

The background features several thick, braided ropes in various colors including purple, teal, red, orange, and grey. These ropes are tied into various knot configurations, such as reef knots and reef reef knots, scattered across the white background.

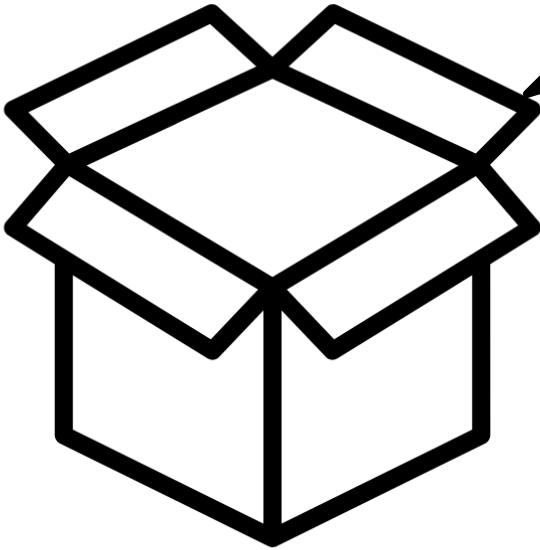
# Learning Inside the Box

The Scope of Incident Reviews

Rachel Silber

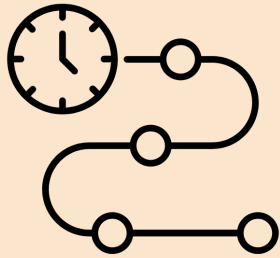
# The Box

- Limited time for the review
- Limited prep time
- Feels ritualistic, not a learning experience

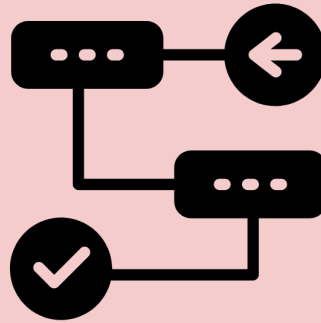


# What's the Scope of the Incident Review?

TIME



SYSTEMS



PEOPLE

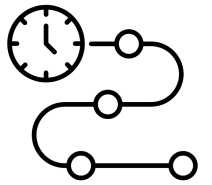


# Example: The Flash Sale

- Burst of e-commerce traffic on the internet. - a flash sale.
- Coincides with another event that temporarily reduces capacity - a planned maintenance
- Lost traffic => lost sales



# Building a Timeline

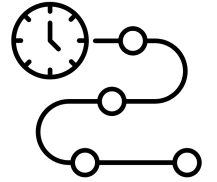


<b>Timestamp</b>	<b>Event</b>
08:54:43	?? what came first
...	...
10:03:06	Incident declaration ...

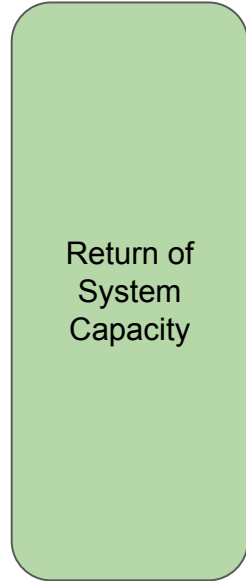
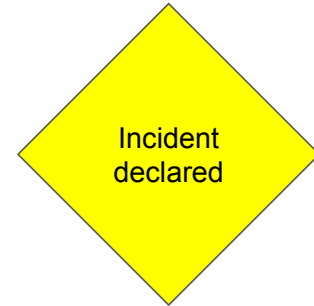
What are the facts of what happened?

Where to start is a choice.

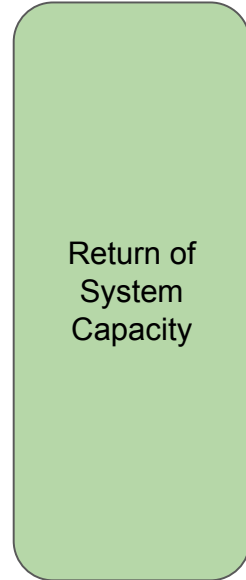
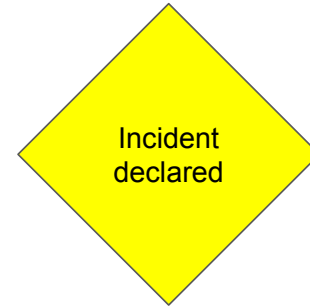
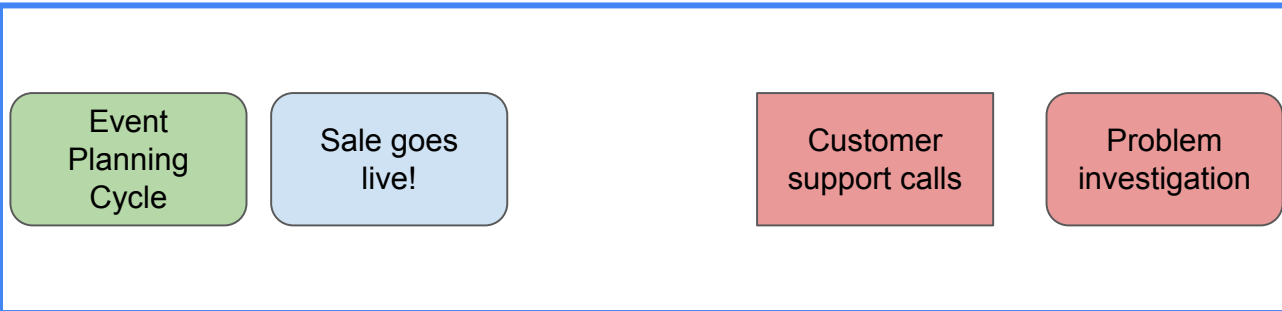
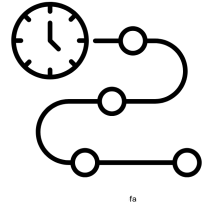
# Timelines Represent Points of View



10



# Timelines Represent Points of View



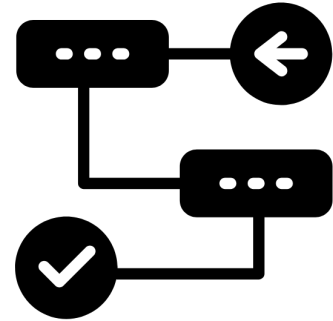
# Creating a System Diagram

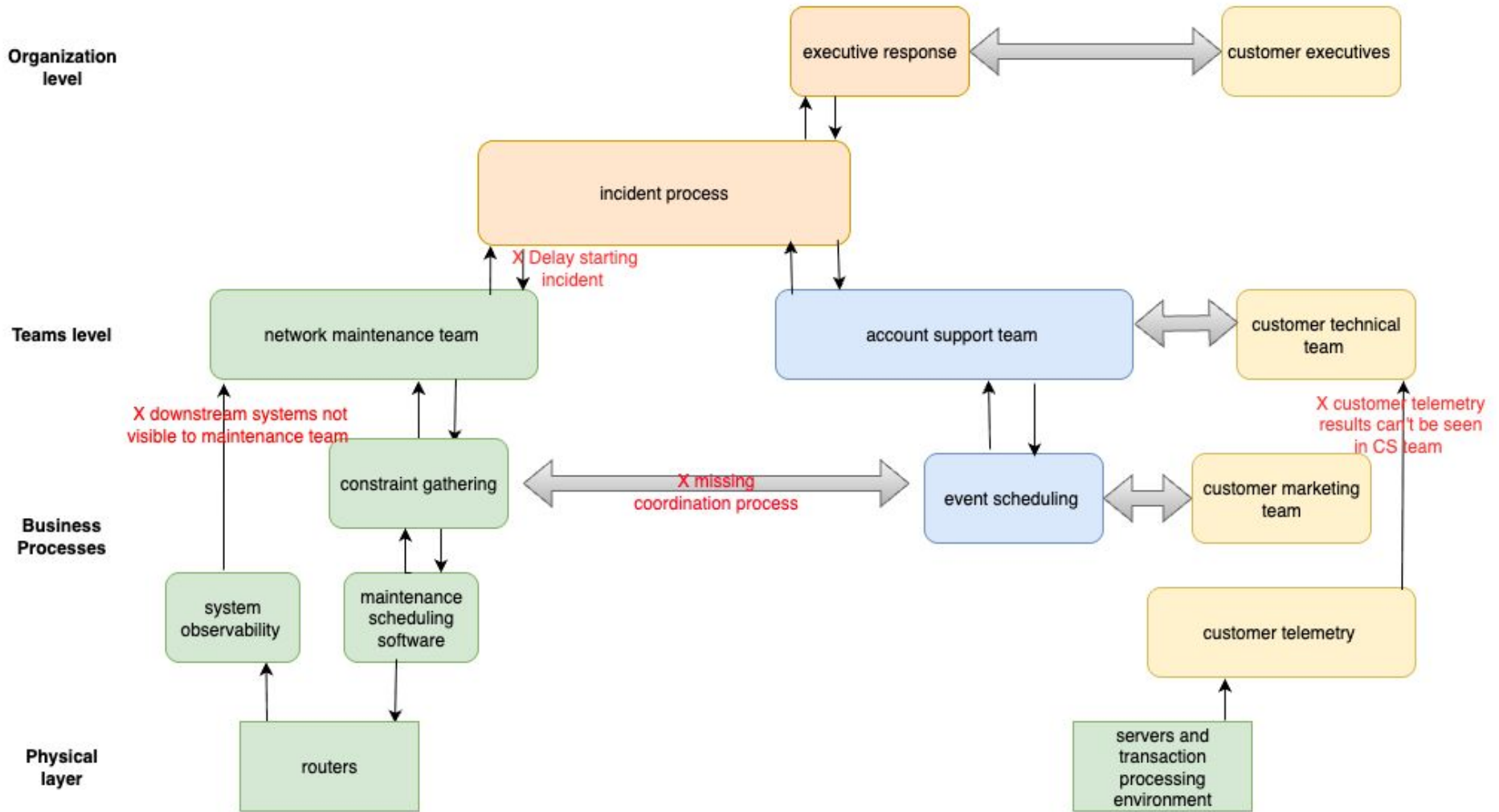
Provide a visualization of the systems in scope.

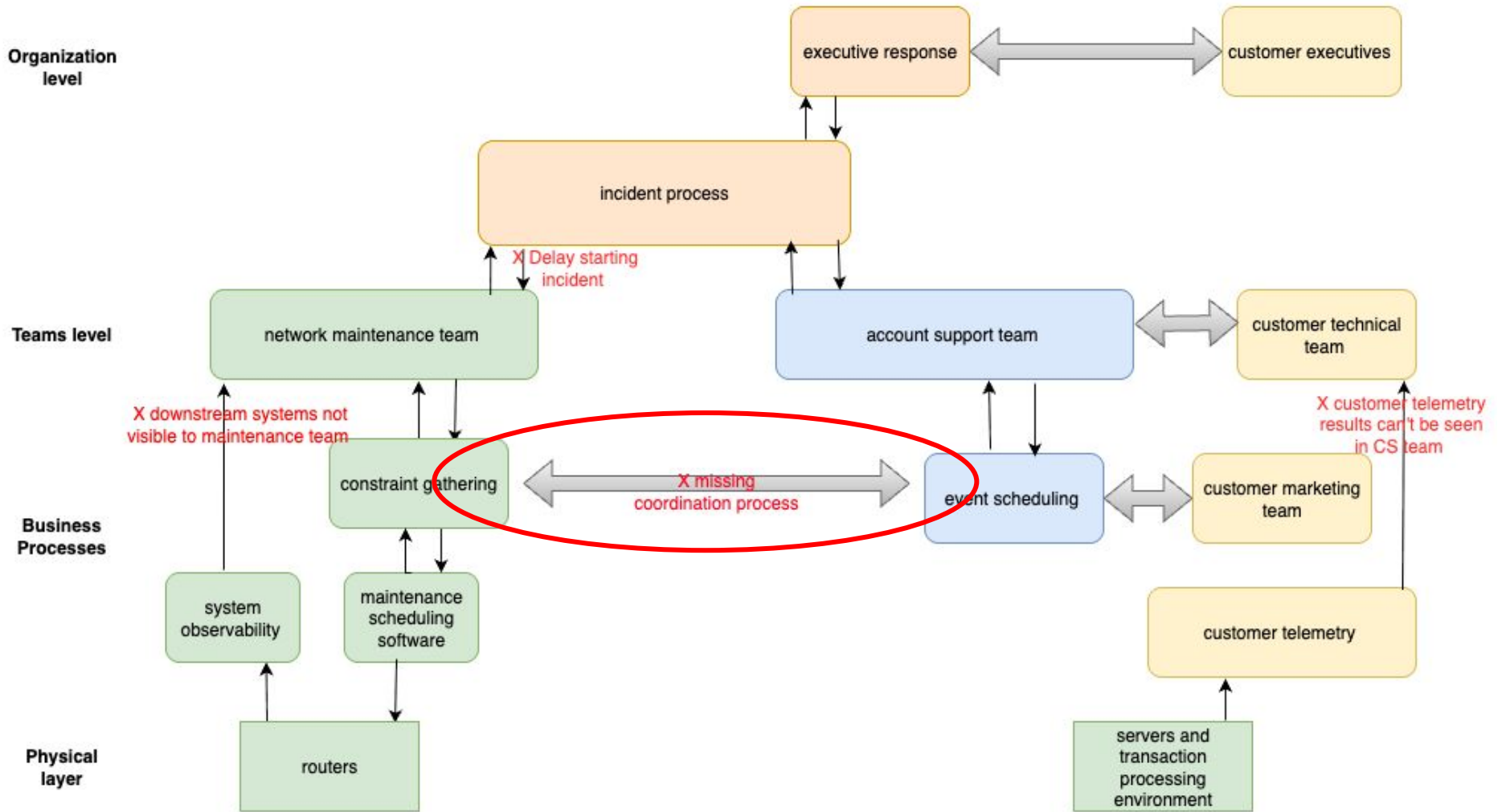
This helps with making sense of the incident.

Hierarchical control flow diagrams:

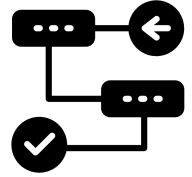
- Support a systems view of incidents
- Connect the human elements and technical elements



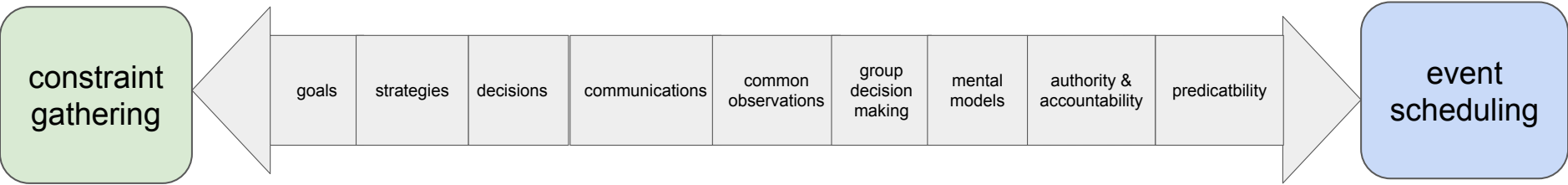




# Coordination Model



Systemic factors that lead to coordination failures can be examined:



# Inviting People to the Review

We have an opportunity to include many perspectives and learn from them.

But different people will bring different goals and understandings of the incident review itself.



# Accountability Goals

Avoid confusing accountability and blame.

Reassure fears of being scapegoated.

Build support for creating safer space for learning.



# Prevention Goals



Action items resulting from incident reviews

- May paradoxically introduce new hazards
- May reduce team autonomy and confidence in other planning process
- May interfere with learning about the incident.

If possible, reduce conflict between prevention goals and deeper understanding by separating changes from the incident review conversation.

# In Conclusion

Running successful incident reviews is not easy.

Preparation and shared mental models help tell a story

... which leads to better understanding

... supporting safer outcomes in the future.



**Thank you!**  
**Questions?**



# Reading list : Short pieces

Action items: <https://ferd.ca/the-review-is-the-action-item.html>, Fred Hebert

Tips and context for keeping accountability in and blame out of incident reviews:  
<https://fgj.codes/posts/why-do-we-do-blameless-incident-reviews/>, Fischer Jemison

Richard Cook on incident reviews:  
<https://www.adaptivecapacitylabs.com/2019/06/17/some-observations-on-the-messy-realities-of-incident-reviews/>

Language used in incident reviews as part of learning: Derek Heraghty et al [Accident Report Interpretation](#) *Safety* (2018)

Timelines and proximate causes:  
<https://backofmind.substack.com/p/analysing-the-explosions> Dan Davies

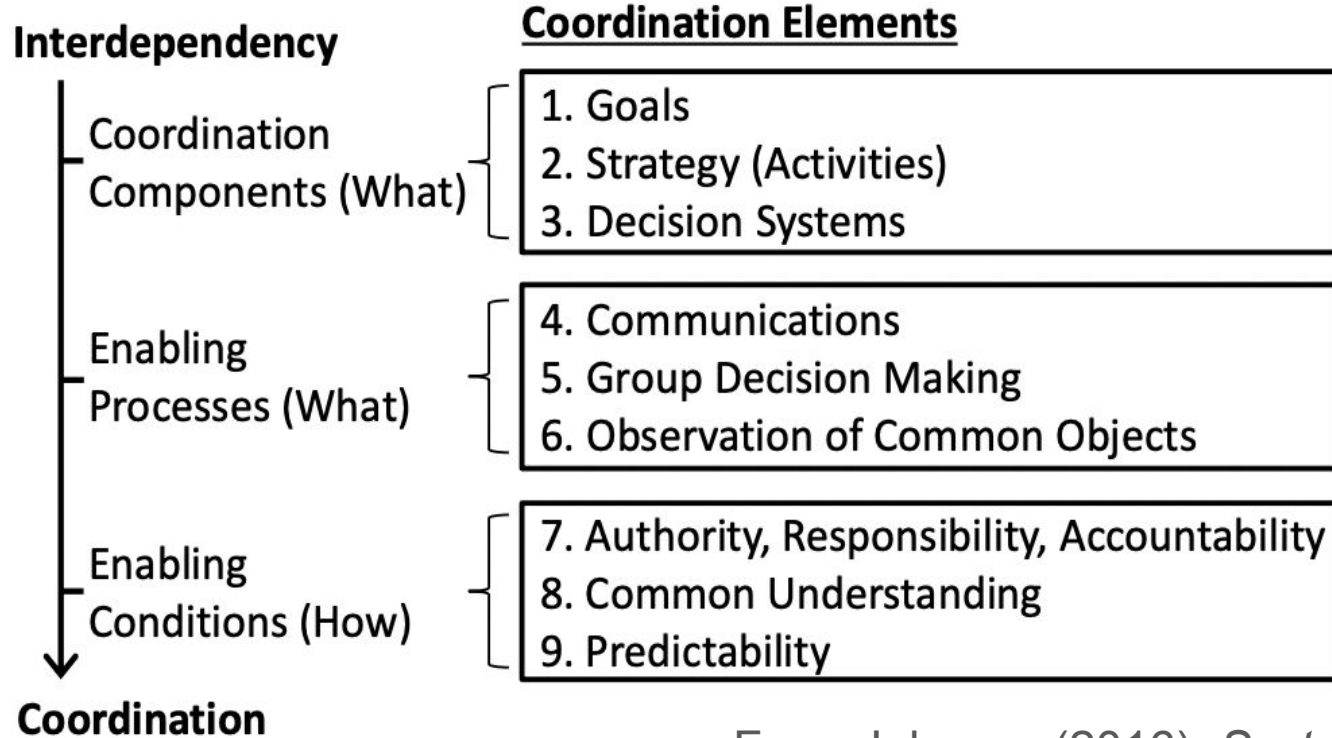
# Reading list: In Depth

Leveson, Nancy G. *Engineering a Safer World: Systems Thinking Applied to Safety*. Cambridge, MA: MIT Press (2012). (online at: <http://sunnyday.mit.edu/safer-world.pdf>) \

David Woods, Sidney Dekker, Richard Cook, Leila Johannesen, Nadine Sarter *Behind Human Error* CRC Press (2010)

Johnson (2016) System Theoretic Safety Analyses Extended for Coordination, MIT dissertation <http://sunnyday.mit.edu/johnson-dissertation.pdf>

# Appendix: Johnson's Coordination Model



**Figure 11. Coordination Elements**

From Johnson (2016) *System Theoretic Safety Analyses Extended for Coordination*, MIT dissertation

# Credits

[Box](#) by Maxim Kulikov, [Panic](#) by Samy Menai, [Timeline](#) by M. Agil Ronggo Mustofa, [Workflow](#) by icelloid, [crowd](#) by Cuputo, [lightbulb](#) by Roat Studio, and [celebrate](#) by Kamel Meziol, all from Noun Project

Thanks to my many reviewers and helpers, and to



All opinions here are my own and not endorsed by any organization or employer.