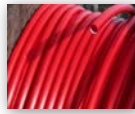


OSH Research priorities in the context of Globalisation and the changing world of work

- › Prof Paulien Bongers
- › TNO, The Netherlands





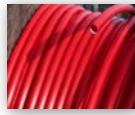
Trends and social changes

Society



Individual

- Ageing of population
 - Pressure on public finances and shortage of workers expected
 - Need to extend working life
- Global competition
 - High productivity and innovation of companies mandatory
- Increase in flexible working arrangements
 - Requiring increased self-management of workers (also in OSH)
- Lifelong learning essential
 - Changes in labour market and working tasks
- Increase in (lifestyle-related) health problems



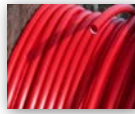
EU position in the globalising economy

- › The future of work for the EU: **growth needs to come from innovation**
*Technology will be the major force of innovative change, but the agents of change will be the **healthy and innovative workers and organisations**, that envision, articulate, implement and improve the innovations > **Good and motivating working conditions are an asset***

- › **Inclusive growth is** essential in order to maintain social cohesion and an affordable society

*Therefor with an ageing workforce productivity needs to increase without new risks or excluding the low skilled workers: new jobs, new skills > **Good and capacitating working conditions are a necessity***

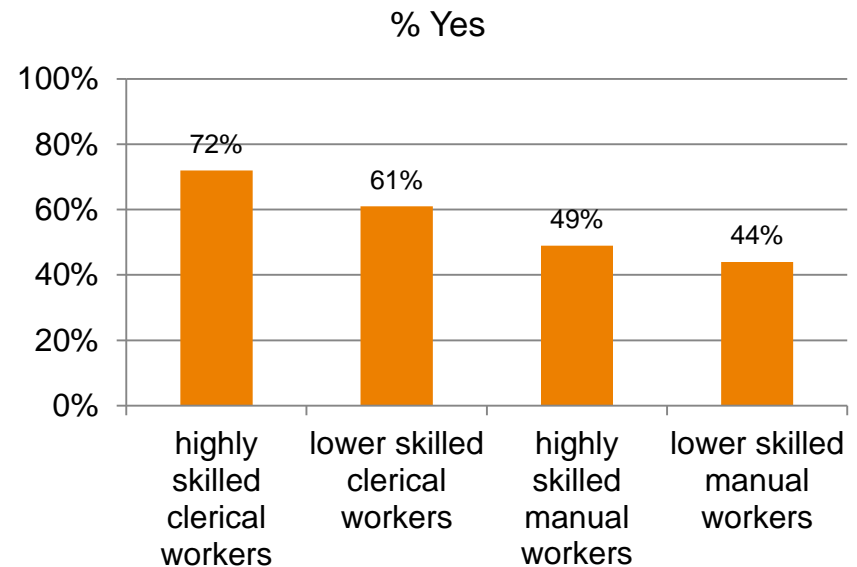
Integrate OSH with other domains and with technology and show the effects on growth > consequences for research agenda



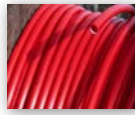
Extension of working life and increase productivity in Europe in a globalised world

- Governments in EU-27 introduced (financial) measures to raise retirement age
 - However, not merely extension of working life,
 - › but extension of **productive** and **healthy** working life needed

- Self-perceived ability
 - › to perform current job
 - › until age 60 (!) notably
 - › low in some groups of
 - › workers in EU-27

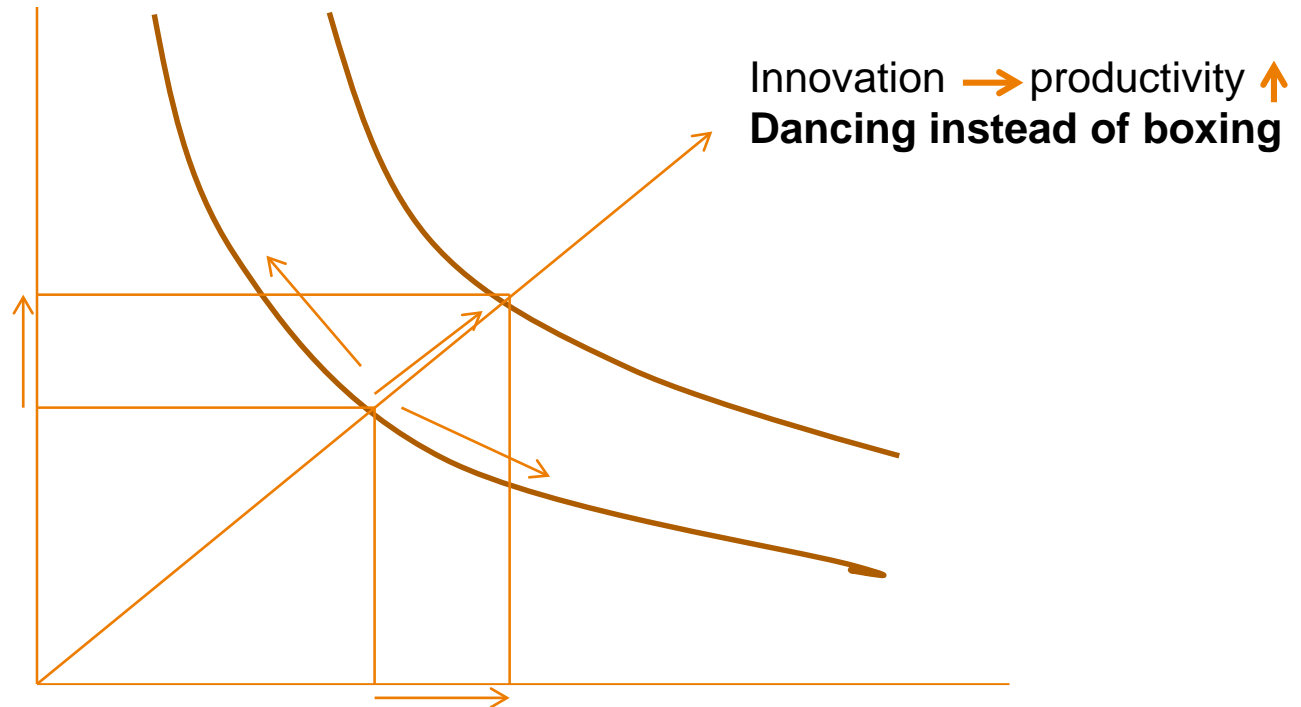


EWCS 2010

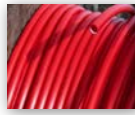


Dancing instead of boxing

Performance
Economic
aspects

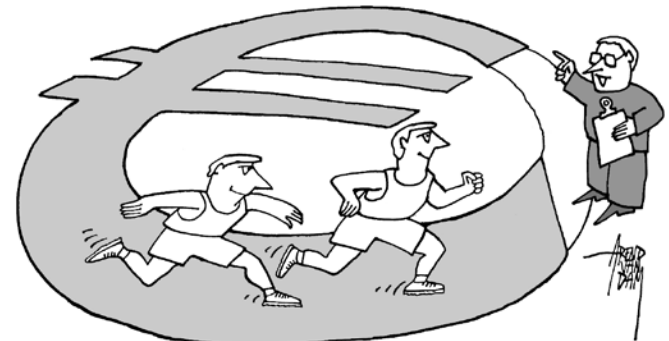


“Good work’ **Integrate OSH with other aspects** like learning, aknowledgement, development, workplace and organisational design, use of human talent i.e human capital



Show the affect of OSH on Economic growth

- › Change the conceptual frame work
- › Show that OSH interventions are worth the investment
 - › Benefit, productivity, added value, strategic value
Business case or Value case
 - › Public value: increased health
- › Short and long term impact asesment
- › Scientificly based and quick and easy to use





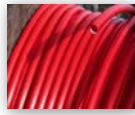
Effects of globalisation: the changing world of work

1. Intensified competition

- › **Continuous restructuring** as a component of industry (downsizing, relocation, acquisition, outsourcing) Intensified through crisis
- › Calls for more research on effects on labour force, mental health
- › In particular more information transfer and implementation



- › New trend insourcing: research needed on the necessary condition to make it feasible, desirable and sustainable (example on dialogue on individualised shiftwork)

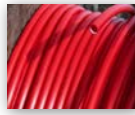


Effects of globalisation: the changing world of work

2. Shift towards services and **more flexible arrangement**

- › Increased high skilled and low skilled jobs that call for knowledge on
- › Enhancement of engagement in the high skilled jobs (battle for talent)
- › Research on capacitating flexible arrangements (dancing, no zero sum game) both sustainable external flex and internal flex strategies (pools, structural regional arrangements, e support for training, prevention mental retirement, soft skills, intrapreneurship,, OSH & work place innovation)
- › E tools, AVR, platforms, learning temp agency jobs, games for dialogue



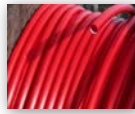


Effects of globalisation: the changing world of work

2. Shift towards services and **violence and harassment**

- › Cost effective prevention of mental strain due to client interaction (business case)
- › Job characteristics and prevention of violence and harassment

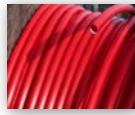




Effects of globalisation: the changing world of work

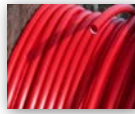
3. Extra: Fluid company boundaries, increased working in continuously changing networks (SME)
 - How to manage OSH in these networks
 - How to use new technology to increase both health and competitiveness in continuously changing environments
 - Which regional collaboration is necessary





Effects of globalisation: the changing world of work

4. How to maintain well being, positive psychology, vitality in the 24/7 economy (lifestyle, work life balance, emotional and mental well being, ...) underscore **combined approach** with workplace innovation: More research needed in, among others:
 - Positive effects of work itself on vitality and health, resilience, self-management, lifestyle and participation in society (playground for self management skills)
 - Emphasis on research on healthy and productive cultures at work, capabilities approach, integration with learning,
 - How to effectively use technology for human enhancement?
 - How to effectively use e coaching and support?



Effects of globalisation: the changing world of work

5. Develop EU research and technology to empower **SME** (training, e support, cultural change support, see networks)



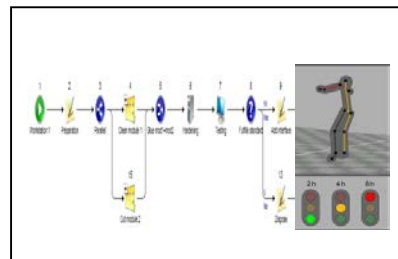
knowledge and
learning
management system



VR training/gaming
for security in
emergency case



VR immersive training
for work on
workstations and with
machines



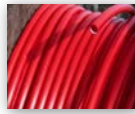
OSH risk assessment
in current and future
work processes

Emphasis on transfer
(technological approaches),
integrative approach and
networks

How to harmonise instruments
and develop EU standards

➤ aim to promote health and
safety and reduce related costs
in small/medium manufacturing
companies

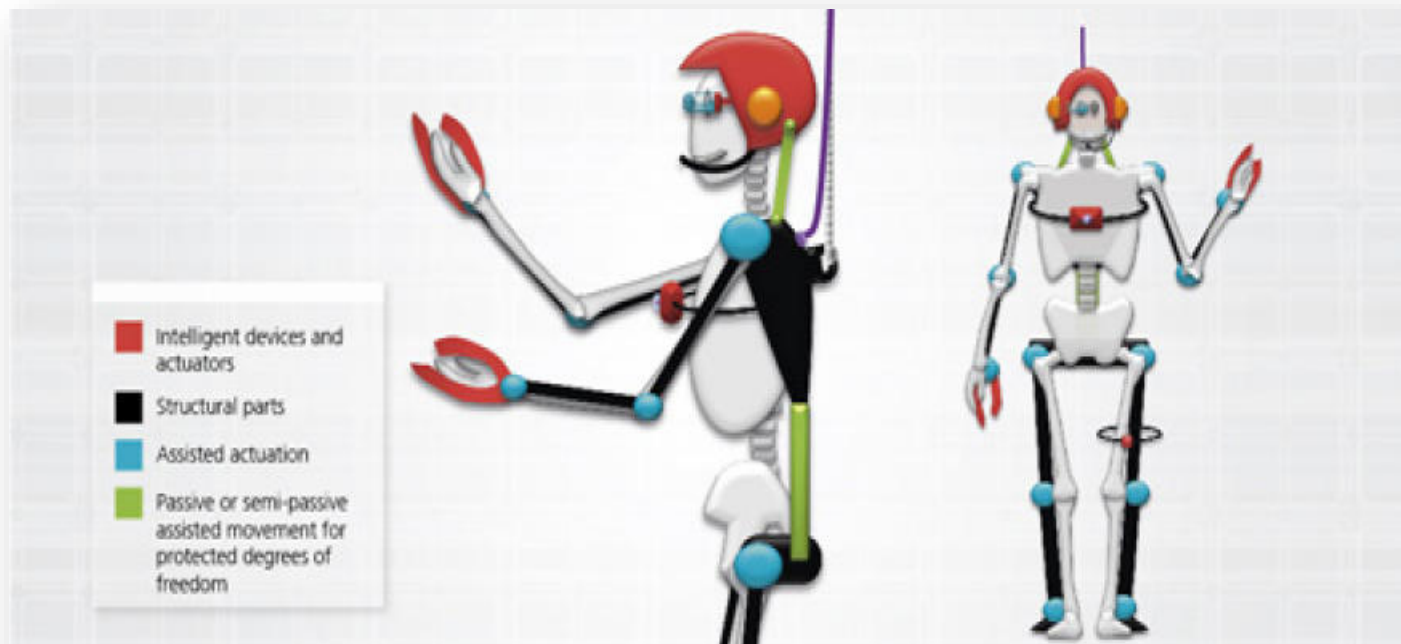
➤ developed by research in close
collaboration with companies
and sector organisations



Human robot collaborations to keep flexibility in (automotive) production lines

Exoskeleton for assistance in heavy duty work
(already used in rehabilitation and military but not yet in industry)

Provide workers with an intelligent tool, enabling them to increase productivity and decrease physical stress





Effects of globalisation: the changing world of work e support for a balanced and healthy life



Alice (29 jaar)

woont in Dordrecht
Computermanager bij een elektronicazaak
32 uur per week
Haar man Martijn (31 jaar) werkt ook 32 uur per week als vertegenwoordiger bij een elektronicazaak

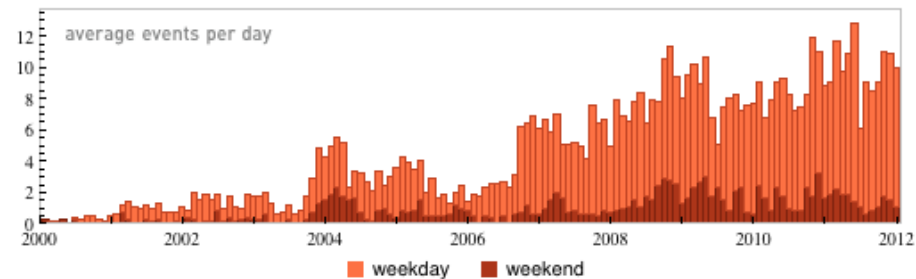
"Hi, ik ben Alice"

"Het behouden van mijn werk is voor mij heel belangrijk. Het is mijn manier om mijn inkomen te verdienen. Het is mijn manier om mijn inkomen te verdienen. Het is mijn manier om mijn inkomen te verdienen."

"Ik ben een beetje van een ander soort. Het is een beetje van een ander soort. Het is een beetje van een ander soort. Het is een beetje van een ander soort."

"Ik heb een leuke baan. Het is een leuke baan. Het is een leuke baan. Het is een leuke baan."

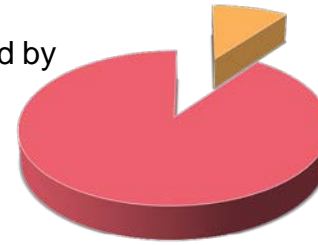
"Ik heb een leuke baan. Het is een leuke baan. Het is een leuke baan. Het is een leuke baan."





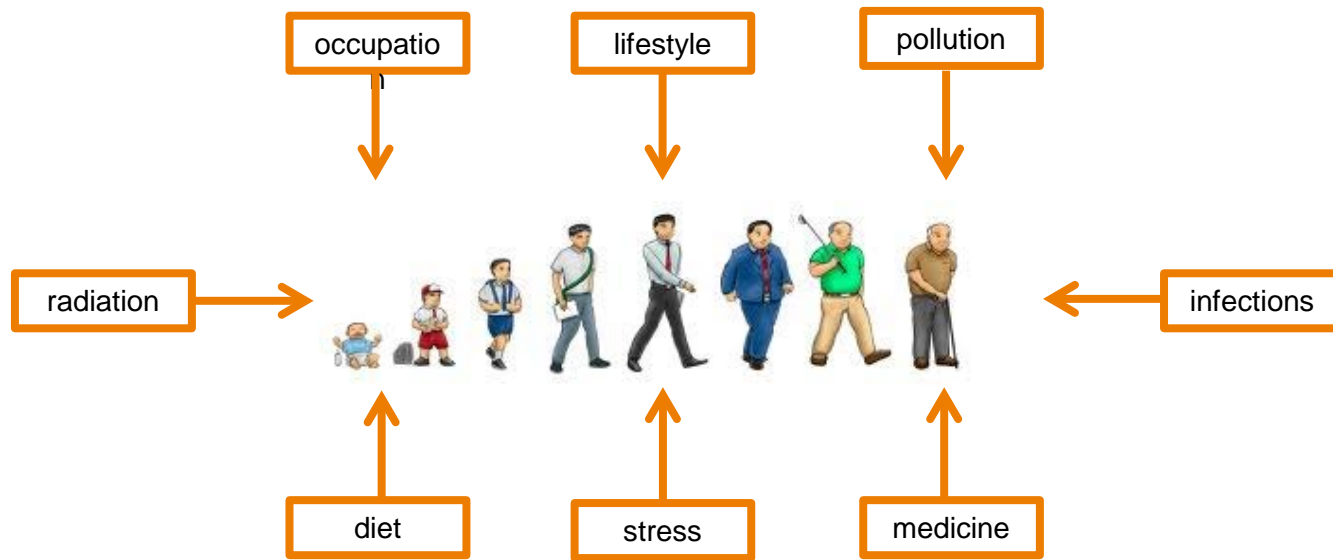
Do not forget about research in prevention in High risk sectors

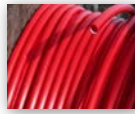
10% explained by
genetics



90% appears to be from
external causes =
exposome

The exposome: The measure of all the exposures of an individual in a lifetime and how those exposures relate to health





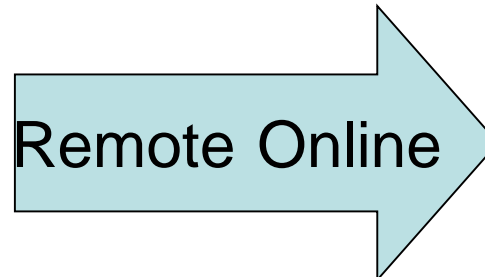
Effects of globalisation: the changing world of work

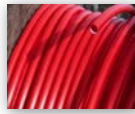
6. Use EU research to **create a level playing field in the globalised world**

Research on the most cost effective methods

Example : AR and VR to improve train maintenace

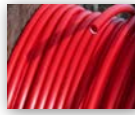
support: operator in spain can online instruct operator in
USA





Example 2 : use VR and AR to develop training and instruction from one country to another to obtain in more healthy work stations globally





Emphasize integrated research (dancing) and show its value for growth and inclusion

- **Individual/Organizational level**
 - Job crafting: Improve person-job fit and enhance motivation and ability to prolong career
 - Intervention promoting resilience, self-management, engagement
 - Intervention on learning culture: lifelong learning, learning on job
- **Organizational/Societal level**
 - Development of multi-actor approaches: employee and employer organizations, insurance companies, service providers, etc.
 - Improving cooperation between occupational care and primary/secondary curative care
 - Financial measures stimulating prolongation of working life
- **Supported by new design and technology**