

INCREASING ORGANISATIONAL RESILIENCE THROUGH SAFETY CULTURE DEVELOPMENT

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AVIATION ACADEMY

Mission: Provide the current and next generation of professionals with the skills they need to meet the international aviation challenges of the next 10 to 15 years.

Pillars: Education, Applied Research, and Events

Research areas:

- Safety & Human Factors
- Maintenance Optimization
- Airport Capacity
- Composite Materials



OVERVIEW

- The “Safety Culture” concept.
- Research in the Aviation Academy
- What are the prerequisites for a safety culture?
- What are the descriptors of safety culture?
- How do we prioritize safety culture development activities?
- How is safety culture connected to organizational resilience?



THE “SAFETY CULTURE” CONCEPT

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HOW DO WE UNDERSTAND “SAFETY CULTURE”?

- “Safety culture” was firstly introduced in 1986 (Chernobyl accident).
- Since 1986 plenty and somehow divergent definitions.
- Confusion between the meanings of safety culture and safety climate.
- What is the result?
 - Different guidance provided by various industry sectors.
 - Divergent safety culture activities amongst organizations.
 - A range of safety culture assessment instruments.

HOW DO WE UNDERSTAND “SAFETY CULTURE”?

- What are the traps?
 - Safety culture being introduced as the new scapegoat and folk model during accident investigations.
 - Seen as sum or product of individuals, rather than a matter of interaction and sharing.
 - Measurement methods and tools:
 - Address dimensions (i.e. “what”) but do not uncover the underlying mechanisms (i.e. “why” and “how”) if not followed by qualitative analysis.
 - Lack a valid reference point for comparison.
 - Do not explicitly explore how safety competes with other parallel organizational goals (e.g., production, security, quality)
 - Do not count for the interaction amongst various cultures (e.g., individuals, professional groups, departments, industry sector, nation)

RESEARCH CONDUCTED BY THE AVIATION ACADEMY

- Request by a Nuclear Power Plant (NPP) to conduct a research in order to:
 - Identify the prerequisites for safety culture development, as these are referred in the literature;
 - Assess the extent these prerequisites are present in the NPP and various industry sectors' respective documentation;
 - Provide an indication of the position of the NPP compared to the safety culture development practices of the industry sectors under consideration;
 - Evaluate the potential gaps amongst the planning, operation and monitoring of safety culture development activities at the NPP.

SAFETY CULTURE: THE PREREQUISITES

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SAFETY CULTURE PREREQUISITES

- Management commitment.
- Leadership.
- Clear responsibilities and accountabilities.
- Safety department visibly responsible and accountable for safety planning.
- Employees' involvement.



SAFETY CULTURE PREREQUISITES

- Non-reliance on past success.
- Risk management policy.
- Planning for buffers.
- Rewarding safety initiatives.
- Internal communication.
- External communication.

SAFETY CULTURE: DESCRIPTORS

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REASON'S SAFETY RELATED SUBCULTURES





JUST CULTURE DESCRIPTORS

- Documented definition of “acceptable” and “unacceptable” safety behaviour.
- The decision for attributing unacceptable behaviour is made and agreed by peers.
- Practitioners know their rights and duties regarding occurrences.
- Prevention of practitioners’ stigmatisation.
- Organisational support in legal disputes.



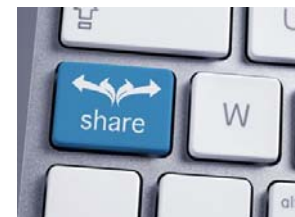
FLEXIBLE CULTURE DESCRIPTORS

- Recognise the inevitable gap between standard procedures and working practices.
- Control of variability. Policy for managing the efficiency – thoroughness trade-off.
- Emergency response and crisis management exercises.



REPORTING CULTURE DESCRIPTORS

- Clear policy about reporting.
- Characteristics for maximum potential of a reporting system:
 - Voluntary;
 - Non-punitive;
 - Protected (confidential);
 - User-friendly;
 - Accessible (system close to work-station);
 - Timely feedback to reporter.



INFORMATIVE CULTURE DESCRIPTORS

- User-friendly safety information system with free access.
- Content of safety information.
- Planning for access to safety information.
- Information sharing across teams, units and departments.



LEARNING CULTURE DESCRIPTORS

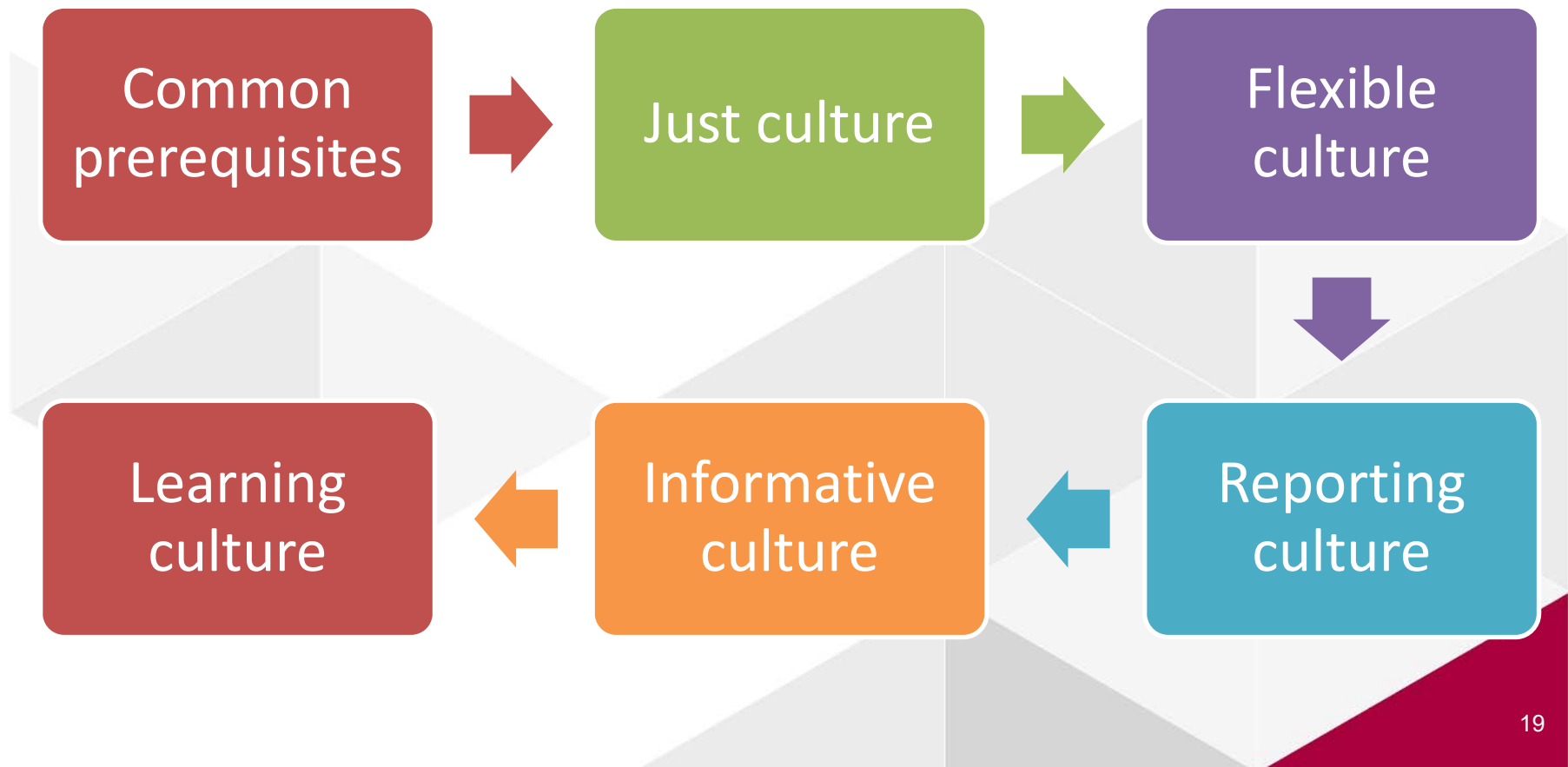
- Learning from failures.
- Learning from success.
- Safety training.
- Internal benchmarking.
- External benchmarking.
- Safety information used to initiate changes.

HOW TO PRIORITIZE SAFETY CULTURE DEVELOPMENT ACTIVITIES?

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SAFETY SUBCULTURES: IN WHICH ORDER?



IS PLANNING FOR SAFETY CULTURE ENOUGH?



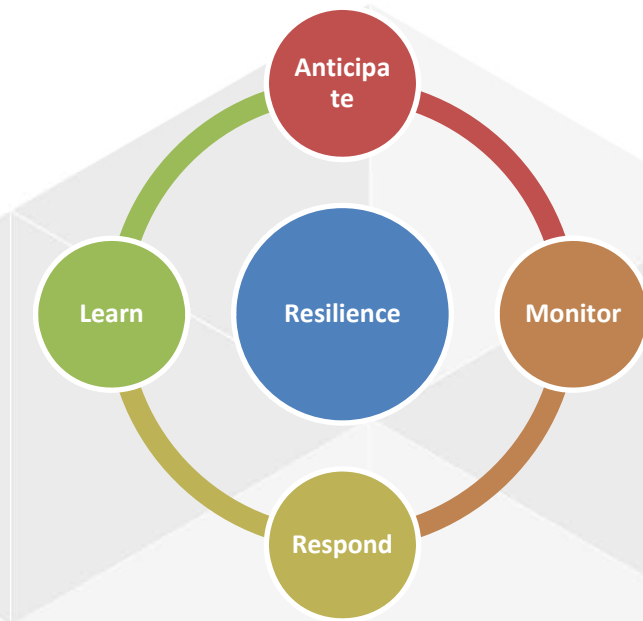
SAFETY CULTURE & ORGANIZATIONAL RESILIENCE

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ORGANIZATIONAL RESILIENCE ABILITIES

- Anticipate: Prepare to deal with unplanned, unexpected and unwanted events.
- Monitor: Trace performance variability and deal with uncontrolled deviations.
- Respond: Act and adapt to both planned and unforeseen situations.
- Learn: Initiate changes at all functional levels.



SAFETY CULTURE & ORGANIZATIONAL RESILIENCE

Safety culture prerequisites	Resilience abilities
Common organisational prerequisites	Anticipate, monitor, response, learn
Just culture	
Flexible culture	Response
Reporting culture	Monitor
Informative culture	Learn
Learning culture	

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