Accimapping: From Theory to Practice



Photo: Wild Rockies Field Institute, Colorado Plateau 2021

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Executive Director of the Wild Rockies Field Institute

Ash Sward
Enrollment and Field Operations Coordinator
Field Instructor

Hellos!

-Name, organization, role

-A two sentence story from your field season

-Why did you choose this session today?





A few details….

This work builds on a session from the 2023 WRMC by Rick Curtis and many subsequent conversations with Steve Smith.

“All models are wrong, but some are useful” - our goal today is to share a model that has had utility to us.
~George Box, via Steve Smith

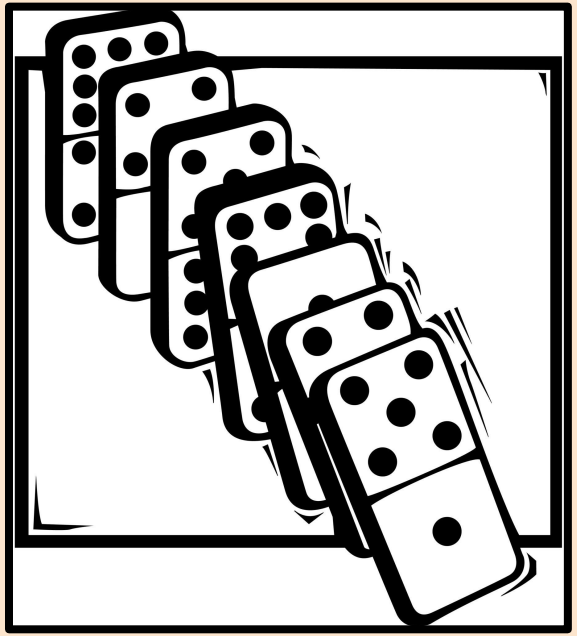
“You can either learn or blame, but not both.”~Sidney Dekker, by way of Steve’s pre-conference presentation yesterday

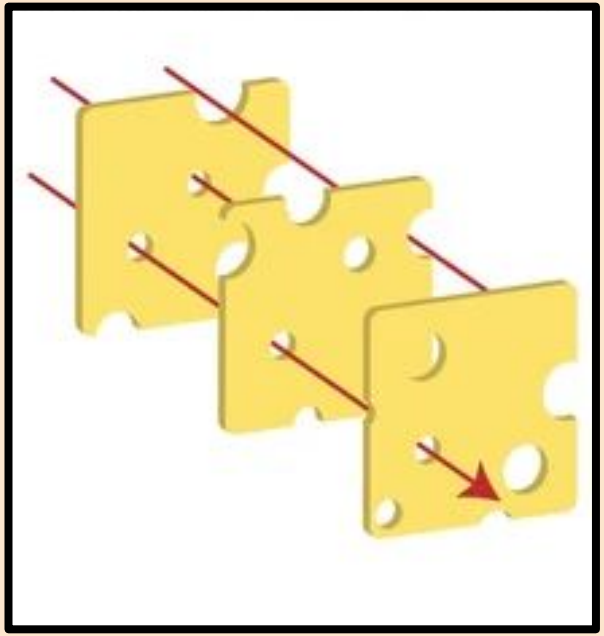
We are not an attorneys and none of this is not legal advice.

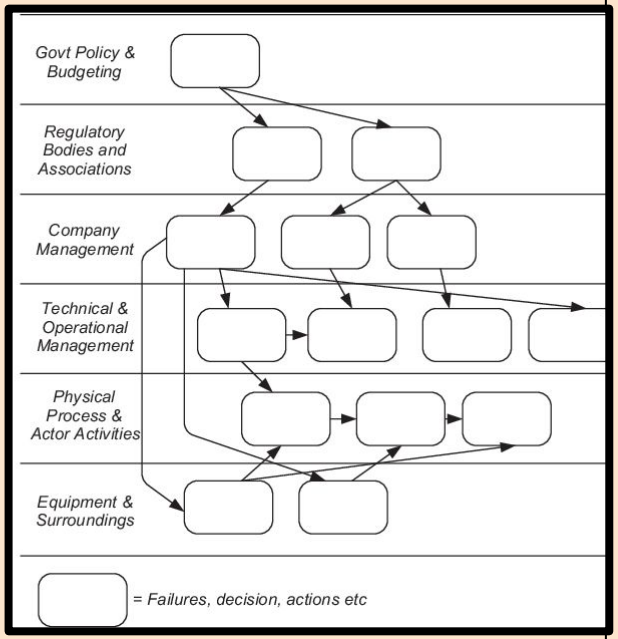
Accident Understanding 101

“domino ⇨ swiss cheese ⇨ accimap”

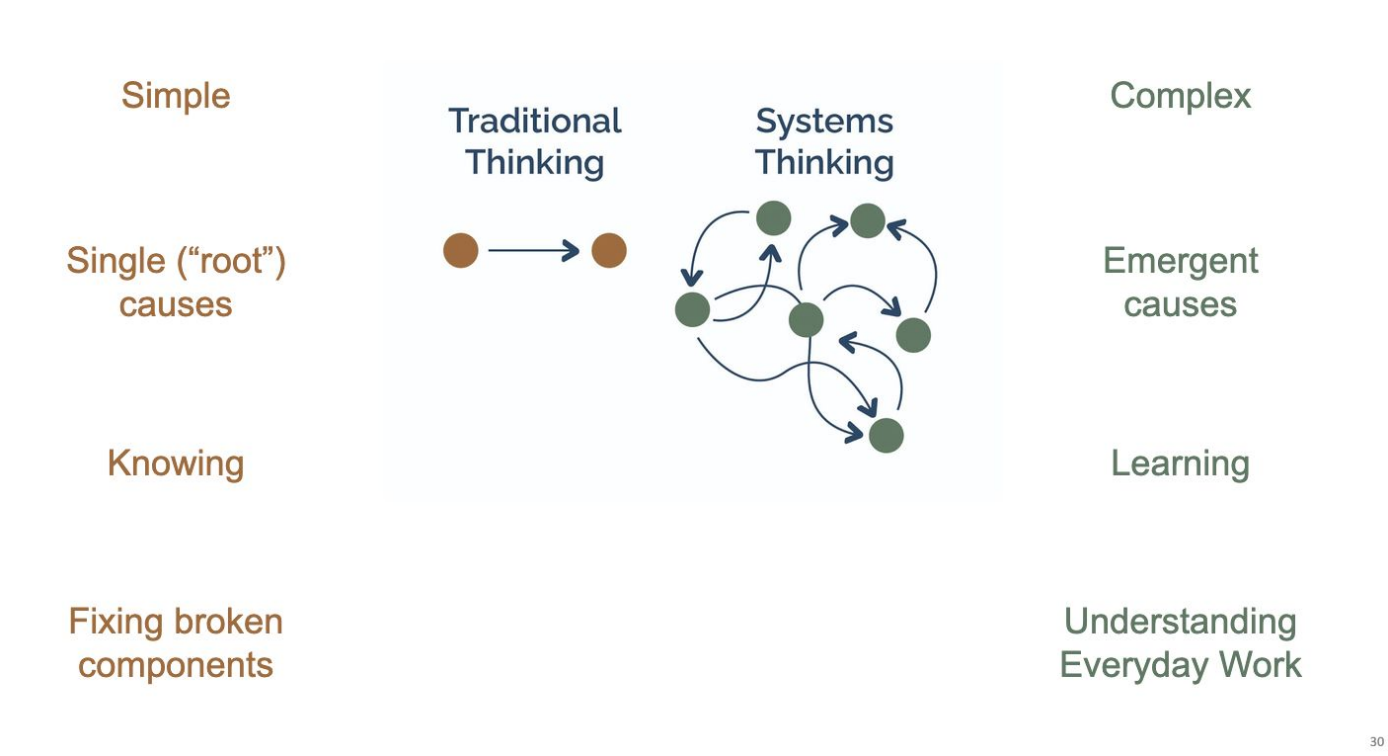
(Heinrich, 1931) (Reason, 1990) (Rasmussen/Svedung, ~2000)





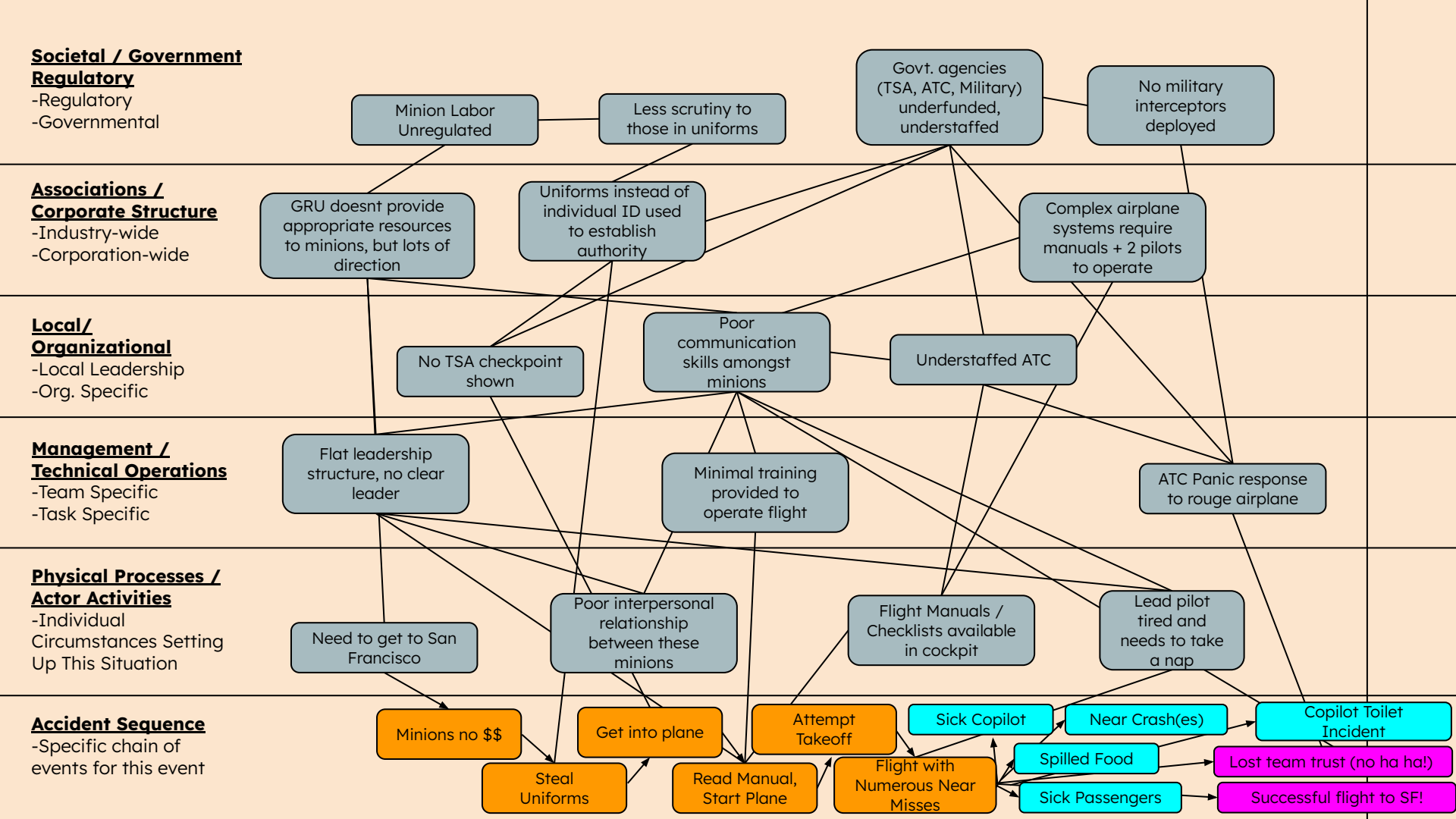


Simple vs Systems Thinking

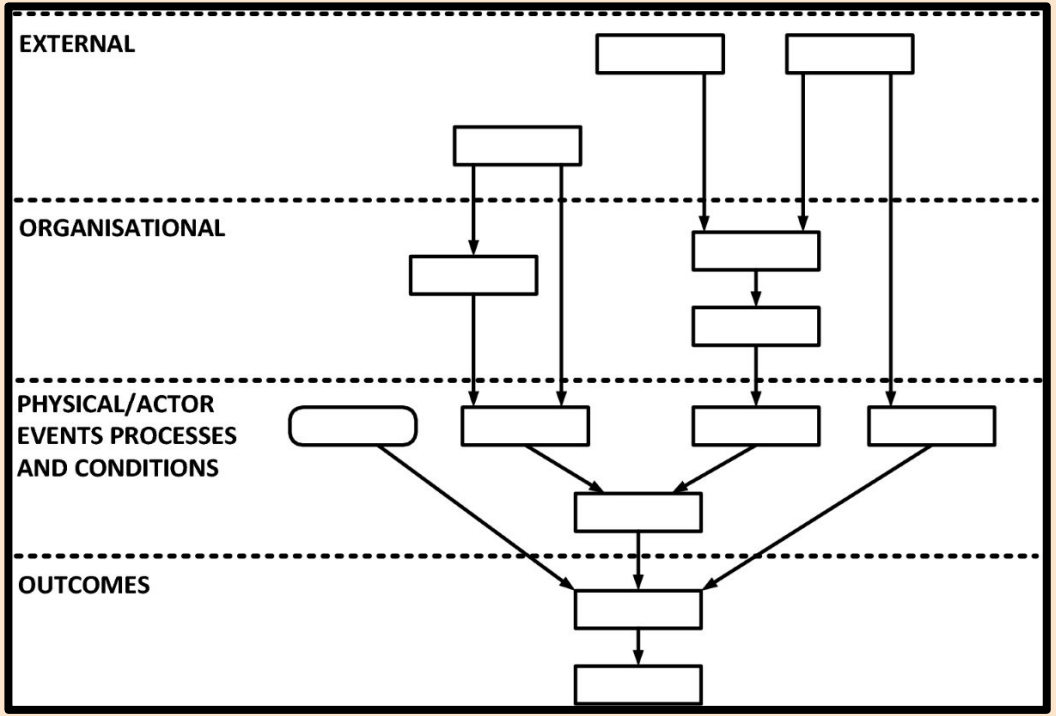


(Thanks to Experiential Consulting LLC for this image)


ILLUMINATION
MINIONS
THE RISE OF GRU
MINI
MOMENTS


Societal / Government Regulatory
-Regulatory
-Governmental
Associations / Corporate Structure
-Industry-wide
-Corporation-wide
Local/ Organizational
-Local Leadership
-Org. Specific
Management / Technical Operations
-Team Specific
-Task Specific
Physical Processes / Actor Activities
-Individual Circumstances Setting Up This Situation
Accident Sequence
-Specific chain of events for this event
Minion Labor Unregulated
Less scrutiny to those in uniforms
Govt. agencies (TSA, ATC, Military) underfunded, understaffed
No military interceptors deployed
GRU doesnt provide appropriate resources to minions, but lots of direction
Uniforms instead of individual ID used to establish authority
Complex airplane systems require manuals + 2 pilots to operate
No TSA checkpoint shown
Poor communication skills amongst minions
Understaffed ATC
Flat leadership structure, no clear leader
Minimal training provided to operate flight
ATC Panic response to rouge airplane
Need to get to San Francisco
Poor interpersonal relationship between these minions
Flight Manuals / Checklists available in cockpit
Lead pilot tired and needs to take a nap
Minions no $$
Get into plane
Attempt Takeoff
Sick Copilot
Near Crash(es)
Copilot Toilet Incident
Steal Uniforms
Read Manual, Start Plane
Flight with Numerous Near Misses
Spilled Food
Lost team trust (no ha ha!)
Sick Passengers
Successful flight to SF!

How to build an Acci-map



Build your Own: Workshop Instructions 5 Minutes

Building an Accimap

- Identify an incident from your program
- Create an Accimap of that incident
- Try to identify at least two “nodes” in each of the hierarchies, and at least one connection for each node







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- **Storytelling**
  - Enrollment Processes + mental health screening
  - On course events
    - Yellow - First signs of mental health symptoms
    - Red - Severity of mental health symptoms progressing beyond our scope of management
    - Orange - “Behavioral” management plan as mitigation strategy
    - Yellow - Monitoring student + instructor mental health





- **Reflections** -
  - Choice vs procedural thresholds/flow-charts/matrix
  - What does it actually mean to serve the general public?
  - Behavioral management plans for mental health support
  - Acci-mapping as a subjective narrative tool

Questions?

Debrief

- Normal goals of WRFI debriefs:
  - Create a safe space for discussion of field courses
  - Build congruence between administrative and field instructor understandings of what happened on a course
  - Name and discuss areas for growth
  - Celebrate successes

- A major incident occurred and…What do we do with that?
  - Accimap!

① How do we build More TIME in courses to be Resilient to challenges at WRFI?

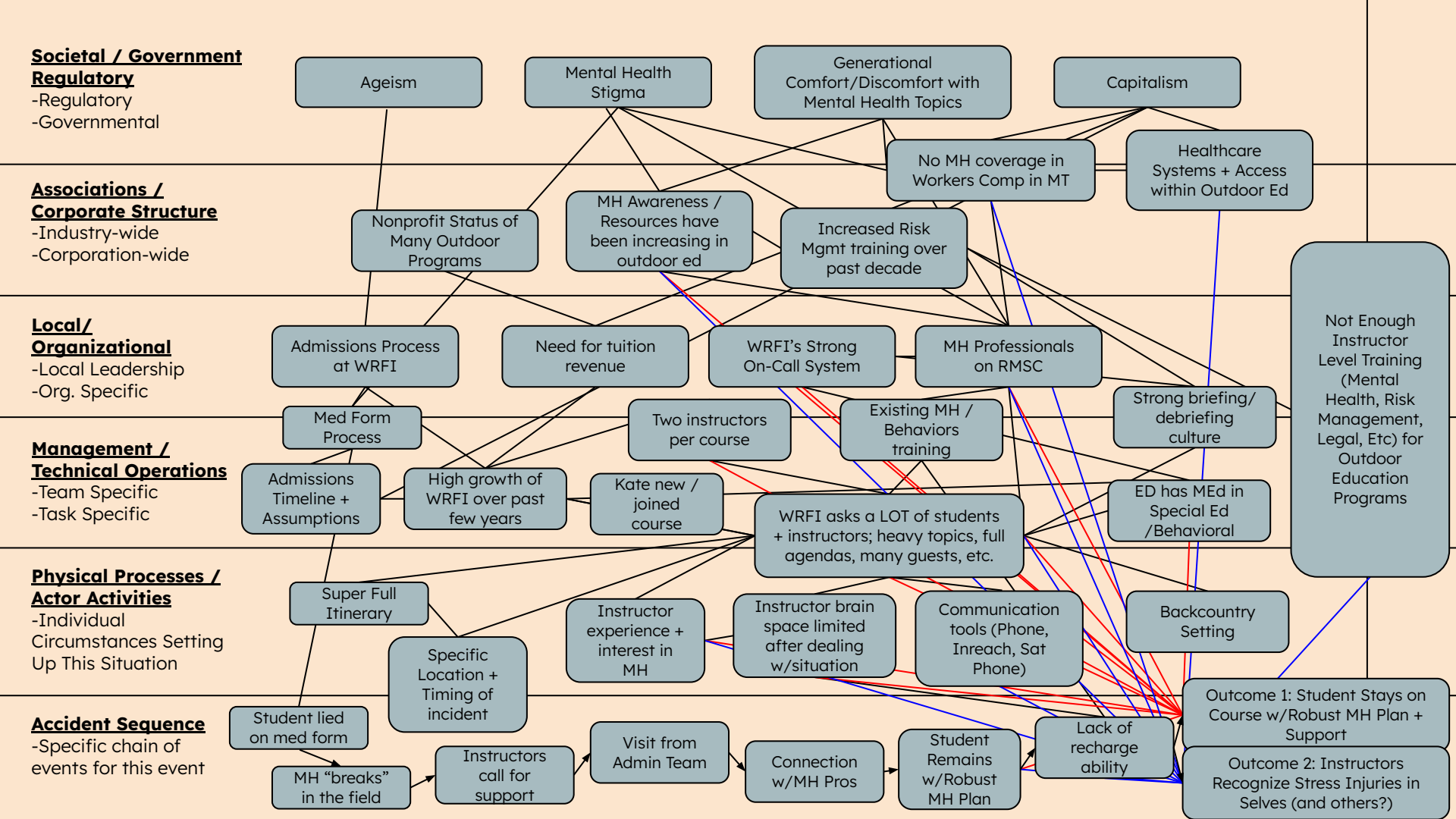
② What addl trainings/supports can WRFI build/supply to instructors/administrators to create similar (or higher) levels of MH awareness + capacities as this situation?

③ How does WRFI Address this type of situation with other locations and timelines and communications?

④ How can we ↓ academic tasks while maintaining or ↑ academic rigor/outcomes?

⑤ Post-incident Checklist
CI protocol document




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Ageism
Mental Health Stigma
Generational Comfort/Discomfort with Mental Health Topics
Capitalism
No MH coverage in Workers Comp in MT
Healthcare Systems + Access within Outdoor Ed
Nonprofit Status of Many Outdoor Programs
MH Awareness / Resources have been increasing in outdoor ed
Increased Risk Mgmt training over past decade
Not Enough Instructor Level Training (Mental Health, Risk Management, Legal, Etc) for Outdoor Education Programs
Admissions Process at WRFI
Need for tuition revenue
WRFI's Strong On-Call System
MH Professionals on RMSC
Med Form Process
Two instructors per course
Existing MH / Behaviors training
Strong briefing/ debriefing culture
Admissions Timeline + Assumptions
High growth of WRFI over past few years
Kate new / joined course
WRFI asks a LOT of students + instructors; heavy topics, full agendas, many guests, etc.
ED has MEd in Special Ed /Behavioral
Super Full Itinerary
Instructor experience + interest in MH
Instructor brain space limited after dealing w/situation
Communication tools (Phone, Inreach, Sat Phone)
Backcountry Setting
Specific Location + Timing of incident
Student lied on med form
MH "breaks" in the field
Instructors call for support
Visit from Admin Team
Connection w/MH Pros
Student Remains w/Robust MH Plan
Lack of recharge ability
Outcome 1: Student Stays on Course w/Robust MH Plan + Support
Outcome 2: Instructors Recognize Stress Injuries in Selves (and others?)

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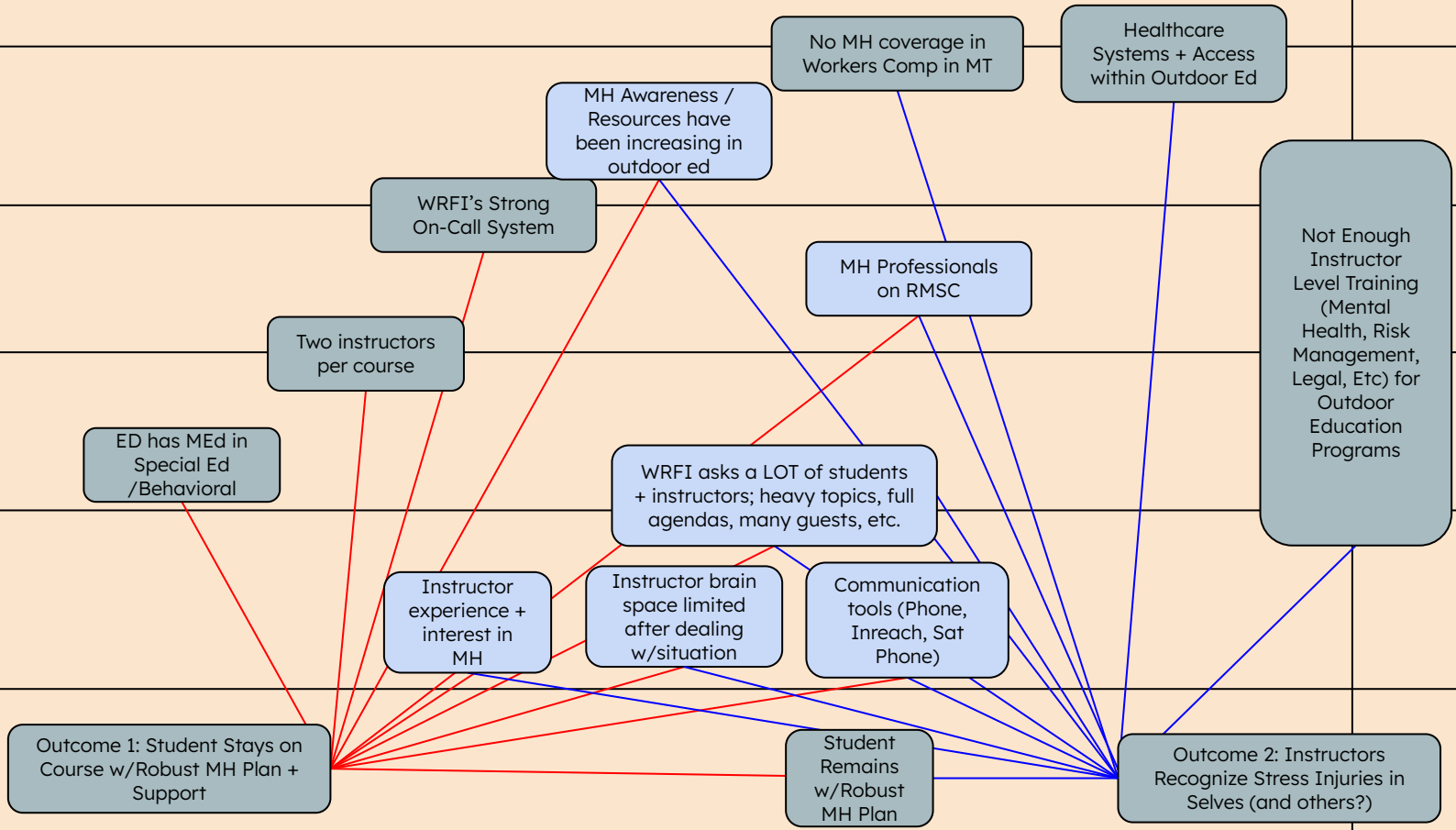
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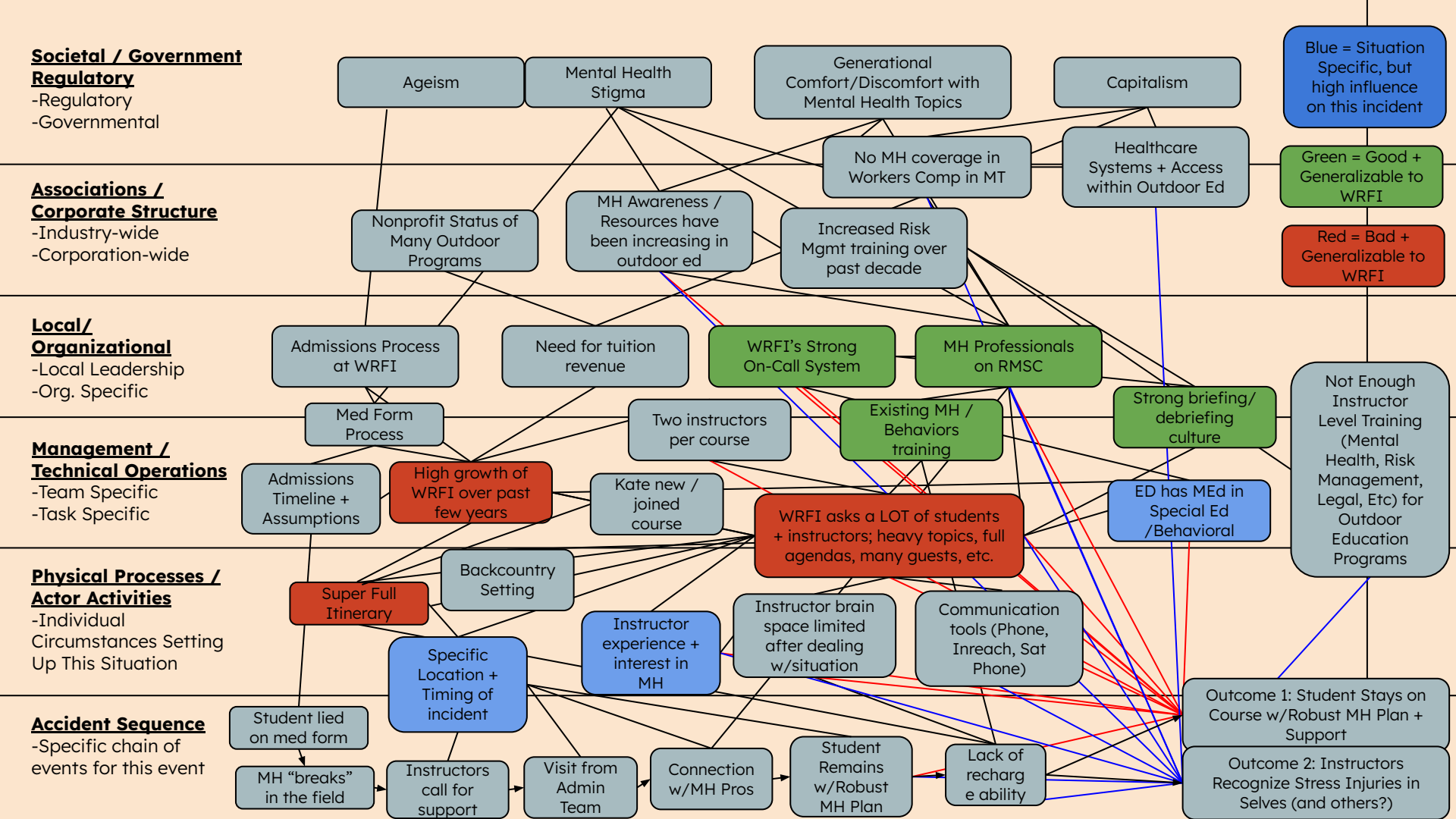
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Blue = Situation Specific, but high influence on this incident
Green = Good + Generalizable to WRFI
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Outcome 2: Instructors Recognize Stress Injuries in Selves (and others?)

Build your Own: Workshop Instructions 5 Minutes

Making Sense from an Accimap

- Revisit your Accimap, add any nodes/factors that are missing that you've thought of
- Identify no fewer than two and no more than five "key nodes" in your own example
- What questions/challenges emerge from identifying those key nodes?







Core Questions

(This part took us weeks/months to grapple with)

Adaptive Questions: (continue to visit over time)

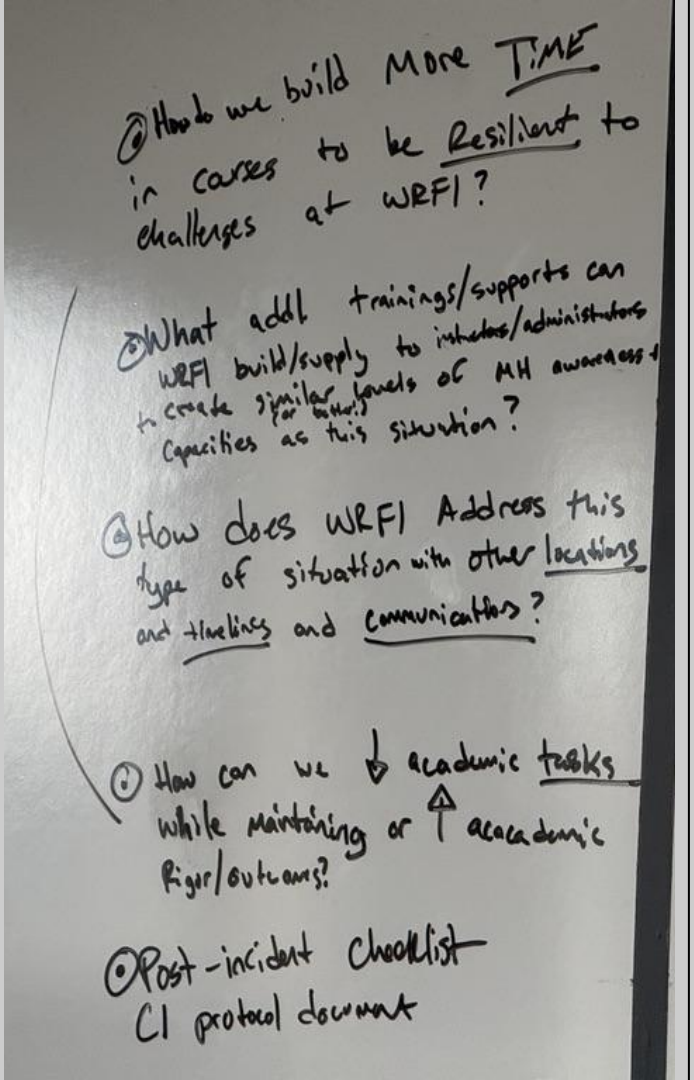
- How do we build more **time** in courses to be **resilient** to challenges at WRFI?
- How can we decrease academic **tasks** while maintaining or increasing academic rigor + outcomes?

Technical Questions: (seek specific answers)

- What additional trainings / supports can WRFI build or supply to instructors + administrators to create similar levels of MH awareness or capacities as this situation?
- How does WRFI address this type of situation in other **locations** and **timelines** and **communications?**

To-Do-List

- **Create: Post Incident checklist + critical incident protocol document**



Now what?

- Posed these questions to *all instructors* at a community town hall meeting via zoom in January of 2026 to hear ideas and feedback
- Encouraged instructors to discuss these specific questions while prepping for courses in the 2026 field season
- Made some direct changes to trainings offered/required and onboarding
- We’re still grappling with some of these questions over a year later!

What has WRFI done?

Adaptive Questions: (continue to visit over time)

- How do we build more **time** in courses to be **resilient** to challenges at WRFI?
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Technical Questions: (seek specific answers)

- What additional trainings / supports can WRFI build or supply to instructors + administrators to create similar levels of MH awareness or capacities as this situation?
- How does WRFI address this type of situation in other **locations** and **timelines** and **communications?**

To-Do-List (Still needs to be done)

- **Create: Post Incident checklist + critical incident protocol document**

Adaptive Questions: (continue to visit over time)

- Asked these questions of all instructors in an org-wide town hall; brainstormed ideas
- Directly told instructors to feel empowered to either reduce academic tasks on the fly when a course is stretched, or to reduce academic tasks and plans prior to a course happening
- Continue to revisit and discuss
- Considering a new framework for “core” vs optional course content and material

Technical Questions: (seek specific answers)

- Added stress resilience and first response training from Responder Alliance for whole team
- Added management training from Responder Alliance for on-call team
- Unsure of WRFI’s capacity to manage a similar situation with different factors in these domains
- Continuing to develop what is a “critical incident” and how to respond at WRFI

Build your Own: Workshop Instructions 5 Minutes

Action Steps from Accimapping

- What questions did you develop from your Accimap?
- Write down at least 3 action steps you can take within your work/at your organization to grapple with your questions and push your organization forward
    - A one-on-one conversation you can have
    - An email you can send regarding this workshop
    - A training you a offer/lead for others
    - A specific question you can bring home







What are *we* thinking about now?

Admin processes – Can we accimap **admin or other processes** to learn more about the systems that ~~control us~~ we control?

Lucky or Good 4 square - Can accimapping **help us identify moments** that are within our control to make change vs. moments that are out of our control and plainly unlucky?

Can we **“posi-map?”** – By using the same process to inspect things that **go well** and identify what factors are in place in those moments?

How can accimapping be a **tool for sensemaking,** particularly across **different “levels” of an organization?**

Could we build a …… ***predicti-map?*** (Maybe, there’s some interesting ecology work that’s surprisingly similar with some interesting predictive modelling)

	Not Good	Good
Not Lucky	-No rain gear packed -Big wet from sky	-Rain gear packed -Big wet from sky
Lucky	-No rain gear packed -Perfect weather	-Rain gear -Perfect weather

Questions?

Additional Resources Page

-HPOG Accimapping document

https://www.hpog.org/assets/documents/Introduction-to-AcciMap-1.pdf

Beneficial Risks: The Evolution of Risk Management for Outdoor and Experiential Education Programs: https://www.outdoorrisk.com/beneficial-risks

Safety Science for Outdoor and Experiential Education: https://www.outdoorrisk.com/safety-science

-Mangatepopo gorge incident research: https://activeeducationmagazine.wordpress.com/2012/09/05/understanding-accidents-in-the-great-outdoors-the-human-factors-approach/

https://www.sciencedirect.com/science/article/abs/pii/S0925753511002992