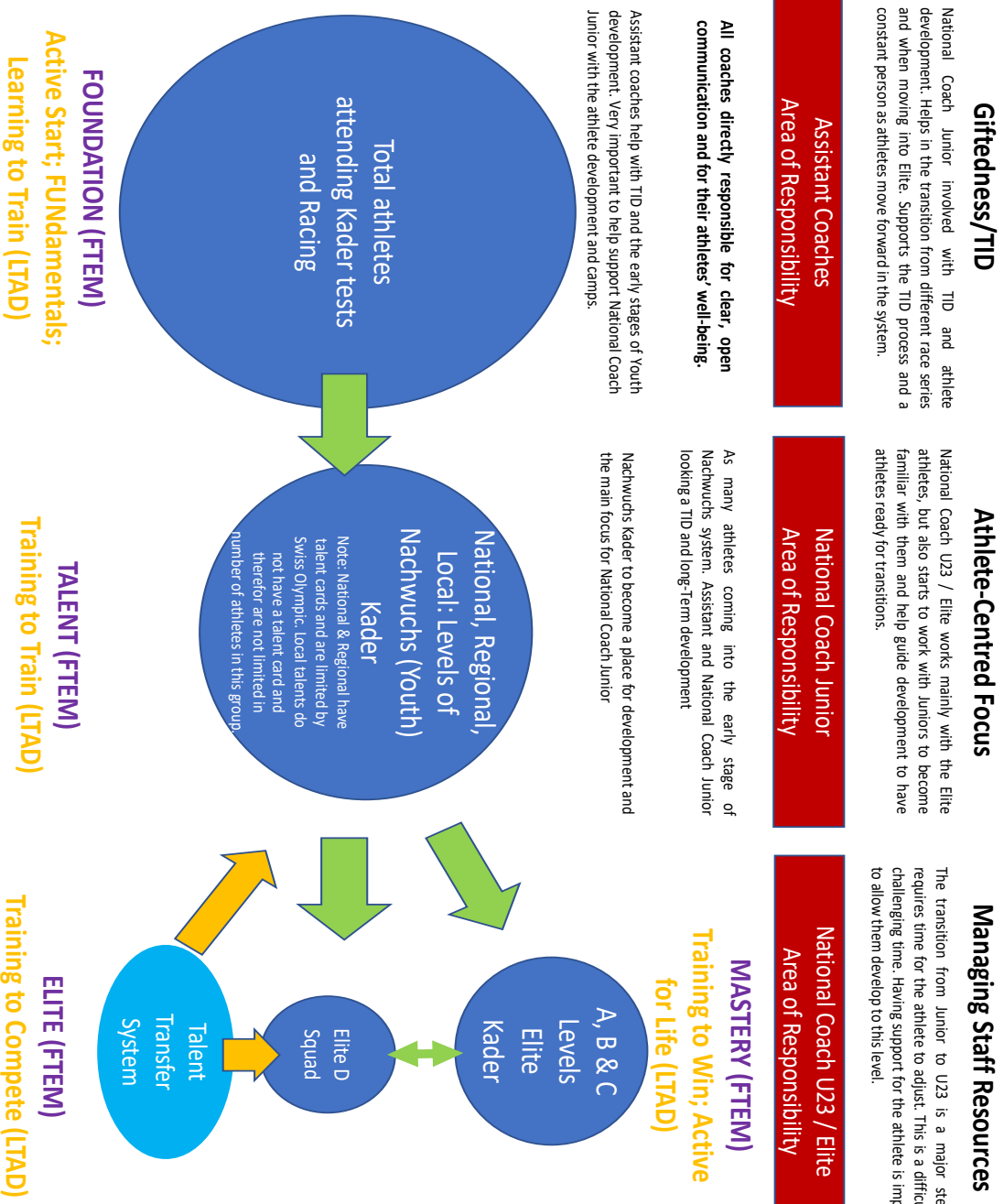
These seem to be working but needs to be discussed with Gordon what could be done to make this function better.

- D *Kader*: A talent pool that have some access to recourses within Swiss Triathlon but are not directly supported by Swiss Triathlon. They are athletes that are seen as having a possibility to develop. These athletes could be part of the Junior National coaches' area of responsibility, this could be also a great place for single sport athletes to come across to, like in the American system mentioned earlier. Which is, an Elite athlete that cannot make it in the individual sport is offered a place here for a year and offered coaching to see if they have any ability to transfer to Triathlon. The involvement from Swiss Triathlon can be kept low, and just be time from the Junior National coach and there could be a handful top coaches in Switzerland that may be able to help with this process, through their training group or club.

1.10 Conclusion

As I believe has been indicated there are stakeholders that are currently unhappy with the current Swiss Triathlon development system. I personally believe that it would not take too much to change the current system into something very positive. It is also my belief that this change has to happen from the group (Regio Cup) to the top of the *Nachwuchs* system. Key points for me are:

- Regional coaches need to be experienced and good coaches. Crawford has given a rundown on what he believed is required here.
- Selection and support need to reflect that triathlon is a late developer sport and talent transfer can happen later, therefore a system needs to allow this to happen.
- Find a way to support a large group of athletes and help support the coaches, which also helps the athletes.
- Allow the Head coach to set the system in place that the other coaches follow.
- Understand that an athlete at 16 still has at least 10 years of development, therefore telling them they can't be a good triathlete is short sighted and dangerous to the sport.
- True development is a long-term process and should be seen as such.
- Keeping athletes in the sport long-term is important for the long-term success of Swiss Triathlon



Giftedness/TID

National Coach Junior involved with TID and athlete development. Helps in the transition from different race series and when moving into Elite. Supports the TID process and a constant person as athletes move forward in the system.

Athlete-Centred Focus

National Coach U23 / Elite works mainly with the Elite athletes, but also starts to work with Juniors to become familiar with them and help guide development to have athletes ready for transitions.

Managing Staff Resources

The transition from Junior to U23 is a major step and requires time for the athlete to adjust. This is a difficult and challenging time. Having support for the athlete is important to allow them develop to this level.

Managing Athlete Resources

Total number of A, B and C Kader athletes remain similar, with more attention from National Coach U23 and Elite.

All coaches directly responsible for clear, open communication and for their athletes' well-being.

As many athletes coming into the early stage of Nachwuchs system. Assistant and National Coach Junior looking a TID and long-term development

National Coach U23 / Elite

As the number of places in C, B and A Kader are limited, in the past, de-selection and non-selection have been high here. With D Kader this number could be reduced. Also, any athletes de-selected or non-selected given clear pathways back into the system.

Assistant coaches help with TID and the early stages of Youth development. Very important to help support National Coach Junior with the athlete development and camps.

Nachwuchs Kader to become a place for development and the main focus for National Coach Junior

A, B & C Levels Elite Kader

Elite D squad to allow transfer between C and D, some athletes may not hit limits for C, but are still in National system, which helps the total squad and gives more time To develop.

Total athletes attending Kader tests and Racing

National, Regional, Local: Levels of Nachwuchs (Youth) Kader

Note: National & Regional have talent cards and are limited by Swiss Olympic. Local talents do not have a talent card and therefore are not limited in number of athletes in this group.

Elite D Squad

Talent Transfer System

Talent Transfer

Creating a robust Talent Transfer System would be important, offering time with a high qualified coach, to harness athletes from other sports.

Selection Protocols:

De-selection, Non-selection

Clear selection criteria for National & Regional. De-selection, non-selection protocols and support. Local can be more holistic as not controlled by Swiss Olympic. More athletes can be selected and developed using Local in this way.

LEAD Framework:
Swiss Triathlon