

***Matt Davis***

*SRE Advocate*

*Blameless*

# **Observability, Incident Response, & Common Ground that Binds**



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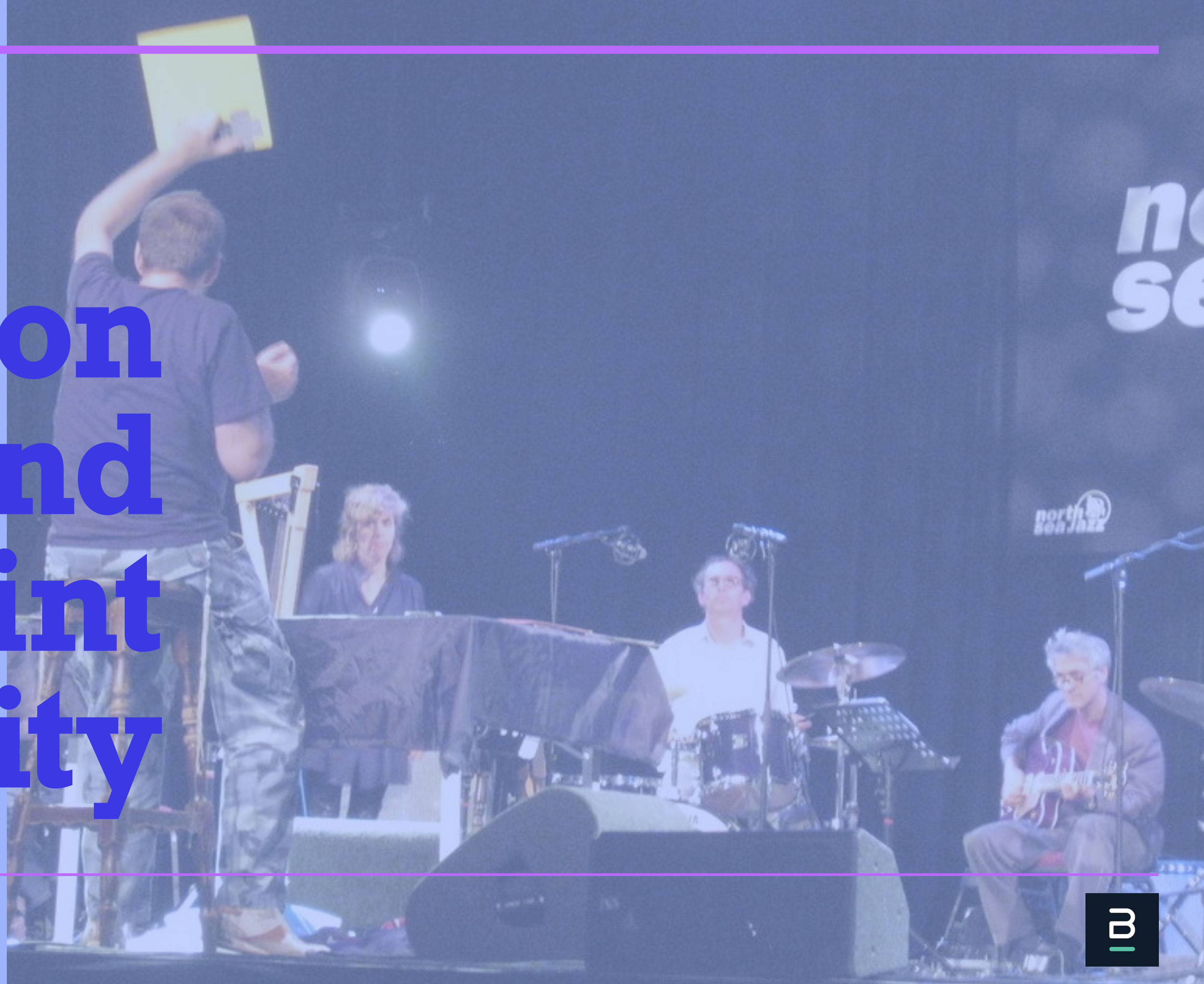
# How Complex Systems Fail

*Dr. Richard Cook*

**12. Human practitioners are the adaptable element of complex systems. Practitioners and first line management actively adapt the system to maximize production and minimize accidents.**



# Common Ground & Joint Activity





# Joint Activity

*Parties intend to **work together**, not in parallel. ~ Their work is **interdependent**. ~ All are committed to **common goals**. ~ Collaborative **choreography** is achieved through effective coordination.*

**Interpredictability** [ Reciprocity ]

**Directability** [ Reframing ]

**Common Ground** [ Group Intuition ]



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# Common Ground

*qualities of grounding*

*A **process** of communicating, testing, updating, tailoring, & repairing mutual understandings & mental models, consisting of:*

- **Initial Conditions** -*
- **Status of what has transpired** -*
- **Changes of knowledge since we started** -*



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# Common Ground

*types of knowledge, beliefs, assumptions*

*~ Each participant's **Role** ~*

*~ **Routines** the team can handle ~*

*~ **Expertise** of each person ~*

*~ Each person's **Stance**: their perception of production pressure, level of fatigue, cognitive weight, competing priorities ~*



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# Common Ground

*key aspects for incidents*

- A. We commit to **continually inspect and adjust** Common Ground as we work towards remediation.
- B. We **share the types of knowledge, beliefs, and assumptions** at work.
- C. We recognize **coordination signals**.

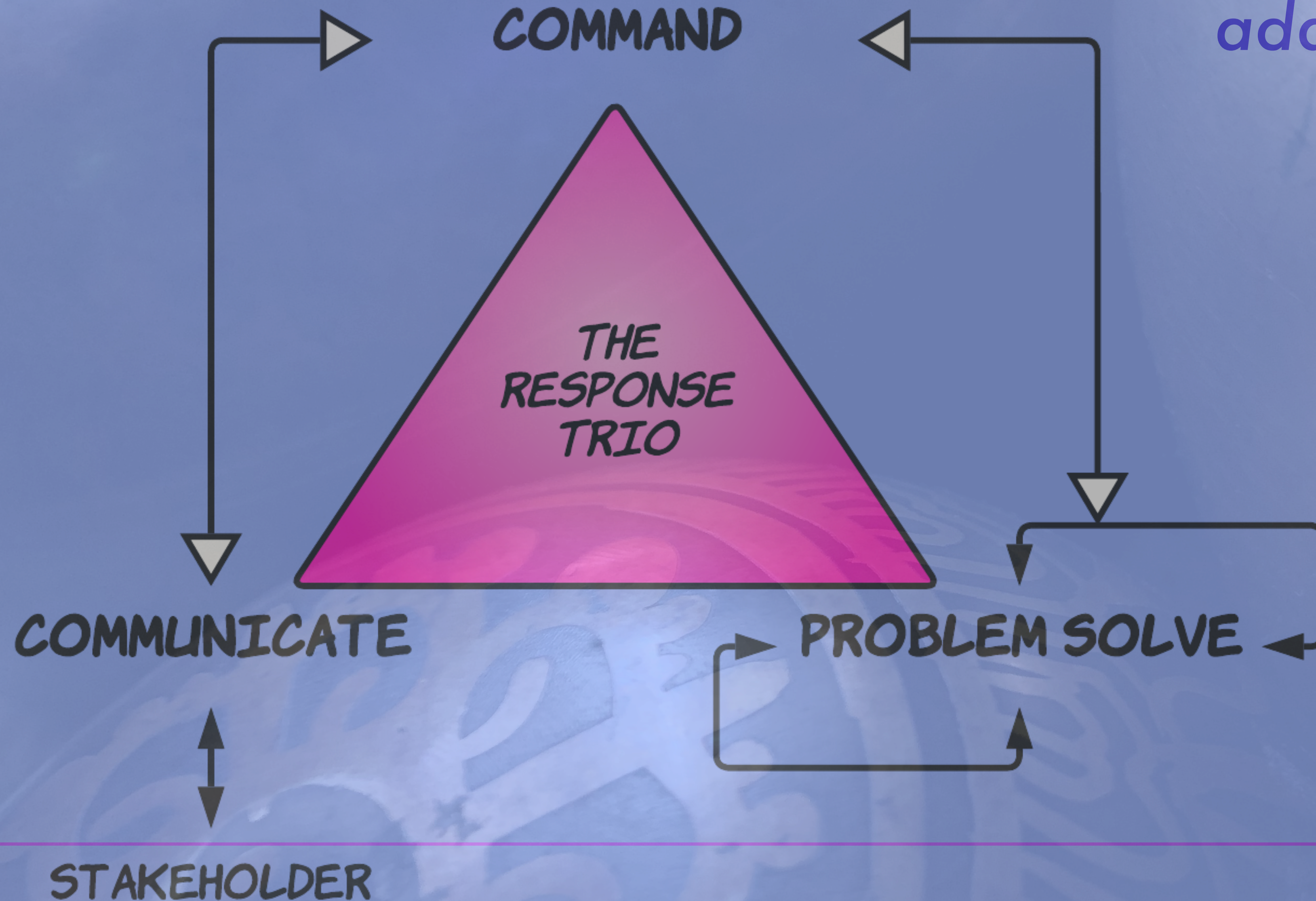


# The Response Trio



# Incident Command

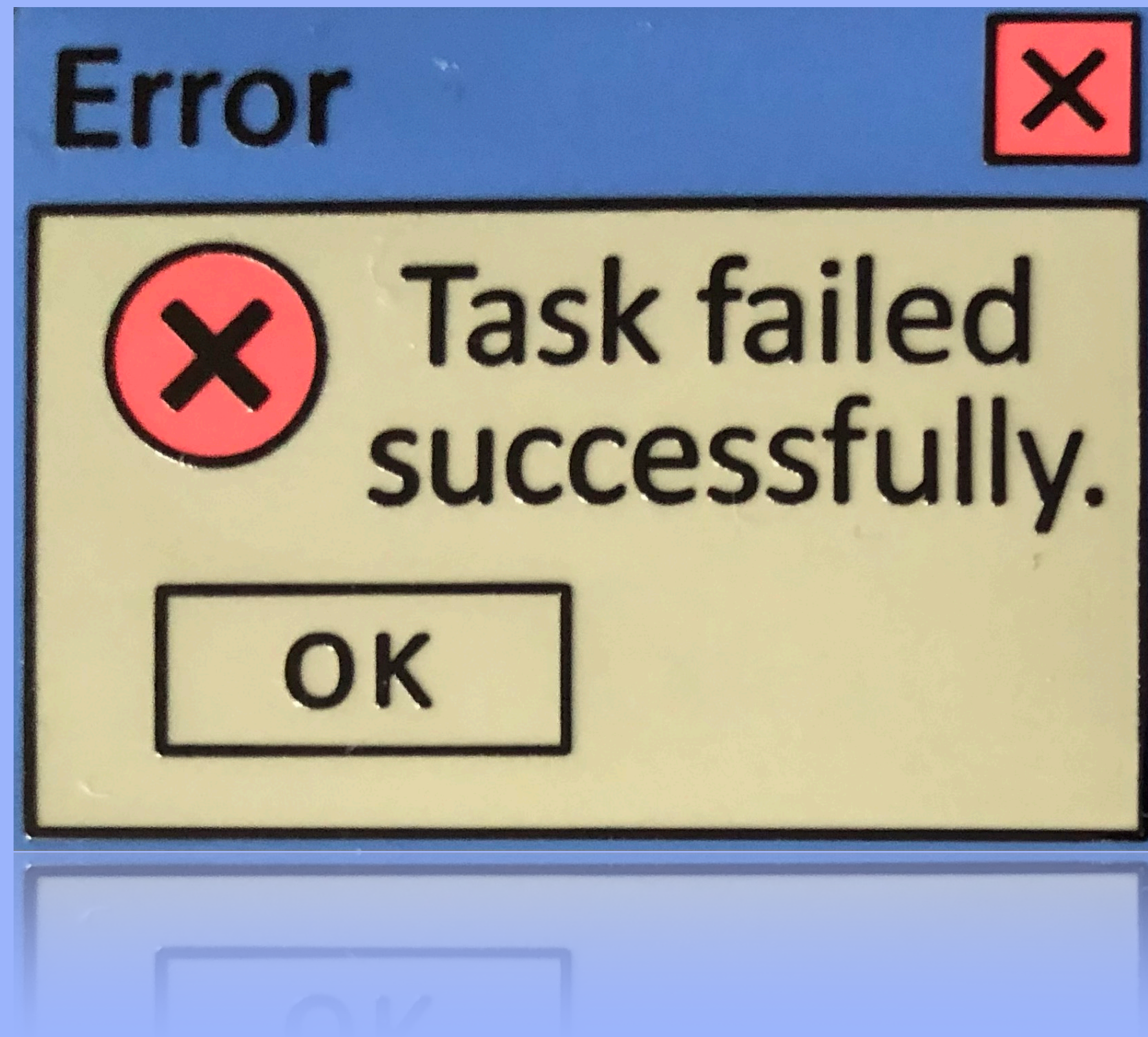
*adaptive choreography*





# Incident Command

*responsibilities*



- 1. Gather Knowledge**
- 2. Organize Resources**
- 3. Make Informed Decisions**
- 4. Support Common Ground**

*IC owns the Response... not the Incident.*



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# Incident Command

*adaptive choreography*

*Command remains flexible to an emerging situation and guides the response to remediation, giving Problem Solvers autonomy to self-coordinate and make local decisions as needed.*



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for the Interoperation of Distributed Software, Incidents need:

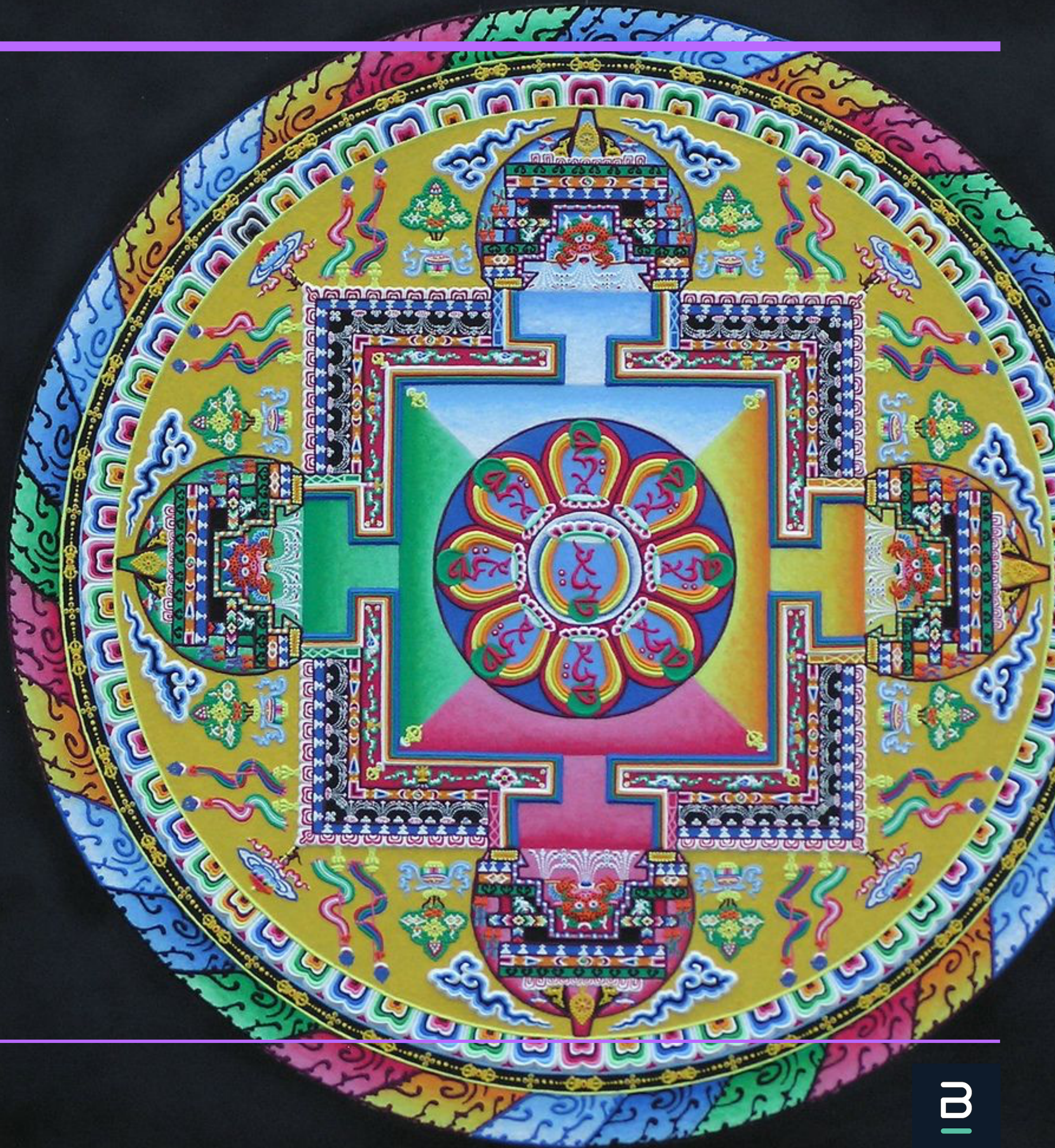
**M a c h i n e   O b s e r v a b i l i t y**

for the Reciprocity & Interpredictability of People, Incidents also need:

**H u m a n   O b s e r v a b i l i t y**



# The Human Observability of Incident Command





# Dynamics of Reciprocity

Dr. Laura Maguire

The ability to  
"look in and listen in"

has been widely documented as a benefit to  
smooth coordination.

*- Managing the Hidden Costs of Coordination, ACM Queue*



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# Human Observability

*support common grounding*

**Listen.** *Get the big picture by asking others their perspective. Be attentive to peoples' ability to respond while keeping a regular tempo with check-ins.*

**Update.** *When new people join, give them a status. When a mitigation is made, announce it. Feel like you are over-communicating. Delegate when you need help updating.*

**Guide.** *Get multiple perspectives for making decisions. Politely keep people on-topic. Suggest next steps or alternatives to engage minds.*



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# Human Observability

*support common grounding*

**Monitor.** Recognize signals like: questions around confusion, side conversations, huddles without updates, lack of response from a Role, hypothesis testing goes too long, a Problem Solver becoming fatigued.

**Repair.** Get knowledge flowing by asking questions. Redirect threads to the main chat. Delegate a Scribe. Pull participants together for a no-work status chat/meeting.

**Practice.** Use dedicated collaboration sessions outside of incidents to build personal relationships and group intuition. Provide a safe, unpressurized space for people to feel vulnerable with their peers.



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# Human Observability

*takeaways for incidents*

- A. **Share and update mental models** *to support common goals.*
- B. **Maintain transparency** *to support reciprocity and signals.*
- C. *Be flexible enough to* **change course and recalibrate** *when breakdowns occur.*



# References

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3. Maguire, Laura. Managing the Hidden Costs of Coordination.  
<https://queue.acm.org/detail.cfm?id=3380779>.



# Q&A



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