Making Safety Culture to Corporate Culture

The evolution of safety culture

Age of systemic safety

Age of safety management

Age of human factors

Age of technology

| 1769 Industrial Revolution | 1961 Fault tree analysis | 1979 TMI | 1986 Chernobyl Challenger | 2011 Fukushima |
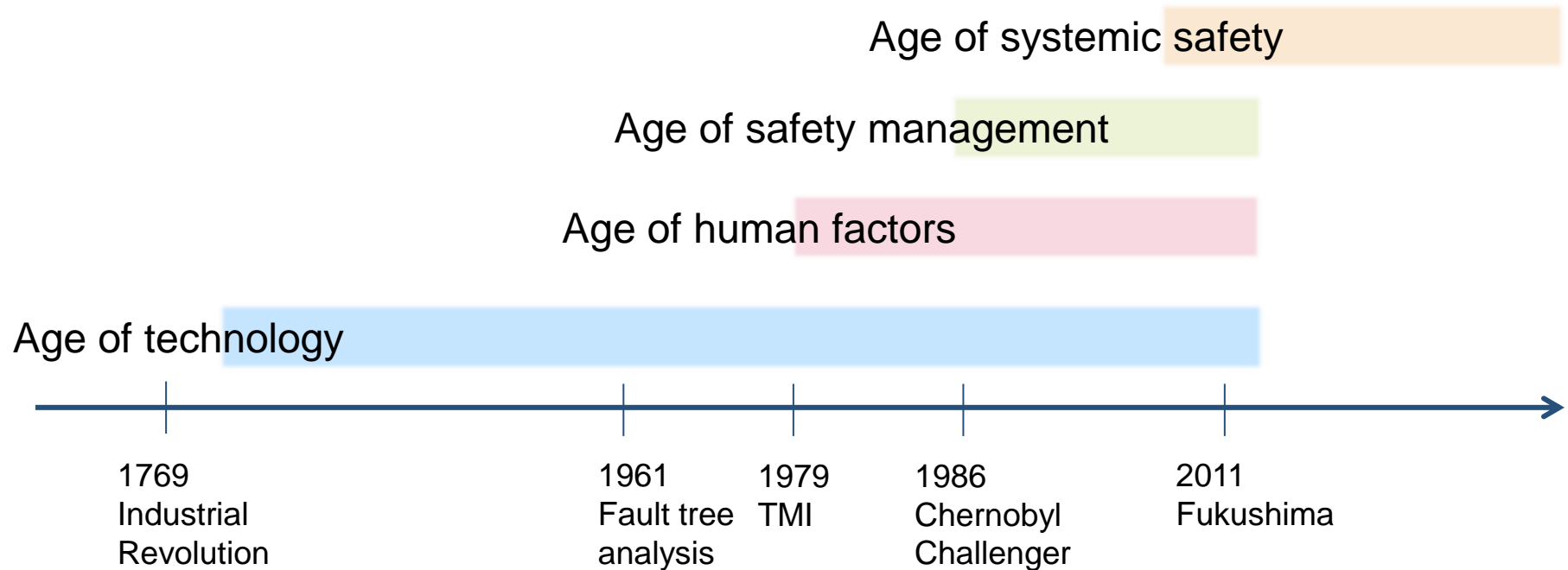
Bad apple theory

The Theory of Bad Apples approach is popular, because blaming and removing individuals from the system seems like a quick-fix and is attractive in its simplicity…

But… we need to move beyond the simplicity. We need to understand the context to improve our safety work. We need to think more creatively and differently about the safety issues we as humans and our organizations face…

Continued work towards a Systemic approach

The modern view of safety

MODERN SAFETY THINKING

- **Modern views complement, and do not cancel, traditional models and approaches.**

- **New safety thinking recognises the value of standardized procedures but goes beyond compliance behaviour.**

- **The ultimate goal is to build a mature and proactive organizational culture, which does not merely react to unwanted events.**

MODERN SAFETY THINKING

9 key attributes

1. **Human error seen as symptom and not as cause.**
    This does not cancel responsibility and accountability of workers and managers.

2. **Avoidance of hindsight bias.**
    We try to understand the course of events from the place of the actors and not as external observers.

3. **Shared responsibility.**
    Both good and adverse outcomes result from interdependencies and interactions of all organizational functions.

4. **Focus on success rather than solely on failures.**
    We need to understand how employees perform well under constantly changing conditions and conflicting goals.

MODERN SAFETY THINKING

9 key attributes

5. **Feedback mechanisms.**
   System processes in addition to their planning and operation must be constantly monitored in order to allow adjustments.

6. **Avoidance of folk models.**
   The use of abstract statements without further explanations (e.g., lack of motivation, boredom, loss of awareness) does not support our understanding of why things do not go well.

7. **Non-counterfactual approach.**
   In addition to comparing performance with standards, we must explore the underlying reasons for non-adherence to procedures.

8. **Non-judgmental attitude.**
   Apart from comparing performance with norms and expectations, we need to both question established "norms" and explain why people do not act as expected.

9. **Systemic view.**
   Good and unwanted events result from continuous interaction among systems elements under variable conditions and multiple objectives.

Focus on success rather than solely on failures

$10^{-4} = 1$ failure in 10.000 events

$1 - 10^{-4} = 9.999$ non-failure in 10.000 events

The imbalance between things that go right and things that go wrong

The thin red line represents the case where the (statistical) probability of a failure is 1 out of 10 000.
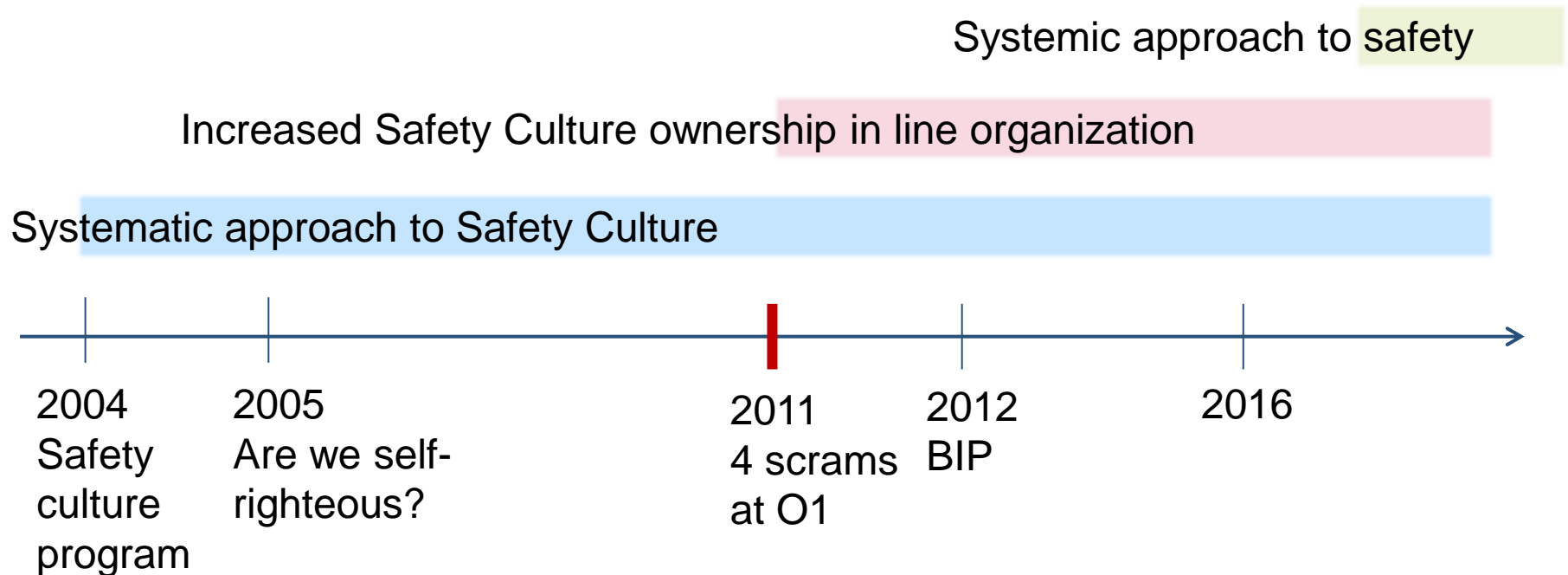
This also means that one should expect things to go right 9 999 times out of 10 000 – corresponding to the green area.

Focusing on the lack of safety does not show us which direction to take to improve safety.

The ratio of 1:10,000 corresponds to a system or organization where the emphasis is on performance (cf., Amalberti, 2006); the ratio would be even more extreme for an ultrasafe system.

Hollangel 2013, "A Tale of Two safeties"

The evolution of safety culture at OKG

Systemic approach to safety

Increased Safety Culture ownership in line organization

Systematic approach to Safety Culture

2004
Safety
culture
program

2005
Are we self-
righteous?

2011
4 scrams
at O1

2012
BIP

2016

OKG – The next step towards a modern safety thinking

Collaboration with Amsterdam University of Applied Science

"The goal of this project was to propose to OKG measures, by which the company will improve its ability to facilitate and manage the organizational prerequisites for the emergence of a culture that will lend the organization resilient properties and risk awareness."

Organizational safety components

Reason's Subcultures	Definition
Just culture	Defined acceptable and unacceptable behaviour.
Flexible culture	A culture that accepts variability.
Reporting culture	A culture where staff, both in the sharp end and blunt-end, are prepared to voluntarily report their own hazards, errors, violations, and deviations.
Informative culture	A culture that enables information sharing across the organisation.
Learning culture	A culture that draws valuable conclusions from its safety information system, and drives changes in the organisation based on the lessons learned.

Benchmark

Domain	% of descriptors	Regulatory documents
Aviation	69%	ICAO and CANSO
Railway	67%	EU and ERA
Oil & Gas	67%	OGP
Nuclear	64%	IAEA
Healthcare	58%	WHO and EU
Defence	53%	US Air Force and NATO
Maritime	33%	IMO and ISF
All industry sectors	**59%**	

Benchmark

Domain	Just culture	Flexible culture	Reporting culture	Informative culture	Learning culture
Aviation	40%	67%	86%	75%	83%
Railway	40%	33%	43%	75%	83%
Oil & Gas	40%	67%	57%	50%	83%
Nuclear	40%	67%	29%	75%	67%
Healthcare	0%	0%	71%	75%	83%
Defence	0%	67%	14%	75%	83%
Maritime	0%	33%	14%	25%	50%
All industry sectors	**29%**	**48%**	**45%**	**64%**	**76%**

The systemic view

Finally, to be able to make Safety Culture into Corporate Culture it's imperative that we incorporate a Systemic view!

Good and unwanted events result from continuous interaction among systems elements under variable conditions and multiple objectives.

Humans and organisations acting and thinking are constantly influenced by it's context. Therefor,
a systemic view is vital!

Questions?

Thank you!