



Preparing for Failure: Organization level imperatives

WRMC, October 2023

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**Managing
Risk**

Systems Planning
for Outdoor
Adventure
Programs



Agenda

1. Review: What do we know about safety so far? Ind & Org
2. Org level exposures – research and findings
3. Views on preparing for failure



Bottom line:

- Routines, Rules, Responses
- Orgs are sum of our routines
- Routines require stable operating env
- Rules and Responses required to cover failed routines



Org Failure: defined



Org Failure: defined

- Exceeding limits of functional performance – routines inadequate for outcome needed





Training to Failure and Other Unlikely and Highly Effective Training Strategies

WRMC 2018

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- <https://www.youtube.com/watch?v=bw6rxHbB4r4>

Safety critical skills

Specific Perf. Req's:

Varied Perf. Req's:



Specific S.perf. needs
specific training

Varied S.perf. needs
varied training



Who is in the room?

So, what do we know about safety so far?

- Be at the right place at the right time, with the right people and the right gear, doing the right things...



Jeff Jackson Algonquin

Pair/Share Question:

- What your primary safety concerns in your org?
- (2 minutes per partner)

4:30

to go

Introduce and
get going!
Partner 1
share

4:00

to go

Partner 1
share

3:00

to go

Partner 1
share

2:00

to go

Partner 2
share

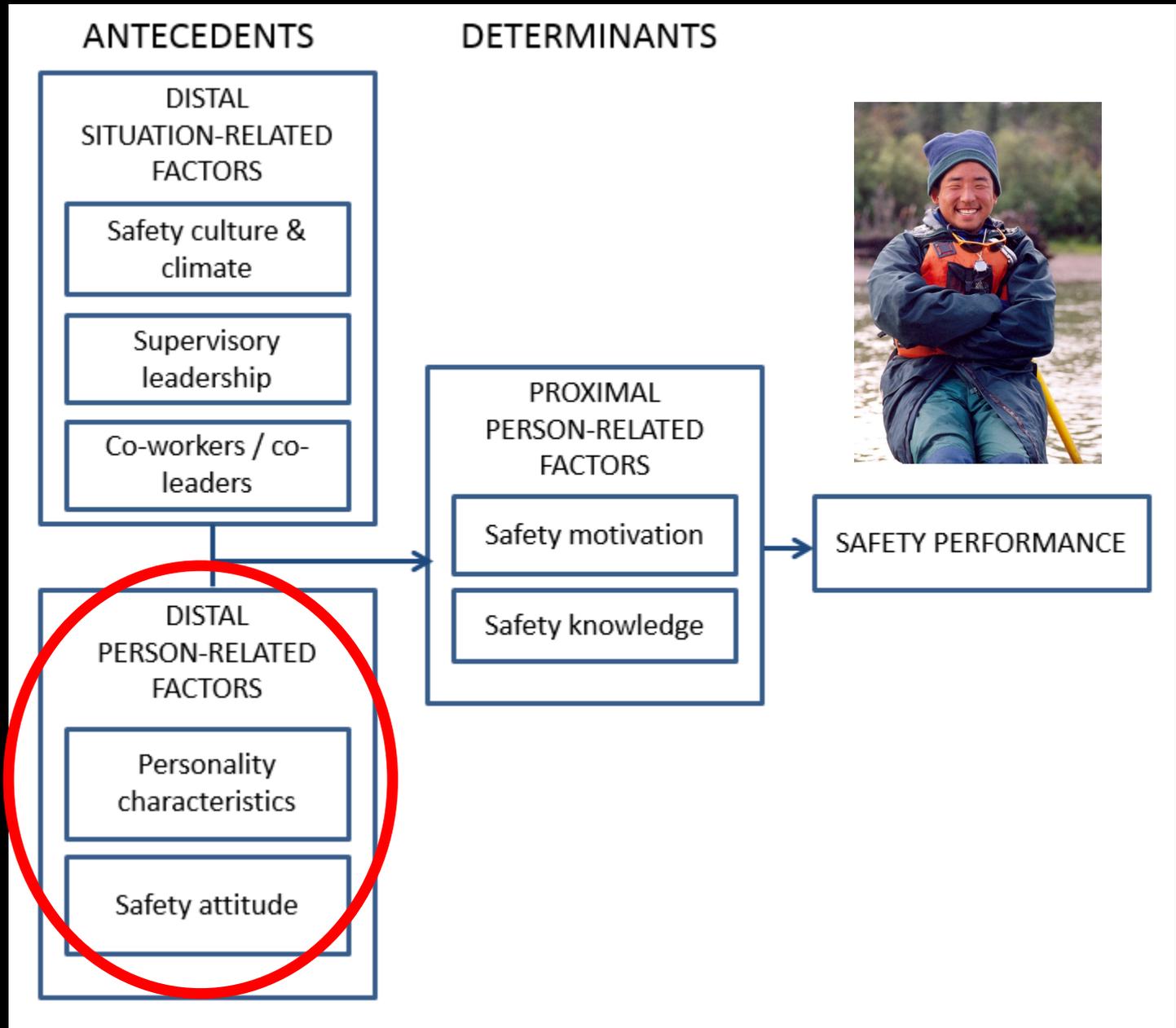
1:00

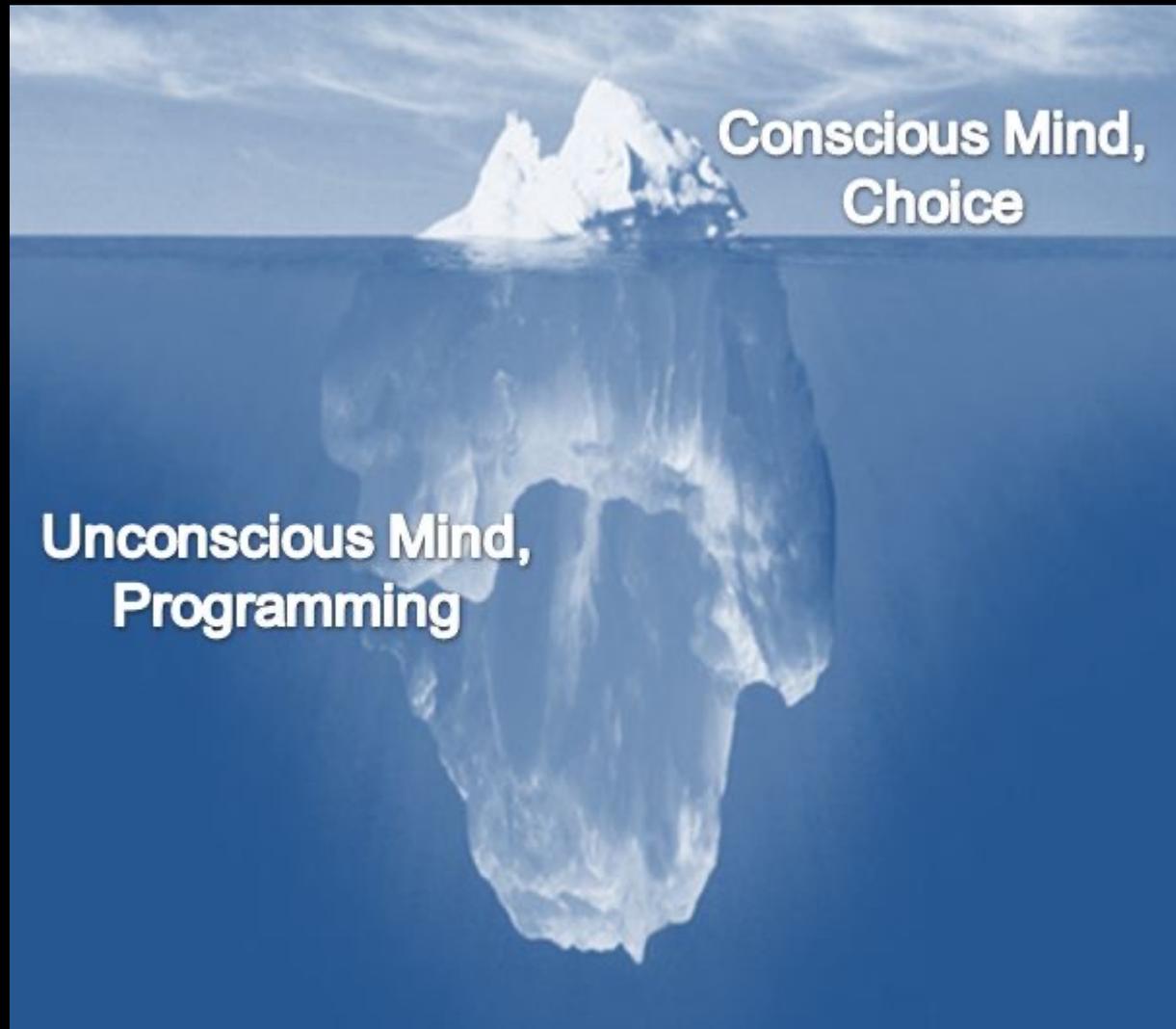
to go!

Partner 2
share

A large yellow rubber duck is the central focus, positioned in front of a night cityscape. The background is filled with a dark blue sky where a large, vibrant firework burst of white and purple streaks is exploding. The city lights are visible in the distance, reflecting on a body of water. The text "Time's up!!" is overlaid in a large, bold, yellow font with a blue outline.

Time's up!!







Work Motivation and Work Behaviour Influence Map

Proximal influence

Distal influence

Situation strength determines extent to which context exerts influence on causal chain

Person/Env fit: supplementary, complementary, job design

Self-regulation: cognition, goal choice, goal striving

Feedback

Needs:

Self concept
Social identity
Prevention/promo
Comp/related/auto

Personality: FFM, self-efficacy, core self evaluations

Context:

Situational
Cues

- Environment
- Task demands
- Social demands

Intention

Goal selection

Level of aspiration

Attention, effort, behaviour

Individual Behaviour & Organizational Outcomes:
Task performance;
Organization citizenship behaviour

Values: principles vs. norms

Values: preference and attitudes

Affect and Emotion

Self-regulation: emotion management, emotional intelligence

Feedback



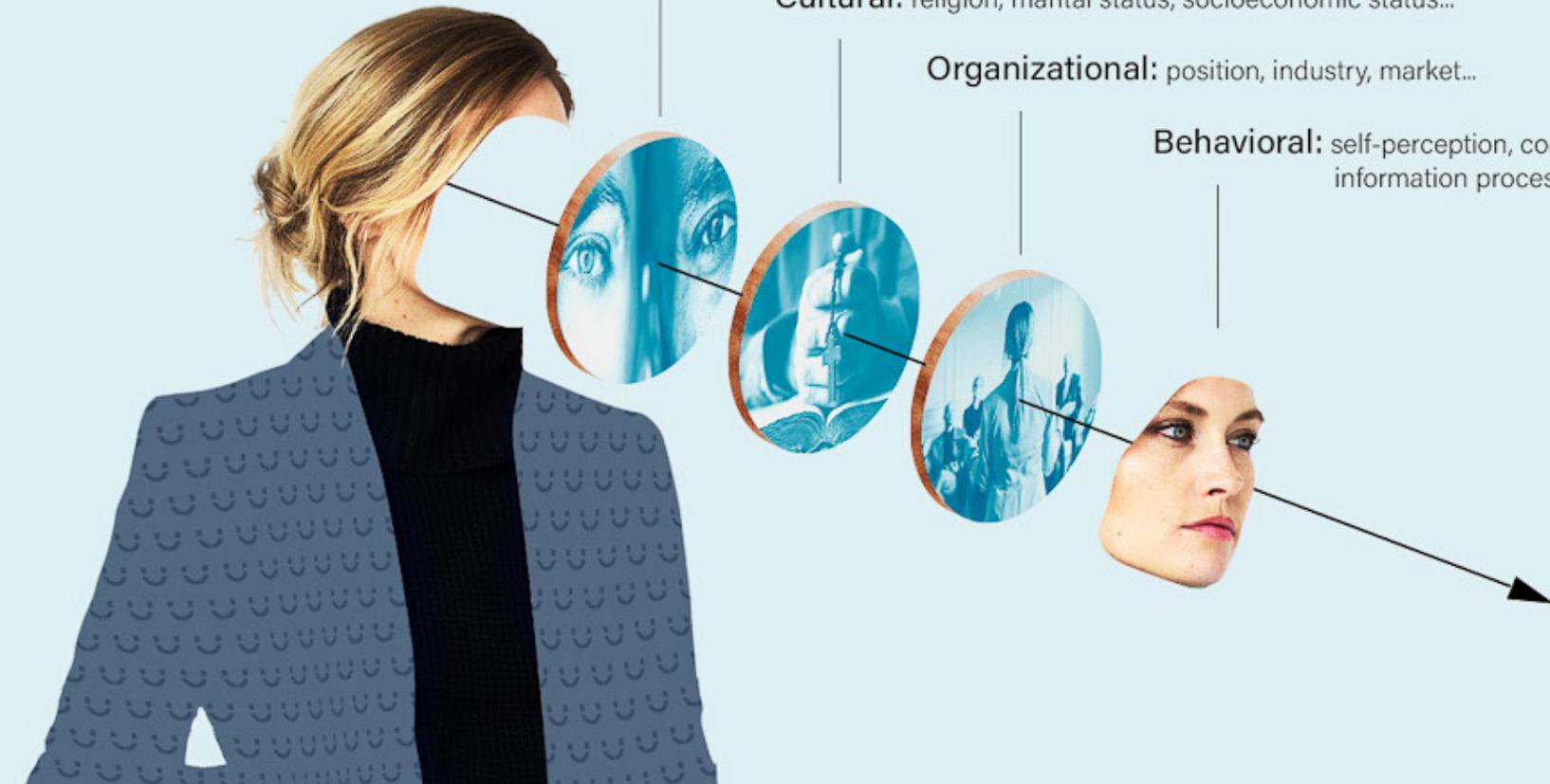
Personality

Inherent: age, generation, ethnicity, gender identity...

Cultural: religion, marital status, socioeconomic status...

Organizational: position, industry, market...

Behavioral: self-perception, communication, information process....



consciously



So, what do we know about safety so far?

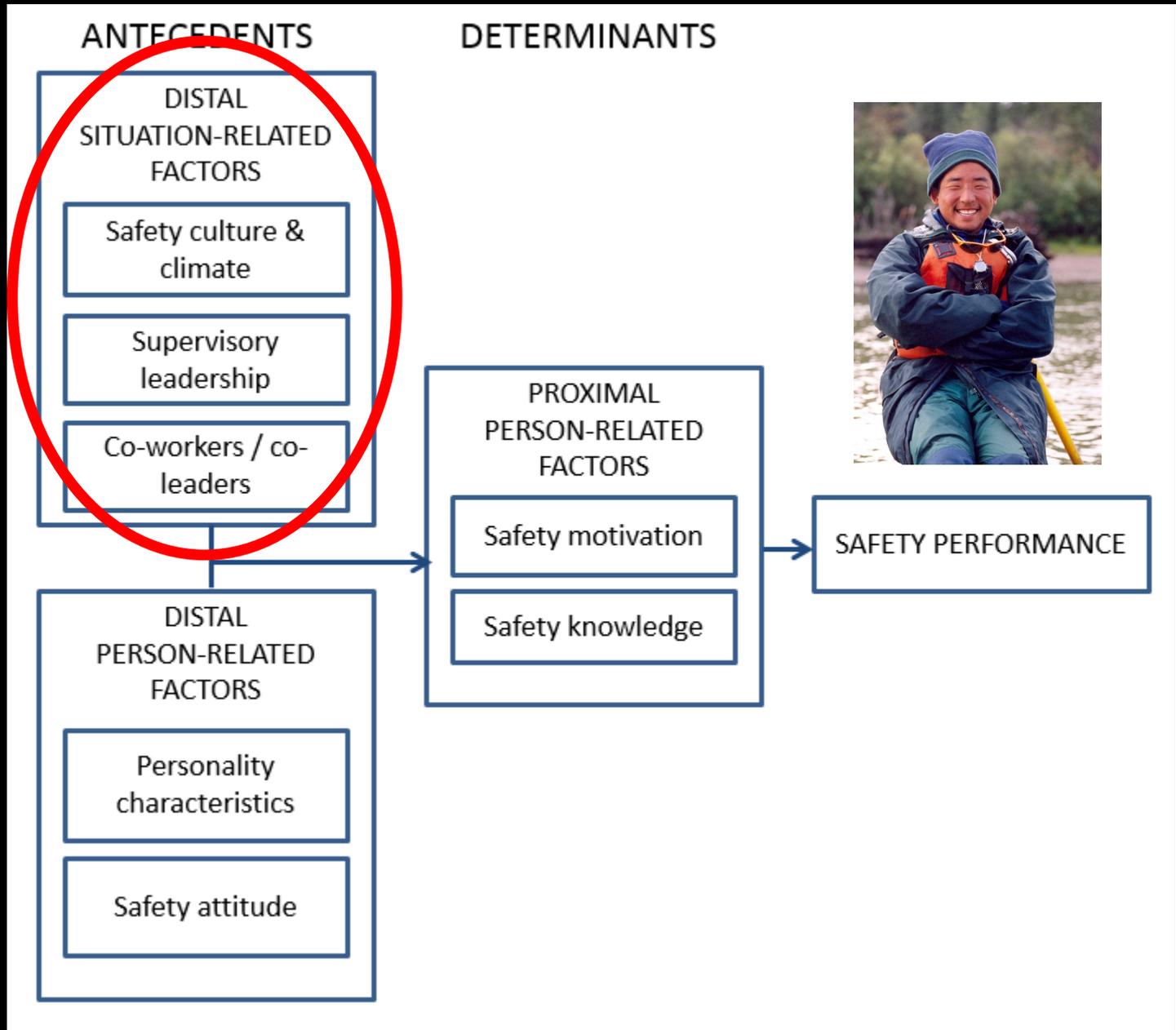
- Safety as INPUT vs OUTCOME
 - (behaviours vs measures) (Perrow, 1999)



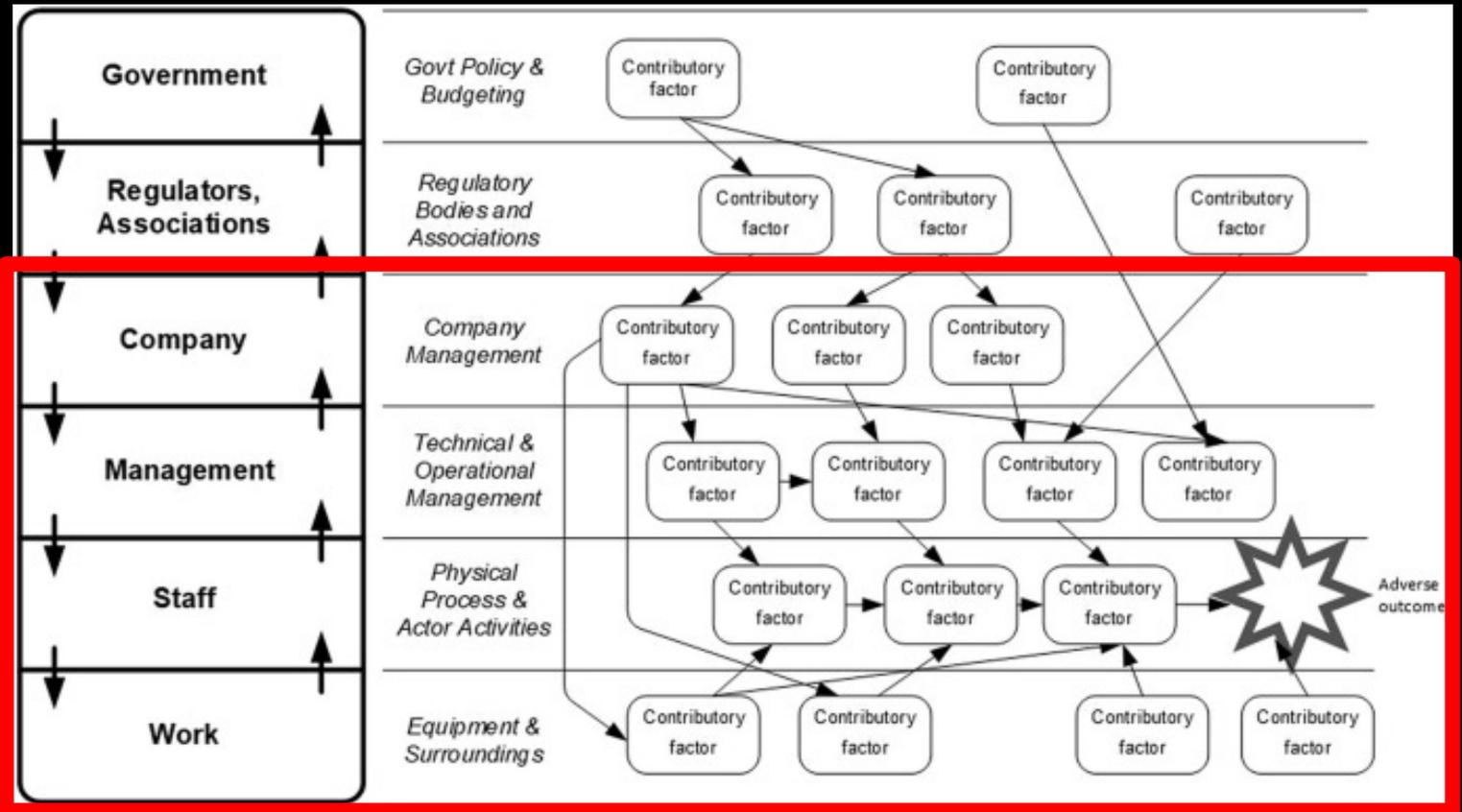
Weick, K. E. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster.

- Cited 7394 times!





Work Systems (Rasmussen, 1997)





So, what do we know about safety so far?

- Safety as INPUT vs OUTCOME
 - (behaviours vs measures)
- Individual behaviours create organization performance
 - multi-level variables:
 - Individual
 - Contextual
 - Organizational
 - Work systems

So, what do we know about safety so far?

- Be at the right place at the right time, with the right people and the right gear, doing the right things...
- With the right tech, right authority, use the right rules. (Foran, Jackson, Young, 2011)

Jeff Jackson Algonquin





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Safety Culture





Safety Culture

“Culture controls the manager more than the manager controls the culture.” Schein

Safety Culture

Findings:

1. #IRF, injury rate, NM rate moderate to weak negative correlation w Scult (Lit says strong r)
2. Scult 'positive' measures of note:
 - Trust, workload stress, adequate staffing, comfort reporting $r > 0.8$



Safety Culture

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 - Trust, workload stress, adequate staffing, comfort reporting $r > 0.8$
3. ****'Positive' Scult factors stronger correlations than 'negative' safety performance measures** (Jackson, 2020)



Operationalizing S.Cult

High Reliability Orgs (LaPorte & Roberts, Weick)



High Reliability Orgs

1. preoccupation with failure
2. reluctance to simplify interpretations of problems
3. sensitivity to field level operations
4. commitment to and capabilities for resilience
5. resistance to over-structure systems. (Weick, Roberts, 1993)

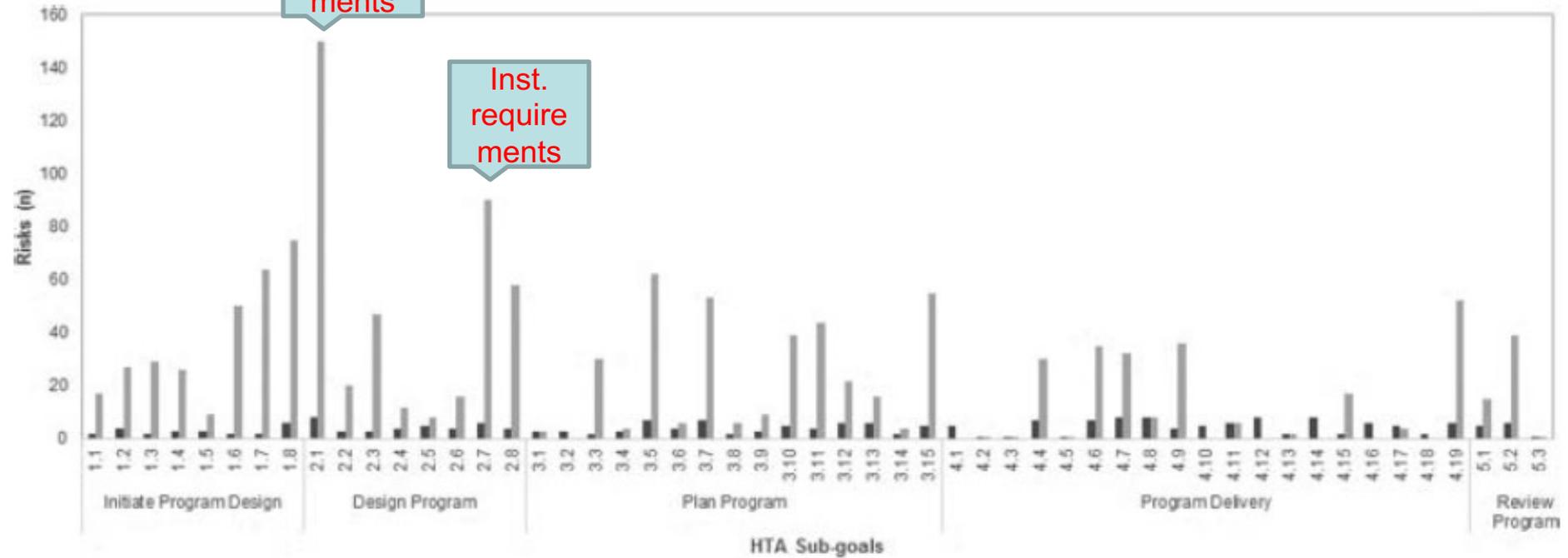


Emergent risk due to gaps in planning

(Dallat et al., 2018)

Px
requirements

Inst.
requirements





OLA case learning

(Jackson, Priest, Ritchie, 2023)

- Key person dependency
- 'rules' vs guidelines
- Risk creep, risk tolerance



Jeff Jo

Risk tolerance scale





Summary: Org exposures

1. Positive Safety Culture
 - Trust, workload stress, adequate staffing, comfort reporting
2. HRO: failure, complexity, routines
3. Planning and emergent risk
4. Key person, risk creep, 'rules'
5. Ill-defined risk tolerance



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Org Failure: defined

- Routines ineffective or no longer relevant
- Internal and external causes
- Clicking and non-clicking triggers

Local News / Local Business

Whitewater rafting companies lobby to lift Ottawa River boat ban

Blair Crawford

May 25, 2019 • May 26, 2019 • 4 minute read

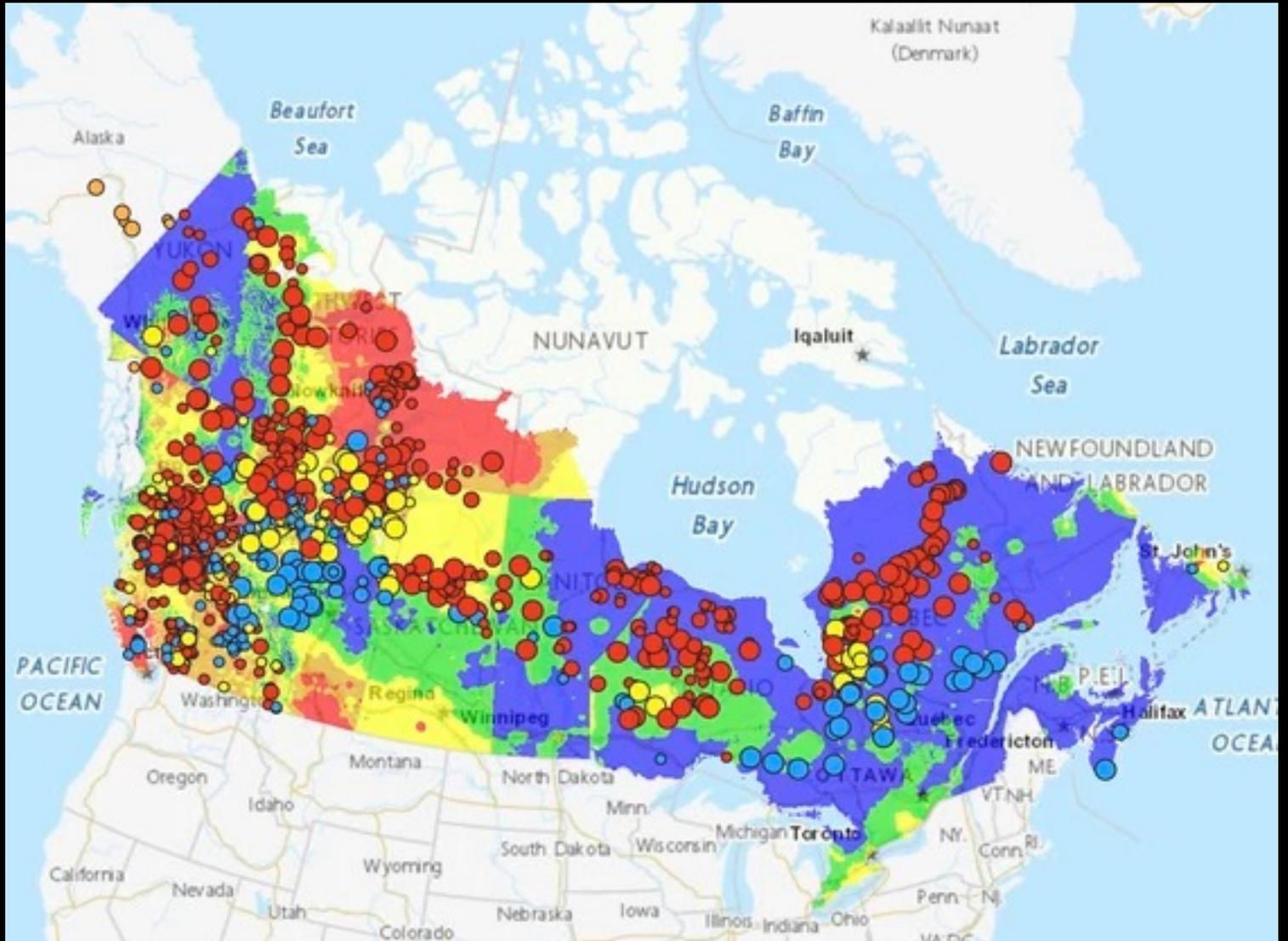


Whitewater rafting on the Ottawa River. handout photo Courtesy of OWL Rafting PHOTO BY HANDOUT /OWL RAFTING



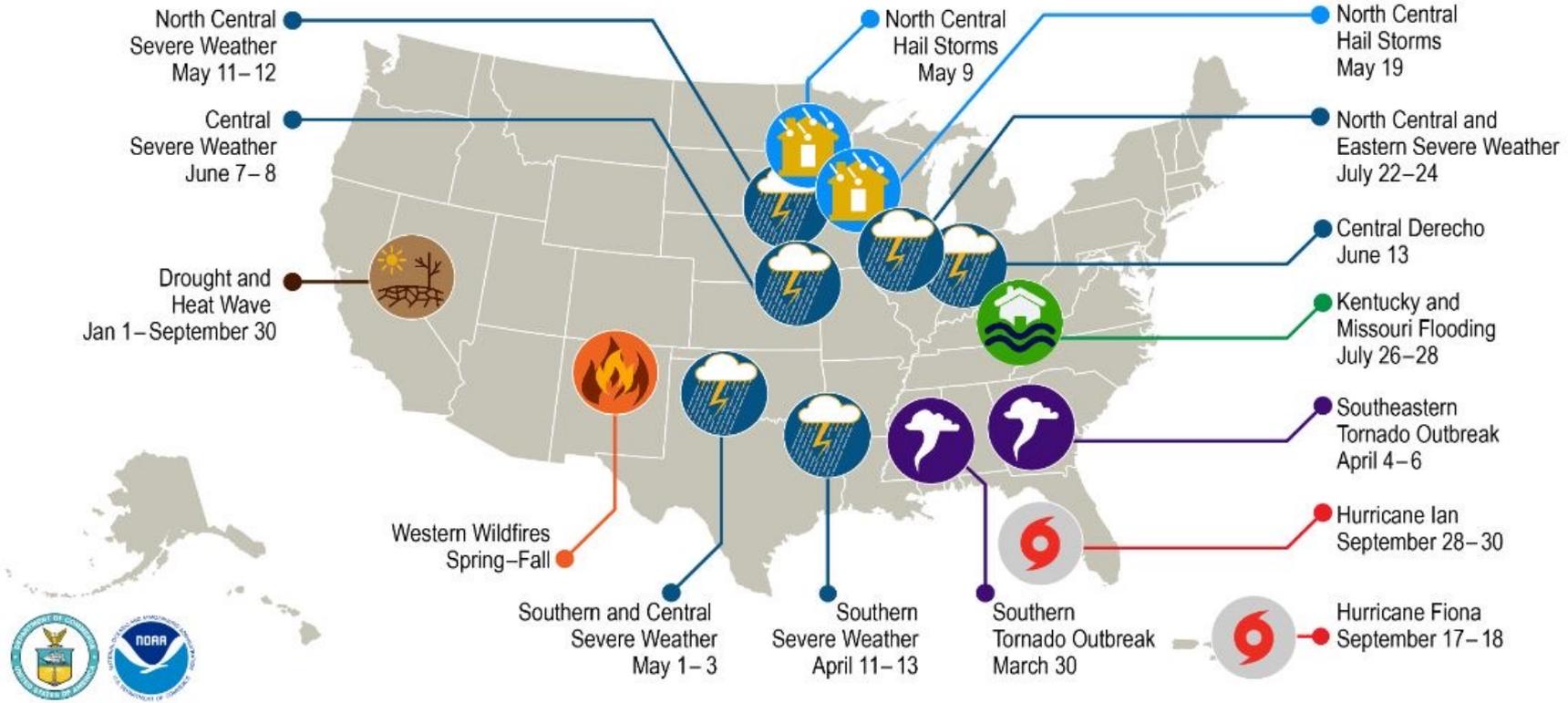
Closure of the North American Airspace, September 11, 2001





U.S. 2022 Billion-Dollar Weather and Climate Disasters

-  Drought/Heat Wave
-  Flooding
-  Hail
-  Hurricane
-  Severe Weather
-  Tornado Outbreak
-  Wildfire
-  Winter Storm/Cold Wave



This map denotes the approximate location for each of the 15 separate billion-dollar weather and climate disasters that impacted the United States January – September of 2022.

- All Disasters
- Drought
- Flooding
- Freeze
- Severe Storm
- Tropical Cyclone
- Wildfire
- Winter Storm





Global News

STAFF SHORTAGES

Toronto forced to cancel hundreds of recreation programs

Global News

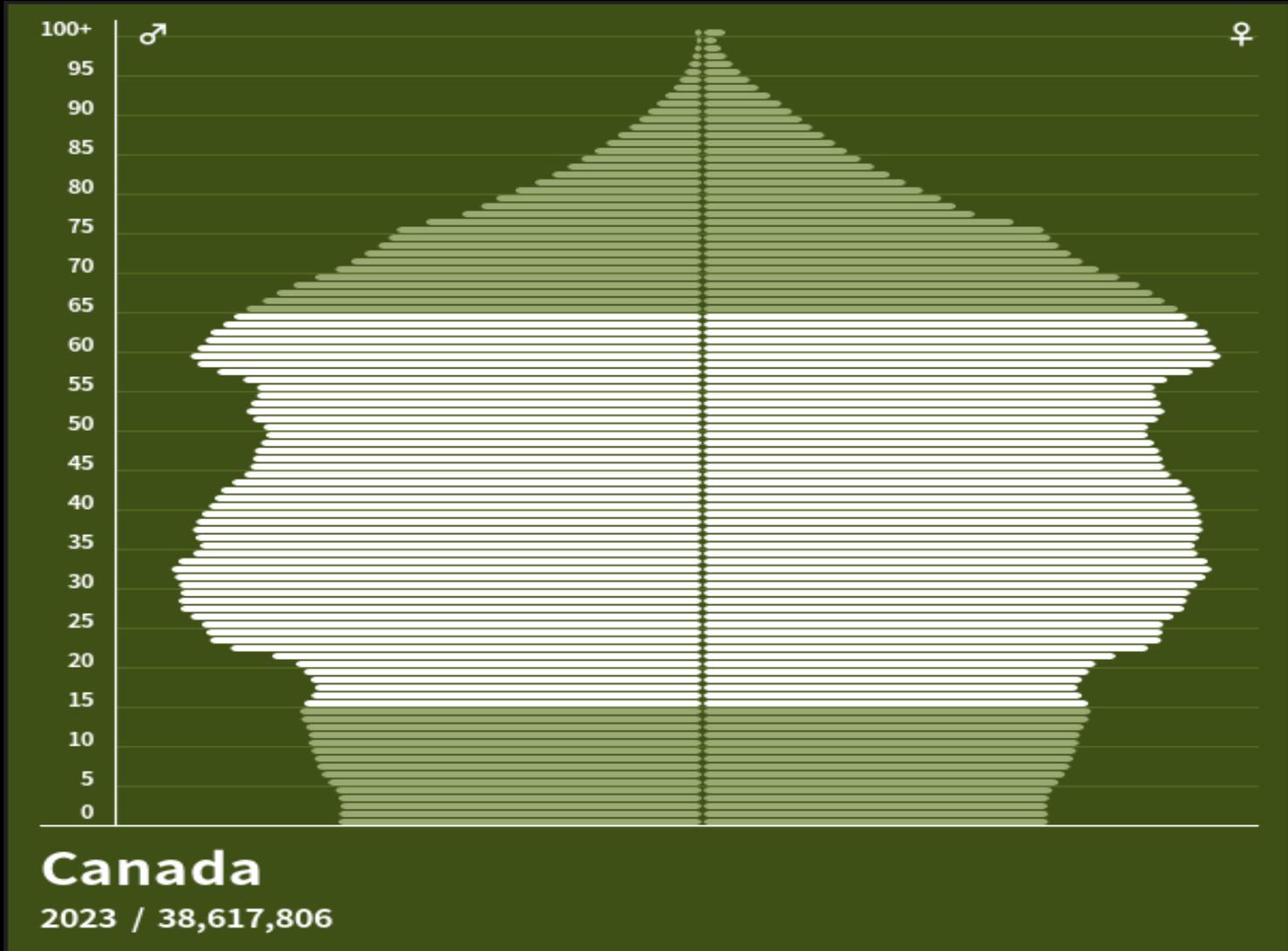
1,040 x 585

Around 5% of City of Toronto fall programs cancelled due to instructor shortage - Toronto | Globalnews.ca

Visit >



Michael Connor Photo



<https://population-pyramid.net/en/pp/canada>



Org level exposures:

- Operating parameters become vulnerabilities...
- What does your org NEED to deliver your org output?

<https://www.menti.com/alkyu8hecstu>

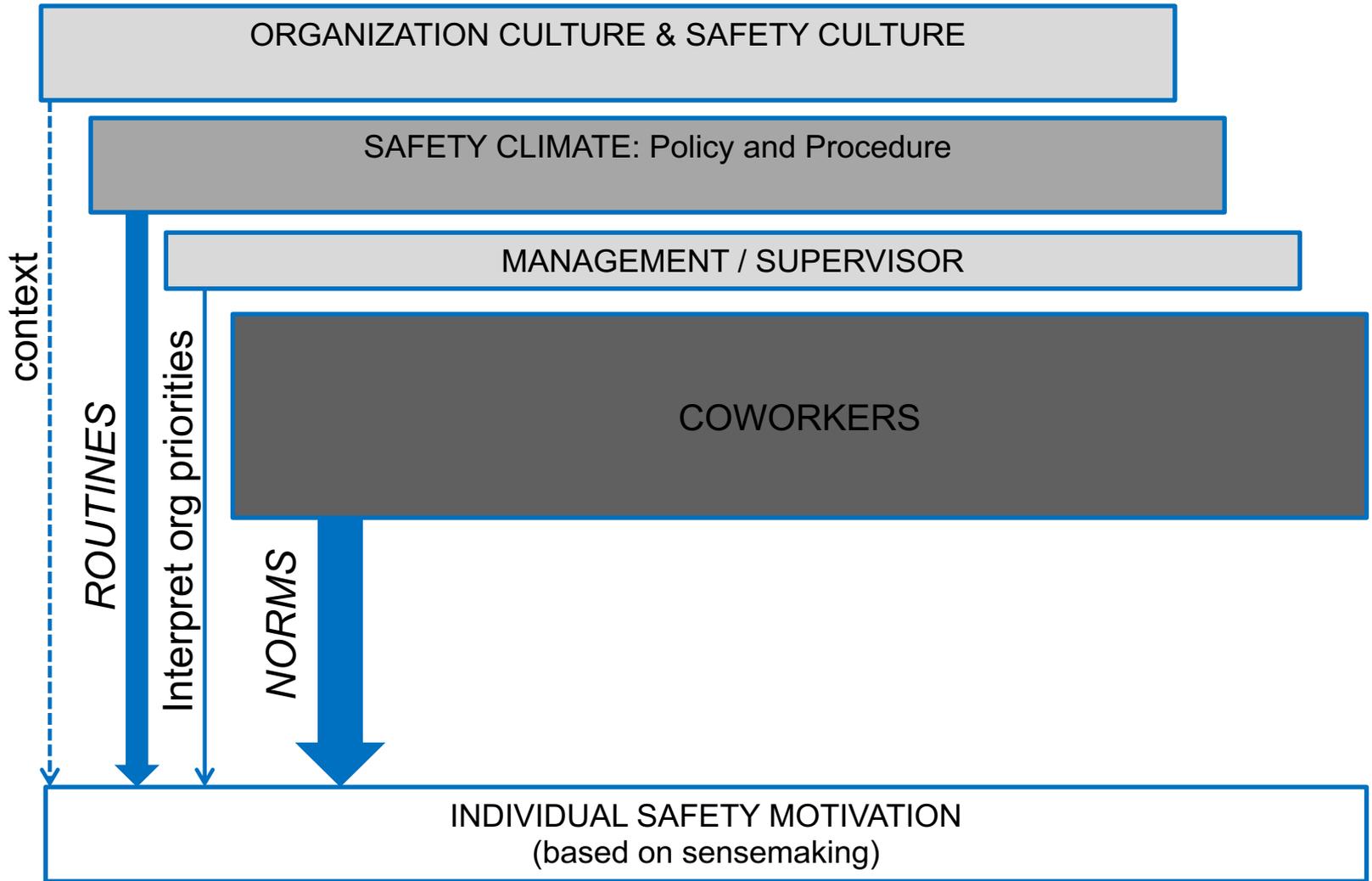


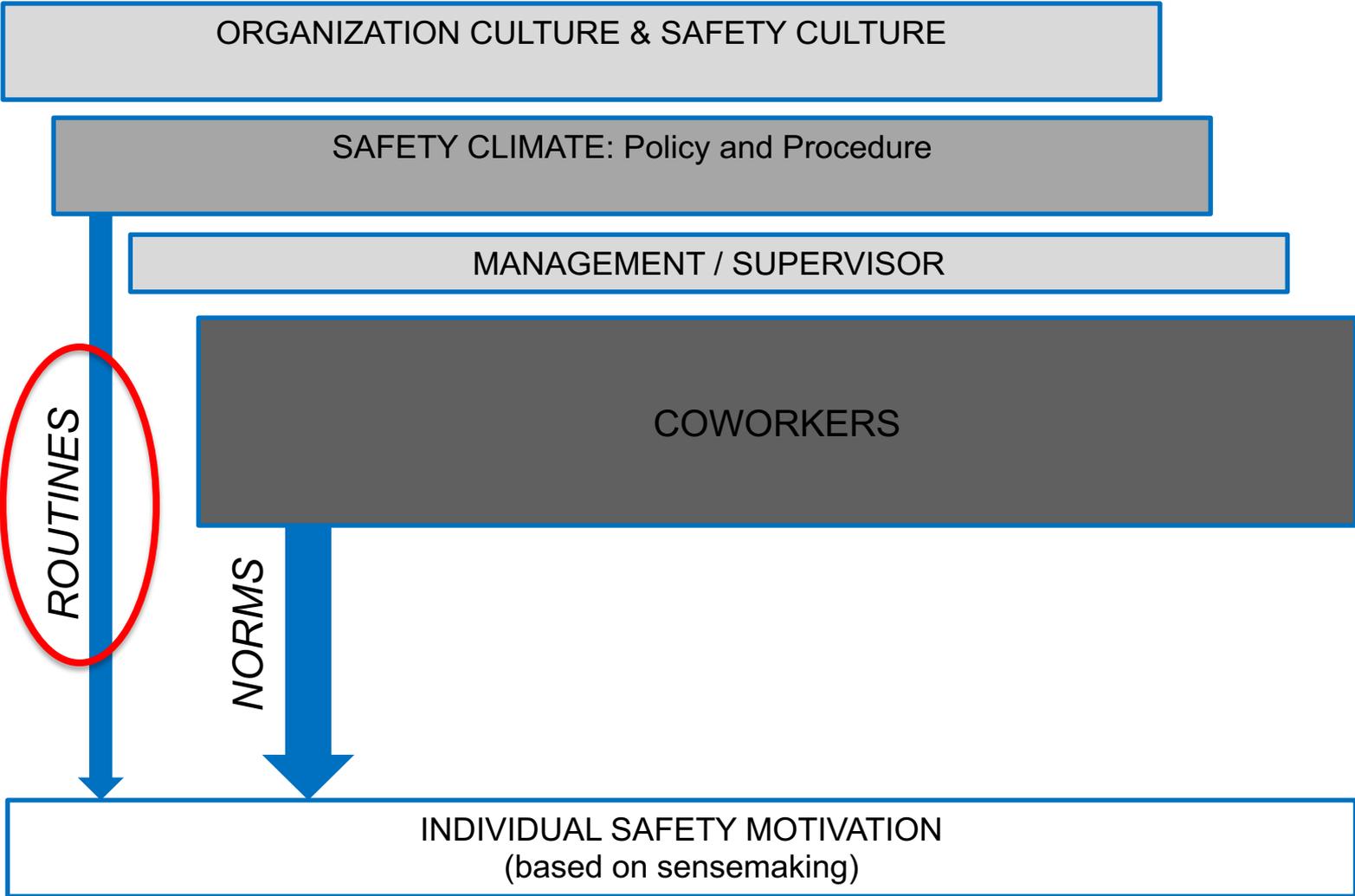


How organizations work:

- Routines
- Rules
- Responses (improvised)

- Orgs are sum of our routines;
when our routines fail, our org fails







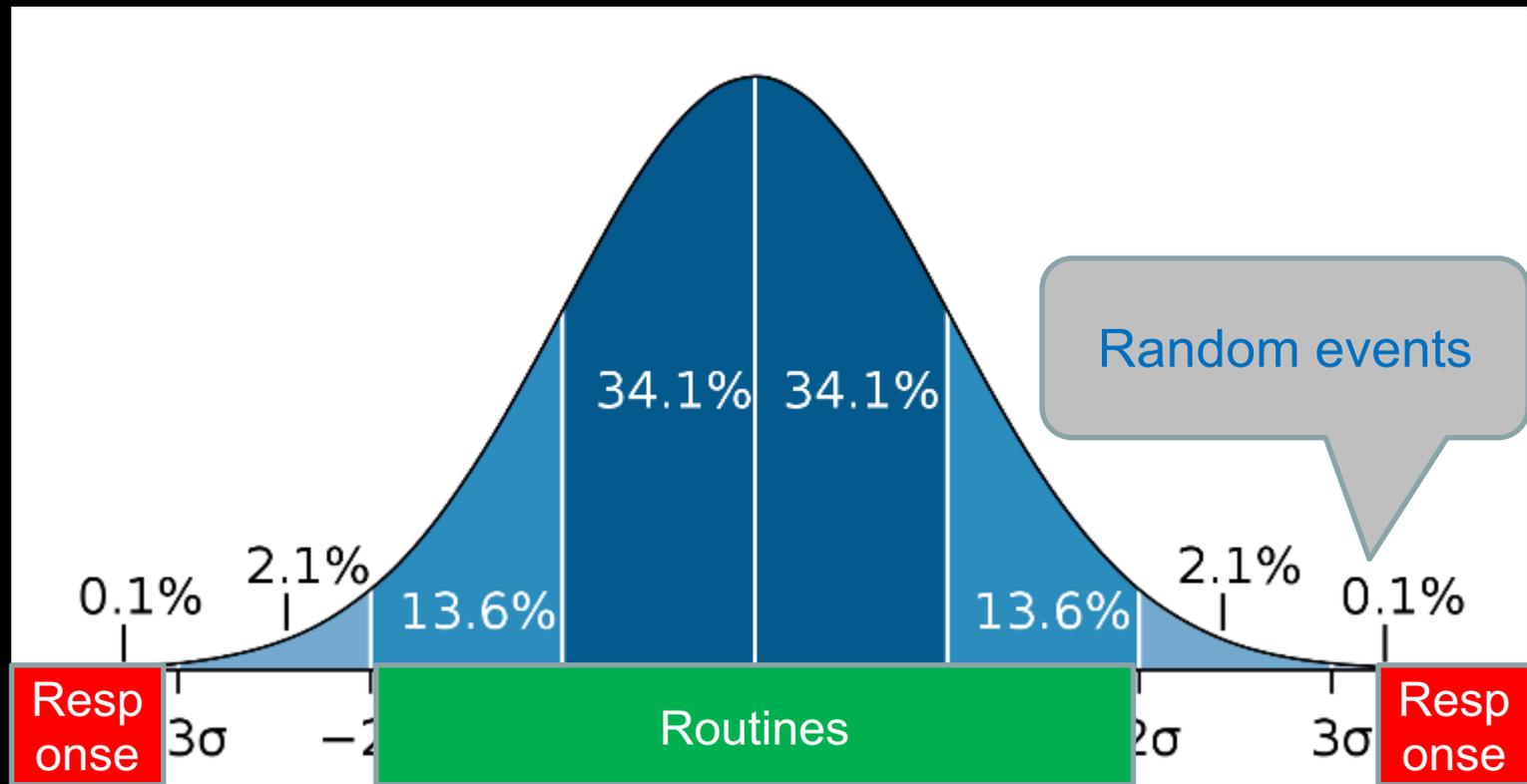
Too much routine

- Prioritize efficiency & remove slack
- Px certain of what will happen – entrenched sense of normal
- Ignore signs of probs or known issues – too much effort to change
- Blame for not following procedures

Routines

- Control variation – require stability
- Consistency vs flexibility – “dynamic stability” (Woods, Holnagel, 2006)
- How does org ‘notice’ something is not right? Redundancy failures. (clicking vs non-clicking)
- Reporting errors without condoning them

Non-Normal & Failure



Closure of the North American Airspace, September 11, 2001







Responses (improvised)

- Things will go wrong that can't be predicted;
- Can be identified and quickly reduced
- Org sensemaking = Individual sensemaking + Chicken Little



Resilience Engineering

How to cope with complex,
underspecified & (partly)
unpredictable work? (Hollnagel, 2007)

Eliminate risk
Constrain perf.
“what not to do
wrong”

Sacrifice efficiency
(time, output)
Build adaptability
“what can we do right”



Resilience Engineering

- Defensive (coping) vs
- Offensive (adapting)

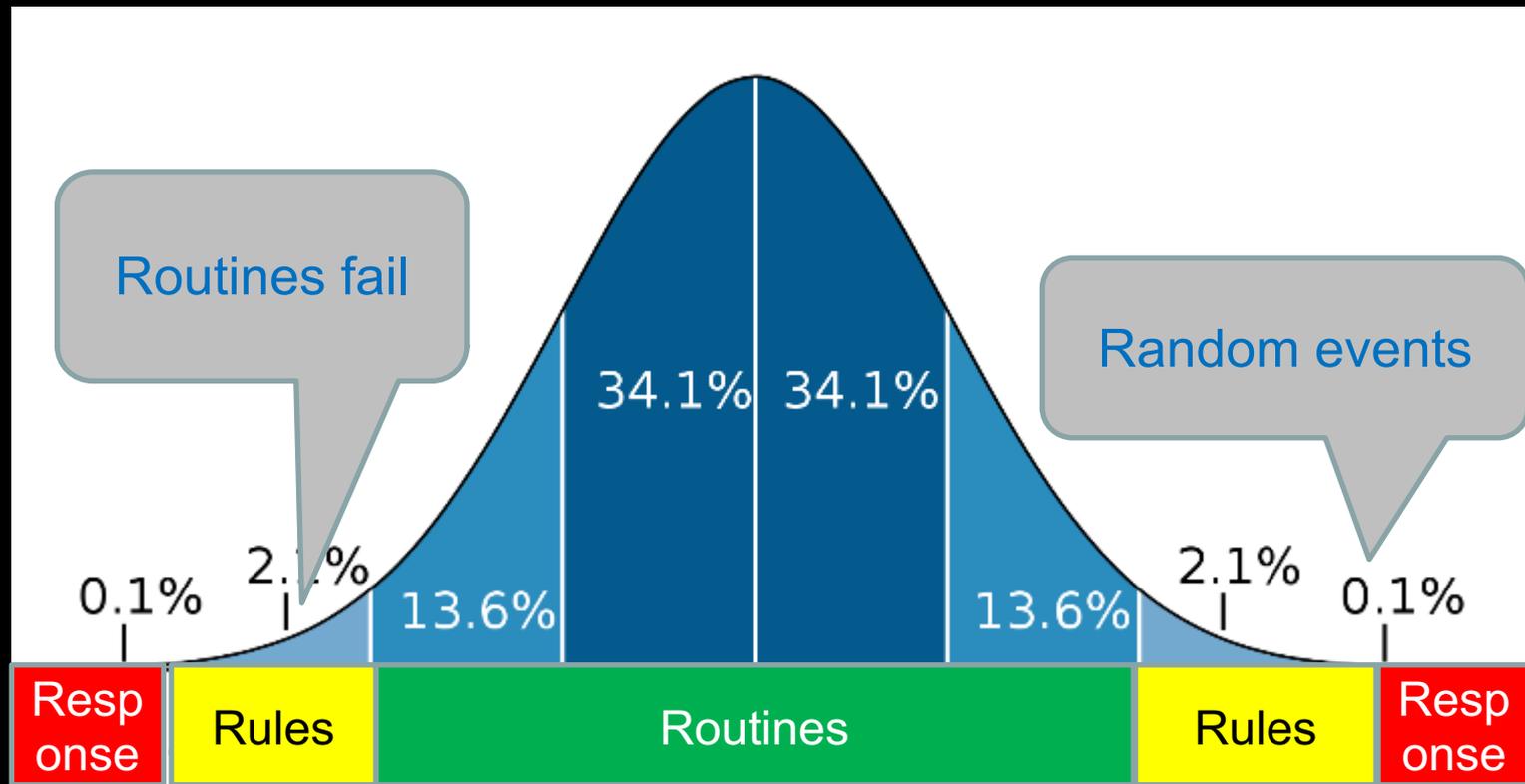
- Resilience as:
 - Outcome
 - Process
 - Capabilities



Note on money...

- Liquidity: Debt = resilience
- Rainy day fund (self-insuring); optional vs mandatory spending; 2% challenge
- Cost based pricing vs margin
- Diversify income

Non-Normal & Failure





Michael Connor Photo



Rules – when routines break down

- Limits w/o prescribing action – risk tolerance
- Does the org know what it wants?
- Redundancy and controls – mngt concerns – omit w/o routines
- Ambiguous perf standards ie cv19
- Interpretation vs DM (sensemaking)

ORGANIZATION CULTURE & SAFETY CULTURE

SAFETY CLIMATE: Policy and Procedure

COWORKERS

INDIVIDUAL SAFETY MOTIVATION
(based on sensemaking)

ROUTINES

NORMS

Formalize social authority, team structure and ind. roles

Prime sensemaking by framing ambiguity

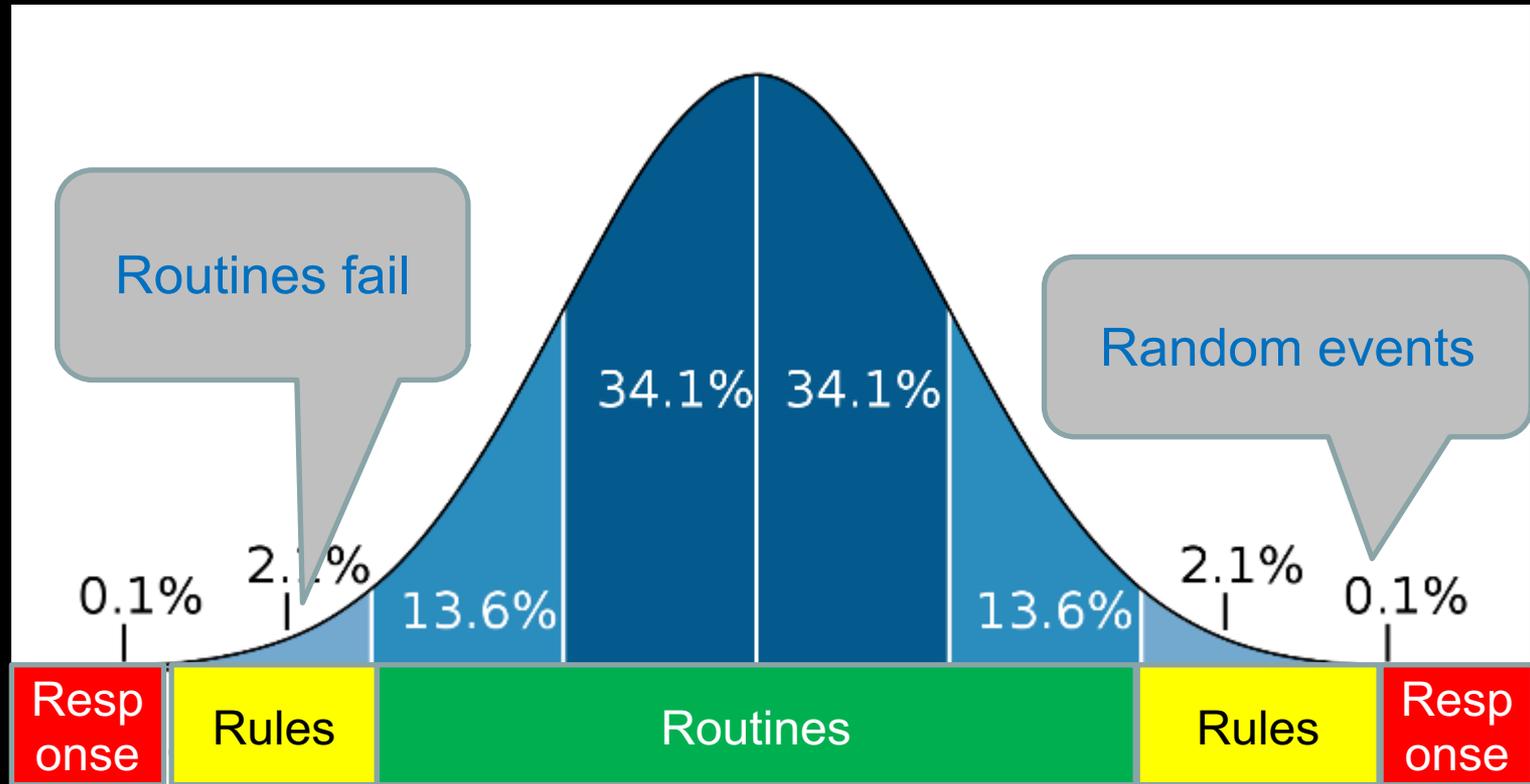


Rules:

Structure ambiguity:

- Prime sensemaking – call it what it is...
- Revised risk tolerance (espoused v. implied)
- Test at boundaries & failure (improvisation)
- Clear expectations – short term
- Provide authority to respond

Non-Normal & Failure





Invest in Resilience

1. Add slack (in opposition to efficiency)
2. What gets attention, is measured or controlled (and what does *not* get attention and is therefore condoned or unimportant)
3. Build communication pathways



To do list:

1. Identify operational parameter vulnerabilities (where ROUTINES break down)
2. Measure org ROUTINE effectiveness-quality measures (so you know when ROUTINES aren't working)
3. Articulate RULES to reduce ambiguity when ROUTINES fail

References / further reading

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Managing Risk

Systems Planning for Outdoor Adventure Programs



Jeff Jackson
Jon Heshka



2nd Edition

Book info:

[Kobo Managing Risk 2nd edition](#)

Adventure
Risk Report

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