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elcome to Making Good, a design exegesis submitted as part of the Master of Design programme at Massey University.

This project has dual purposes and outputs. Firstly, it focuses on the design of an online tool charged with making scientific data more accessible to the public in a clear and engaging manner. Working in a collaborative environment, from a human-centred perspective, the project explores methodologies, processes, tools and techniques with which to democratise access to scientific information, and to foreground credibility, transparency and trustworthiness in design for the web. This is a response to a client brief, and the resulting website will be launched in March 2014.

In tandem, it is a reflective examination of negotiating the nature of good - as a synonym for ethical - design practice within the digital space, and within a client-facing project. The findings from both research directions are embodied in this response, Making Good.

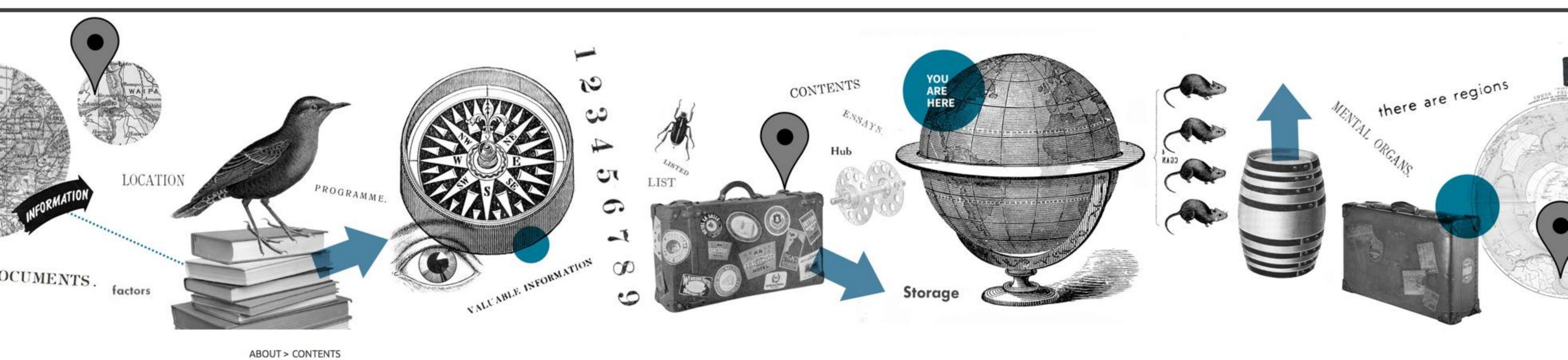
Contents >

A thesis submitted in partial fulfilment of the requirements for the degree of Master of Design, Massey University, Wellington, New Zealand: 2014.

Jo Bailey | 08118884

JO BAILEY





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Next: What's in a name? ▶

### WHAT'S IN A NAME?

JO BAILEY JANUARY 2014

ABOUT > WHAT'S IN A NAME?

- This, then, is our first question: What is good? and What is bad? and to the discussion of this question (or these questions) I give the name Ethics
  - **(**Moore, 1903, chapter 1.2)

### WHAT IS MAKING GOOD?

This exegesis is called Making Good because:

- It seeks to I 'make good' on the brief and our commitment to the stakeholders in LAWA.
- It seeks to demonstrate success; to make a mark.
- The act of making is a process, so it acknowledges there is a process to explore.
- As it is called 'making', not 'made', it also acknowledges this is a work in progress, still in flux.
- It alludes to good design, in terms of its aesthetic and functional merits, and the principles succinctly encapsulated by Dieter Rams in the 1980s.
- It suggests good design in a wider sense, as shorthand for ethical design, and making progress towards that goal (or, at least, understanding what it might mean).

### WHAT IS GOOD DESIGN?

The term 'good design' is generally taken to mean "of a high standard" (Good', n.d.):

Design that has aesthetic merit, breaks ground or captures the zeitgeist (Roberts, 2007)

and perhaps enriches intrinsically by its very existence. Yet using these criteria, designers could produce work for a morally abhorrent purpose, but still consider it 'good'.

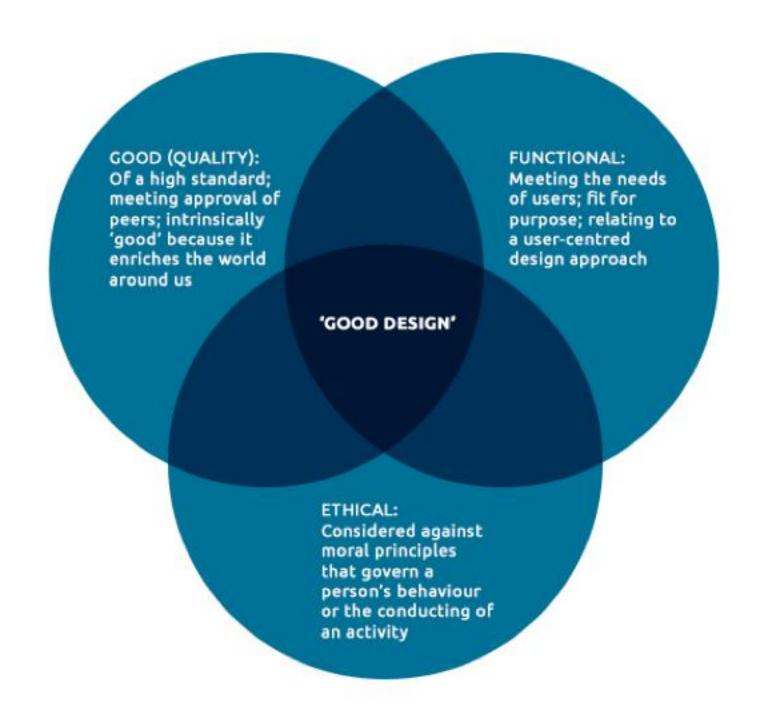
Increasingly however, good design as a term has a broader meaning.

Design commentators Steven Heller and Véronique Vienne suggest good design (regardless of style or mannerism) adds value to society, and equate it with good citizenship (Heller & Vienne, 2003). Lucienne Roberts, in her book on ethics in graphic design suggests that in giving a piece of design the accolade 'good', we should look beyond "artistic and functional merits" and consider the wider social context:

66 Does it contribute visually to the world in which we live? ... could it be harmful in any way? Is the design efficient in its use of materials and production techniques, and can it be disposed of or recycled without causing harm or involving great cost? Were the producers treated fairly and given proper recompense for the skill and effort provided?

## **★**(Roberts, 2006, p.13)

Within this exegesis, good design is used holistically to describe design with due consideration for responsibility, ethics, aesthetics, and fitness for purpose:



Good design: ethical and aesthetic.

## GOOD IS PERSONAL

There are "lots of different versions of good" ♠(Roberts, 2006, p.11). Each person will place emphasis on the importance of different ethical considerations.

In a conversation with a colleague I learned that he felt that the overarching moral obligation of a designer is similar to that of a lawyer – every client should be entitled to quality design. Most people would find his 'gun for hire' approach extreme, and take a more nuanced line.

As a designer, choosing not to work for certain clients because they operate in a sector to which one has considered moral opposition sounds straightforward. But it is a spectrum, and sometimes not clear-cut (even with a personal 'pengagement policy'). For instance, if you object on principle to mining, deciding not to work for companies engaged in mining is easy, but what about the penals who service them?

Zooming in to the minutiae of design practice and production, myriad decisions could be considered to have an ethical dimension: Is 'borrowing' a font without a licence acceptable? Taking images off the web for a mood board even though they are technically copyrighted? Saying yes to an impossible deadline? Taking a quote slightly out of context for more impact? Using non-recycled paper? Everything is on a scale; black and white ethical choices become grey very quickly. How often as design practitioners do we even pause to consider if we are being 'good'?

## CONSIDERING 'GOOD'

Milton Glaser's ▶12 Steps on the Road to Hell illustrates beautifully the different magnitudes of ethical decisions we make as designers, and is a valuable aide to establishing "your own level of discomfort with bending the truth" ♠(Glaser, 2002). In a similar way, this exegesis seeks to shine a light into ethical grey areas in a design process, considering decisions through an ethical lens and charting how far down the 'road to hell' I went.

Next: The project source ▶

- The name Making Good has several meanings.
   It suggests fulfilling our commitment; design that is 'good' in the sense of being aesthetically appealing and highly usable; and 'good' in an ethical and moral capacity.
- Good design too can be interpreted in numerous ways.
- This thesis considers good design to encompass ethical, aesthetic and functional
- A purpose of this exegesis is to consider the myriad dimensions of good design as applied to a live, client-facing project.

ABOUT > THE PROJECT SOURCE

## THE PROJECT SOURCE

JO BAILEY JANUARY 2014 A major design output of this project is LAWA (Land Air Water Aotearoa) – a website enabling public access to water quality data.

BUILD

Lawnz

### INTRODUCING LAWA

LAWA grew out of a large and complex brief given to Popen Lab, where I am a Senior Designer.

In 2012, Open Lab had a meeting with a consortium called LAWNZ (Land and Water New Zealand). LAWNZ were interested in Open Lab designing for them a mechanism (probably a mobile application) for sharing water quality data with the public, building on an existing website for council scientists and freshwater policy staff.

At that first meeting, I recall two things stood out. Firstly, based on my experience of working on a similar project, the immense scale of the task was immediately apparent. Secondly, the LAWNZ representatives specified something that intrigued me. They said they wanted the solution to be robust and transparent.

One of the partners (alongside regional councils) was the Cawthron Institute, an independent research agency. Cawthron had a specific role in the project to verify the quantitative trustworthiness of the data and analysis methodology. The information was to be collected and analysed in a standardised way so that comparisons could be made between sites or regions (even if this did not give a favourable impression of certain regional councils). Seemingly, the clients wanted the application and its contents to be open and credible.

### BOTH FOCUS AND OUTPUT

When the LAWA project began, a specific ethical lens was not being applied. Whilst considering ways to marry the stated intention of LAWNZ to be transparent, with the visual appeal of the site, the question of ethics persisted. Were there dilemmas associated with making 'credible design'? Were the clients really prepared to present data even if it made councils appear unfavourably? Was this project contributing unwittingly to prepared?

Consequently, LAWA became both a case study and a design output of this Masters project; a vehicle through which to reflect on clarity, truth, credibility and ethics in web design whilst exploring my own design practice and ethos.

Next: About me ▶

### SECTION SUMMARY

- Making Good uses LAWA (Land Air Water Aotearoa) as a case study to consider credibility and transparency in design.
- The LAWA project was a brief given to Open
   Lab, a design studio within Massey University.
- LAWA was an intriguing proposition as the clients specified certain levels of transparency.
- LAWA became the focus of both design output and reflective analysis on my own practice.

College of

**Creative Arts** 

ABOUT > ABOUT ME

## IN THE INTERESTS OF TRANSPARENCY: ABOUT ME

JO BAILEY JANUARY 2014 In a book on design research, I came across a word that resonated with my own research philosophy: maxiology.

Hilary Collins (2010, p.37) states "Axiology is concerned with values, including aesthetics and ethics, but it also includes the process of research". Collins advocates writing a values statement to heighten the awareness of both practitioner and reader.

In the introduction of her book about ethical design practice, Lucienne Roberts says: "Everyone has baggage that informs their thinking. So, just as politicians have to declare an interest, I thought it would be useful to include something of my history". Denis Wood, cartographer and former Professor of Design at North Carolina State University, describes this as "[letting] the reader decide if he would buy a used car from you, much less believe your science." (Wood, 1973). Roberts' précis of her background led me to feel her worldview was broadly similar to my own, hence I instinctively trusted her writing and viewed her as a credible source.

So, in the interests of transparency, something of my own history:

#### **DECLARING MY INTEREST**

I was born in 1976 in England. I am a geographer from a family of geographers. I earned a BSc in geography when environmental issues like climate change were becoming increasingly prominent. Studying geography raised my environmental consciousness and, in retrospect, I see it makes me consider processes and interconnectedness.

### Good work

Post-university I went to work for the NGO WWF-UK. One of my roles was Business Ethics Analyst, cutting through the greenwash and reporting on the reputational risk associated with potential donors. I became more conscious about sustainability, and a healthy sceptic regarding the claims organisations make about their environmental performance. Most research was online. I developed strong views on effective web design. I went on to manage WWF's intranet. Websites and information management became my career for the next five years.

### Good things come to those who are late

After moving to New Zealand in 2007, I started studying design, taking a Graduate Diploma at Massey University. I became increasingly interested in design history. Design writing that I find particularly resonant includes Ken Garland's First Things First manifesto and Milton Glaser's Ten Things I have Learned. I am surprised that ethics doesn't feature more in design education; to encourage emergent designers to consider the implications of their decisions, large and small, is empowering.

I am interested in the way design interacts with and helps communicate complex subjects.

But, I worry that there is a tendency in design thinking to neglect the micro in favour of the macro. I sweat the small stuff. Sometimes, I shouldn't.

I believe design is an inherently optimistic pursuit. It feels like we are at the point where as a profession we are claiming a niche. We don't just make things look nice. We question; we transform; we solve problems; we add tangible value. *And* we make things – but things you can feel in a haptic sense, or feel and experience emotionally. Now is an exciting time to be a designer.

### Next: How this exegesis works ▶



With my brother lan, in Brighton, UK

Me, 1978, camping

With my partner Max, tramping somewhere in NZ

- Declaring personal values can heighten awareness for both author and reader.
- In this section I declare my background to give context to the project's perspective.
- Especially pertinent are my BSc, my history with websites and information management, and my experience and interest in business ethics.
- Both LAWA and Making Good offered a vehicle to draw together my fields of experience.

ABOUT > HOW THIS EXEGESIS WORKS

## **HOW THIS EXEGESIS WORKS**

JO BAILEY JANUARY 2014 Why are you reading this as a website? Put simply, to show, rather than just tell.

### AN ONLINE EXEGESIS

As one of the intents of this project is to demonstrate how best to communicate credibly within the online space, synthesising my research and process with this medium becomes a design expression in its own right. Quite literally, pthe medium is the message.

#### Bite size

This exegesis covers the process, methods and research underpinnings that have fed into making the LAWA web tool clear, credible, trustworthy and transparent. Findings are presented as a series of essays that can be read autonomously, drawing on the writing for the web principle of 'chunking'.

### Drilldown

A tenet of the LAWA design is the "'Visual Information Sharing mantra': overview, zoom and filter, then details on demand" (Shneiderman, 1996). Because of LAWA's diverse audiences and complex terms, it is important that jargon be explained simply, without cluttering the interface for users who do not require these explanations. The solution for LAWA was to use an interactive glossary, where modal popups, accessed via icon buttons or in-text links, give short explanations, and wink to more detailed factsheets. This simple 'drilldown' principle has been adopted and expanded in Making Good.

### SOME FEATURES TO NOTE

Websites should be intuitive and self-explanatory. This is not a 'how to use' guide, but a rationale of some of the features you will encounter:

### The credibility toggle



On some essay pages, you will find a credibility button. Using this button will toggle the display from a 'credible' version (that is, the site as an expression of best practice and my own interpretation of articulating credibility in the online environment) to an p'incredible' version relating to the topic of the essay in question. The purpose is not to illustrate 'bad' design per se, but rather to present an irreverent illustration of observations made during my research. These alternative design decisions demonstrate - through absence or disruption - the small differences that can alter the perception of online credibility.

## Reference link



An extension of normal referencing protocols, this link type opens details of the reference, but also connects to the source material directly (if available digitally). Within academic writing, referencing allows the writer to substantiate claims and demonstrate they understand the wider discourse. Facilitating direct access to the source material may lend even greater validity.

## Comment link



A kind of personal footnote, explaining a thought process, giving context, or explaining my position.

## Image link and video link



Opens an image or online video to further illustrate a point. As with reference links, this validation-through-context helps demonstrate credibility.

## External link



Opens external content on another website in a new browser tab.

## Glossary link



The glossary popup need only be accessed if the user does not understand a term; for those that do, the link is unobtrusive. The short-form glossary entry can also be used to access more detailed information via references and links.

## Road to hell score



In each essay you will find a personal reflection on my ethical decision-making. As homage to Milton Glaser's 12 Steps on the Road to Hell each decision is considered on a Road to Hell scale (1 being "not ethically taxing", 10 being "this is absolutely wrong and immoral"). This may seem flippant, but the message is serious - there are ethical dimensions to everything we do as designers, and we should consider our actions and their consequences.

Next: Why LAWA matters: freshwater problems and opportunities ▶

- This website articulates best practice in terms of designing for website credibility.
- It also introduces some new concepts that bring increased usability benefits, such as different link types identified via icons.
- In each Method and Practice essay, 'road to hell' scores are given to demonstrate how ethically taxing certain decisions were.
- On selected pages, a credibility toggle allows you to see what happens when best practice is



ABOUT > WHY LAWA MATTERS

### WHY LAWA MATTERS

JO BAILEY JANUARY 2014 66 In much of my work, I actively seek out 'win-wins' for the economy and the environment. But in this case, New Zealand does face a classic economy versus environment dilemma.

Dr Jan Wright, Parliamentary Commissioner for the Environment (Wright, 2013, p.7)

#### FRESHWATER PROBLEMS AND OPPORTUNITIES

Water quality is an increasingly prominent issue in New Zealand. The Parliamentary Commissioner for the Environment has recently released a preport highlighting the fact that increased dairy production undoubtedly means more freshwater pollution; controversy over the Hawke's Bay Ruataniwha Dam project rages; last summer's drought meant hosepipe bans for the public and reduced profit for farmers; and toxic algae in rivers has a killed over sixty dogs since 2005. New Zealanders need tools to be able to make informed choices about how freshwater resources should be used.

### PERCEPTION-REALITY GAP

### Water quality decreased over the 1998 to 2007

★(Ballantine, Booker, Unwin, & Snelder, 2010, p.7)

VS.

### Three quarters of New Zealanders think that rivers and lakes are adequately managed

**★**(Hughey, Kerr, & Cullen, 2010, p.23)

Though there is plenty of evidence that New Zealand has a freshwater pollution problem, Hughey, Kerr, & Cullen €(2010, p.23) found that most New Zealanders think that our lakes and rivers are adequately managed. However, when the survey group was asked to choose the most important environmental issue facing New Zealand, water pollution and waterrelated issues ranked highest. Perhaps these findings suggest there is a nascent public consciousness of water quality issues. Or perhaps they simply underline the fact that the picture is confusing.

### PARTNERSHIP ROLES

Regional councils are the key driver behind LAWA. In 2011, regional councils' role in freshwater management was assessed by the Auditor General, who made the following recommendations:

- 66 collaboration at all levels central and local government, across local government, with the dairy sector, stakeholders, iwi, farmers, and communities; sharing knowledge and information - especially easy availability of nationally comparable, high-quality, scientific data and research; a holistic approach to managing freshwater that integrates land use, freshwater quality management, and the effects on the coastal marine environment; and strong links between freshwater management planning and using scientific monitoring to measure the effectiveness of the policies being implemented.
  - ♠(Provost, 2011)

## A RESPONSE?

- Open Lab's original ★brief sought to address some similar themes:
- 66 Regional Councils and the Cawthron Institute, with the help of the Tindall Foundation, wish to create a credible and informative website providing robust environmental information on land and water resources. The website, aimed at the general public, will build on the existing Land and Water New Zealand (LAWNZ) website, utilising and expanding on the considerable water quality data gathered, stored and presented on the site by Regional Councils.
  - ★(LAWNZ (Land and Water New Zealand), 2012).

Clearly, there are themes raised by the Auditor General that the LAWA brief seeks to address. This is laudable, but raises the issue, to what degree could LAWA be considered a box-ticking exercise to point to and say 'something is being done'? This is a thought I will return to as I describe the LAWA journey.

Next: Theory, method and process ▶

- Water quality is a problem in New Zealand, and is becoming increasingly prominent.
- There is a gap between public perception and reality, but New Zealanders still rate lakes and rivers as the most pressing environmental issue nationally.
- In a 2011 report the Auditor General recommended greater cross-sector collaboration, a holistic policy and greater emphasis on monitoring.
- LAWA may be a regional council response to this report.

METHODS > THEORY, METHOD AND PROCESS

## THEORY, METHOD AND PROCESS

JO BAILEY JANUARY 2014 The LAWA process has been informed by principles of user-centred design, and largely mirrors existing design methods often grouped as design thinking.

### **USER-CENTRED DESIGN**

User-centred design (UCD, also known as human-centred design) is a "broad term to describe design processes in which end users influence how a design takes shape" @(Abras, Maloney-Krichmar, & Preece, 2004). It is a key method used within ■ user experience design (UXD). User-centred design principles include requirements that:

- The design is based upon an explicit understanding of users, tasks and environments.
- Users are involved throughout design and development.
- The design is driven and refined by user-centred evaluation.
- The process is iterative.
- The design addresses the whole user experience.
- The design team includes multidisciplinary skills and perspectives.

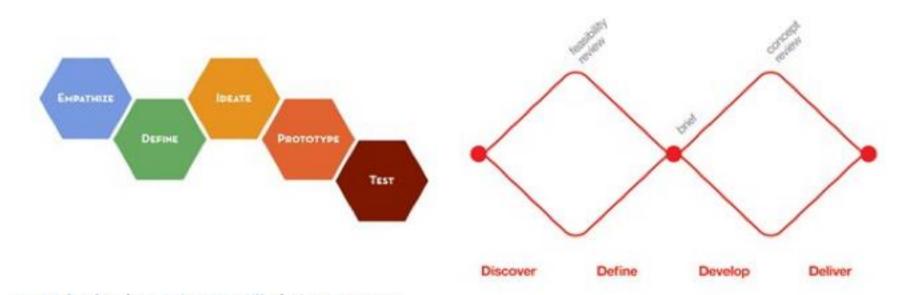
### **★**(ISO, 2010)

### **DESIGN THINKING**

Design thinking as a term evolved out of research that sought to define the processes and approaches designers (as distinct from scientists or engineers (Cross, 2011)) use to solve problems.

In 1969 Herbert Simon defined design as "transformation of existing conditions into preferred ones" (Simon, 1969), linking design to the idea of a better future. He outlined a process of 'Define, Research, Ideate, Prototype, Choose, Implement, Learn' as an articulation of design thinking, and this remains the foundation of frameworks defined since, such as "Discover, Define, Develop and Deliver" (Design Council, 2005) or "Empathise, Define, Ideate, Prototype, Test" (Stanford d.school, n.d.).

Design thinking encompasses **UCD**, and other tools such as collaboration and prototyping. It has increasingly found favour within business schools as it encourages a lean "fail fast, fail cheap, fail early", or "learn fast, learn cheap, learn early" (Mootee, 2013) approach.



## D.School and Design Council's design processes

THE SCIENCE OF DESIGN

Nigel Cross classifies the values of scientific culture as "objectivity, rationality, neutrality, and a concern for 'truth'" and design's as "practicality, ingenuity, empathy, and a concern for 'appropriateness'" (Cross, 1982 p.222). Within LAWA's multidisciplinary team, being conscious of these differences, especially at moments where design and science seemed to be speaking different languages, aided negotiation of sticking points. Cross's research assisted me in articulating what we do as a method with its own kind of rigour, albeit not one based on the scientific method.

## ANOTHER DESIGN METHOD: THE POWER OF THE 'STUPID QUESTION'

56 Designers often attempt to solve problems about which they know nothing. I have also come to believe that in such ignorance lies great power: The ability to ask stupid questions.

## **★**(Norman, 2013)

Toyota originated the 'Five Whys' \( \text{(Ohno, 2006)} \) as a way to get to the root of a design problem, and Don Norman (2013) categorises asking 'stupid questions' as part of a design thinking approach.

In previous projects, I had been reluctant to ask what I felt could be perceived as 'stupid questions', instead keeping my ignorance quiet and taking circuitous journeys to acquire answers retrospectively. In the LAWA project, that was not always feasible. I discovered that, more often than not, my questions did not have simple answers, or that I did not understand because there was an error in the information presented. Asking questions demonstrated how much prior knowledge was being taken for granted by the scientists - an issue that many lay users would also have found confusing. The process demonstrated that using ignorance consciously locates gaps, and the outcome is better as a result.

## CHALLENGES

Within LAWA, the clients represented a small subset of the potential subsets, so could not fully reflect all groups. We needed to justify spending time to understand what potential users wanted to get out of LAWA before we could properly define the scope, let alone the design. UCD was, in reality, an ambition, utilised as much as possible in terms of time and budget, but supplemented pragmatically with ■ self-design, ■ genius design, and ■ activity-focused design.

Next: The LAWA process ▶

### SECTION SUMMARY

- User-centred design (UCD) requires getting the end users involved in the process.
- Design thinking is an articulation of an iterative UCD process incorporating empathy building, iteration, prototyping, testing and reflection.
- LAWA utilised UCD and design thinking tools, but sometimes constraints meant working pragmatically without user feedback.
- Design has values that differ to science and engineering, but still has a robust methodology.
- or design output can be identified.

### ETHICAL CONSIDERATIONS

### **UCD** fallacy

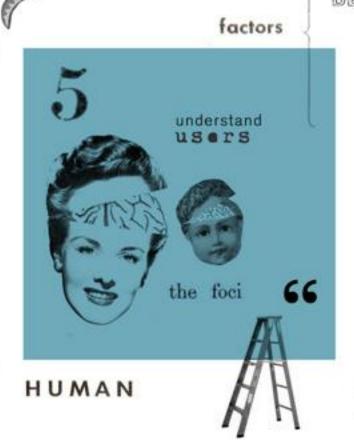
There was not as much direct user engagement as I would have liked in LAWA, yet when talking about the project to clients, it is from the perspective of it having been built using a user-centred approach. This is not untrue, but equally UCD did not extend as far as I would have liked.

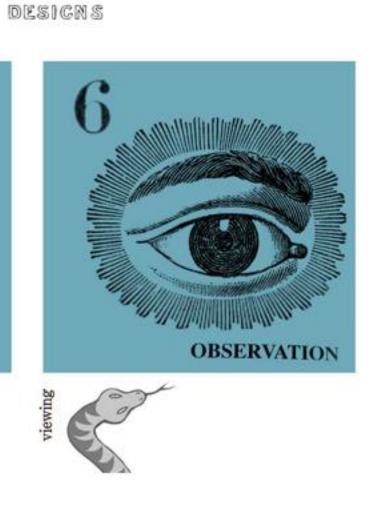


### Only me...

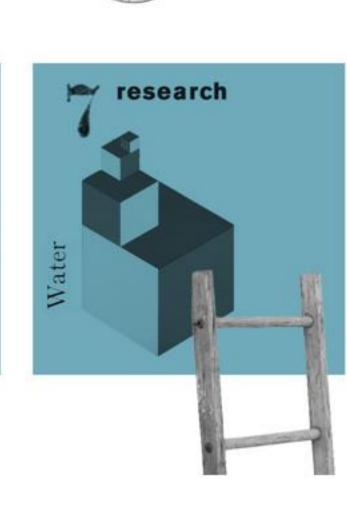
Having advocated for UCD and design thinking both of which emphasise prototyping and testing - I have to admit, I have done no user testing with Making Good. In fact, you are the test phase. Sorry I didn't get ethics approval!

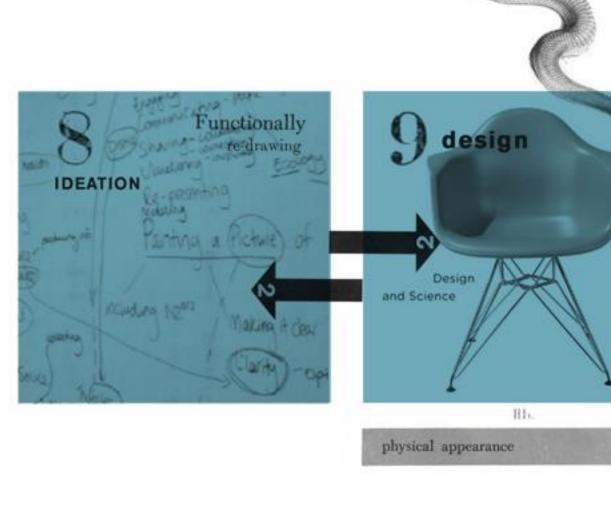






LAWA





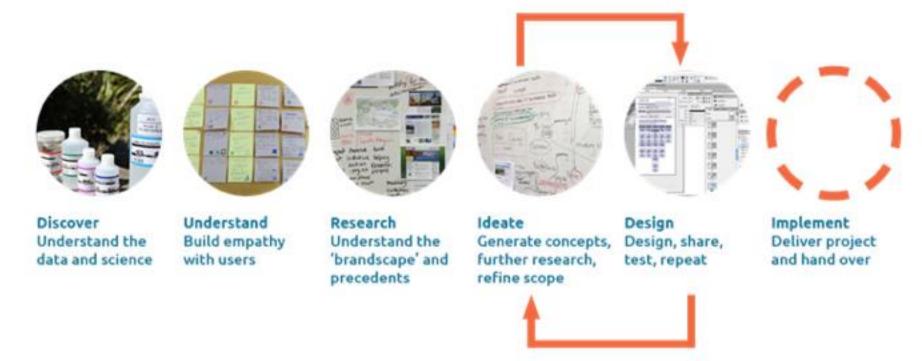
THE LAWA PROCESS

JO BAILEY JANUARY 2014

METHODS > THE LAWA PROCESS

LAWA was an exercise in design collaboration, which meant we had to explain the process. This necessitated a certain amount of pre-emptive reflection about what, exactly, we do as designers – the seemingly innate steps we take.

In August I presented at a freshwater science conference with Kati Doehring, an ecologist from Cawthron. The session was on science communication, and we used LAWA as a case study – an example of how design can aid scientists in communicating complex subjects. In the presentation, I described the LAWA design process thus:



The IM LAWA design process

### DISCOVER

This phase sought to understand and frame the brief, the scope, and the objectives, and to build understanding with the scientists who were part of the LAWA team. This phase clarified what data was available, but it also involved understanding the data collection process (a first stage in a process of empathy building).

Having accompanied a council scientist to a local river and asked myriad stupid questions, the value of demonstrating to users exactly what sits behind the data became clear. Not only would this demonstrate transparency through disclosure of the process and methods, but also because it adds a human element, which is important from a credibility perspective (Fogg et al., 2002). This experience was also the progenitor for the focus on learning resources in LAWA.

### UNDERSTAND

With assistance from Horizons Regional Council and Cawthron, we held two user workshops with participants including recreational users, iwi, farmers, scientists, Fish & Game staff, conservation volunteers and Open Lab designers.

In coordinated but reasonably fluid sessions, users were asked to describe their involvement with water, and to define, in an ideal world, what this new web tool would do for them. This process of building empathy with users yielded highly informative insights (Appendix III) ▶ and though user engagement makes the design process more complex ♠(Forlizzi & Ford, 2000, p.422-423), it was a critical stage in defining the requirements of the project.

## RESEARCH

At this point, LAWA was not called LAWA – we were tasked with defining the identity as part of our brief – so this research phase incorporated looking at brands in the environmental data and freshwater space, and also looking in detail at other websites conveying water quality data. No sites were identified performing the same functions that were envisaged for LAWA, but some best practice precedents (Appendix IV) > for individual components of the site were identified.

## IDEATION

This phase involved brainstorming, collating ideas and starting to conceptualise how the site might be structured and how it might function. Ideas were shared with the LAWA steering group, who identified constraints, generally around organisational buy-in. Getting ideas on the table was key – some (incorporating recreational water quality for instance) were vetoed at this stage, but with the backup of the findings from user workshops, it was possible to negotiate them back into the scope of the project.

## DESIGN (SHARE, TEST, REPEAT)

This phase is the iterative design process proper. Wireframing and user journey testing informed concept designs and prototypes, progress was shared with stakeholders for feedback, and designs were refined many times over before the developers were handed the designs to start the build. The process was then repeated with the developers, until the test site reached a stage where it could be released as an alpha site to share with a wider group. Testing and iterative changes are ongoing, and the beta launch to council users in mid-December will necessitate further rounds of iterative improvements.

## IMPLEMENTATION (IN PROGRESS)

Final user testing will take place and the site will be assessed against the criteria set in the first phase. The site will be made public in mid-2014, then feedback will be gathered, which can be used to inform further development.

Next: Web credibility ▶

### SECTION SUMMARY

- LAWA's process was: Discover; Understand (build empathy); Research; Ideate; Design (Test, Repeat), Implement.
- The last two phases are ongoing.

### ETHICAL CONSIDERATIONS

### Dodgy research

During my research I was reading a thesis, and one of the recommended resources in it was the film Thank you for Smoking. I headed straight over to Pirate Bay and downloaded it. I should probably feel bad about that, but I don't. FACT (Federation Against Copyright Theft), on the other hand definitely think it is a burn in hell offence! Therefore I score this a 2 (but if you ask FACT, I'm toast).



### Really representative?

The user groups were convened by Horizons and Cawthron. This was a practical decision based on the need to assemble a user group in a timely manner, but ideally the net would have been spread beyond people who were already known to the LAWA partners. With users who are not truly independent, there is the possibility of bias, or telling us what they thought we wanted to hear. LAWA partners were cognisant of this however, and any findings that seemed anomalous would have been subject to further investigation.



### One for all

The user workshops at the start of the project were vital, but it would have been preferable to run LAWA as a more immersive co-design exercise. The fact that we had only two workshops at the start meant that we were extrapolating the views of two representatives from each user group (farmer, iwi, recreational user, conservation volunteer, etcetera) to all people in that demographic. My misgiving here probably stems from my lack of experience with qualitative data collection rather than any actual flaw in the methodology.



## A funeral pyre?

Under my desk, I have at least a ream of wireframe printouts. I have never checked what kind of paper we are using – hopefully the university has a sustainability policy that specifies 100% post-consumer waste. I am a fastidious re-user (the wireframes are only still there to use as scrap notes paper) and recycler, but I could and should have done more to reduce my paper use.



## He never said that!

When Kati and I presented LAWA at the Freshwater Sciences Society conference, we opened with a quote: 'Everything as simple as it can be, but not simpler'. This is widely attributed to Einstein, but I was worried that I could not present at a science conference with an unreferenced quote. So I went on a detective mission and it turns out he didn't say it! Einstein expressed the sentiment and it was paraphrased in a newspaper article by composer Roger Sessions. I had a full citation on the slide, but Kati – the scientist! – said it was clutter, just attribute it to Einstein. Thereby, a myth was perpetuated.



METHODS > WEB CREDIBILITY

FOR STUDENTS, CRAFTSMEN, & AMATEURS

## WEB CREDIBILITY

JO BAILEY JANUARY 2014 ...participants relied heavily on the surface qualities of a web site to make credibility judgments. ... we had hoped to see that people used more rigorous evaluation strategies.

**★**(Fogg et al., 2002, p.25)

### WHAT IS CREDIBILITY?

Credibility is a perceived quality that has two dimensions: trustworthiness (equated with dependability (Mayer, Davis, & Schoorman (1995, p.712)); and expertise (Fogg, 2003. p.122). Trustworthiness hinges on factors such as being unbiased, fair and honest. Expertise is the perceived knowledge or skill of the source \*(Fogg, 2003, p.124). A successful website needs to combine high levels of both.

### RESEARCH ON WEB CREDIBILITY

The benchmark web credibility research came out of the Stanford University Web Credibility Project (WCP). The WCP research explored the considerations and judgements people make in the process of assessing web credibility. Despite being a decade old, this seminal study still informs best practice today (usability guidelines endure because they depend on human behaviour, which changes very slowly @(Nielsen, 2005)).

### THE FIRST BYTE IS WITH THE EYE: THE ROLE OF DESIGN

One of the most surprising WCP results was that when determining online credibility, the average consumer paid far more attention to superficial aspects of a site, such as visual cues, than to content \(\bigsim (\text{Fogg et al., 2002, p.6)}\), a result that has been replicated since \(\bigsim (\text{Alberts & } \) van der Geest, 2011). Visual design (including layout, typography, and colour palette) featured in the comments of nearly half of all test participants @(Fogg et al., 2002, p.6).

However, there was also a backlash against sites that were deemed too "slick-looking" a (Fogg et al., 2002, p.25). People perceive 'slickness' as marketing or design 'gloss'; more about selling than useful information. This is a tightrope that LAWA needed to negotiate.

### SHORT ATTENTION SPANS?

Users judge visual appeal quickly - as quickly as 50 milliseconds (Lindgaard, Fernandes, Dudek, & Brown, 2006) - hence capturing attention through design is important.

■Lindgaard, Fernandes, Dudek, & Brown (2006) demonstrated that "visual appeal factors" can alter how users feel about a website. If a website looks appealing, subsequent interactions get judged less harshly: "[after a] very positive first impression, a person may disregard or downplay possible negative issues encountered later: potentially negative aspects such as errors may be generously overlooked" (Campbell & Pisterman 1996, quoted in Lindgaard et al., 2006)). This is called cognitive confirmation bias, or the 'halo effect'.

Half of all new site visits last less than 12 seconds (Weinreich, Obendorf, Herder, & Mayer, 2008, p.16), but if a site makes the first cut and is not abandoned by the user straight away, "there's a fair chance that they'll stay much longer — often two minutes or more, which is an eternity on the Web" (Nielsen, 2011).

## STANFORD WCP: A FRAMEWORK FOR LAWA'S CREDIBILITY

The WCP research has been summarised into a series of guidelines (Fogg, 2002). These have been key considerations for the LAWA design; how they were interpreted is detailed in further essays:

Guideline	WCP comments	How this was considered in LAWA	
Make it easy to verify the accuracy of the information on your site.	You can build web site credibility by providing third-party support (citations, references, source material) for information you present, especially if you link to this evidence. Even if people don't follow these links, you've shown confidence in your material.	Use of reglossary and factsheets to allow drilldown; linking to external research from factsheets.	
Show that there's a real organization behind your site.	Showing that your web site is for a legitimate organization will boost the site's credibility. The easiest way to do this is by listing a physical address. Other features can also help, such as posting a photo of your offices or listing a membership with the chamber of commerce.	About section on  LAWA is clear about  who the partners are.	
Highlight the expertise in your organization and in the content and services you provide.	Do you have experts on your team? Are your contributors or service providers authorities? Be sure to give their credentials. Are you affiliated with a respected organization? Make that clear.  Conversely, don't link to outside sites that are not credible. Your site becomes less credible by association.	Cawthron as external validators of data, and the 'Can I Trust this Data' tick.	
Show that honest and trustworthy people stand behind your site.	The first part of this guideline is to show there are real people behind the site and in the organization. Next, find a way to convey their trustworthiness through images or text. For example, some sites post employee bios that tell about family or hobbies.	Use author names on all articles and events.	
Make it easy to contact you.	A simple way to boost your site's credibility is by making your contact information clear: phone number, physical address, and email address.	Footer contains  contact information and links to all regional councils.	
Design your site so it looks professional (or is appropriate for your purpose).	We find that people quickly evaluate a site by visual design alone. When designing your site, pay attention to layout, typography, images, consistency issues, and more. Of course, not all sites gain credibility by looking like IBM.com. The visual design should match the site's purpose.	See typography ▶, colour ▶, and visual style ▶	
Make your site easy to use – and useful.	We're squeezing two guidelines into one here.  Our research shows that sites win credibility points by being both easy to use and useful.  Some site operators forget about users when they cater to their own company's ego or try to show the dazzling things they can do with web technology.	User-centred design principles.	
Update your site's content often (at least show it's been reviewed recently).	People assign more credibility to sites that show they have been recently updated or reviewed.	Published dates on all articles and factsheets.	
Use restraint with any promotional content (e.g., ads, offers).  If possible, avoid having ads on your site. If you must have ads, clearly distinguish the sponsored content from your own. Avoid pop-up ads, unless you don't mind annoying users and losing credibility. As for writing style, try to be clear, direct, and sincere.		Establishing a consistent LAWA voice that talks simply, without jargon, but without dumbing down (see Copy and writing style ▶). No advertising (see Visual style ▶).	
Avoid errors of all types, no matter how	Typographical errors and broken links hurt a site's credibility more than most people imagine.	Rigorous testing regime, beta launch.	

It's also important to keep your site up and

running.

Next: Site structure ▶

small they seem.

## SECTION SUMMARY

- Credibility on the web is a combination of perceived trustworthiness and expertise.

re-drawing

Terzi, del.

- Credibility judgements are based on how a website looks, above all other factors.
- Websites also need to look appealing (but not too 'slick') to prevent a user abandoning the site straight away.
- Once a user is engaged, other factors such as errors and the ability to verify information come into play.
- The Stanford WCP guidelines form an important checklist for LAWA.

#### **ETHICAL CONSIDERATIONS**

Credibility design as a tool for evil!

One of the Masters cohort asked me, "do you think you could make someone bad look good with your research?". By highlighting techniques to make web design appear more credible, anyone could utilise them, honestly or otherwise. I am a graphic designer, and as Matherine McCoy says, there is a tendency to think of graphic design and advertising as competing cultures using the "oppositional modes" (McCoy, 2000) of information and persuasion. But that is a false dichotomy. Of course what I am doing is utilising persuasion. Even the most innocuous graphic design is persuasive – "the red colour of a stop sign is a persuasive rhetorical tactic" (McCoy, 2000). What I am not doing is stepping beyond persuasion to use acoercion or deception, but someone else could.

Fundamentally, though, people aren't stupid. Even if a site looks appropriate to the task (for instance, the highly plausible @ Bonk Museum, @ Australian International University and HuhCorp sites - all delicious spoofs good enough to fool anyone, at least for a few seconds), there still needs to be substance.





## SITE STRUCTURE

JO BAILEY JANUARY 2014

PRACTICE > SITE STRUCTURE

- ...the only way to enhance the user's ability to find his way around ... is by providing better points of reference. In the same way that sailors navigate by reference to shorelines and stars, users navigate with reference to permanent objects placed in the programme's user interface.
  - **★**(Cooper, 1995, p.508)

### DESIGNING LANDMARKS

For a website to be credible, it needs to be easy to use and useful **(Fogg, 2002)**. A key component of ease of use is an intuitive structure that enables a user to find, without undue hindrance, what they are looking for.

Unlike books whose bound physical form suggests an order, "hypertextual navigation allows users to be transported right into the middle of a large unfamiliar web site" ♠(Rosenfeld, 1998, p.44) via search engines or direct links. Well structured, consistent primary navigation and the use of breadcrumb trails means each page is contextualised, and a user can navigate up a level, or a number of levels, with ease. Ensuring URLs also reflect the site architecture (primary levels, with ease and link is shared, looks more professional, thereby enhancing credibility. Both LAWA and this site employ breadcrumbs and semantic URLs.

### LAWA'S SITE ARCHITECTURE

Once there was agreement on the functions the site would perform, an initial site architecture plan was constructed. This was informed through affinity diagramming. The user workshops allowed us to conceptualise a range of user personas based on the participants, and to create user journey scenarios, which were tested with paper prototypes.

### SECTIONS

LAWA has four central roles:

- communicating science;
- providing recreational information;
- contextualising information (via stories, events and instigation of conversations);
- providing learning resources.

These form the primary navigation under Explore Data (science and recreation), Learn (learning resources), and Get Involved (news and stories). The need to identify who is behind LAWA (identified by the user groups, and specified in the WCP guidelines) is addressed by the fourth primary navigation label, About.

The primary navigation follows convention and appears at the top of the page across the whole site. Active navigation states are colour coded, and this colour is used for emphasis across the section to reinforce the navigational cues. A consistent footer containing a sitemap and a secondary footer with related content tailored to each page gives further navigational options. The secondary footer becomes a useful place for establishing contextual information, such as stories or learning resources within LAWA, but it also lets the user "locate with ease additional evidence relevant to the topic in question" (Fallis, 2004, quoted in Rieh & Danielson, 2007, p.38) which establishes the 'third-party verification' (Fogg, 2002) recommended in the WCP guidelines.

## MAPPING AS NAVIGATION AID AND SYMBOL

The LAWA map is used as both a data visualisation tool and a navigational device. The map is a useful, instantly recognisable form and, as the information is spatial, utilising the map to move through the region/catchment/site structure is intuitive. "Maps are images of the world that proclaim their objective neutrality, an important source of their authority" (Wood, 2007, p.10), and as such, people tend to trust them.

The map is also a reinforcement that the site is about New Zealand. WCP guidelines suggest aligning with "respected organizations [sic]"  $\bigcirc$  (Fogg, 2002). New Zealanders feel a strong affinity with the shape of their country, so given that the domestic audience is the primary target group, the map may translate into a credibility-building feature, tapping into the shared national identity and fostering a sense that the user has a stake in LAWA.

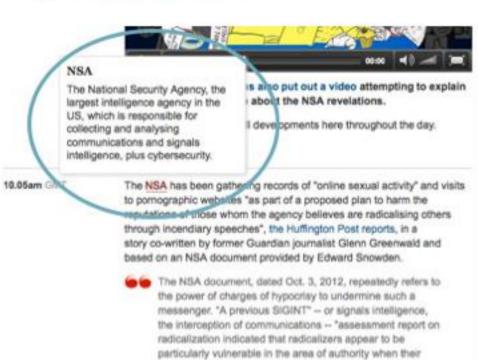
## CHUNKING AND PAGE STRUCTURE

Content chunking is a 'writing for the web' technique where content is broken down into 'chunks', so that it is easy and efficient for users to consume. Headings give content a visual hierarchy. Users scan or skim information online (Nielsen, 1997), so using visual cues such as headings and bullets allows easier comprehension of the page content.

## 'Overview, zoom and filter, then details on demand'

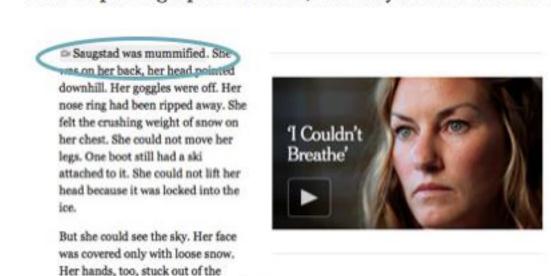
This principle was a maxim for LAWA. Coined by Ben Shneiderman, it is known as the Visual Information Sharing Mantra. Because LAWA contains a vast amount of detail, it is designed so that top level information is given first, and content boxes expand on demand, allowing a user to drill down as far as the raw data. The same principle is employed within copy, so that technical terms are highlighted and linked as glossary terms. The links are unobtrusive to users who do not require them to be explained, but it is never assumed that users already understand technical terms. From glossary popups, links to more detailed factsheets are provided when relevant.

Though hyperlinking to other content has been a feature of the internet since its inception, the use of short-form glossary popups is relatively new. Wikipedia uses a similar principle in-text to show the content of footnotes on the same page, and *The Guardian* has recently started using the convention:



Screen capture from <a href="The Guardian">The Guardian</a>, 27 November 2013. Note the use of a different link style to denote a glossary term compared to a regular link. This emerging convention is reflected in LAWA and Making Good.

Within this site, this is expanded to experiement with in-text icons to denote different kinds of links. In a recent New York Times multimedia story, icons within the copy were used to denote photographs or video, but only where that media existed on the same page:



Screen capture from Snow Fall, a multimedia story released by the New York Times (Branch, 2012). Note the highlighted text and video icon, which link to the associated video on the right.

Making Good's visual link style seeks to be transparent about what a user can expect when activating a link. Unless clicking on an external link icon, a user will not leave the site. This has the potential to increase user trust, and therefore enhance a website's reputation and credibility.

Next: Usability and accessability ▶

snow, one still covered by a pink mitten.

### SECTION SUMMARY

- Websites with an intuitive structure, assisted by tools like breadcrumb trails, ensure that users are always able to orientate themselves and help the user reach the information they are looking for.
- Within LAWA and Making Good pages contain chunked text with headings to allow users to scan content quickly.
- LAWA utilises the principle of giving users an overview of information first, but giving clear pathways to access further and more detailed content.

### **ETHICAL CONSIDERATIONS**

### Lack of testing

We were unable to test our structure with any of our initial workshop participants, and so relied on experience, backed up by testing with internal resource (and feedback from the LAWA Steering Group). It would have been more robust to do proper proof-of-concept testing with users.



### Use of the map

The map has been well received in subsequent testing as a navigational device, but it was dropped from the mobile version of the site purely to save money and development time. From a usability perspective, that means some users are disadvantaged solely by the device they are using to access the site. That falls short of best practice by some margin.



### In-text icons: an untried convention

In Making Good my use of in-text icons to denote different types of links is largely untested. In fact, this is the test. I hope you as a reader do not feel experimented on!



**AUTHOR: SITE ADMIN** 

Site structure

...the only way to enhance the user's ability to find his way around ... is by providing better points of reference. In the same way that sailors navigate by reference to shorelines and stars, users navigate with reference to permanent objects placed in the programme's user interface. (Cooper, 1995, p.508)

Designing landmarks: For a website to be credible, it needs to be easy to use and useful (Fogg, 2002). A key component of ease of use is an intuitive structure that enables a user to find, without undue hindrance, what they are looking for.

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LAWA's site architecture: Once there was agreement on the functions the site would perform, an initial site architecture plan was constructed. This was informed through affinity diagramming. The user workshops allowed us to conceptualise a range of user personas based on the participants, and to create user journey scenarios, which were tested with paper prototypes.

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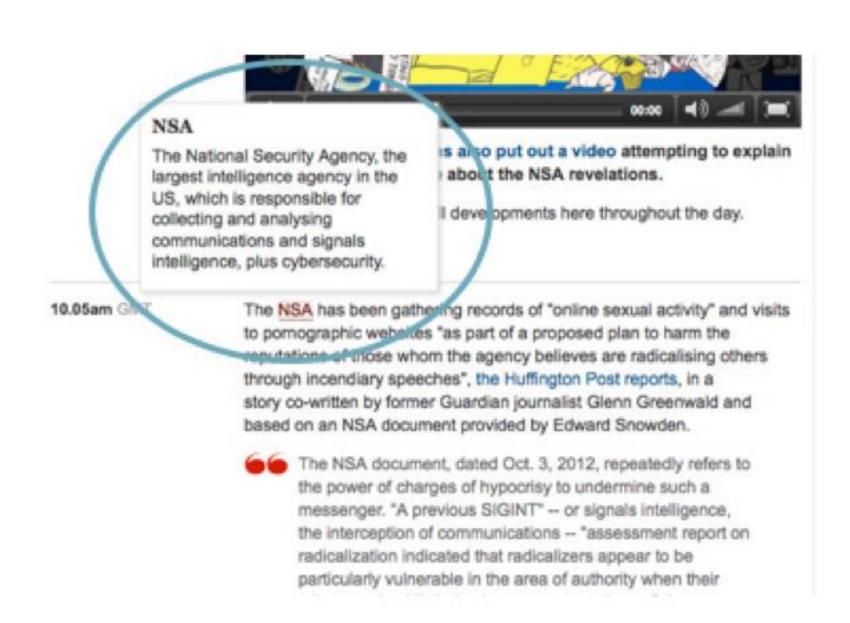
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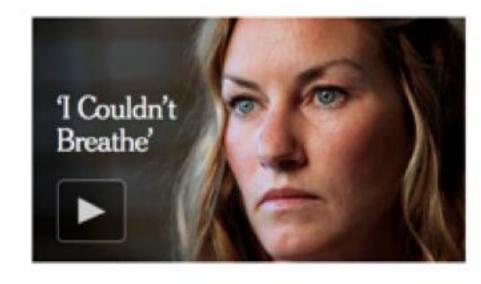
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Within this site, this is expanded to experiement with in-text icons to denote different kinds of links. In a recent New York Times multimedia story, icons within the copy were used to denote photographs or video, but only where that media existed on the same page:

Saugstad was mummified. She was on her back, her head pointed downhill. Her goggles were off. Her nose ring had been ripped away. She felt the crushing weight of snow on her chest. She could not move her legs. One boot still had a ski attached to it. She could not lift her head because it was locked into the ice.



But she could see the sky. Her face was covered only with loose snow. Her hands, too, stuck out of the snow, one still covered by a pink mitten.

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Next: Usability and accessability

PRACTICE > USABILITY AND ACCESSIBILITY

## **USABILITY AND ACCESSIBILITY**

JO BAILEY JANUARY 2014 Usability describes "how effectively, efficiently and satisfactorily a user can interact with a user interface" (Assistant Secretary for Public Affairs, 2013).

Accessibility describes "the set of properties that allows a product, service, or facility to be used by people with a wide range of capabilities, either directly or in conjunction with assistive technologies" (W3C Web Accessibility Initiative, 2003). This may relate to people with a disability, but also covers ensuring that different devices can access an appropriate version of a site.

#### USABILITY

Key considerations within LAWA that relate to usability include the consistent application of structural and navigational elements, colour coding in navigation, and easy access to the search function. Within pages, chunking and expanding content provide unimpeded access.

Care has been taken to ensure that there is adequate contrast between colours, especially when text is coloured, or used over coloured blocks. Earlier iterations of the design used various shades of the core palette for text over colour, but ultimately we opted to use white text. The shades, as well as being slightly harder to read, just seemed overly fussy. For large areas of text, dark text on white background is always used. This is considered more legible than light text on a darker background (Hill and Schraff, 1997) in \(\bigceq (Lee & Rao, 2010).\)

### TEXT LEGIBILITY

The LAWA font - 

Source Sans Pro - is designed for screen use. It is highly legible, and the default size was chosen to be comfortable for the majority of users (who can change the text size via their browser if they wish). For body text, sentence case is always used, as it is most comfortable for the eye (Kurniawan & Zaphiris, 2005). Care has been taken to ensure that line length is limited to the maximum considered comfortable \*(Ling & van Schaik, 2006).

### COLOUR: AN ACCESSIBILITY ISSUE

With approximately 1 in 10 men and 1 in 100 women suffering from colourblindness (Stone, 2006), ensuring that users with deficiencies in colour perception are not disadvantaged is a major accessibility concern on the web. Whenever to icons have been colour-coded on LAWA, they never rely solely on colour for meaning; the icons also have pictorial representations, or explanatory text, or, where necessary, both. At present there are no graphs or other visualisations on LAWA where colours denote different values. In future phases, if this becomes necessary, avoiding the use of red and green (the inability to distinguish between red and green is the most common type of colourblindness) in the same display will be paramount.

## **DEVICE NEUTRAL: RESPONSIVE WEB DESIGN**

Responsive web design uses flexible grids, images and media queries to determine how content behaves based on screen size and orientation (or browser window size), with image size and resolution changing automatically based on device and user preference. In theory, responsive design removes the need for a separate mobile version of a website, and means all users get an experience optimised for their device.

Within LAWA, responsive design was our goal. However, the complexities of having a layout with a map did not translate well to mobile screens. Because there are multiple possible navigation pathways, we took the expedient and pragmatic decision to remove the map when viewing on smaller devices. Clearly, this excludes many users from having a complete experience of the LAWA site, and was perhaps a compromise too far. An ideal solution would be the development of a LAWA papp to complement the website.

### HTML5

HTML is the core language of the internet, and HTML5 is its most recent incarnation.

The reason that LAWNZ needed to be replaced was because it was Flash based. Adobe Flash is a proprietary software platform used mostly for animated and video content. Most mobile devices do not support Flash, so many users were excluded from experiencing LAWNZ.

HTML5 allows browsers to perform essentially the same functions as Flash, but using a non-proprietary technology that can be implemented across multiple platforms. Philosophically, LAWA is about democratising access to information. Therefore using what is essentially an loopen format' technology is important.

Next: Visual style: looking good ≈ being good ▶

### SECTION SUMMARY

- Usability describes "how effectively, efficiently and satisfactorily a user can interact with a user interface" (Assistant Secretary for Public Affairs, 2013)
- Accessibility describes "the set of properties that allows a product, service, or facility to be used by people with a wide range of capabilities" (W3C Web Accessibility Initiative, 2003) - disability and device type may both present accessibility challenges.
- Within LAWA, text legibility, considerations for colourblindness, and use of responsive web technologies were all considerations.

### ETHICAL CONSIDERATIONS

### Open access

We have not actually tested LAWA with screen reading devices used by visually impaired people. It would have been most ethical not only to retrospectively test the developed site with visually impaired users, but also to have included, at the workshop stage, people with disabilities which could affect their interaction with LAWA.



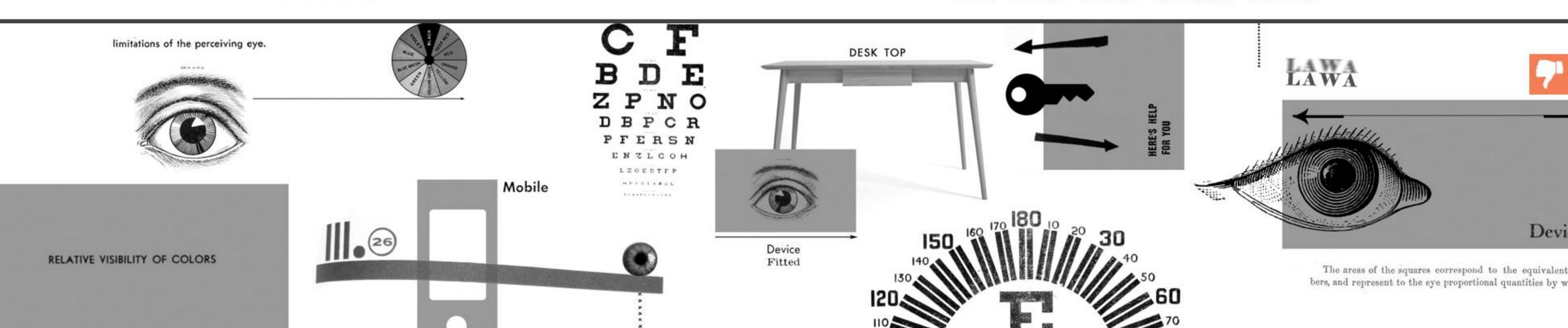
### Mobile disadvantage

I have mentioned the removal of the map from the mobile display in the site structure section, but it warrants another mention. We wanted responsiveness to be a core tenet of LAWA, but in reality it has been compromised for expediency. If analytics show a high proportion of mobile device users, we will be able to justify a mobile app to give them the best possible experience in a subsequent phase.









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Next: Visual style: looking good = being good ▶

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PRACTICE > VISUAL STYLE

## VISUAL STYLE: LOOKING GOOD ≈ BEING GOOD

EVERYTHING

JANUARY 2014

JO BAILEY

- 66 ...social psychology research has shown that physically attractive sources (usually people) have been perceived to be credible sources ... [this] also seems to hold true for evaluating the credibility of Web sites
  - **★**(Fogg et al., 2002, p.58)

re-drawing

### IN GOOD TASTE

Several studies suggest that aesthetically appealing websites are more trusted ( Fogg et al. (2002), Fogg (2003), ♠Robins & Holmes (2008), ♠Alsudani & Casey (2009), ♠Coker (2011)), but what makes a website attractive is less well defined.

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From a designer's perspective, the results of their tests are unsurprising. Typographic hierarchy, colour balance and careful placement of images are a designer's stock-in-trade, but they are not taught (and likely cannot be learnt) formulaically. Moreover, despite using a rigorous framework, what Alsudani & Casey deem to be more, or less, harmonious or balanced is by its nature subjective. As Jennifer Tidwell (2006) says, "good design can't be reduced to a recipe", but, a good designer can balance the right ingredients.

### 'AUTHENTIC' DESIGN

- 66 Accept perhaps that we are using binary and pixels on a machine... I myself have laboured over getting fake stickers and tea stains to look right in Photoshop before bringing them into my pages with CSS, but, in all honesty, who has ever managed to get a cup of tea to stick to a vertical computer screen? This is not a reality.

applied to this style.

**★**(Collison, 2010) Just as in the 19th century changes in technology allowed ornamentation to flourish, postweb 2.0 design became increasingly stylistic and visually ornamented, enabled by tools like Adobe Flash. The epitome of this was the mimicking of real-world textures, such as the use of fake leather texture in Apple's calendar papp. The term skeuomorphism has been

Just as Modernism curbed this stylistic excess with its drive towards universality, abstraction and an ideology of form follows function, recent web trends have rejected ornamentation in favour of a cleaner, more functional aesthetic, manifesting as 'flat' design (Fadeyev, 2013).



IOS6 vs IOS7 compass, calculator and calendar (Slade, 2013)

### A NEW AUTHENTICITY

Claims have been made for this recent shift being towards a new authenticity, rather than merely the latest design fad. Fadeyev (2013) describes it thus:

- 66 Authentic design aims to pierce through falsehood and do away with superfluousness. Authentic design is about using materials without masking them in fake textures... Authentic design is about representing function in its most optimal form, about having a conviction in elegance through efficiency.
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Authenticity and credibility are closely related, so philosophically, applying authentic design to LAWA has merit. Once again, appropriateness is the credibility driver. 'Everything as simple as it can be, but not simpler' ( attributed to Einstein) was a maxim for the project as a whole - from communicating science, to data visualisation, to copy style - so reflecting this in the interface through visual simplicity was appropriate.

As well as avoiding ornamentation we were able to streamline the hierarchy by ensuring we had real data and content to use at the wireframing stage; the form of the page was informed by the function and contents.

## ICON DESIGN

The LAWA icons were crafted to present a uniform look and feel, in a flat, unfussy style. Icons were used where they increased usability, not simply for aesthetic purposes. Where icons were metaphoric rather than literal (the abstract external link icon versus a picture of a swimmer denoting 'suitable for swimming') we used only well established conventions.

## **USE OF IMAGES**

Photography has a key role to play in LAWA, emphasising that the science is about real places, and the stories are about real people. Using stock imagery suggests that you have something to hide, and is considered less credible than "documentary" photography (Norton, 2012, p.17).

Because LAWA's images come from a variety of sources, they vary in quality and style. The use of multiple sources actually increases credibility because it suggests that multiple people are engaged with the site, lending a degree of authenticity.

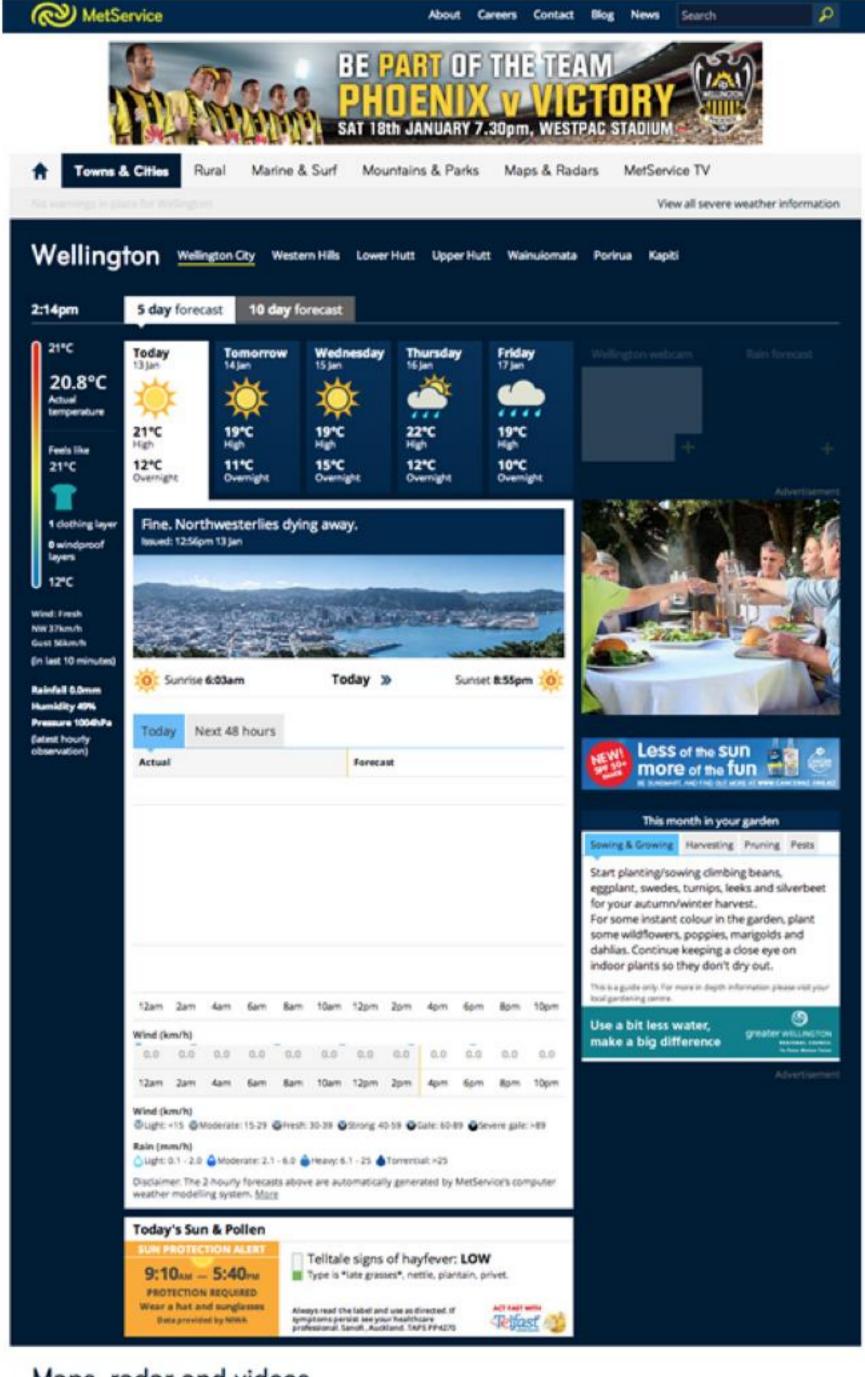
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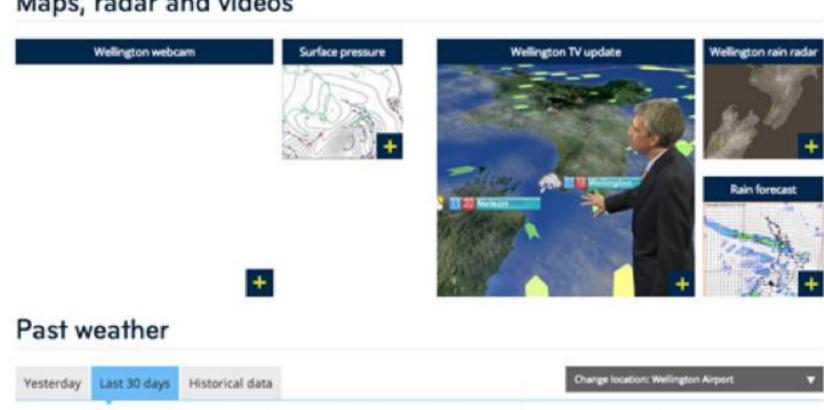
## ADVERT FREE

Advertising on a website has the potential to damage credibility, especially when there is a blurring between sponsored content and the website's own copy (Fogg, 2002). Massey University is a partner in LAWA, with its original role being to consider, through

the MBA programme, ways to commercialise the site or the data. This was concerning, as it risks damaging perceived credibility. Having to cater to adverts would have meant major compromises to the designs. Consider how much screen real estate has to be given over to advertising on MetService's website:



# Maps, radar and videos



Screen capture from http://www.metservice.com/towns-cities/wellington/wellington-city. Note the advertising around the edges, but also within the dashboard.

Not only is the advertising visually obtrusive, but there are negative usability consequences, and some advert copy blurs the line between marketing and editorial. The LAWA Steering Group agreed to veto advertising in phase one, and are actively

considering other ways to monetise the site, such as licensing the model to overseas councils.

# A NOTE ON MAKING GOOD

The visual style for this website employs the same techniques to optimise unity, but the images are highly personal, seeking to increase my credibility further by letting you see how

I work and think; things I like and things I am inspired by. The banners utilise collage to create a narrative through bringing ephemeral artefacts together, transforming and reimagining them to tell a story about the issues and how I relate to them. The active making process of collage reflects the title of the project. The

balancing of elements is a metaphor for my mental processes attempting to balance and reconcile my thoughts about good design.

Collage has a long history as a medium for dissent. This reflects my anxiety about design as

Next: Colour: setting the tone ▶

an agent for increasing consumption.

SECTION SUMMARY

- How a website looks affects the way it is perceived. - A designer balances elements to achieve unity.
- There has been a trend towards a more minimal, 'flat' design style on the web recently, which may reflect a quest for a more authentic design style.
- LAWA avoids visual ornamentation, but photographs add a human element.
- Making Good employs personal imagery to disclose to the viewer how I work and think.

### ETHICAL CONSIDERATIONS

### That's bullshit!

This point really runs across the whole project, but relates to presenting the designs to the clients, so I will place it here. There is such a huge dose of trial and error in producing websites that, when it came to justifying our decisions, I felt presenting it as evidence-based was a stretch. Michael Bierut (2005) says "...every design presentation is inevitably, at least in part, an exercise in bullshit. The design process always combines the pursuit of functional goals with countless intuitive, even irrational decisions ... designers are direct about the functional parts of their solutions and obfuscate like mad about the intuitive parts, having learned early on that telling the simple truth — "I don't know, I just like it that way" simply won't do" (read more). Though I don't think we went over the top, I definitely got to the edge of my comfort zone.



### Pick and mix

There are images in the Making Good banners plucked straight from Google image search, though most came from items I scanned myself, or from Vintage Printable, an archive of public domain images. Sometimes though, if you know what you are looking for, search, right click and copy is the default. I have tried to stick to non-copyrighted material, and as I have significantly transformed the images, I would (if I was in the US) claim this is I "fair use".



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## **VISUAL STYLE: LOOKING GOOD** ≈ **BEING GOOD**

WESTERN SPRINGS FRIDAY 17 JAN 2014 TICKETS ON SALE NOW

www.bigdayout.com

66 ...social psychology research has shown that physically attractive sources (usually people) have been perceived to be credible sources ... [this] also seems to hold true for evaluating the credibility of Web sites

**★**(Fogg et al., 2002, p.58)

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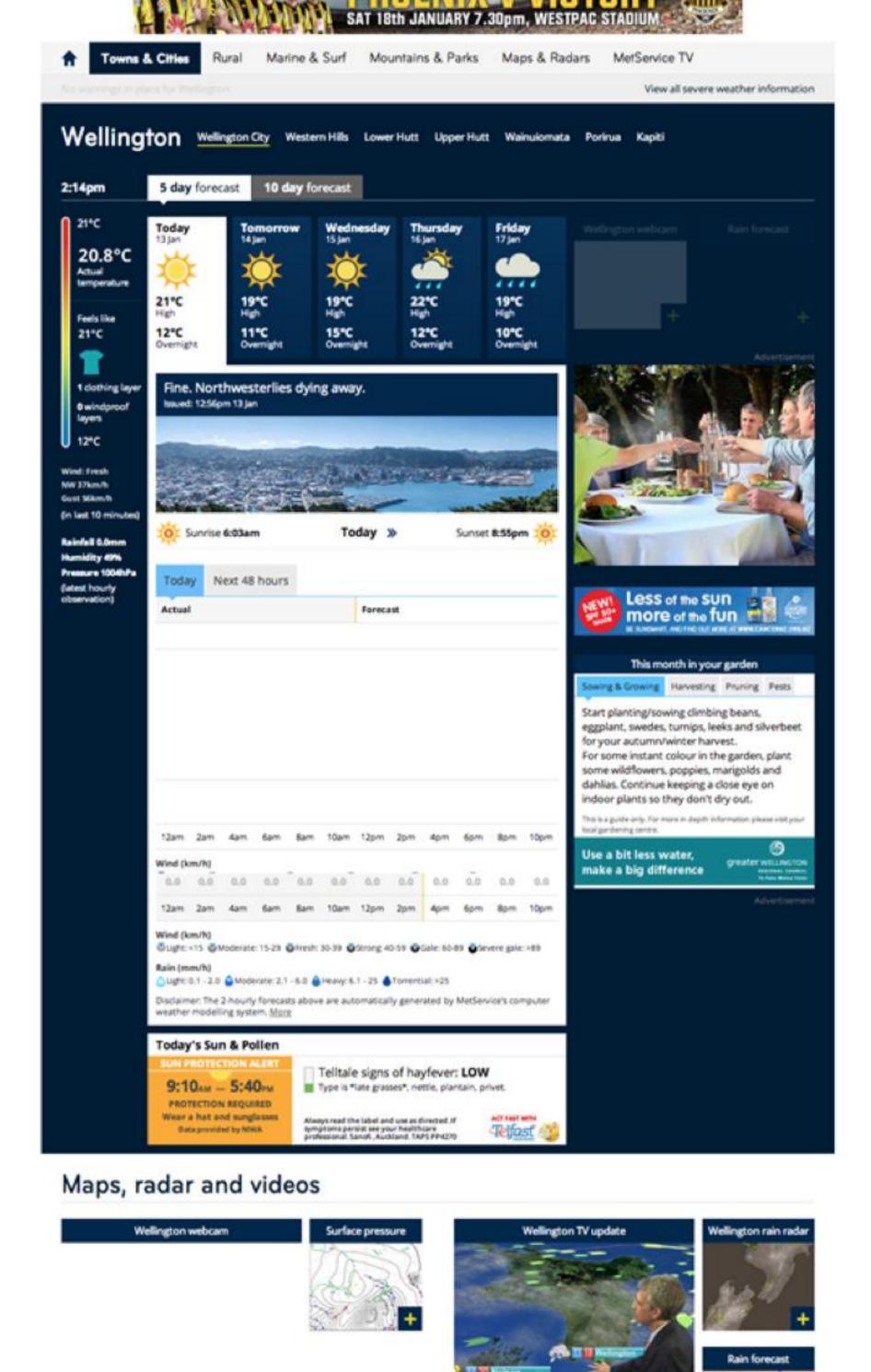
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I work and think; things I like and things I am inspired by.

Change location: Wellington Airport

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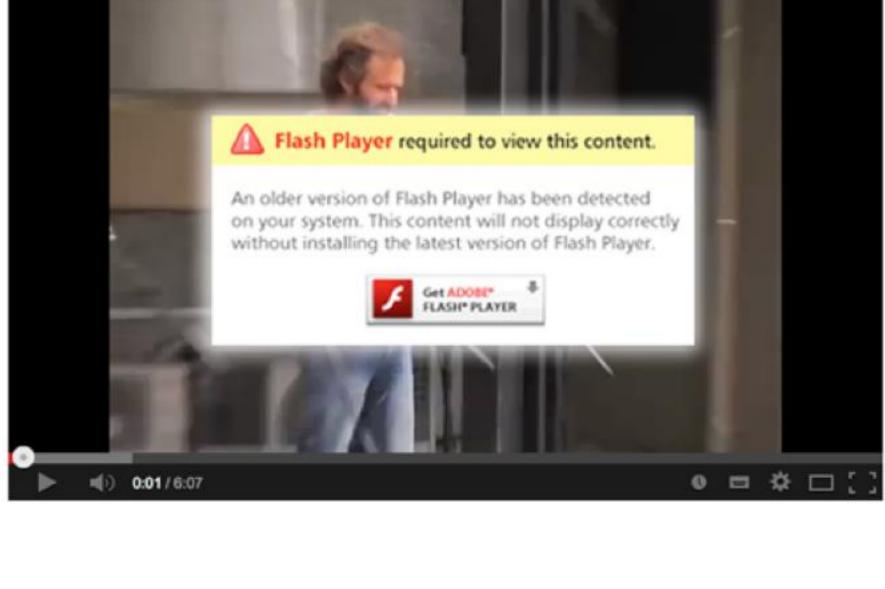
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Past weather

Yesterday Last 30 days Historical data

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.ess of the sun



**CPA Accountant** accountantsfirst.co.nz No surprises. No mistakes. No stress. Accurate, efficient, safe, affordable. Yes 86 people like this. Summer dresses from \$14 Summer dresses are on sale - from \$14! Shop at NZsale for a new sale every day! 53,390 people like this. Imagine Childcare Quality childcare education. Safe & natural environment. Qualified & Like · 175 people like Imagine Childcare. Onecard Visa - Apply now countdown.co.nz Earn more Onecard points. Get more vouchers. Click here to find out more. **Buy Shapes Soundz today!** secure.bandit.fm Head in-store and pick up new Shapes Soundz to grab your bonus Jackets&Coats Around \$10 Jackets&Coats All Around \$10,Free Shipping Selected

Items, Order \$50+ Get

10% Off, Buy Now

1,223,597 people like this.

Next: Colour: setting the tone ▶

An exegesis submitted as part of the MDes programme, Massey University, 2014

Saturation:

Green Blindness.

HYBRID

FULL

HALF



This colored plate is not intended to lest color blindness.

Showing how the purity and brilliancy of mixed Colours depend upon the suitability of their Component Colours. [See CHAPTER VI.]

Red Blindness

PRACTICE > COLOUR: SETTING THE TONE

## **COLOUR: SETTING THE TONE**

JO BAILEY JANUARY 2014 To paint well is simply this: to put the right color in the right place

## Paul Klee quoted in Tufte (1990, p.81)

Colour is one of the visual criteria that users rely on to assess credibility. However, it is hugely subjective. Read any web posts by supposed colour experts, and you will be bombarded by contradictory information on what different colours 'mean', as if this perceived 'meaning' is a static universal truth, transcending cultures.

### ONE MAN'S SERENE IS ANOTHER MAN'S RAVING LUNACY

Kress & Leeuwen (2002) highlight some scholarly examples of the range of attributes assigned to colours:

66 Goethe (1970) called yellow 'serene, gay and softly exciting' ... Kandinsky (1977) said 'it has a disturbing influence and reveals an insistent, aggressive character ... it may be paralleled, in human nature ... with violent, raving lunacy' ... Wierzbicka (1996), a cognitive linguist, called yellow 'warm and sunny' ... Stefanescu-Goanga (1912), an early 20th-century colour psychologist said that blue was 'calming, depressing, peaceful, quiet, serious, nostalgic' ... whereas for Franz Marc it was 'the male principle, sharp and spiritual', and for Novalis 'female', 'especially attractive, and rare in nature'. Green has been seen as an 'irritant', and as 'sulphurous' (Goethe, 1970) as well as 'calm and placid' (Kandinsky, 1977).

★ (Kress & Leeuwen, 2002, p.355)

Clearly, there is no magic formula in this area.

### **PURITY AND HYBRIDITY**

Within the gamut of each colour there is also a huge diversity of thues, tints, tones and shades. Kress & Leeuwen (2002, p.357) discuss colour on a spectrum from "maximum purity" to "maximum hybridity". This spectrum runs from the pure 'Mondrian palette' so closely associated with Modernism, to a "colour scheme of pale, anaemic cyans and mauves ... a key signifier of the ideologies of postmodernism" in which the "idea of hybridity is positively valued".

## LEARNED MEANINGS

How we interpret colours has a cultural dimension. Some colours have different meanings in different regions, for instance "in China and other parts of East Asia white is the colour of mourning; in most of Europe it is the colour of purity, worn by the bride at her wedding" a (Kress & Leeuwen, 2002 p.343).

However, the green equals good, red equals bad convention is useful visual shorthand that has global currency thanks to the Vienna Convention on Road Signs and Signals 1968. It is possible, therefore, to use these "status colors without concern for culturally dependent interpretations" (Microsoft, n.d.).

## WEB COLOURS

"Color matters in user's judgment about the Web site's trustworthiness"

## ▲ Alberts & van der Geest (2011)

In terms of website palettes, there is some research to suggest that, psychologically, 'warm' colours (e.g. red) can lead to "elated mood states, activity, vitality, anxiety" (Lee & Rao, 2010, p.111), whereas 'cool' colours have the opposite effect, although most research relates to e-commerce purchasing decisions.

A study by Alberts & van der Geest (2011) demonstrated blue and green colour schemes to have the highest perceived trustworthiness, but also underlined the fact that colour is highly contextual: "perception and evaluation of colors are linked to contexts and that judgment about the most appropriate or the most preferred color differs between contexts. People do not have just one favorite color, but a favorite color for each context".

In terms of visualising data, "avoiding catastrophe becomes the first principle in bringing color to information: Above all, do no harm" (Tufte, 1990, p.90). As with web typography, aiming for 'appropriateness' is the safest route to credibility.

### LAWA'S PALETTE

"What palette of colors should we choose to represent and illuminate information? ... Nature's colors are familiar and coherent, possessing a widely accepted harmony to the human eye - and their source has a certain definite authority."

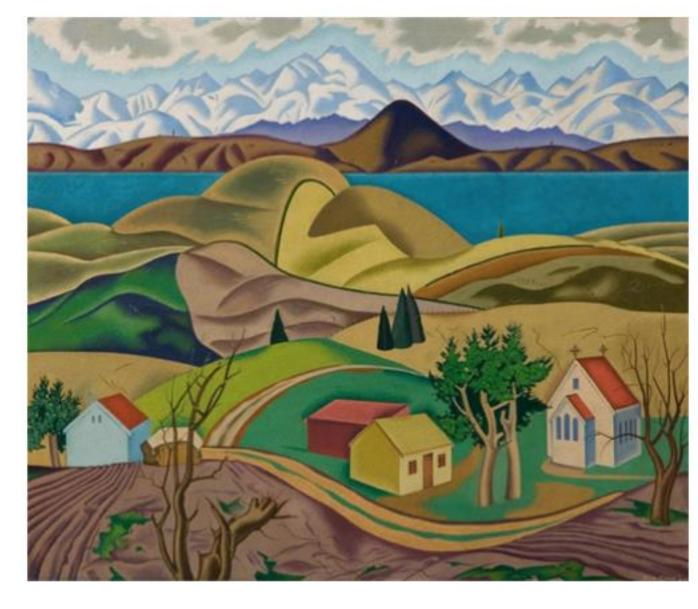
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Within LAWA, colour needed to work appropriately for identity and navigation, and as part of a hierarchy within data visualisations and dashboards. The research phase had identified that 'water brands' (including LAWNZ), form a brandscape uniformly composed of strong blue and green hues. To break away from that was philosophically important (though the clients were not immediately seized of the need to make a distinction).

## THE LIE TRUTH OF THE LAND

LAWA's focus on the environment became the starting point for choosing a palette. The palette formulated speaks of a visual terroir of the New Zealand environment.

Inspiration came directly from the elements, and also from interpretations of New Zealand's landscape in well-known paintings.



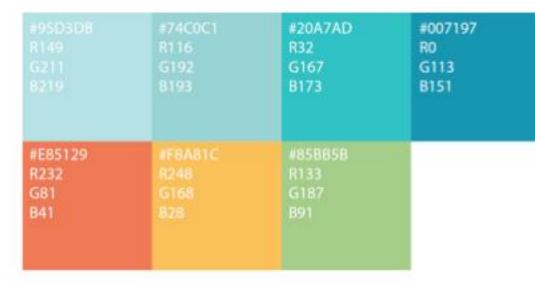
Angus, Rita, (1940). Central Otago. Oil on board. Size (hxw): 457 x 533 mm. Auckland Art Gallery Toi o Tāmaki, gift of Mrs artwork/6481/central-otago



Allan, Hamish. Books On A Shelf. Acrylic on stretched canvas, 1220mm x 760mm. 

\* http://hamishallan.co.nz /archived.html.

A range of blues represent the water cycle, the green represents vegetation, the slightly rusty red symbolises agricultural buildings (often a feature of landscape painters' depictions of rural New Zealand), and an orange symbolises cultivated landscapes:



# THE LAWA COLOUR PALETTE

In terms of Kress & Leeuwen's spectrum, LAWA's palette walks a deliberate middle line between the maxima of purity and hybridity. Saturation is not high enough that the colours are turned up 'loud' (reds 'shouting' "warning!" and blues being the water cliché), but there remains a degree of exuberance and expressiveness in keeping with LAWA's intended tone of voice.

A design decision was made that, wherever possible to use the colours flat, that is, to avoid gradients, shading, shadows or tonal patterns. This is closely related to the debate about skeuomorphism and 'flat design' (see Visual style >), and was an instinctual decision that avoiding ornamentation was more 'honest'.

strongly value-laden. Just as flat colour "may be perceived as simple and bold in a positive sense", it can equally be seen as "overly basic and simplified" \(\text{(Kress & Leeuwen, 2002,}\) p.358). Given that simplifying information is a key tenet of LAWA, the latter interpretation may be no bad thing.

Kress & Leeuwen discuss how the affordances of colour are in the eye of the viewer, and are

# DATA VISUALISATION

Our council partners were cautious about using traffic light colours within the data dashboards as they were concerned that some councils would object to the overt, green equals good, red equals bad "grammar of colour" (Kress & Leeuwen, 2002). I felt that leaving out this useful visual shorthand was making the data story more convoluted that it needed to be. Modulating the palette maintained the legibility of the message while avoiding the perceived negative connotations of 'pure' colours.

On graphs variables are limited so the data is always displayed in a single colour, gridlines are in a uniform grey, and decorative colour is avoided - "Dressing up a graph might serve a purpose in advertising, but it only distracts people from what's important—the data—in an information display" (Few, 2008, p.13).

# ACCESSIBILITY AND USABILITY

Ensuring legibility through adequate contrast, and that colourblind users were not disadvantaged, were also key considerations, and are discussed in the Usability and accessibility section ▶

Next: Typography: the right type ▶

SECTION SUMMARY

- Choosing colour is subjective.
- Be aware of cultural interpretation of colour the stop/go traffic light colours are near-universally understood.
- Make sure colour does not compromise legibility, or confuse graphs.
- For LAWA the colour choice was inspired by New Zealand's palette, and interpretations of
- There was a deliberate strategy of walking a line between 'pure' (Modern) and 'hybrid' (Postmodern) colours.
- As with other elements of visual style, appropriateness is key.

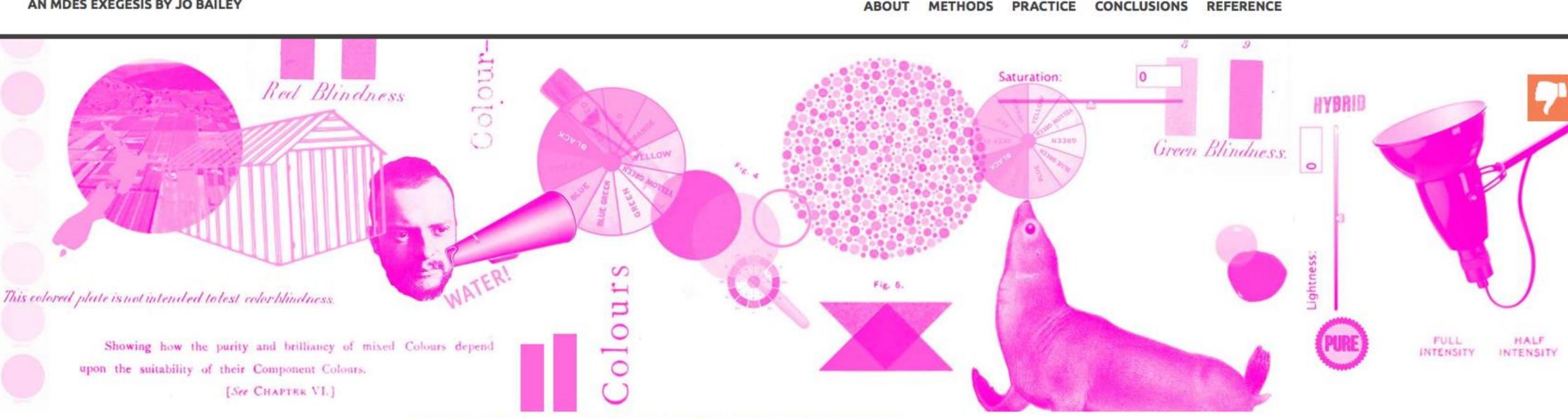
### ETHICAL CONSIDERATIONS

### Colouring judgement

I discovered Alberts & van der Geest's research paper after the LAWA colours had been set. Their findings were that blues and greens were generally perceived as the 'most trustworthy' colours, and I considered claiming that research as rationale for LAWA, given blue-greens are a dominant theme. I won't pretend never to have post-rationalised, but in this case, colour really was a trial and error decision sparked by a few inspirations.



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## **COLOUR: SETTING THE TONE**

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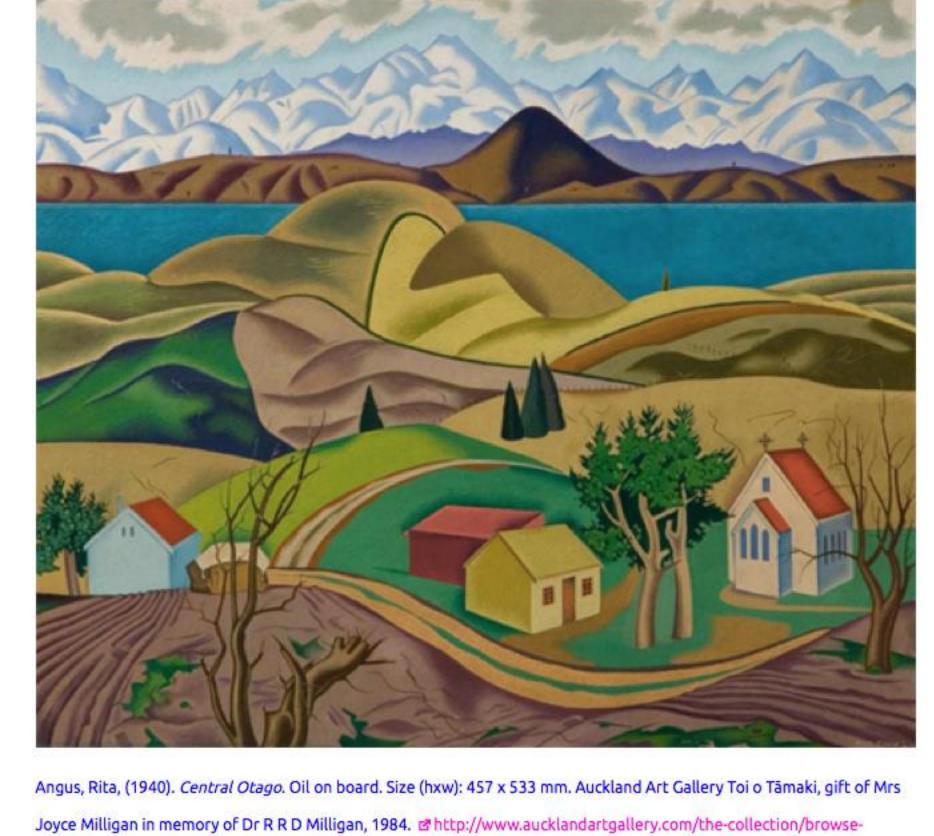
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artwork/6481/central-otago



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R149	R116	R32	R0
G211	G192	G167	G113
B219	B193	B173	B151
#E85129	#F8A81C	#85BB5B	
R232	R248	R133	
G81	G168	G187	
B41	B28	B91	
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# In terms of Kress & Leeuwen's spectrum, LAWA's palette walks a deliberate middle line

between the maxima of purity and hybridity. Saturation is not high enough that the colours are turned up 'loud' (reds 'shouting' "warning!" and blues being the water cliché), but there remains a degree of exuberance and expressiveness in keeping with LAWA's intended tone of voice. A design decision was made that, wherever possible to use the colours flat, that is, to avoid

skeuomorphism and 'flat design' (see Visual style >), and was an instinctual decision that avoiding ornamentation was more 'honest'. Kress & Leeuwen discuss how the affordances of colour are in the eye of the viewer, and are strongly value-laden. Just as flat colour "may be perceived as simple and bold in a positive

gradients, shading, shadows or tonal patterns. This is closely related to the debate about

sense", it can equally be seen as "overly basic and simplified" (Kress & Leeuwen, 2002, p.358). Given that simplifying information is a key tenet of LAWA, the latter interpretation may be no bad thing. DATA VISUALISATION

## Our council partners were cautious about using traffic light colours within the data dashboards as they were concerned that some councils would object to the overt, green

equals good, red equals bad "grammar of colour" (Kress & Leeuwen, 2002). I felt that leaving out this useful visual shorthand was making the data story more convoluted that it needed to be. Modulating the palette maintained the legibility of the message while avoiding the perceived negative connotations of 'pure' colours.

On graphs variables are limited so the data is always displayed in a single colour, gridlines are in a uniform grey, and decorative colour is avoided - "Dressing up a graph might serve a purpose in advertising, but it only distracts people from what's important—the data—in an information display" (Few, 2008, p.13).

# **ACCESSIBILITY AND USABILITY**

Ensuring legibility through adequate contrast, and that colourblind users were not disadvantaged, were also key considerations, and are discussed in the Usability and accessibility section >

Next: Typography: the right type >

Choosing colour is subjective.

SECTION SUMMARY

- Be aware of cultural interpretation of colour the stop/go traffic light colours are near-universally understood.
- Make sure colour does not compromise legibility, or confuse graphs.
- For LAWA the colour choice was inspired by New Zealand's palette, and interpretations of
- line between 'pure' (Modern) and 'hybrid' (Postmodern) colours.

- There was a deliberate strategy of walking a

 As with other elements of visual style, appropriateness is key.

An exegesis submitted as part of the MDes programme, Massey University, 2014

**Creative Arts** 

Thrilling

DELIVER



Manifesto









CURIOSITIES

better

Best

GOOD

PRACTICE > TYPOGRAPHY

### **TYPOGRAPHY: THE RIGHT TYPE**

JO BAILEY JANUARY 2014

- "Truth is not typeface dependent, but a typeface can subtly influence us to believe that a sentence is true ... Indeed, we may be at the mercy of typefaces in ways that we are only dimly beginning to recognize.
  - **★**(Morris, 2012b)

### TYPOGRAPHY, THE FINAL FRONTIER

In 2012, journalist Errol Morris conducted an experiment. In a New York Times column ostensibly about asteroid collisions he posted a quote containing an assertion, and asked his readers if they agreed. But the question was a ruse. He was really seeking to test if there are certain typefaces "that compel a belief that the sentence they are written in is true" (Morris, 2012a). Viewers saw the quote in one of six randomly assigned fonts. Over 45,000 people responded, and the data was given to David Dunning, a Cornell psychology professor. Dunning's analysis indicated that when the question was posed in Baskerville, there was a 1.5% advantage (in statistical terms, phuge) in people trusting the statement.

Of course the test did not show why people trusted Baskerville the most and Comic Sans least, but Dunning puts it down to gravitas. Baskerville having "a tad more starchiness" than Georgia and Computer Modern (in second and third place), lending it more authority.

### INAPPROPRIATE TYPOGRAPHY

Morris and Dunning also touched on the appropriateness of font choice. Comic Sans was perhaps deemed inappropriate due to context. If the question had been about cartoons, the response may have differed. Earlier research (Shaikh, 2007) suggests that trust, professionalism and believability are all reduced when content is presented in a font considered 'inappropriate'. Even 'neutral' fonts (as determined in a previous study 🎓 (Furman, 2009)) impacted these metrics.

### FINDING A VOICE

- 66 ... typefaces can convey mood, attitude, and tone while having a distinct persona... Each document should be rendered in a font that connects the mood, purpose, intended audience, and context of the document.
  - ★(Shaikh, Chaparro, & Fox, 2006)

Choosing an appropriate typeface could be approximated to choosing a suitable 'voice' to marry the verbal language with the visual language. Childers & Jass (2002) describe typefaces as "communicating unique semantic associations to individuals distinct from the content of the written words they clothe", and it is clear different fonts are perceived as having different personalities (Shaikh, Chaparro, & Fox, 2006). Given the explosion in typefaces available for web use now, the challenge is finding one that says what you want it

## LAWA'S VOICE

Beyond normal usability concerns LAWA's typeface needed to appear approachable, but credible; authoritative, but not authoritarian.

Having collected type specimens that I felt had these qualities, I ran an online survey for 1 Open Lab, which was shared on social media. Mockup pages were created with different fonts, and viewers were asked which they deemed most credible. The one serif in the test ( Adelle) was ranked highest, and the rounder sans serifs (such as Sofia) were consistently ranked lowest. Plenty of respondents tried to second-guess the choices - it appears designers (who were overrepresented in the sample) need to know they have chosen a font that other designers consider 'good' before they concur.

## DESIGNING FOR USERS, NOT JUST DESIGNERS

Do designers 'read' fonts differently to non-designers? When CERN used Comic Sans in a presentation announcing the discovery of the Higgs Boson the decision was widely derided by the design community. This distaste is at variance with the general public's perception of the font as happy, youthful, cuddly and casual (Shaikh et al., 2006). Perhaps it was actually a nuanced choice by the scientists, given their audience was the public. (I venture however that Comic Sans is never the dright choice for a war memorial ♠(Coles, 2012)). I wanted to avoid falling into the mode of designing for my peers rather than the

## MODERNIST MEANING?

users.

For designers, the default 'credible', 'neutral' font would likely be a Modernist sans serif, such as Helvetica, with its "Platonic ideal and a generic sterility" (Heller, 2003a). However, as Heller points out, Helvetica "has long been used to obfuscate corrupt corporate messages: such is neutrality's double-edged sword."

Do non-designers see a grotesque or neo-grotesque (Helvetica being the most ubiquitous) and see 'neutral'? Or is the connotation 'corporate'? Or do they recognise it as a 'designer's' font - it has after all been the subject of a mainstream film ♠(Hustwit, 2007) - and is that wholly positive?

Koch **★**(2012) states "There are virtually no rules to empirically interpret the meaning inherent in typeface designs - people intuitively decipher typefaces", and perhaps this was designer's overanalysis. I opted to sidestep Helvetica and family in favour of a neo-gothic face.

## MADE FOR WEB

Source Sans Pro was chosen, partly based on favourable survey feedback, and also because it was versatile enough to be used as heavy small caps in the logo, for headings and for body text. Furthermore, the fact that it is an open source font fitted the philosophy of the project, and it is designed specifically for the web rather than adapted from a print face, making it more legible on screen. Coincidentally, 'Source' was a concept name before LAWA was coined. Having a river connotation is no bad thing.

For Making Good I chose the sans serif font Ubuntu. Like Source Sans Pro it is distributed under an open licence and is a web font. It is well crafted (by type foundry Dalton Maag), and is different enough that it could never be mistaken for Helvetica. Though designed for a company - Ubuntu are an open-source software community - I admire their philosophy as an organisation so have no problem aligning myself with their name. They describe the font as conveying "a precise, reliable and free attitude."

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Next: Science communication

### SECTION SUMMARY

- Choosing a font is like choosing the voice you want to represent you.
- There needs to be harmony between what is being said and how it looks. If there is a disconnect, users will perceive the website as less believable.
- For LAWA a sans serif font − 

  Source Sans Pro – was chosen, because it was open source, looked good, was not overtly 'designerly', and

### ETHICAL CONSIDERATIONS

### 'Borrowing' fonts

Stephen Heller calls it "akin to tapping into cable TV" (Heller, 2003b), but I cannot pretend we had licences for all the fonts we used in mockups. I 'borrowed' a couple, and ones we couldn't lay our hands on we screen captured from an online type specimen. Technically this may be in contravention of most terms of use, but I see it as analogous to listening to music online. I'll try it out, and if I like it I'll buy the album.



### Data picking

If I was going to rely on crowdsourced opinion, I would definitely have used Adelle, but I just didn't quite like it enough. Is it unethical to pick and choose which data you use to inform decisions, and which you disregard? Clearly if you are running a medical trial it is, but in this case, I was not torn.



### Cheapskate

To choose an open source font was philosophical, but it was also financial. Not having to use budget on buying a font was attractive. If we didn't have a fixed budget, I may have felt differently.



### Supporting local foundries

We did consider using a font from a New Zealand foundry on the basis that it would support local business, but it would have cost too much. Basing a decision on cost alone could be questionable for example buying virgin forest paper over 100% post consumer waste – but in this instance the NZ product was not the best solution anyway.



## Ethics approval?

I ran the font choice survey as part of my role as Senior Designer in Open Lab, not as part of my Masters project, so am citing it as secondary data. If I had conducted the same research (for effectively the same purpose) as an academic exercise I would have required a Low Risk Ethics Approval, so I have exploited a technicality. Results were anonymous, no personal data was collected, and the content was not contentious so I do not believe anyone was compromised, though in theory, circumventing the Ethics Approval process in this way could be very dubious practice.



## What value culture?

Buying a NZ font also seemed somehow more culturally appropriate, and we knew that all the Māori glyphs would be present. Instead we used a font inspired by "twentieth-century American gothic typeface designs". Still, on balance it was the better choice.



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**TYPOGRAPHY** 

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## MADE FOR WEB

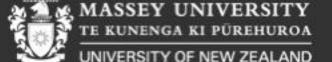
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Z L L L OXYGEN Measure VARIATIONS. 

Each complete figure represent

PHOSPHORUS

## SCIENCE COMMUNICATION

Data

JO BAILEY JANUARY 2014

PRACTICE > SCIENCE COMMUNICATION

66 Making a presentation is a moral act as well as an intellectual activity. The use of corrupt manipulations and blatant rhetorical ploys in a report or presentation ... suggests that the presenter lacks both credibility or evidence

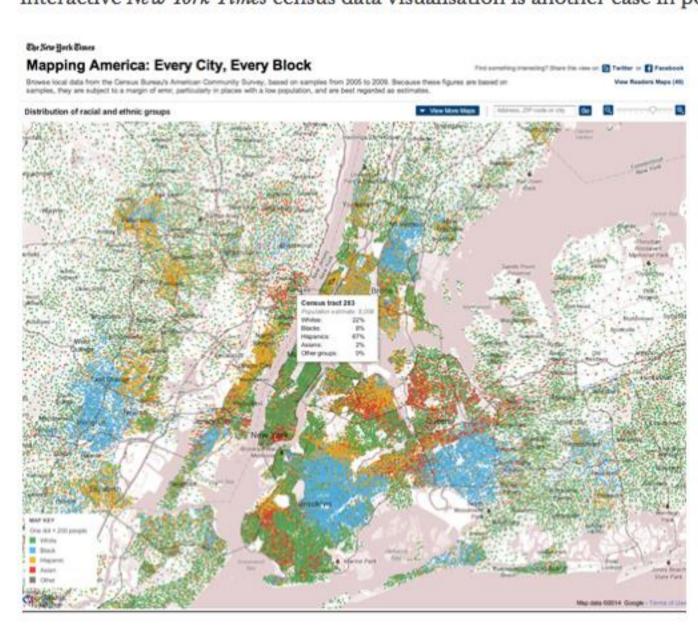
**★**(Tufte, 2006, p.141)

### TRUTH BE TOLD

Data visualisations like graphs and maps are commonly taken at face value, with "automatic attachment of credibility" (Burn-Murdoch, 2013). Burn-Murdoch believes that this is because in education, "... data visualisations are overwhelmingly used simply as a medium of

Visualisations are capable of making complex datasets reveal their meaning. John Snow's cholera map (Rogers, 2013) is perhaps the most famous example, and this excellent interactive New York Times census data visualisation is another case in point:

displaying final results." (Burn-Murdoch, 2013), whereas text is a medium to critique.



Screenshot of Mapping America: Every City, Every Block. (Bloch, McLean, & Carter, 2012). Census data on ethnic groups is mapped onto an interactive display, showing starkly how some areas are almost entirely mono-ethnic. http://projects.nytimes.com/census/2010/explorer

Graphs, like statistics, can be cherry-picked or manipulated to make a dishonest point. But even if they are not deliberately misleading, a graph can still be technically correct, but tell a politicised story. Take for instance this New York Times interactive graphic that lets you select a Republican or Democrat view of a dataset:



Screen captures from 

↑ http://projects.nytimes.com/census/2010/explorer. L to R: 'neutral' view; Democrat view; Republican view. (Bostock, Carter, Cox, & Quealy, 2012)

By drawing attention to specific features of the graphs a different version of the 'truth' can be told. Within LAWA, neutrality (rather than a particular rhetorical position) was the aim. where users are able to view raw data on graphs, best practice guidelines (in terms of colour, typography, labelling of axes, etcetera.) were adhered to, and Google charts plots the graph based solely on the input data selected by the user.

### DATA IN LAWA

The first consideration for visualisation is always the data. Stephen Few says "show me the numbers" (Few, 2012), but for LAWA the water quality data had already been processed into chunks to depict categories; the meaningfulness of the data had been assigned for us and the users.

This makes sense for most people - not everyone can interpret samples and know if a trend is statistically significant or not - so a simple dashboard works well. We also ensured that the methodology is explained via glossary explanations and factsheets, thereby giving context.

To increase transparency, we pushed to allow access to the raw data for those users who want it. Data can be plotted onto graphs in LAWA over user-determined timescales, or downloaded as a .csv file.

The scientists were initially reluctant to allow this, as they felt the data could be misinterpreted. This may be the case - we have added caveats to help the user (and indemnify the scientists) - but to withhold information altogether on the basis that a user may form an independent interpretation would be prescriptive and didactic. Democratising access to this data is necessary if LAWA is to become the 'freshwater hub' that the stakeholders envisaged.

## **DEPICTING STATE AND TREND**

Each site has a display for water quality trend and water quality state. Trend is shown as one of five categories, from significant degradation to significant improvement, and state as a quartile value. In considering how to show these, the power of the 'stupid question' came into its own.

When we looked at LAWNZ, we found that nobody from Open Lab could adequately explain what the quartiles meant. Marked as Q1 to Q4, the immediate perception was that this had something to do with quarters of the year:



The LAWNZ dashboard. Quartiles are not explained on either the dashboard or via popup explanations.

LAWNZ trend and state (quartiles) were shown along the bottom of the page, and anecdotal testing suggested that people tried to read the display from left to right, as some kind of change-over-time rather than a series of discrete metrics.

After experimentation, a stylised distribution curve icon was chosen as the most comprehensible way to graphically represent the quartiles. This was supplemented with explanatory text, and colour coded from best (green) to worst (red), and further explained by way of glossary explanations. The map acts as a secondary visualisation tool, displaying the comparative state quartiles of other sites, catchments or regions.

The same format was used for the trend icons - stylised graphs with colour coding, textual descriptions, and popup glossary explanations:

## State and trend



- Top row L to R Data in quartile 4 (worst 25%) Significant and meaningful degradation Significant degradation
- Data in quartile 3 (worst 50%) Data in quartile 2 (best 50%) Data in quartile 1 (best 25%)
- LAWA state and trend icons.

## THE PROBLEM OF LANGUAGE

An unresolved issue is the gap between a layperson's interpretation of statistical terms, and their actual meaning. Significant means statistical analysis can detect a pattern, but that it may be inconsequential; meaningful means that a conclusion can be drawn from it. Yet to most people, significant would lead them to believe that something noteworthy had happened, and that they may even be able to see that reflected on the ground. In using technically correct terminology, are we in fact offering a confusing interpretation?

Significant improvement

Significant and meaningful improvement

## WHAT IS USEFUL TO USERS?

The user groups told us that they really wanted to know where they could swim, and if 'their' place had water quality issues. The Ministry for the Environment releases an annual Suitability for Recreation Grade result for a selection of sites, and we wanted to be able to display this on LAWA. Despite reservations from some councils (a lot of sites are rated poor) we did include it. However, terminology is again an issue. A poor site may not be poor all the time. Further, it is a grade based on sampling over a long period, not an indication of conditions at the site at the current moment.

## THE DRILLDOWN PRINCIPLE

Within the copy and site structure we have adhered to the 'Visual information sharing mantra': overview, zoom and filter, then details on demand (Shneiderman, 1996). Scientific indicator dashboards list all the indicators (clarity, bacteria, etc.) with icons to indicate the state and trend (overview). Clicking on these dashboard panels opens further information about the variables and gives access to graphs (zoom in, filter). Another click and the graph can be adjusted by timescale, or raw data downloaded (details on demand).

In terms of credibility, this multi-level process fulfils several functions. It is transparent (giving access to raw data); it makes the site easy to use (content is managed so that a user does not have to digest it all at once); and useful (all variables are explained and placed in context).

## LIVE DATA

Another element users wanted was real time information. Only a few sites have live monitoring equipment (for dissolved oxygen, water temperature and flow), but even though these will be of limited use to most people, it does set a precdent of aiming to keep information fresh (one of the core WCP guidelines).

Live data is presented as a dashboard of the most recent samples, and as with the indicators, selecting them opens the sample history.

THE CAWTHRON TICK The 'Cawthron tick' identifies data or methodology that has been assessed against best practice and verified by the Cawthron Institute. This verification process utilises the WCP

principle of "third-party support".

Next: Copy and writing style ▶

SECTION SUMMARY

- Graphs and maps convey a sense of trustworthiness.
- Data visualisation can reveal the meaning in complex data.
- It is easy to cherry pick data to tell a politicised story on a graph.
- In LAWA, the scientist had already determined what the data showed, so a dashboard display was the logical way to frame the information.
- But access to raw data and the ability to plot this on graphs in LAWA demonstrates
- transparency. - Scientific language, even when used correctly may be confusing because what a term means may have a layperson interpretation (e.g.
- statistical significance vs. something significant to me) Where possible, LAWA presents live data, as much to demonstrate the site is updated as to

### ETHICAL CONSIDERATIONS

offer a useful tool.

### Cherry picking

At no point whilst considering how to display the variables given did I think to question if what we were being asked to show was right. Subsequent conversations with Dr Mike Joy have made me reappraise that. Regional councils are not bound by law to collect samples in a standardised format. They can - if they choose - collect all their samples upstream of where pollution enters the river system. I do not doubt the credibility of the scientists involved in LAWA, but what if a policy decision taken for political reasons means a sampling regime is deliberately chosen to obscure the picture? I hope we can get some robust debate about this though LAWA. I want to know for instance why all councils are not obliged to sample at the coast, when all possible pollutants have entered the river. Fundamentally, I am not equipped to make these judgements, so how can I expect the public to be? Should I have asked more questions?





Contact | Jo on Twitter | Contents page

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LAWA

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PRACTICE > COPY AND WRITING STYLE

LAWA

## COPY AND WRITING STYLE

MULTIPLE

th Jarvis Thomson, "Rights and Deaths," Philosophy and P Cf. also Michael Tooley, "Abortion and Infanticide," Philo 72), sec. 5, and James Rachels, "Active and Passive Eatha

ry rich article, "Abortion and the Doctrine of the Double E it of my examples are more or less long-winded expansions e's brief reply, "Who Is Wronged?" in the same issue of t

Hodgson, Consequences of Utilitarianism: A Study in N rk: Oxford University Press, 1967), pp. 77ff.

bortion and the Doctrine," p. 10.

JO BAILEY JANUARY 2014

e endless phenomena all around L like a searchlight. The "line on a walk" ca as. Any surface offers itself for definition ts. Klee's examples of coordinated linear me stream, waterfall, can be supplemented b rd flight, the horizontal motion of the tides

rings. The optical perceptions and illusion ramework of his security. But has he observ him to the experiences of physical heigh notion, light and dark contrasts? What c'

the optical facts? And there is the

66 ... As for writing style, try to be clear, direct, and sincere.

**★**(Fogg, 2002)

TWO WAY DIALOGUE

#### LAWA'S VOICE

Water

Establishing a consistent voice for LAWA is a major challenge. With multiple contributors, and the need to explain complex scientific information, clear communication is vital. The tone needs to be approachable, reliable and trustworthy, with a certain authority (in fact, we conceptualised LAWA's ideal voice as being Sir David Attenborough's).

Credibility may not be best served by an austere academic tone. Edward Tufte \( \cdot (2006, p.142) says "passive verbs ... advance effects without causes, an immaculate conception"; using a reserved academic passive voice might ostensibly sound neutral, but it also sounds removed.

### WHOSE STORY?

One of the major threads to come out of the user workshops at the start of the process was the need to know who LAWA is. Users specifically asked to know that it was objective, or "balanced across all sectors". 'Balance' is difficult to achieve. Does it mean both sides of the story? Or with science does suggesting that there is 'another side' or interpretation in the face of consensus - as with reporting on climate change - actually distort the issue more?

We asked the regional councils to provide their own information about their areas. This varied dramatically in style, especially with regards to the 'neutrality' of the information. Some councils sought to use the copy to highlight what they were doing as a means to qualify poor water quality results. Others kept their tone and content factual. If we now edit this for consistent voice, do we risk removing cues users could have picked up to detect bias? These issues are not fully resolved in LAWA's current iteration.

Within the Get Involved section, stories from a range of contributors - like the opinion section in a newspaper - should have multiple voices, as they represent the thoughts of individual people (and should be clearly identifiable as such). Attempting to make LAWA completely homogenous by editing all stories for consistent tone would not be transparent and would likely reduce credibility. Demonstrating different sides to the discourse on a subject builds credibility.

### TWO-WAY DIALOGUE

Open Lab had pushed for LAWA to be a two-way dialogue between users and the LAWA stakeholders. We wanted users to be able to share recollections of a river and contribute directly to the site profile pages in the Explore Data section. This was vetoed by the LAWA Steering Group, who thought there was inadequate resource to moderate comments. Ultimately, a compromise was negotiated whereby users could submit stories, events and photos via a form, for a LAWA administrator to curate.

The Steering Group felt that comments might be used by people with an axe to grind to criticise the councils. Clearly, there is a fine line between moderating for offensive comments and stifling debate. From a transparency perspective, can any moderation be justified? Recently the website Popular Science shut off comments on their articles because "a fractious minority wields enough power to skew a reader's perception of a story" (LaBarre, 2013). They claim:

66 A politically motivated, decades-long war on expertise has eroded the popular consensus on a wide variety of scientifically validated topics. Everything, from evolution to the origins of climate change, is mistakenly up for grabs again. Scientific certainty is just another thing for two people to "debate" on television. And because comments sections tend to be a grotesque reflection of the media culture surrounding them, the cynical work of undermining bedrock scientific doctrine is now being done beneath our own stories, within a website devoted to championing science.

## ★ (LaBarre, 2013).

Popular Science have redirected discussion outside their website into social media channels, including explaining their policy decision via a Google Hangout discussion (Ward, 2013). The causes may have been increasingly uncivil behaviour and a growing body of research suggesting that people conflate what they read in the comments with the content of an article (Ward, 2013), but ultimately, their decision was also due in part to a lack of resource to moderate comments. In addition, *Popular Science* posit that moving the debate onto social media encourages people to "be themselves", as they are operating under their own name, and this fosters better behaviour.

## SOCIAL MEDIA

Social media integration is something Open Lab pushed for to further two-way dialogue, but the Steering Group remain undecided. Social media lends credibility by demonstrating that there are real people behind an organisation, but it needs to be done well and - as the Steering Group rightly raise - adequately resourced, or the risk to credibility (from an unanswered question or angry comment that is not responded to) is high. Social media (if well managed) builds trust, and can provide content for the site to make it more up to date (a WCP credibility guideline).

## STORYTELLING

The purpose of factsheets, stories and events on LAWA is to add another dimension to the otherwise relatively dry science; 'telling stories' about the issues around freshwater. Framing the science with contextual and opinion-based information may help LAWA appear more balanced, and build social presence.

Within Making Good, I take the building of social presence further, by using self-disclosure (Lowenthal & Dunlap, 2010) as a tool. This is experimental in terms of building credibility, but I feel it is appropriate given the experimental nature of this exercise.

## **COPY LENGTH**

Within LAWA, writing for the web best practice is adherred to: short content, structured with headings. Recent multimedia experiments by The Guardian (Henley, 23 May 2013) and the New York Times (Branch, 2012) suggest that there is appetite for long-form content on the web (McAthy, 2013). Making Good is an experiment in this area.

Next: A real organisation

### SECTION SUMMARY

- Tone of voice for LAWA needs to be approachable, reliable and trustworthy.
- Balancing the voices of multiple contributors is a challenge; using a single voice across all sections risks removing nuance, and personal opinion (valid in the context of stories).
- Two-way dialogue (the ability to contribute comments directly) was an Open Lab objective, but it was not possible due to resource limitations. The compromise solution was user-generated stories submitted through a site curator.
- Social media has a role to play as a forum for discussion, but it needs to be done well.

### ETHICAL CONSIDERATIONS

### All in moderation

Does preventing direct comments stifle legitimate debate? This is a delicate area to traverse. The LAWA partners were worried they'd get "a load of photos of cows in rivers" and part of me thinks, so be it. Time will tell if the compromise solution of inviting submissions works.





**Creative Arts** 



synth

## COMMUNICATIONAL COMPOSITION AND PHRASEOLOGY

AUTHOR: OUR NEO-DIGITAL CORRESPONDENT ... As for writing style, strive for convoluted, obscure, and pseudointellectual.

**★**(Fogg, 2002)

### THE VOCALITY OF LAWA

Establishing an undeviating phonetic for LAWA is a predominant preoccupation for the participatory-players. With multi-vocal participants, and the requirement to transliterate Byzantine scientific knowledge, clarity of conveyance is imperative. The vocality is charged to be affable-congenial, calculable and dependable, with a certain dominion (in actuality, LAWA was conceptualised as enunciating in a neo-Attenborough (viz., Sir David Attenborough) style.

Credibility may not be optimally furthered by an aloof scholastic tonality. Tuftian theory (2006, p.142) posits "passive verbs ... advance effects without causes, an immaculate conception"; using an orthodox passive-professorial lexicon appears ostensibly unencumbered by bias, but it additionally registers as de-situated.

### WHOSE NARRATIVITY?

The predominant tenor emanating with accord from the multi-participatory dialogue conclave at the inception of the process was the necessity to, in a sense, comprehend the very nature of LAWA. Partakers in the convocation specifically queried the neutrality of LAWA, posing the question, can this undertaking exist in a state of non-partisan, non-tendentious being? Can it obtain an optima-neutral state?

Maintaining dialogic tonal equilibrium is involuted and fraught with complexity. In establishing rhetorical parity between 'the consensus' and alternative 'received wisdoms', is a pseudo-reality created where rigour and bavardage are given equal charge? Does this not produce a perversion of circumstance?

The incumbent personnel within regional legislative bodies were tasked with providing a geo-narrative focused on their locale. The responses were devoid of heterogeneity, especially regarding substantive subjectivity.

Some councils sought to balance suboptimal aqua-clarity performance through their monologue. Others projected objectivity in both tone and substance. If the varietal quality is homogenised into a uniform vocalisation, is the readership's attunement to subtle signifiers compromised? Reconciliation of these themes is extant.

Within the Participatory Engagement section, dialogues from myriad perspectives – much like opinions intra-Comment sections of a paper-media journal – should be enabled (and authorial provenance should be established).

### MULTI-MODAL DIALOGUE

Open Lab hypothesised that LAWA should enable the stimulus of organisation-user or trans-user dialogue. It was conceptualised that users should be enabled to engage in participatory conversation about place, contributing without encumbrance to the geo-specific pages intra-LAWA.

The LAWA Orientation Body, after cogitation, vetoed participatory online conversation, on the basis that inadequate amenity was available to arbitrate if sub-optimal (from a reputational perspective) schools of thought were vocalised.

Ultimately, accommodation was made for multi-viewpoint contributions via a documentary mechanism which enabled crowd-sourced offerings to be 'arranged' by a site curator.

The LAWA Orientation Body felt that agitators, positing undesirable attitudinal mindsets and bent on negatively critiquing the regional legislative bodies, may be used to pillory said bodies.

Clearly, there is, figuratively, a delicate balance to be struck between exercising power of veto over uncivil postulation, and impeding vigorous discourse. If a narrative of transparency is a desirable, nay vital component of the reputational matrix, can any degree of moderation be justified?

Latterly, the internet-enabled journal *Popular Science* terminated open interchange via written digital response to their crafted treatise on the basis that "a fractious minority wields enough power to skew a reader's perception of a story" (LaBarre, 2013). They assert:

66 A politically motivated, decades-long war on expertise has eroded the popular consensus on a wide variety of scientifically validated topics. Everything, from evolution to the origins of climate change, is mistakenly up for grabs again. Scientific certainty is just another thing for two people to "debate" on television. And because comments sections tend to be a grotesque reflection of the media culture surrounding them, the cynical work of undermining bedrock scientific doctrine is now being done beneath our own stories, within a website devoted to championing science.

## ★(LaBarre, 2013).

Popular Science have rechanneled dialogue beyond their online domain, into 'social media' conduits. Further, they used the Google Hangout fora to confer with participatory-groups who utilise and patronise their digital space, and who had vocalised a range of perspectives (Ward, 2013).

The progenitor of the policy decision was increasingly impertinent conduct and a substantive and advancing corpus suggesting that people conflate their experience within the unfettered utterances of non-expert contributors with the substantive treatise under editorial purview (Ward, 2013). Ultimately though, their decision was additionally a consequence of insufficiency in human resource provision.

Further, *Popular Science* posit that translocating the discourse onto 'social media' platforms encourages people to "be themselves", as they are acting under their own moniker, thus to a lesser degree likely to conduct themselves without due regard to social nicety.

## SOCIAL MEDIA

'Social media' integration is, from the perspective of Open Lab, a utility-tool to further neo-digital dialogue, but the LAWA Orientation Body remain irresolute. 'Social media' confers credibility by proclaiming that there are bona fide 'real people' behind an organisation. It must, however, be judiciously orchestrated, and − as the LAWA Orientation Body rightly raise − have adequate allotment of resource, or the risk to credibility (from an unanswered question or vexed pronouncement that is not responded to) is excessive. 'Social media' (if prudently guided) affords the development of trust, and can generate publicauthored contributional-dialogue for the 'digital place' to maximise contemporaneity (a ■ WCP credibility guideline).

## NARRATIVE RECITAL

The purpose of fact-dossiers, narratives and experiential happenings placed within LAWA is to project a dimension of animation around otherwise relatively dry science; 'delivering narrative dialogues' about the leitmotifs of freshwater.

Composing the 'science' with contextual and attitude-perspectival information may assist LAWA in projecting an air of equipoise, and build social presence.

Within Making Good, I expand the assembly of social presence yet further, by using self-disclosure (Lowenthal & Dunlap, 2010) as apparatus. This is experimental vis a vis the 'construction of credibility', but I feel it is appropriate given the avant garde nature of this exercise.

## VERBALISED DIALOGUE EXTENSIVENESS

Intra-LAWA, 'writing for the web' best practice is adhered to: short content, structured with headings. Recent multimedia exploratory innovations by *The Guardian* (Henley, 23 May 2013) and the New York Times (Branch, 2012) suggest that there is appetite for long-form content on the web (McAthy, 2013). *Making Good* is a novel exploration in this realm.

Next: A real organisation ▶

### SECTION SUMMARY

is excessive.

- Suitibility of vocality for LAWA is required to be affable-congenial, calculable and dependable, with a certain dominion.
- Using an orthodox passive-professorial lexicon appears ostensibly unencumbered by bias, but it additionally registers as de-situated.
- LAWA should enable the stimulus of organisation-user or trans-user dialogue. It was conceptualised that users should be enabled to engage in participatory conversation about place, contributing without encumbrance to the geo-specific pages intra-LAWA.
- Social media' confers credibility by proclaiming that there are bona fide 'real people' behind an organisation. It must, however, be judiciously orchestrated, and have adequate allotment of resource, or the risk to credibility

PRACTICE > A REAL ORGANISATION

## A REAL ORGANISATION

JO BAILEY JANUARY 2014 ...credible sources are seen as likely to produce credible messages and credible messages are seen as likely to have originated from credible sources.

### ♠(Rieh & Danielson, 2007)

LAWA does not actually exist. That is, you cannot go to the LAWA office, or meet the LAWA Chief Executive. Yet, demonstrating who you are as an organisation is a central 12 WCP requirement ♠(Fogg, 2002).

B.J. Fogg has said, "with the rise of Web 2.0 services, the focus of credibility evaluations extend beyond the page to the people represented. In other words, Credibility 2.0 has become more like reputation, or perceived reputation" ("Stanford Web Credibility Project," n.d.). Establishing LAWA as an organisation and building a reputation comes, in part, from the brand.

### LAWA IS BORN

Open Lab inherited the name LAWNZ, but all it evoked was gardening services. The LAWNZ/LAWA Steering Group had purchased domain names for 'Source' and 'The Source' but anecdotal polling suggested the associations were radio stations and ketchup.

Forming a new identity was an iterative process with a serendipitous outcome. More literal suggestions such as Catchment held too much embodied meaning for the scientists. We needed a name that could develop meaning for the users through their engagement, without any preconceived connotations.

LAWA is Land Air Water Aotearoa. A result of working methodically through all possible acronyms, the serendipitous moment came when a colleague pointed out that 'awa' is river in Te Reo Māori.

We had experimented with logos that evoked pou rāhui, landscapes, cartography or rivers, but they were either too close to the clichés identified in the research phase, or too abstract for the clients. Our chosen identity plays off the fact that LAWA is a phonetically similar word to data. Through paper prototyping and stop motion animation, the idea of fragments of data coming together to make a coherent object - the LAWA name - was developed.



Video: LAWA paper stop motion logo animations



## WHO IS LAWA?

Final static LAWA logo

The need to be transparent about who is behind LAWA came out very strongly in the user workshops (see Appendix III >).

The first design decision was to have a clear About section, in which all the stakeholders were listed, and links to their own websites were made available. A paragraph on each organisation describes in their own words what they do. Association with the reputation and perceived neutrality of an independent research agency and a university also assists perceived credibility.

Because LAWA is not actually an incorporated entity, that most basic of WCP requirement - stating a physical address - was not actually possible. Instead, we added the ability to email a LAWA email address, or an individual council, to the footer of all pages.

WCP guidelines suggest identifying the real people behind an organisation. Unfortunately, we do not show any people on LAWA's About section. Profiling key partners - scientists, designers and government staff - would have been more transparent, and is something to consider for phase two (LAWA partners Cawthron do this well on their nown website).

Though difficult in the case of LAWA, with Making Good, identifying myself as a 'real person' was not only possible but essential. The LAWA focus group comments about needing to understand the position of LAWA echo the rationales for making a personal statement given by Lucienne Roberts (2006) and Hillary Collins (2010).

## DOMAIN NAME

It may seem obvious, but having a domain name that matches the name of the organisation is important for credibility. Users sense "something suspicious about a company that does not operate under its own name" \*(Fogg, 2003, p. 159). We observed this with LAWNZ, which used landandwater.co.nz (not landandwater.org.nz, which belongs to another organisation).

Org.nz was selected as LAWA's primary domain. Appropriateness is again important here. Organisation (.org.nz) is more accurate than commercial (.co.nz), and also anecdotally is perceived as more independent and trustworthy. Using the suffix .nz also helps add context.

For this site, I selected an academic (.ac.nz) domain as the most accurate reflection of the content.

Next: Philosophy, ethos and 'the big picture'

### SECTION SUMMARY

- Being clear about the organisation and making sure users can contact that organisation is key
- Beyond the website, the need for a timely, well managed response is vital for building reputation and credibility.
- Domain names need to match the name of the organisation, or users find it suspicious.
- LAWA was chosen as a name that has no connotations (other than the neat synergy that awa means river in Te Reo). This is important as users can form an opinion based solely on their interactions with the site.

### ETHICAL CONSIDERATIONS

### Claiming a coincidence as deliberate

The fact that LAWA contains the word awa was a nice coincidence, and one we worked into our presentation to the clients as if it was completely by design. Was it deceitful not to admit it was a happy accident? Personally, I don't think it's any less valid because it was happenstance.



### **Cultural appropriation**

Making the awa connection ticked a 'culture' box in our minds, without actually engaging very much with Māori language or culture. Equally, incorporating Aotearoa into the name rather than New Zealand serves the same function (though that was a phonetic choice rather than a cultural one - words ending in 'nz' are something of a cliché)



### Is branding ever ethical?

Some commentators state that creating a brand is about image and mythmaking, so is therefore manipulating perception.

During my research I noted an article in which Oxfam highlighted Dole's hypocrisy over using an Ethical Choice 'tick' on their bananas, despite the fact that there are documented cases of anti-trade union behaviour, child labour and sub-minimum wage pay at Dole plantations. Dole's reaction? To withdraw the Ethical Choice mark, not to commit to address the issues. Clearly, they were 'ethicalwashing'. A designer would have made that stamp, designed to convey credibility, despite the fact that there was plenty of evidence to the contrary. I wondered if they had any qualms about it?

Mr Keedy (Keedy, 2003, p.208) says "designers think of themselves as good people whose clients make them do bad things - the "I was only following orders" defense." In the Dole case, I am pretty sure I would have said no to that job.

LAWA is more nuanced. The aim is laudable. I am sure the people involved are not part of a conspiracy, yet there are scientists who hold that the regional councils and MfE's testing regimes are dishonest. Martin Lindstrom 🎓 (Lindstrom, 2012) advocates aligning perceptions of a brand with reality, adjusting one or other for them to be in sync. Dole chose to adjust the easy variable. Katherine McCoy (McCoy, 2003, p.5) advocates acknowledging bias rather than manipulating with assurances of 'universal "truth" and "purity". With LAWA, hopefully the inclusion of articles presenting opinions across the spectrum will help create a balanced picture.



## Partner credibility

I had a conversation late in the process with someone who said they were torn by the Tindall Foundation funding the project. They thought that the money would otherwise have been spent on restoration projects, so it was taking potential funds away from grassroots groups.

Further than that though, they believed that as Stephen Tindall makes his money from The Warehouse (which sells cheap goods from China) not only did that make LAWA complicit in conspicuous overconsumption, but worse, our dairy industry supplying China with infant formula meant Chinese women were buying formula instead of breastfeeding, so they could work in factories to make more plastic stuff for The Warehouse. A very depressing cycle.

A colleague's take was that if Stephen Tindall didn't fund LAWA, it wouldn't exist. This is always the argument when a charity takes cause related marketing contributions from a company, but not all donors are equal. In this grey area, = is there a line?



PRACTICE > PHILOSOPHY, ETHOS AND 'THE BIG PICTURE'

## PHILOSOPHY, ETHOS AND THE 'BIG PICTURE'

JO BAILEY JANUARY 2014

The original brief (LAWNZ, 2011) set the project's tone, with a vision of a "credible and informative website providing robust environmental information". This became a cue to inform the whole design process, perhaps extrapolating beyond our partners' initial expectations.

Open Lab were initially viewed as the people who would deliver the project; design in its narrowest form as crafters of output. Increasingly, as it became clear that we envisaged a user-centred and collaborative project, the partners engaged in the process of design, and our role evolved.

Open Lab became facilitators and partners and, as such, pushed the agenda of credibility as a central tenet of LAWA. The user workshops gave us research to point to and say, "your users want open and transparent." Being able to act in the role of provocateurs - essentially pushing our clients and the brief - placed design at the centre of LAWA.

This focus on credibility and transparency fed into aspects of the project, some more successfully than others.

### **OPEN SOURCE**

Dopen source was never specifically discussed with the Steering Group. But, by choosing fonts and a content management system (CMS) that are open source, I felt we were aligning LAWA with values of collaboration, transparency and openness, which are core to both the open source movement and LAWA.

### **CULTURE AND LANGUAGE**

LAWA borrows from Te Reo Māori through using 'Aotearoa' in the name, and the word 'awa' within the acronym. This lends a sense of cultural inclusivity and 'New Zealandness' that contributes to perceived credibility. Yet bilingual elements have not been incorporated into the site. Iwi views were sought an early stage, but the approach has been piecemeal rather than fully inclusive. Open Lab approached Professor Ross Hemera at the outset as we wanted a Māori perspective, and possibly a Te Reo name, but he indicated it would take at least six months - time we just did not have.

### POLITICS AND FRESHWATER

In the first section I raised the possibility that LAWA could be a box-ticking exercise for the councils to point to and say 'something is being done'. How do I feel about that now? The commitment and credibility of the staff involved is clear, but councils are local government, government means politics, and politics entails a certain degree of spin and PR. The same goes for the Ministry for the Environment (MfE). All the staff are highly professional, but I am left with a sense that our civil service is not as independent from government as it should be (or that scientists would like it to be), and is therefore directed by the ideology of the party in power.

Both MfE and regional council staff are in a difficult position, balancing economics and the environment, trying to deal with 'evidence' and myriad perspectives in a highly political arena. I had little comprehension of quite how political until a chance encounter in November.

## THE ELEPHANT IN THE RIVER

66 I feel quite sick that we might be making this worse. I actually feel quite angry. I feel half depressed and half furious. Actually make that a third sad, a third mad and a third in despair.

Note to self when listening to Dr Mike Joy speak at Strange Baroque Ecologies Symposium, 23 November 2013.

Sitting in a dark auditorium, I am hearing that the state of New Zealand's water is worse than I possibly imagined. I knew that the dairy industry's economic role necessitated some sleight of hand with respect to environmental impacts, but now I feel rather sick that I have been naïve (wilfully naïve?) about quite how bad things are.

Dr Mike Joy criticised MfE for their sampling procedures, going so far as to say some of the science is so poor he would fail a first year student if they produced it. He suggested that as citizens we are failed by regional councils, who ignore diffuse nutrient pathways. He picked apart the MfE line that New Zealand compares well internationally in terms of freshwater quality. It was sobering, and, worst case scenario, made LAWA a greenwash tool. This ethical dilemma dwarfed all the little incremental considerations I had been making.

I sought a second opinion from another scientist. Their perspective was that Dr Joy is right in terms of his science, but that there is recognition within MfE and councils that there is a problem, and that steps are being made in the right direction. LAWA simply seeks to tell a story that highlights positive action as well as negative science; not taking "one side over the other", but giving the public tools to make informed decisions. This again raises the issue, is telling 'both sides of the story' really a balance?

## WET BEHIND THE EARS?

I did not really expect to find a moral dilemma of any magnitude in this project, which first piqued my interest specifically because the clients put transparency at the fore.

In About Me I said "I worry that there is a tendency in design thinking to neglect the micro in favour of the macro", yet I feel that on one level, the whole LAWA project fails to see the bigger picture, because it is difficult, and puncomfortable to do so.

Can LAWA really be objective, and can it facilitate change? Time will tell. At least it is placing the issues in the public sphere to provoke conversation. I wrote the note to myself in the auditorium because I wanted to remember the depth of my feeling. I knew that as 'normal life' crept back it would dilute. For a couple of hours my head swam with ideas. A leaking mechanism for government scientists? Direct action campaign against dairy brands? Do a Banksy and go out tagging cows?



Potential direct action against dairy farms? Banksy tagged cows in the South West of England (Banksy, 2006, p.153)

I am still undecided. And yes, 'normal life' did creep back and get in the way. If I could just get enough headspace to reclaim that feeling...

Next: Closing thoughts ▶

### SECTION SUMMARY

- The ethos for LAWA was inspired by the original brief, and driven by Open Lab.
- We used open source fonts and content management system to align with open source values of collaboration, transparency and
- We did not consider bilingual elements for LAWA, and getting a Māori perspective has been a piecemeal process.
- Freshwater is a highly politicised issue, and regional councils and MfE have to operate in
- difficult circumstances. - Dwarfing all the small ethical decisions is the
- Ultimately, I believe LAWA facilitating conversations will be a valuable contribution.

possibility that LAWA will not be objective.

### ETHICAL CONSIDERATIONS

Forcing my agenda

Open source was my decision, my agenda. It did not impact negatively on the project, but perhaps I should have been more overt about why I made the choices I did.



### Insider trading

IT Effect were asked to quote for LAWA because I knew them and knew they would be good to work with. How much is recommending someone in your own network a kind of favouritism and how much is it pragmatic? Ultimately it was not Open Lab's decision to make, so this did not trouble me overly.



### Deckchairs on the riverboat

Dr Mike Joy's presentation made me question everything I thought I understood about freshwater and LAWA. How much should a designer research before taking a job? Would I seriously have considered removing myself if I had seen Dr Joy's talk before we got the brief? No, though I may have asked more questions earlier. It just reinforces that there is no black and white, only grey.





CONCLUSIONS > CLOSING THOUGHTS

### **CLOSING THOUGHTS**

## At the outset I asked: are there practices that can foreground credibility and trustworthiness in design for the web?

Research from the fields of human computer interaction, social psychology and beyond suggest that there are. These practices relate not only to aesthetics, but encompass many factors, including website structure, content and copy, and transparency around authorship. Design has to step beyond its traditional role and encompass all these considerations. A vertex user-centred, collaborative approach allows this to happen.

#### CREDIBLE = APPROPRIATE

Credible design is, above all else, appropriate. No combination of grid, colour, font, visuals, writing style, etcetera will appear credible to all people in all situations. Understanding and engaging with user needs, expectations and perspectives better places a designer to comprehend and construct an appropriate response.

#### THE GOOD, THE BAD AND THE INCREDIBLE

LAWA is a website designed with credibility front and centre, to meet the needs of user and client. *Making Good* is personal; a documentary, a demonstrative expression of research, and a conceptually driven design response. Using the incongruous notion of 'incredible' design to explore the boundary – or the grey area – between credible and incredible, I hope the user is playfully provoked to consider and reflect on the innate judgements they make about credibility in the online space.

### GOOD: ETHICAL AND MORAL

Considering a live design process through an ethical lens has been enlightening; sometimes contradictory, sometimes challenging, bringing with it more questions than answers. I was surprised by my moral ambiguity at times. I thought my personal boundaries were much clearer than they are; grey areas abound once more.

### PERSONAL HELL

Milton Glaser's Road to Hell is thought provoking. But, as he says, "all questions of ethics become personal" (Glaser, 2002). Had I documented my own personal version in advance, my insight may have been deeper. Considering my experience as a design student, I was struck that – bar talks by library staff on plagiarism – very little is said explicitly about design ethics, or about issues that form my own ethical framework (environment, sustainability, social justice). Perhaps a gap lies therein. Perhaps a personal 'Road to Hell' toolkit would be a valuable addition to design education.

## EMBRACE THE GREY?

When I began this project I believed that, theoretically, an absolutist position was possible; that I should be able to look at any brief and decide (after thorough research): acceptable or not acceptable. Perhaps that is why Dr Joy's presentation left me feeling morally conflicted, as it shook that conviction.

Jacqueline Roach ♠(2006, p.47) asks, "isn't it better not to walk away from jobs on ethical grounds, but ask if there's some way that you can have an influence, something you can bring?" and I think there is merit in judicious use of this approach; in fact I believe Open Lab's influence did bring greater transparency to LAWA.

It has also become clear to me that 'black and white' is too reductive and judgemental. The one issue that I found genuinely ethically taxing was the tacit suggestion that the entire LAWA project could be greenwash. A refusal to engage on the basis of this high-level judgement would not only be an oversimplification, but also denies the opportunity to make small steps. I have shown that a multitude of ethical compromises, conflicts, balances and tradeoffs occur at many levels. As Ken Garland (2006, p.177) says "we'll see how we can approach the ideal world from the real world".

## THE END?

What have I learnt, and where does this go? I feel like I have only scratched the surface of ethical design, and I am interested in different ways to engage design in freshwater issues.

If I had to summarise my learning in a single sentence, I would borrow from ■ Steven Heller (in turn borrowing from Milton Glaser): "the key is to ask questions" ♠ (Heller & Vienne, 2003, p.xi). Questions helped me understand the problems, the user needs, and to test solutions. Questions showed that freshwater quality is a complex issue with no quick fix, and helped me to understand the part LAWA could play. Questioning myself challenged my beliefs and gave me greater insight into my own practice. "Ask questions," says Heller, "for the answers will result in responsible decisions". Responsible decisions are definitely Good.

Next: Acknowlegements ▶







CONCLUSIONS > ACKNOWLEDGEMENTS

### **ACKNOWLEDGEMENTS**

It has been a meandering journey, and a few people have saved me from drowning (honestly, that is the last water pun). To everyone that helped me along the way, thank you.

Firstly, without the opportunity to work on LAWA, this project would not have happened. I am deeply grateful to the LAWA Steering and Governance groups for their faith in the Open Lab team, and to Anna Brown for wholeheartedly encouraging the crossover of our brief and my exegesis. Anna's generous support, encouragement and constructive feedback has been invaluable.

Jonathon Alsop at IT Effect has been supremely supportive. Jonathon and IT Effect developer Ismael Machuca made the LAWA development a smooth ride, and they made Making Good possible. I could not have done it without them.

My supervisors Donald Preston and Roy Parkhurst gave me direction through animated meetings, rigorous debate, the odd cynical look, and a lot of patience.

Cameron Askin has been a great collaborator, sounding board and desk-mate, a generous teacher and a pleasure to work with.

Karl Kane provided regular thought-provoking conversation and support.

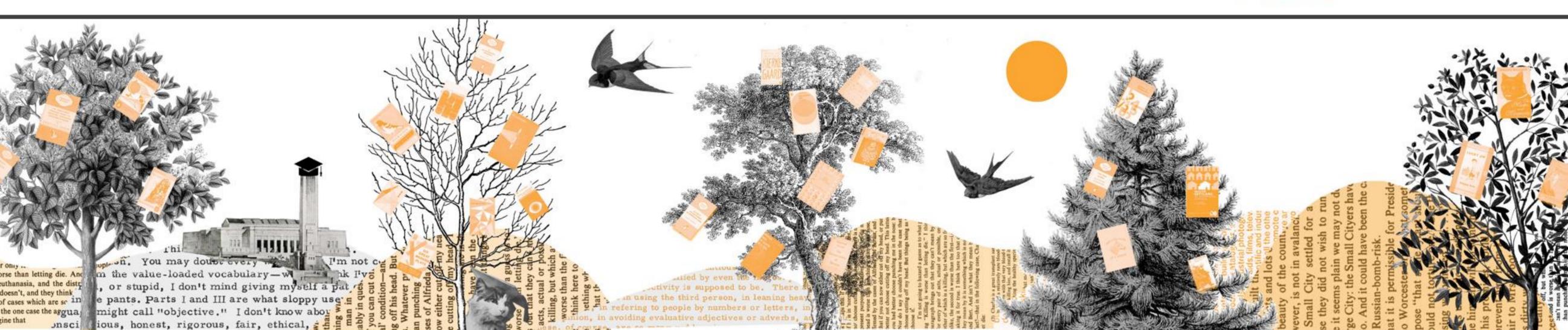
Kati Doehring at Cawthron and Maree Clarke at Horizons bore my 'stupid questions' with good grace and humour.

My Masters cohort and Julieanna Preston provided thoughtful crits and a collegial, supportive environment.

Team Open Lab offered support and humour. I especially appreciated Catherine Adam's cheerful encouragement and the benefit of Nick Kapica's insight.

Finally, my home crew, Max. For love, support, conversation, sanity, perspective and your exceedingly good proofreading skills. I will return the favour!

Next: Reference list ▶



REFERENCE > REFERENCE LIST

## REFERENCE LIST

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REFERENCE > GLOSSARY

### **GLOSSARY**

### A | B | C | D | E | F | G | H | I | J | L | M | N | O | P | Q | R | S | T | U | V | W

- Activity-focused design Affinity diagramming Alpha site Application (App) Axiology
- Beta site Breadcrumb trail
- Cascading style sheet (CSS) Catchment Cause-related marketing Cawthron Institute Chunking Co-design Comment icon Content Management System (CMS) Credibility toggle Cross, Nigel
- Design thinking Diffuse pollution Doehring, Kati
- Ethics External link icon
- Fair use Fogg, B.J.
- Genius design Gestalt psychology Glaser, Milton Glossary icon Good Greenwash

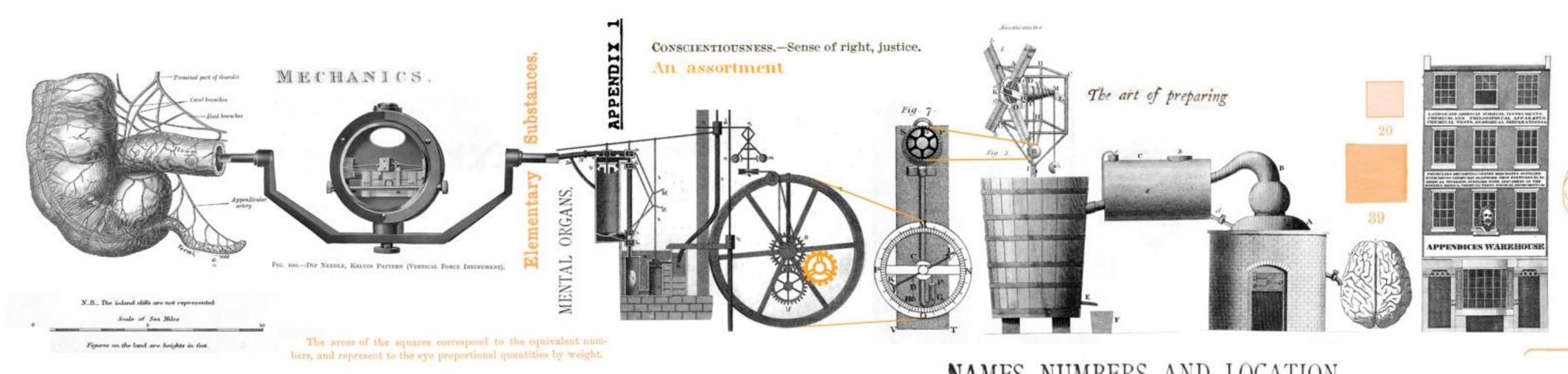
- Heller, Steven Horizons Regional Council Human computer interaction (HCI)
- Image icon Intranet IT Effect
- Joy, Dr Mike Justify
- LAWA LAWNZ
- Make good McCoy, Katherine Media queries Modal popup
- Navigation states Norman, Don
- Open format Open Lab Open source Ornamentation
- Post-consumer waste Pou rāhui Primary navigation
- Quartile

- Reference icon Road to hell icon Roberts, Lucienne Rollover Ruataniwha Dam
- Self-design Semantic URL Shneiderman, Ben Simon, Herbert Skeuomorph Social pressence State (water quality) Stupid questions
- Terroir **Tindall Foundation** Tracking Trend (water quality)
- Unity URL User experience (UX or UE) User journeys User-centred design (UCD)
- Video icon
- Web 2.0 Web Credibility Project Wireframes





of the plate and the wave-length of the light. The general of hyperbolas. As the entire field that could be visually observed

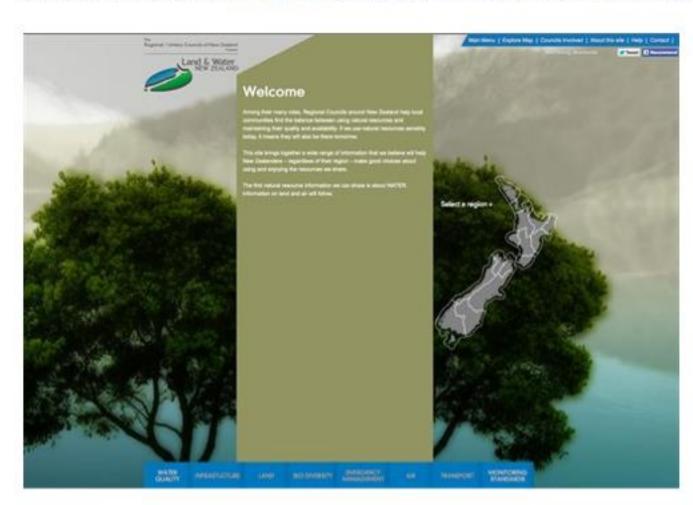


NAMES, NUMBERS AND LOCATION

REFERENCE > APPENDIX I

## APPENDIX I: LAWNZ WEBSITE SCREENSHOTS

Screenshots from the LAWNZ (Land and Water New Zealand) website as of Janaury 2014:



LAWNZ homepage



National dashboard



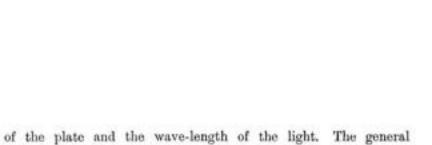
Regional dashboard



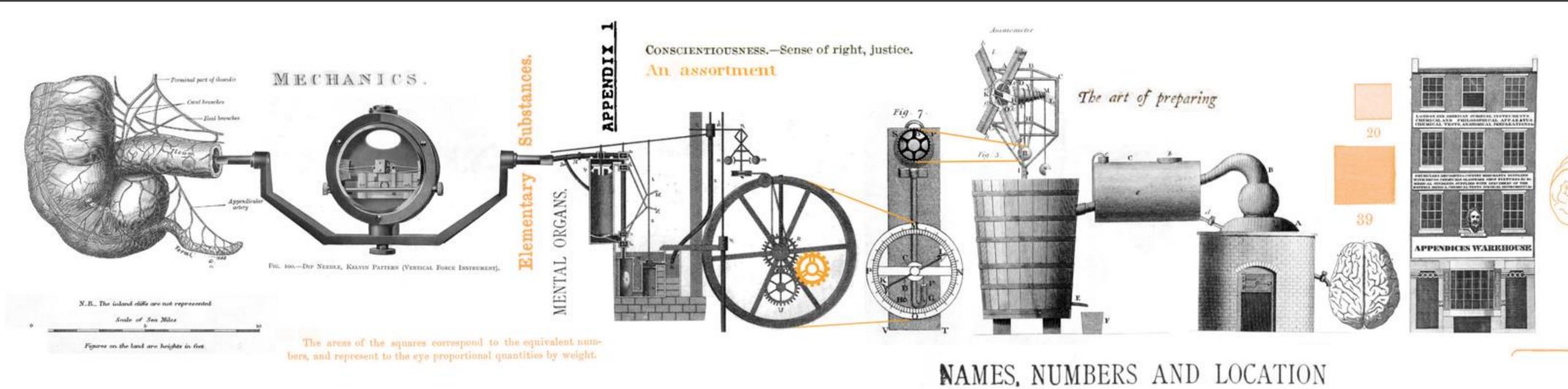
Regional content





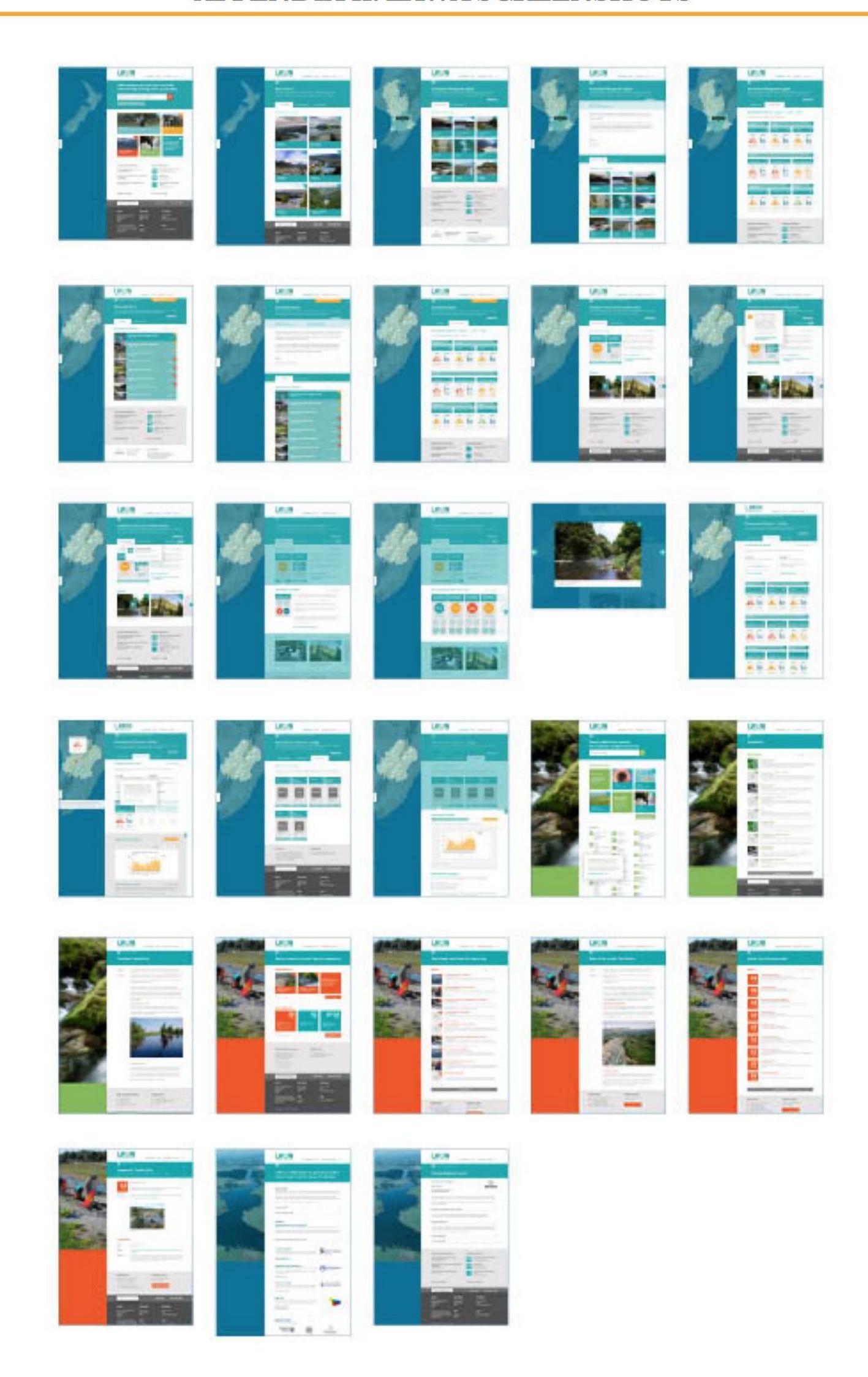


of hyperbolas. As the entire field that could be visually observed



REFERENCE > APPENDIX II

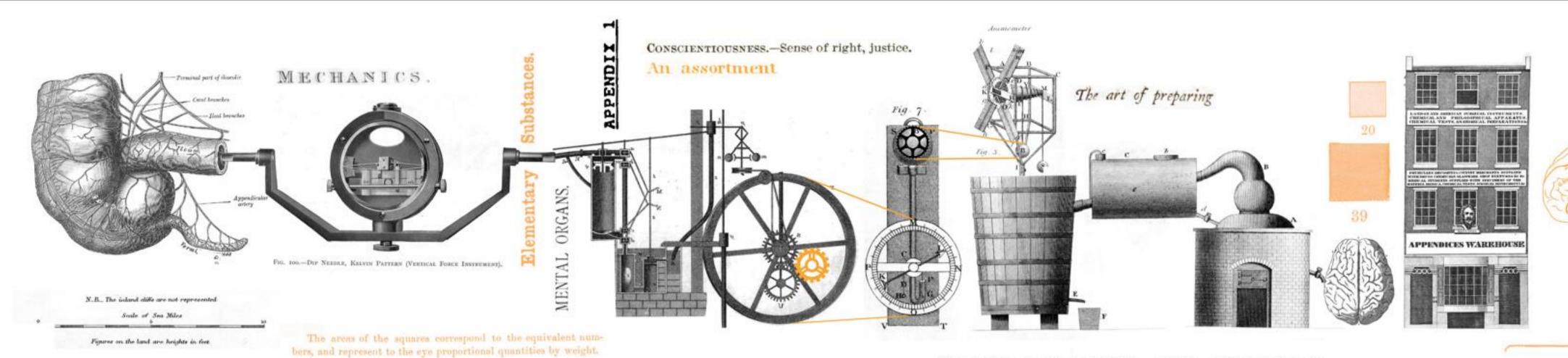
## **APPENDIX II: LAWA SCREENSHOTS**



■ View LAWA design document



of the plate and the wave-length of the light. The general of hyperbolas. As the entire field that could be visually observed



NAMES, NUMBERS AND LOCATION

REFERENCE > APPENDIX III

Making Good

AN MDES EXEGESIS BY JO BAILEY

## **APPENDIX III: USER WORKSHOP OUTPUTS**

Workshop 1 findings

■ Workshop 2 findings





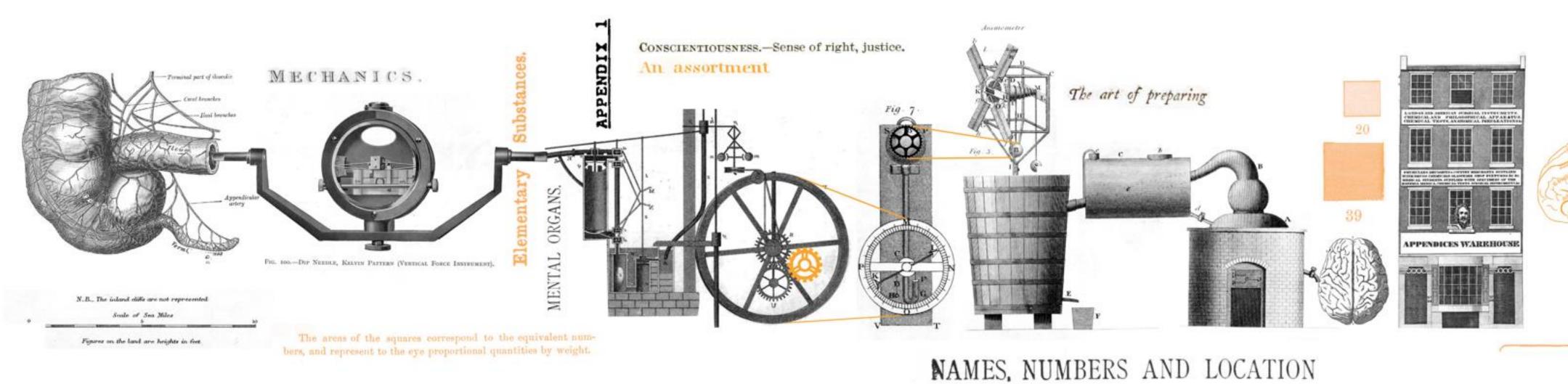




of the plate and the wave-length of the light. The general

he curves of minimum visibility is, as seen in the figure, roughly

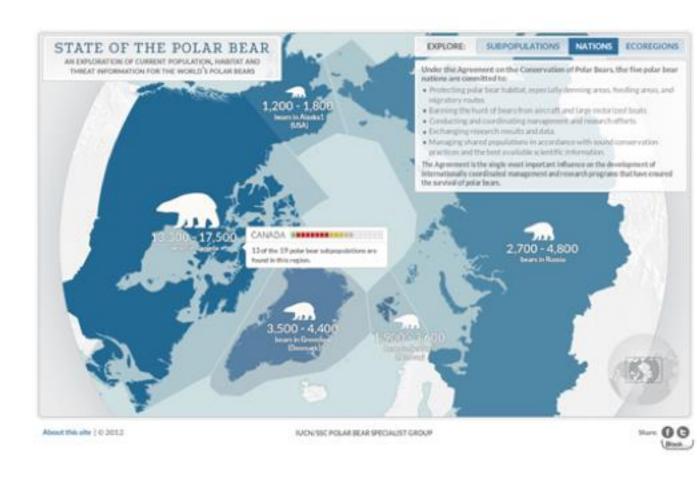
of hyperbolas. As the entire field that could be visually observed

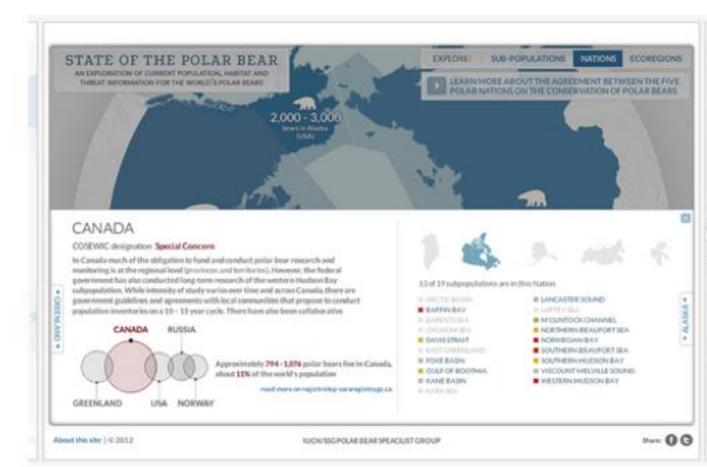


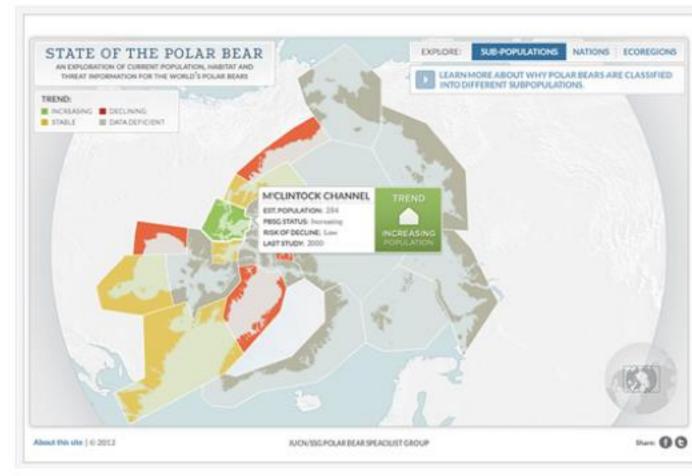
REFERENCE > APPENDIX IV

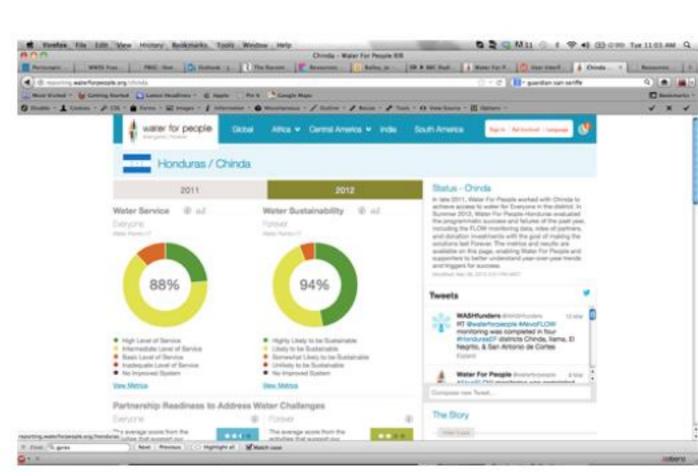
## APPENDIX IV: DESIGN PRECEDENTS

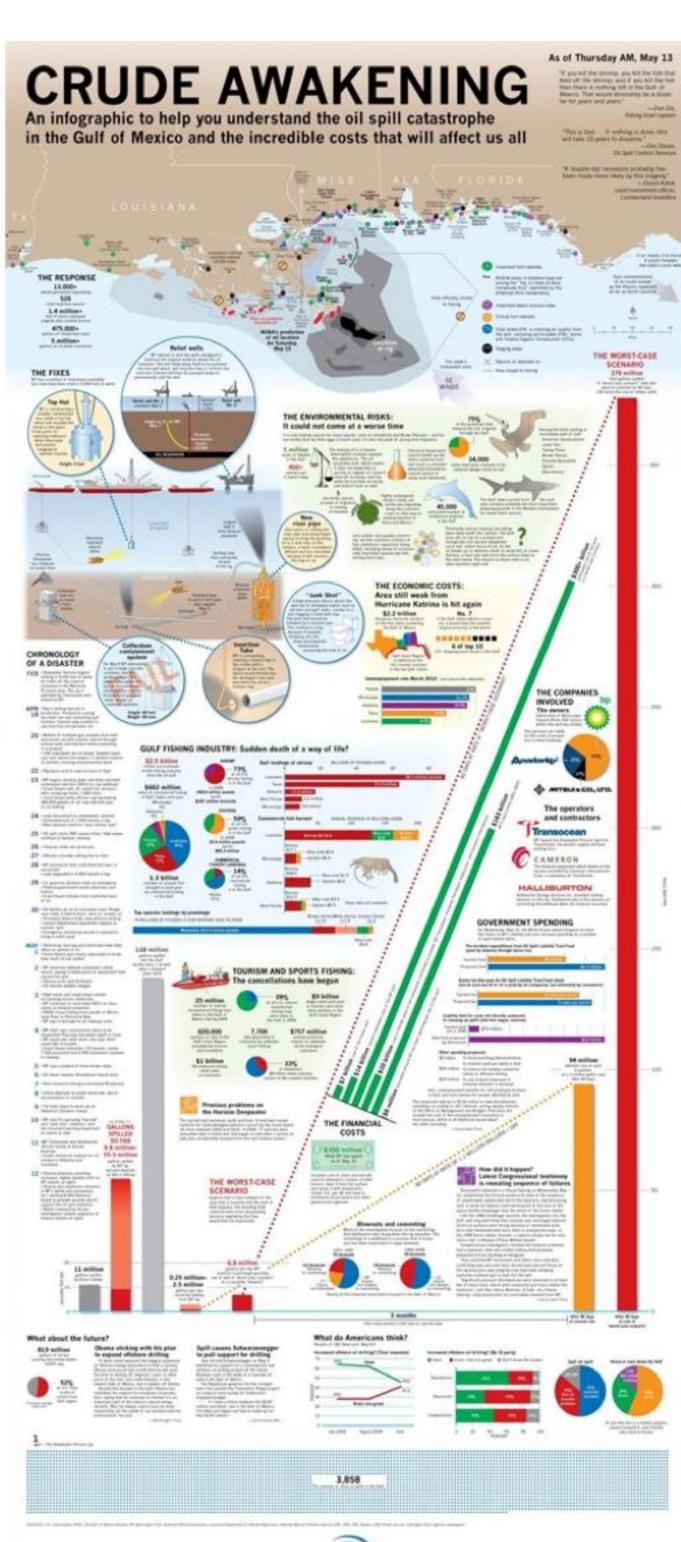
## View a pdf of design precedents

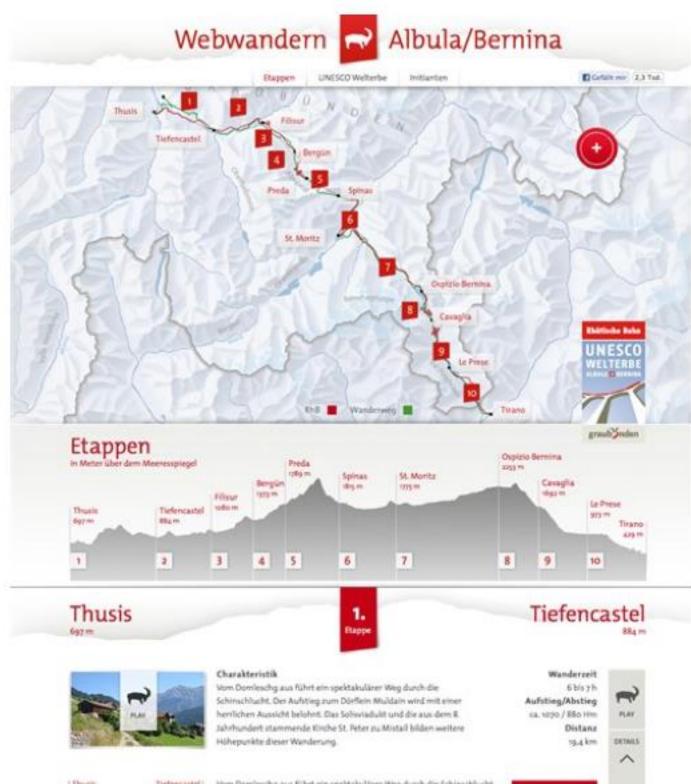




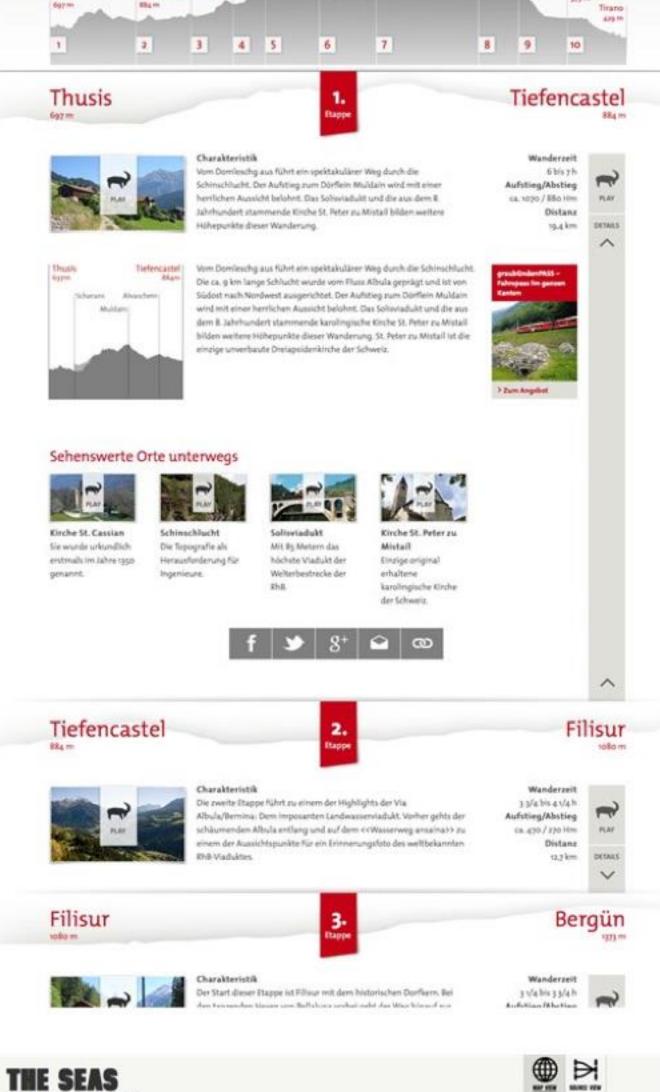


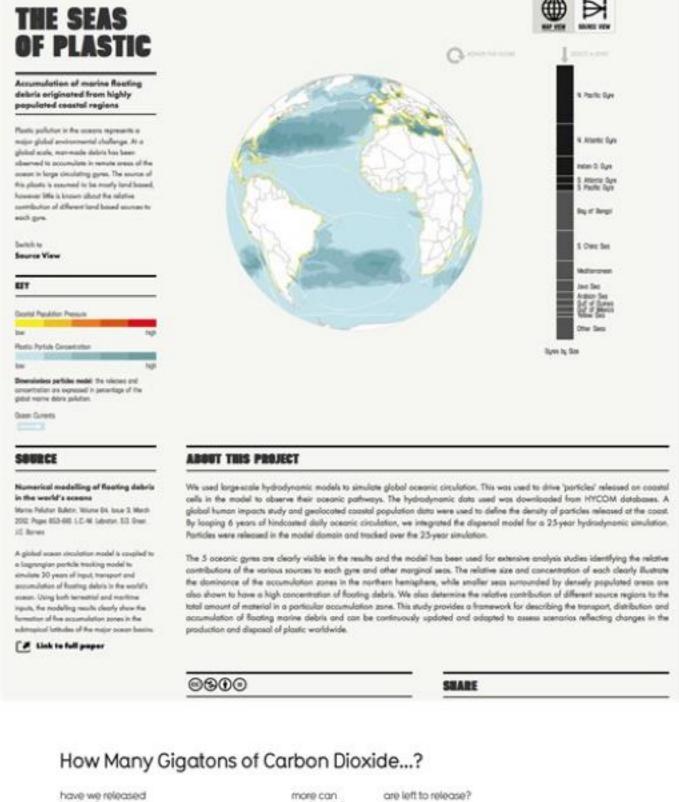


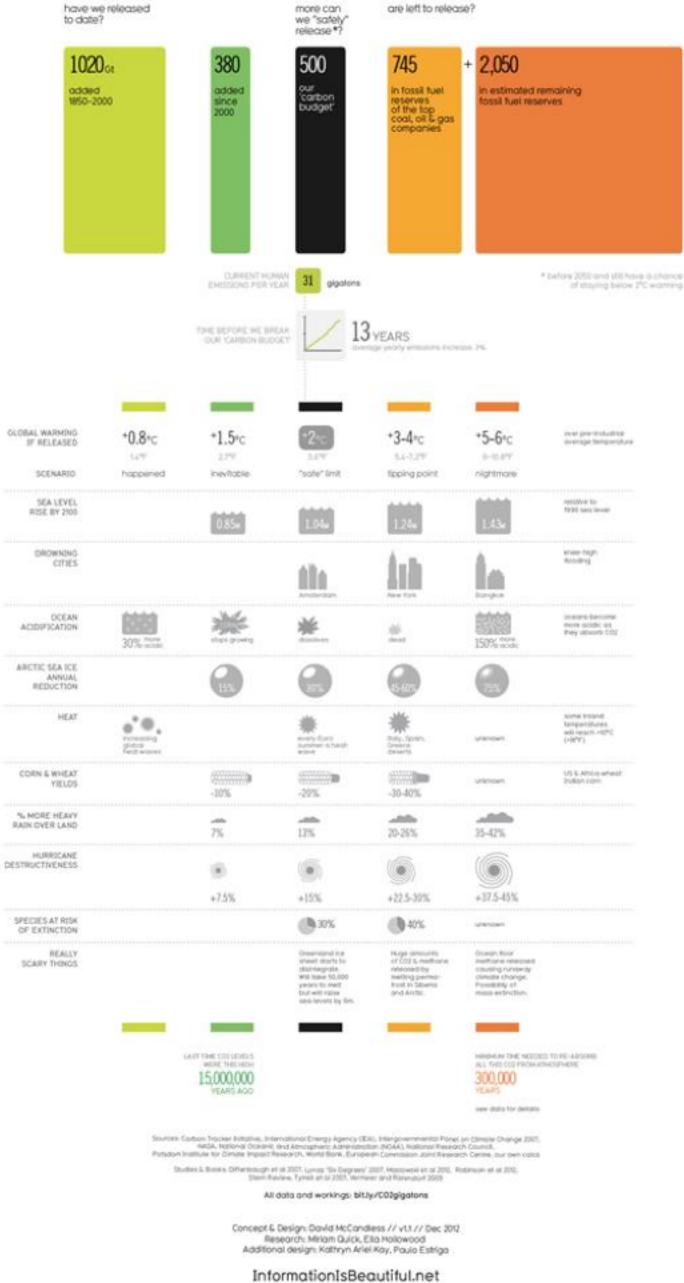




Design by Carol Zuber-Mallison/ZM Graphics.







Coverview

FOOD PRODUCTS

Beef

15.500 liters/kg

Sheep Meat
6,000 liters/kg

Pork
4.800 liters/kg

Goat Meat
4.000 liters/kg

Chicken
3.900 liters/kg

Chicken
3.900 liters/kg

And the key

Food Probable

Food Probable

And the key

Food Probable

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