



HROs, Safety Management and Resilience

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Overview of workshop

- › HRO's , versus traditional safety management
- › The *Resilience Engineering* perspective
- › Dilemmas - that require dialogue



The five characteristics of HRO' s

- › Preoccupation with failure
- › Reluctance to simplify
- › Sensitivity to operations
- › Commitment to resilience
- › Deference to expertise

Relevant at organisational, team and individual level



Dealing with complexity, stemming from

- › Turbulent organisational environments
- › On-going reorganisations
- › New technologies
- › Newly emerging (uncertain or unknown) risks
- › New types of work organisation
Changes in culture (society and organisation)
- › More diverse (better educated and older) workforces than ever before.

- › Etcetera



Organisational mindfulness

- › Awareness and alertness
- › The ability to recognise (and give meaning to) weak signals
- › Allowing ambiguities
- › The importance of multiple perspectives
- › A characteristic of organisational culture / safety culture



Traditional versus resilient approach to safety

| Traditional approach | Resilient approach |
|---|--|
| Failure is deviation from normal performance | Variation is natural (normal) |
| Accidents result from linear progressing causes and effects | Accidents result from interdependencies in complex systems |
| Barriers are essential to prevent accidents | Prevention focuses on unexpected events and containment |
| Expert planning of safety, improvisation is dangerous | Improvisation is essential for safety, expertise is local |
| Focus on failures and errors | Focus on expertise and knowledgeable action |



Three dimensions of developing resilience

- › **Structure:** *organisation designed for precaution, mindfulness, adaptiveness, flexibility, recovery – assuring adequate resources*
- ›
- › **Culture:** *The unexpected is embraced, ability and willingness to openly exchange information, to give feedback, to accept improvisation within agreed boundaries, willingness to change*
- › **Organisational learning:** *adaptation, active knowledge management, giving meaning, collective memory, renewal without becoming rigid, developing values.*

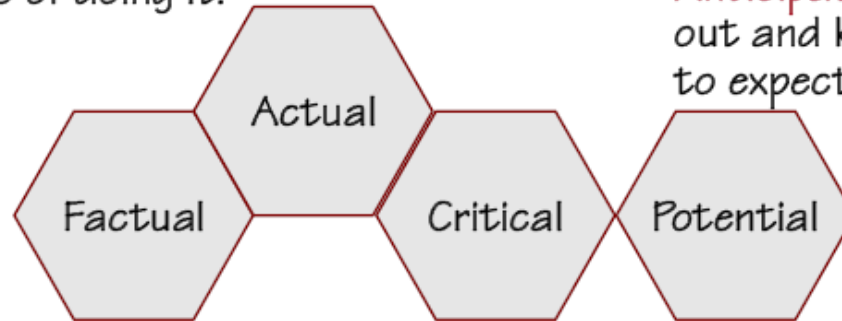


”Resilience is the intrinsic ability of a system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required operations even after a major mishap or in the presence of continuous stress”



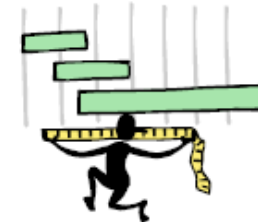
Responding: Knowing what to do, being capable of doing it.

Anticipating: Finding out and knowing what to expect



Learning: Knowing what has happened

Monitoring: Knowing what to look for (attention)



Resilience engineering measures how safe a system is by what it is able to do, hence measures of the positive rather than the negative.

Source E. Hollnagel



Innovative ideas create resistance, don't let it stop you

Resilience Innovation Lab

Welcome to the Resilience Innovation Lab. This is the online community for all those people and organizations interested in [resilience](#), especially in relation to safety. This community facilitates us in bringing the concept of resilience further, thus becoming a valuable tool for dealing with complex systems. The resilience innovation lab is already a community of partners, such as Mines Paris Tech, the world over and from industry and academics alike. The more people become a member, the more information about resilience will be available, the more discussions and visions will be spread and the better this important tool will develop. So if you deal with complex systems in your business consider this [exclusive membership](#), so you could enter the online community: the Resilience Innovation Lab.

Take a look at [this public section](#), to get an impression of the section for members online. If you have any questions left after seeing this website, do not hesitate to [contact us](#). We hope to see and welcome you and your colleagues soon!

Read more about resilience..

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Dilemmas to discuss in this workshop

1. Safety: planned by the experts or created by mindful people?
2. Traditional safety management or coping with complexity?
3. Learning from incidents or from good practices?
4. How to manage emerging risks that we do not fully understand?
5. How can intangible (early) warnings be acknowledged as meaningful?



Safety: planned by the experts or created by mindful people?

- › How far can safety be planned by the experts?
- › How do we know to what degree that safety is predictable?
- › Who are the real experts?
- › Is safety a matter of rational management (Plan Do Check Act), or are culture and behaviour more important?
- › How can we use knowledge and expertise optimally?



Traditional safety management versus coping with variability and complexity

- › How predictable is your production process and safety?
- › Are you sure?

- › What are examples of unexpected events stemming from normal variation or inherent complexity?

- › How do we cope with surprises stemming from dynamic complexities?

- › What does this imply for safety management systems?
- › And for safety leadership? And for accountability?



Learning from incidents or from good practices?

- › Accidents and incidents happen, unfortunately.
- › They are analysed, but why does it only seldom lead to better safety performance?
- ›
- › In many corporations, good practices and poor practices co-exist.
- › Why is it so difficult to learn from their own good practices?

- › What are 'meaningful and positive' events?
- › And how can organisations learn from them?



How to manage emerging risks that we do not fully understand?

- › Without generally accepted risk models, experts will come to different (opposing) conclusions
- › Examples are: The risks of nano technology, Q-fever, outbreaks of new communicable diseases, biosafety, new chemical processes
- › Underlying factors are uncertainties, complexities and ambiguities
- › How to act safely and responsibly?
- › How to apply the precautionary principle without frustrating innovation?
- › How to deal with stakeholders that demand guarantees for safety?



How can intangible (early) warnings be acknowledged as meaningful?

- › How to recognise 'weak signals'?
- › In Technology? Organisation? Behaviour of people?
- › How to give meaning to intangible factors (especially in a rational business environment)?
- › What argumentation is credible for sceptic managers?
- › How can reporting of weak signals be encouraged?
- › Why are whistle blowers so often sanctioned?
- › Why do organisations often prefer unsafe misperceptions over opportunities to improve safety?



Thanks for your attention

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