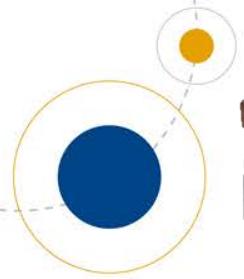


How to teach Health and Safety to Engineering Students?



RESEARCH SEMINAR

HUMAN FACTORS IN PRODUCTION SYSTEMS –
THE VISION FORWARD



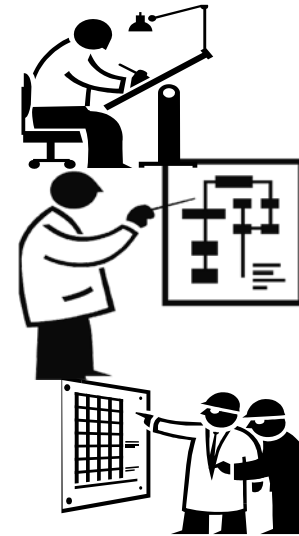
What question to ask?

- Why teach engineers about health and safety?
- Do engineers influence health and safety?
- Which type of engineers?
- What approach to teaching health and safety?

Teach health and safety to Engineers because

They determine the work environment through

- Development of products
- Development of production processes
- Planning of production
- Management of production





Teach health and safety to Engineers because

They work as OHS professionals
e.g. Safety engineers

- OHS management
- Identification and control of:
 - New hazards and risks
 - Existing hazards and risks
 - When injuries and illnesses occur

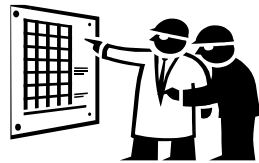


Strategies to improve the work environment?

Productions system



- Development of products
- Development of production process
- Planning of production
- Management of production



OHS management

- Identification and management of :
 - New hazards/risks
 - Existing hazards/risks
 - When injuries and illnesses



Survey of engineers (Broberg, 2007)

- Do not perceive they influence the work environment
- Working environment is ranked as lowest importance
- Barriers for integration of work environment:
 - Time, knowledge and tools

Survey of engineers (Broberg, 2007)

- Strategies for integration of work environment:
 - Solidify knowledge on work environment (53%)
 - More time (32%)
 - Policy statement from Management (23%)



Work
environment

Engineer as technical specialist

30/3/2016

Kirsten B. Olsen, CErgOSH, School of Public Health



Engineer as OHS specialist

30/3/2016

Kirsten B. Olsen, CErgOSH, School of Public Health



Health and safety approaches

Causative/Origin Perspective

Action Perspective

External Context

- Economy/competition
- Legislation
- Agreements
- Ideology
- Culture



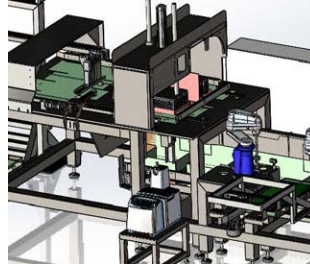
Decision makers

- Employers
- Managers
- Technicians/engineers
- Worker representatives



Production process

- Technology
- Material
- Equipment
- People
- Work organisation



Consequence Perspective

Work environment

- Environment
- Physical demands
- Psychosocial demands
- Autonomy
- Corporation
- Working hours
- Wage structure

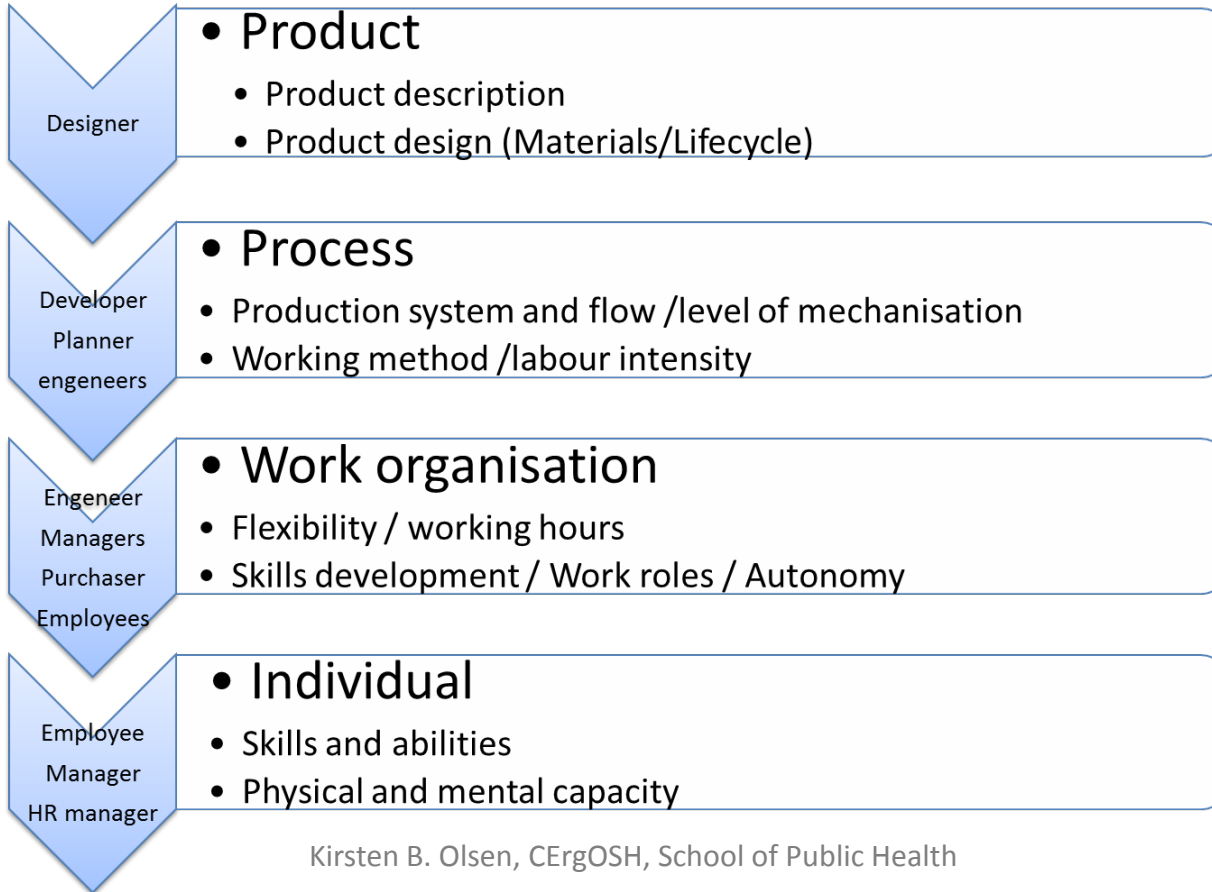


Consequences

- Accidents
- Work related injuries
- Work related disease
- Exclusion from labour market



Key players in the Value chain



How to teach OHS to engineers?

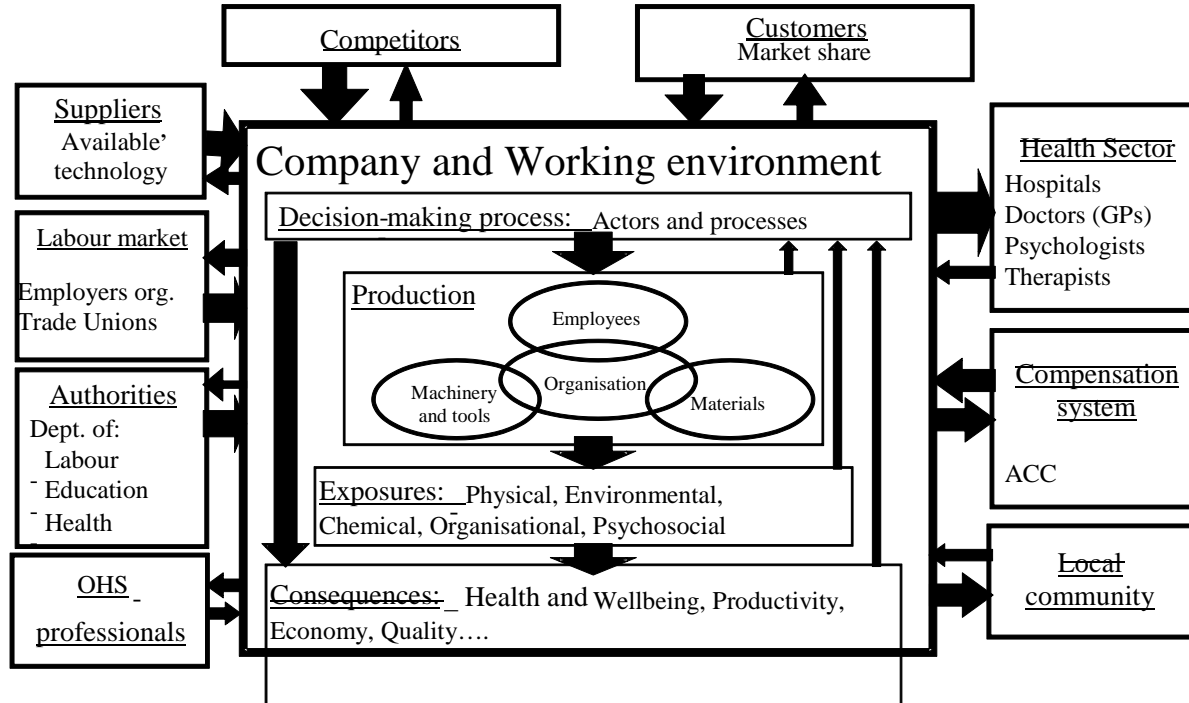
Technical oriented

- Integrate determinants for creation of good job
- Illustrate how their decisions affect the work environment
- Illustrate the consequences of their decisions
- How to act in organisation in the political arena

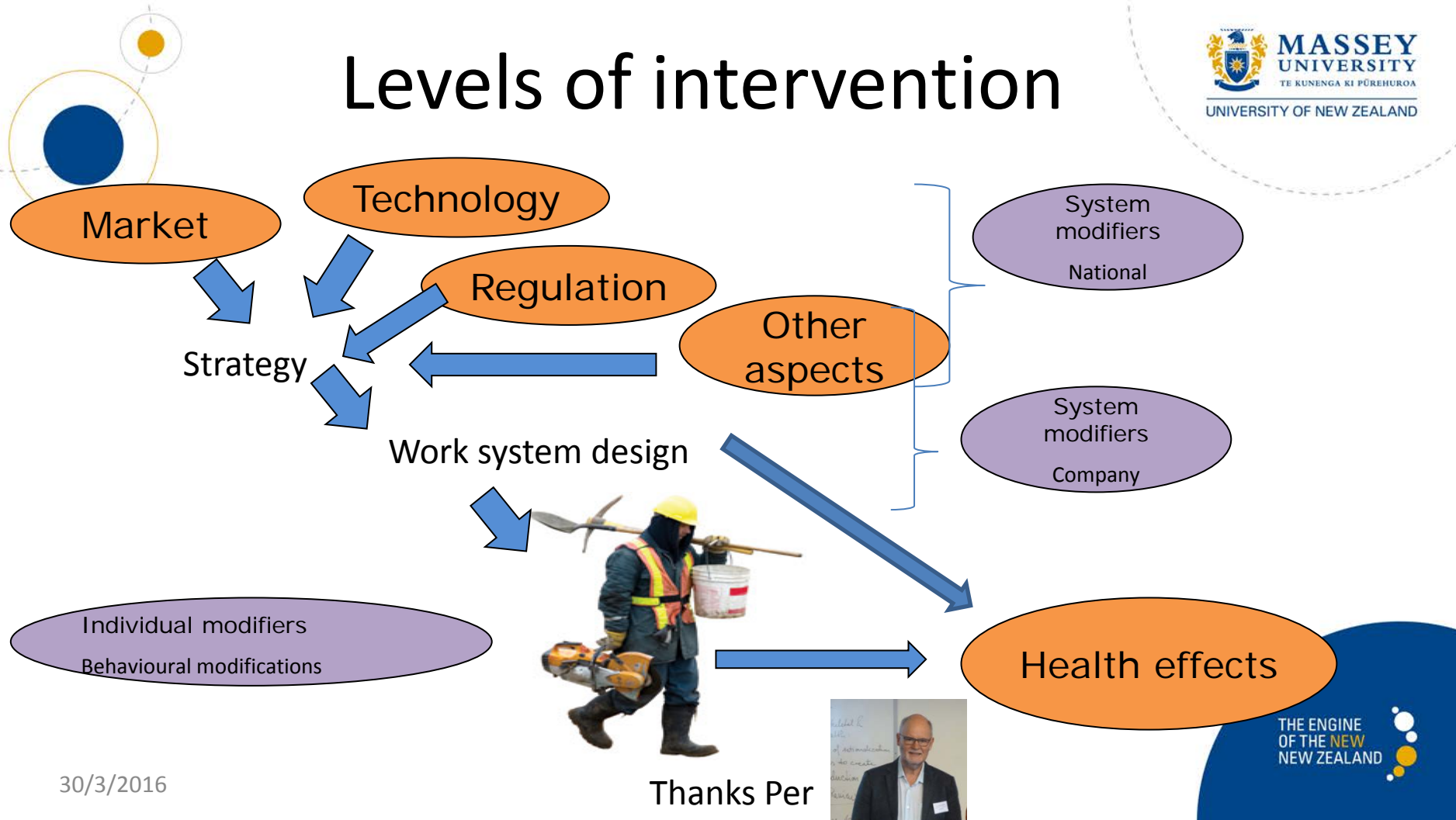
OHS specialists

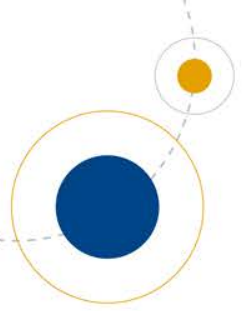
- Determinants for creation of good jobs
- Technology development and it's affect on the work environment and peoples health
- The organisation as a political arena
- How to act in organisations in the political arena

The OHS framework used in New Zealand



Levels of intervention





Thanks Per



Any questions?

