



# Rethinking and refinement of risk assessment

Exchange of good practices in OSH

Healthy Workplaces Campaign Partner event

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Trends in the real World: IT, Big Data, I 4.0 etc.

Safety reflections

- Risk is our language
- RA expansion and integration
- Risk assessment / risk map
- Ways to maintain risk map
- Dynamic Risk Maps
- Adaptive intervention

Challenges

- Technology side
- Human / behaviour side
- Human Factor Implications

# Refinement of Risk Assessment with focus on Human Factors

Dr. David Tjong

Retired Global Director, Health, Safety & Environment

Ideal Standard International

- Understanding Human Behaviour
- Implement different solutions, focus on fixing the system & processes, rather than on fixing the people

## Perception

Communication,  
Warning signs  
(Visual/Audible)  
Labels, Colors

## Memory

Risk Awareness (share  
Inc/Acc),  
Communication on  
Lessons Learned,  
Inductions/Training,  
Warning signs  
(Visual/Audible),  
Labels, Colors

## Decision

SOP, Procedure,  
Manual

## Action

Engineering /  
Technical, Poka yoke  
(fool proof)



# Integrating OSH information processes

2018

## 12500 safety alerts

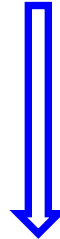
- 1000 alerts per month
- 35 alerts per day
- 650 alerts per site
- 55 alerts per month per site
- 2 alerts per month per site

- FMEA based risk assessment
- OHSAS18001/ISO45001
- equipment 'signoffs, etc..



## → Integrating OSH information process

*real time, online tools, connect safety alerts to risk assessments  
real time risk assessment management & management information*



+ different variables / 'types of hazards and risks'

→ *What's really worth doing next?*

→ Rethinking and Refinement of Risk Assessment

Fernando Lopes

Global Environment, Health & Safety and  
Sustainability

Delphi Technologies

# Rethinking and Refinement of Risk Assessment: Future Trends

Dr. Natalie Lotzmann  
Vice President Human Resources  
Chief Medical Officer  
Head of Health & Well-Being  
SAP SE



# Smart PPE

Henk Vanhoutte  
secretary general  
European Safety Federation (ESF)



- **Gloves with heating** (Zanier)
- **Gloves with GPS** (Zanier)
- **Gloves with infra red sensor for heat (firefighters)** (Zeis)
- **RFID in PPE – several applications**
- **Bicycle helmet – airbag** (Hövding)
- **Use of VR for training** (e.g. FIOH)
- **Helmet with detection system**
- **Exoskeleton – PPE or not ?**



# New approaches of integrative risk assessment

Thorsten Uhle  
 Head of Occupational  
 Safety & Health Governance  
 Bayer AG

