



Organizing for safety and reliability

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Goals for today

- To introduce the concept of high reliability organizing as a way of thinking about consistent and excellent performance.
- After this session, you should be able to answer the following questions:
 - Why care about high reliability organizing?
 - What practices enable high reliability organizing?
 - What are some ways to build the capability for high reliability organizing?

**Why care about
high reliability organizing?**

A million accidents waiting to happen..



Introduction to HROs

“So you want to understand an aircraft carrier? Well, just imagine that it's a busy day, and you shrink San Francisco Airport to only one short runway and one ramp and one gate. Make planes take off and land at the same time, at half the present time interval, rock the runway from side to side, and require that everyone who leaves in the morning returns that same day. Make sure the equipment is so close to the edge of the envelope that it's fragile. Then turn off the radar to avoid detection, impose strict controls on radios, fuel the aircraft in place with their engines running, put an enemy in the air, and scatter live bombs and rockets around. Now wet the whole thing down with sea water and oil, and man it with 20-year-olds, half of whom have never seen an airplane up-close. Oh, and by the way, try not to kill anyone.”

Senior Officer, Air Division
(Rochlin, LaPorte, Roberts, 1987)

Examples of HROs







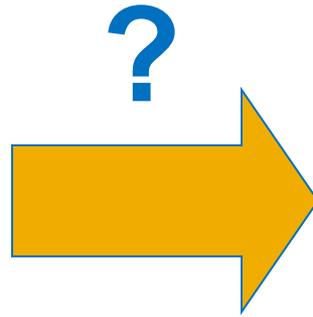




High reliability organizing is...

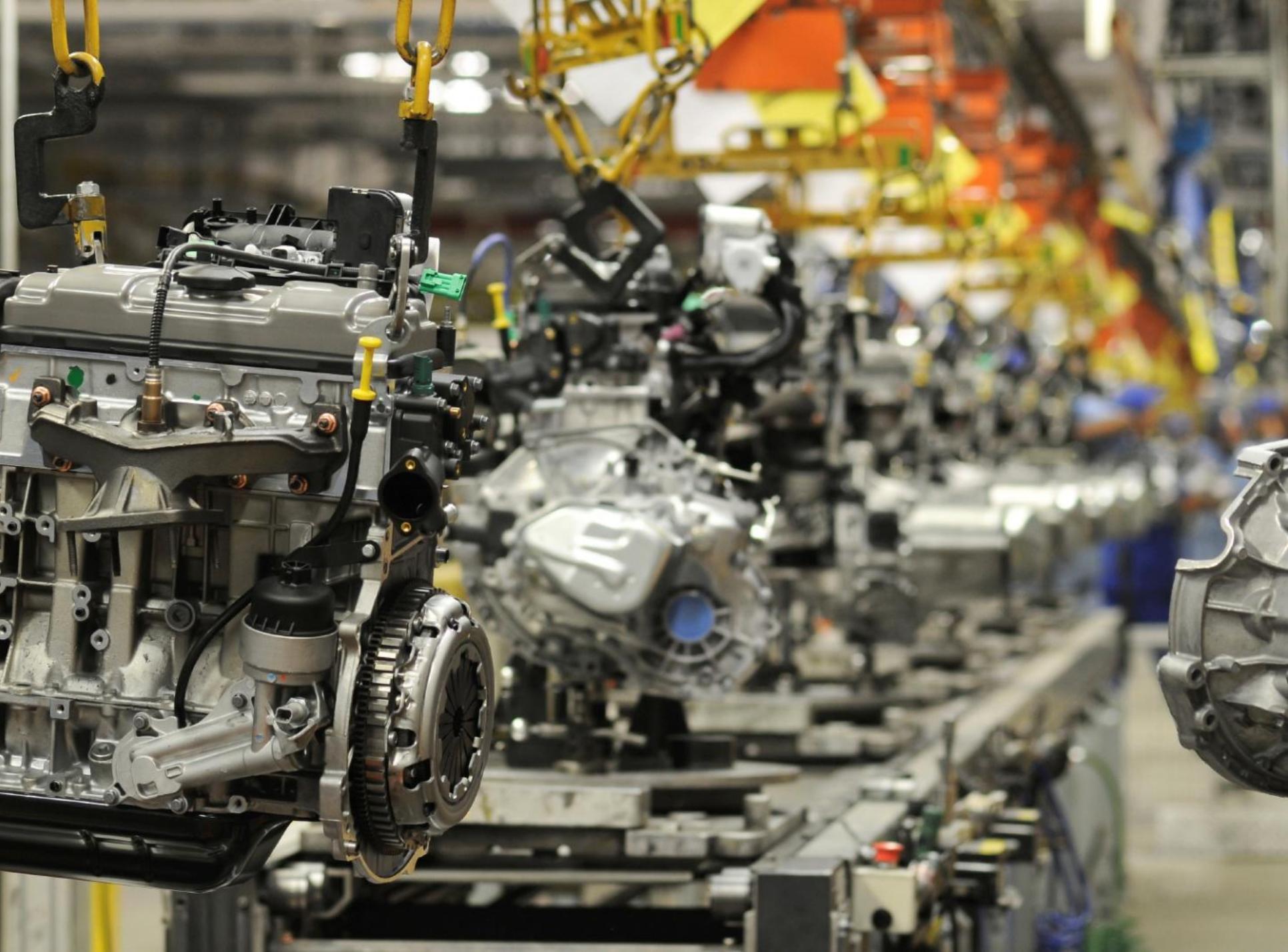
- A way of thinking about the world
- A set of practices that can be learned
- A process, not a state that can be achieved
- Something that must be tailored to the needs of those accomplishing the work

Translating high reliability organizing











**What practices enable
high reliability organizing?**

What do HROs have in common?

1. **Preoccupation with failure:** Treat any and all failures as a window on the health of the system.
2. **Reluctance to simplify:** Socialize people to make fewer assumptions and to notice more.
3. **Sensitivity to operations:** Develop an integrated big picture of ongoing operations.
4. **Commitment to resilience:** Anticipate AND develop the capacity to cope with surprises in the moment.
5. **Deference to expertise:** Venerate expertise and experience over rank.

OF THE YEAR
Julia Child
Book Awards

Vegetarian Cooking for Everyone

EAST NIGELLA LAWSON



FOREVER SUMMER NIGELLA LAWSON



JAMIE OLIVER



jamie's dinners



the barefoot contessa cookbook

GARTEN



Potter

Mollie Katzen's
VEGETABLE HEAVEN



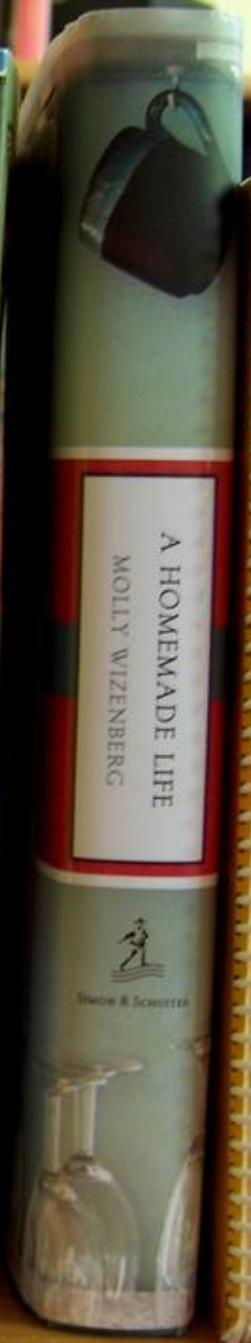
VIVE LE VEGAN!

Drecho Burton



The MOOSEWOOD COLLECTIVE

MOOSEWOOD RESTAURANT
DAILY SPECIAL



A HOMEMADE LIFE
MOLLY WIZENBERG



More Home Cooking

Laurie Colwin

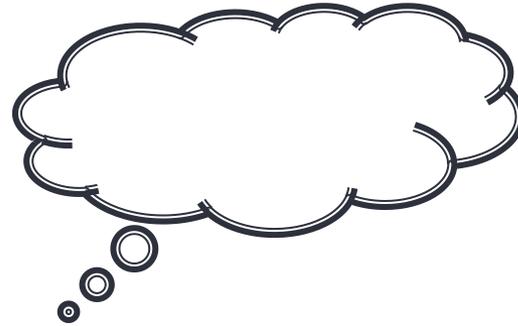


HOME COOKING • LAURIE COLWIN



For each HRO concept...

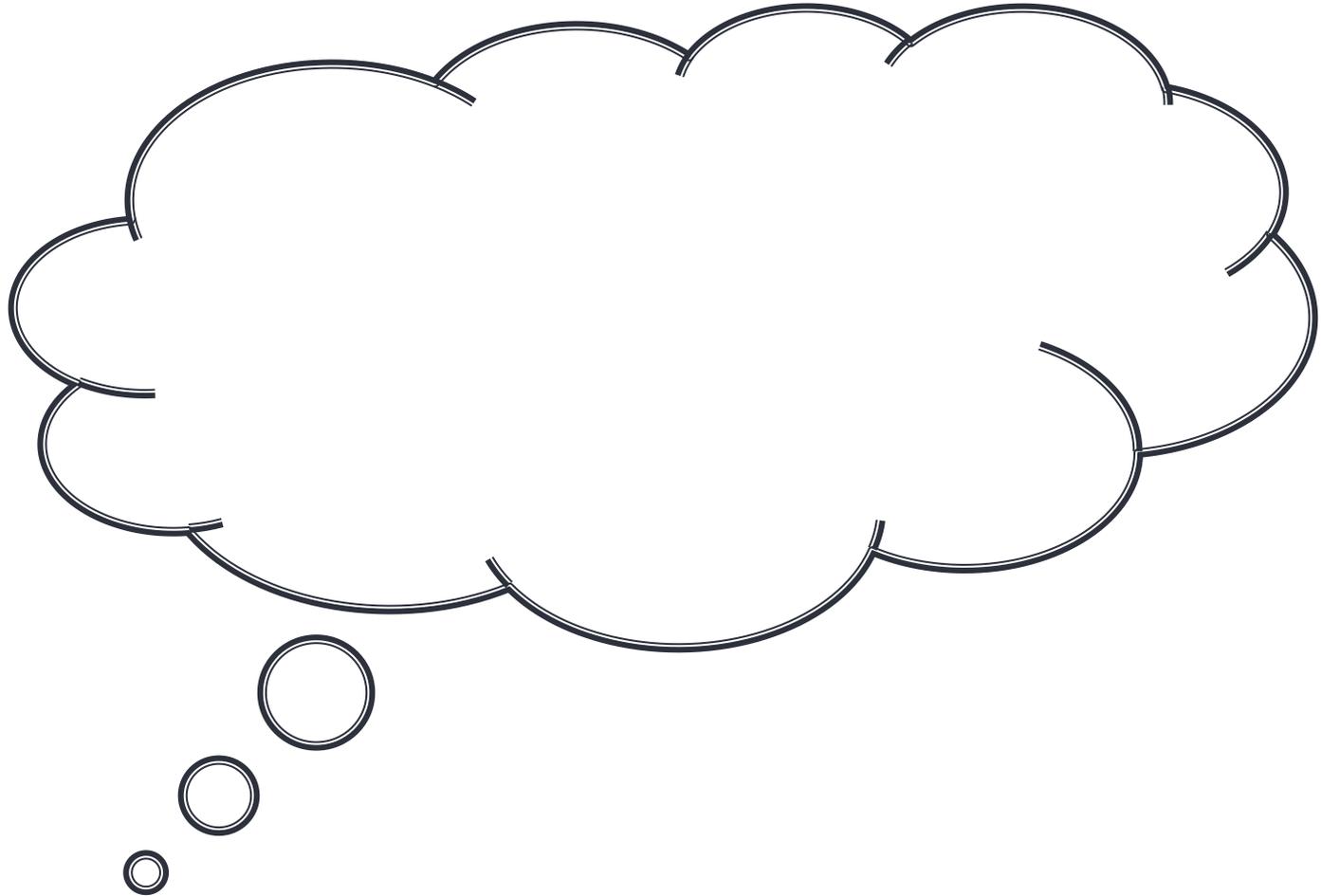
1. Explain the concept



2. Give an example of how the concept is used in an HRO



1. Preoccupation with failure



1. Preoccupation with failure

- Safety is invisible
 - Safety is known by the absence of other things
 - The fact that nothing bad appears to be happening does NOT mean that your organization is safe
- Safety needs to be continually re-created
 - “...it is an ongoing condition in which problems are momentarily under control due to compensating changes in the components.” (Weick, 1987, p. 118)
 - Safety is non-bankable - just because your organization was safe yesterday does NOT mean it is safe today

Most organizations focus on successes and ignore or minimize failures

Grade

A₁

B

A

$$+ q^2 \mid \frac{+}{2} \mid + 4M$$



HROs focus on
understanding failures.

WHY?

Failures (or near-failures) can
act as a window into the
health of the system



Small failures are often
warnings

Small failures give clues about small problems that are easy to fix— problems enlarge and grow over time



1. Preoccupation with failure





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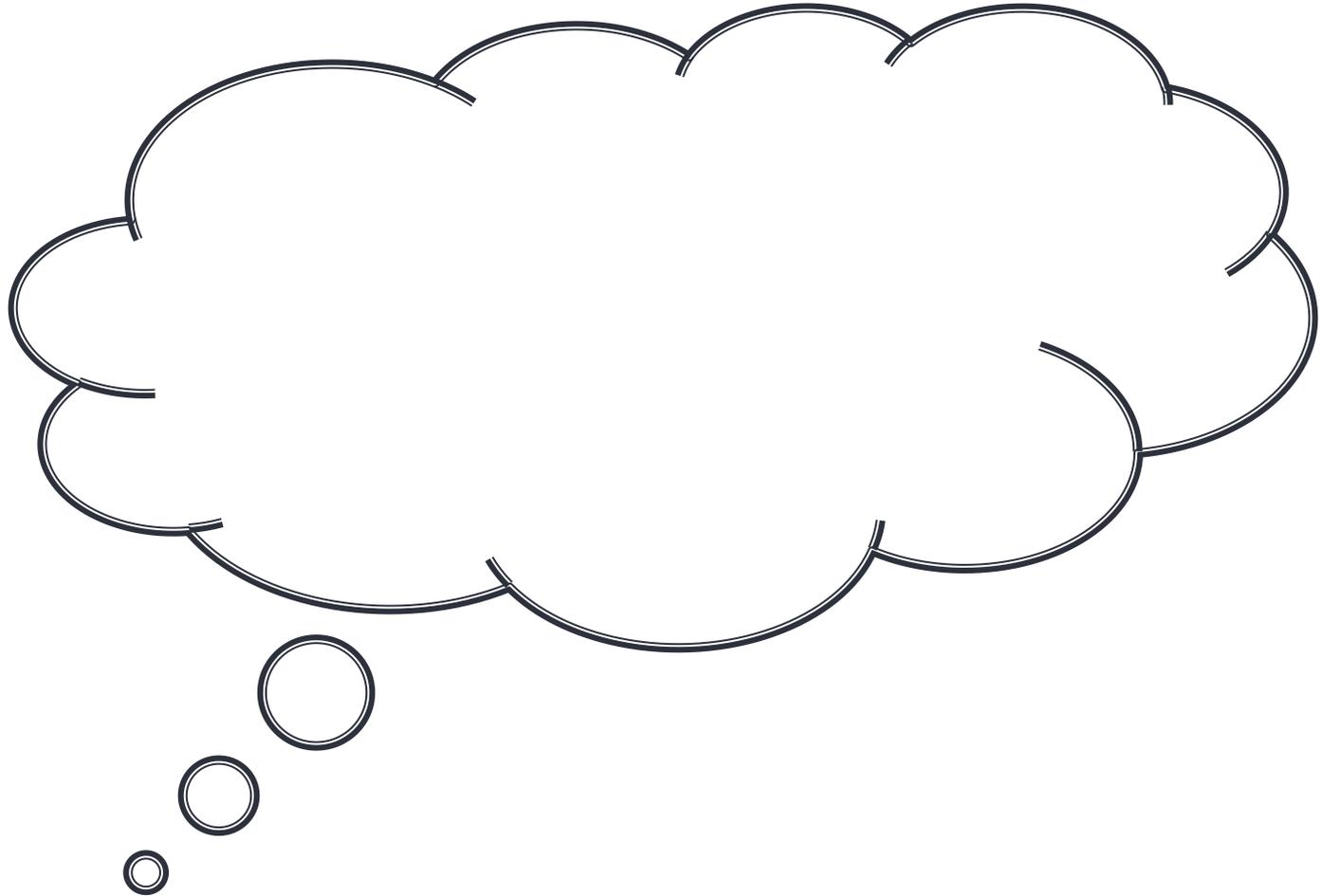
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2. Reluctance to simplify



2. Reluctance to simplify

- Most organizations try to simplify their activities and assumptions.
- HROs try to “complexify” their activities and assumptions
 - Have staff with varied expertise
 - Have staff with differing perspectives
 - Foster an environment where voicing questions and minority opinions is encouraged



Our natural tendency,
especially when under stress,
is to narrow our focus



People tend to privilege
new information that
supports what they
already believe

We see what we expect to see

We see what we have labels to see

We see what we have skills to manage

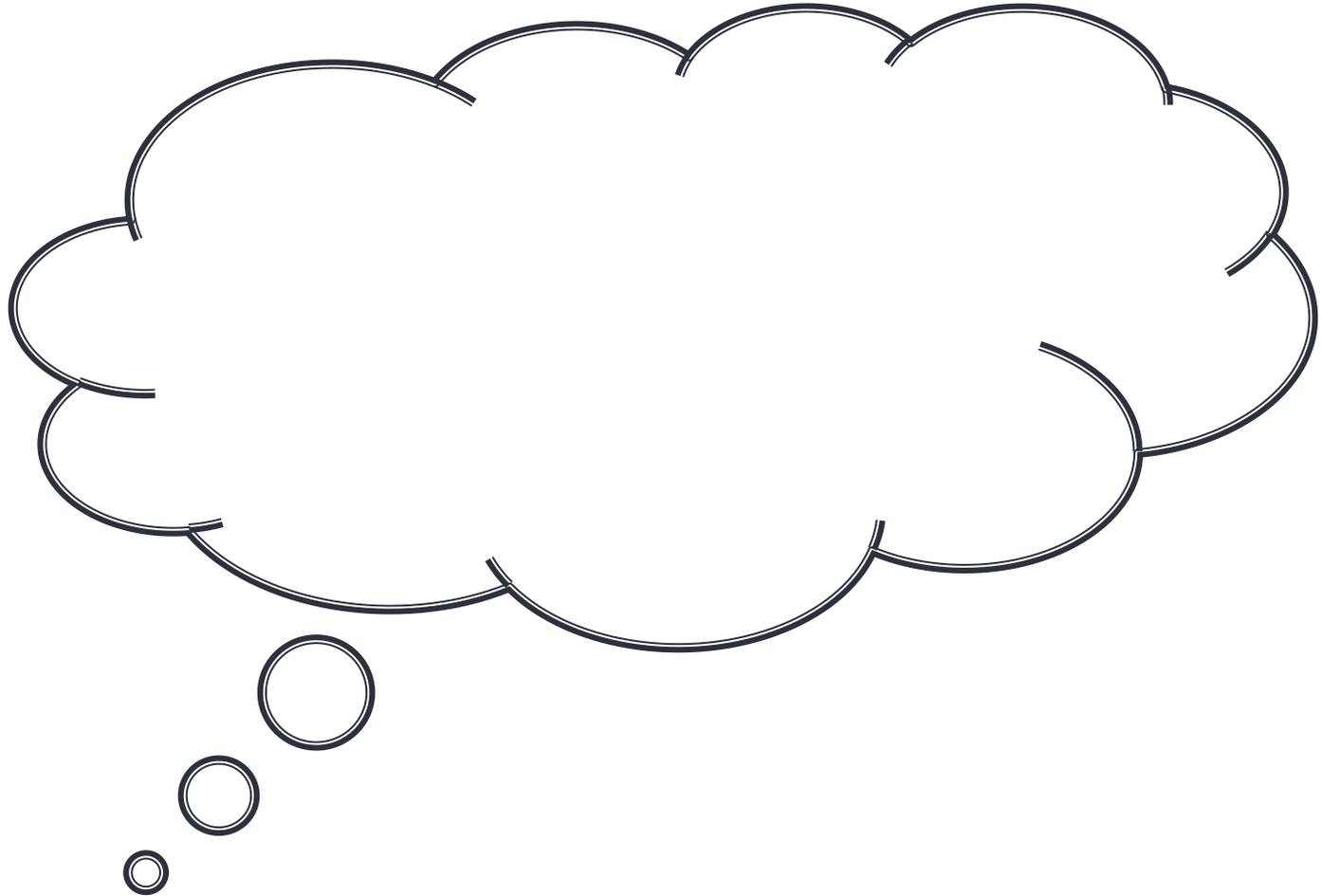
HROs counter this tendency to simplify and work to maintain a complicated understanding of situations

2. Reluctance to simplify





3. Sensitivity to operations



3. Sensitivity to operations

- HROs strive to maintain a big picture of operations in the moment
 - Seeing the “big picture” means that people not only understand their own work but also how their work fits with everyone else’s work
- Sensitivity to operations allows for real-time rapid adjustment

Being sensitive to
operations allows small
perturbations to be
detected



“The journey of error, the dynamic experience of going wrong, is crucial in understanding medical mistakes. They are rarely simple events like errors in addition. Rather they are complex activities and cognitions that unfold in time.”

(Paget, 1990)

Detecting errors early in their unfolding helps to prevent the consequences of the error from cascading throughout the organization

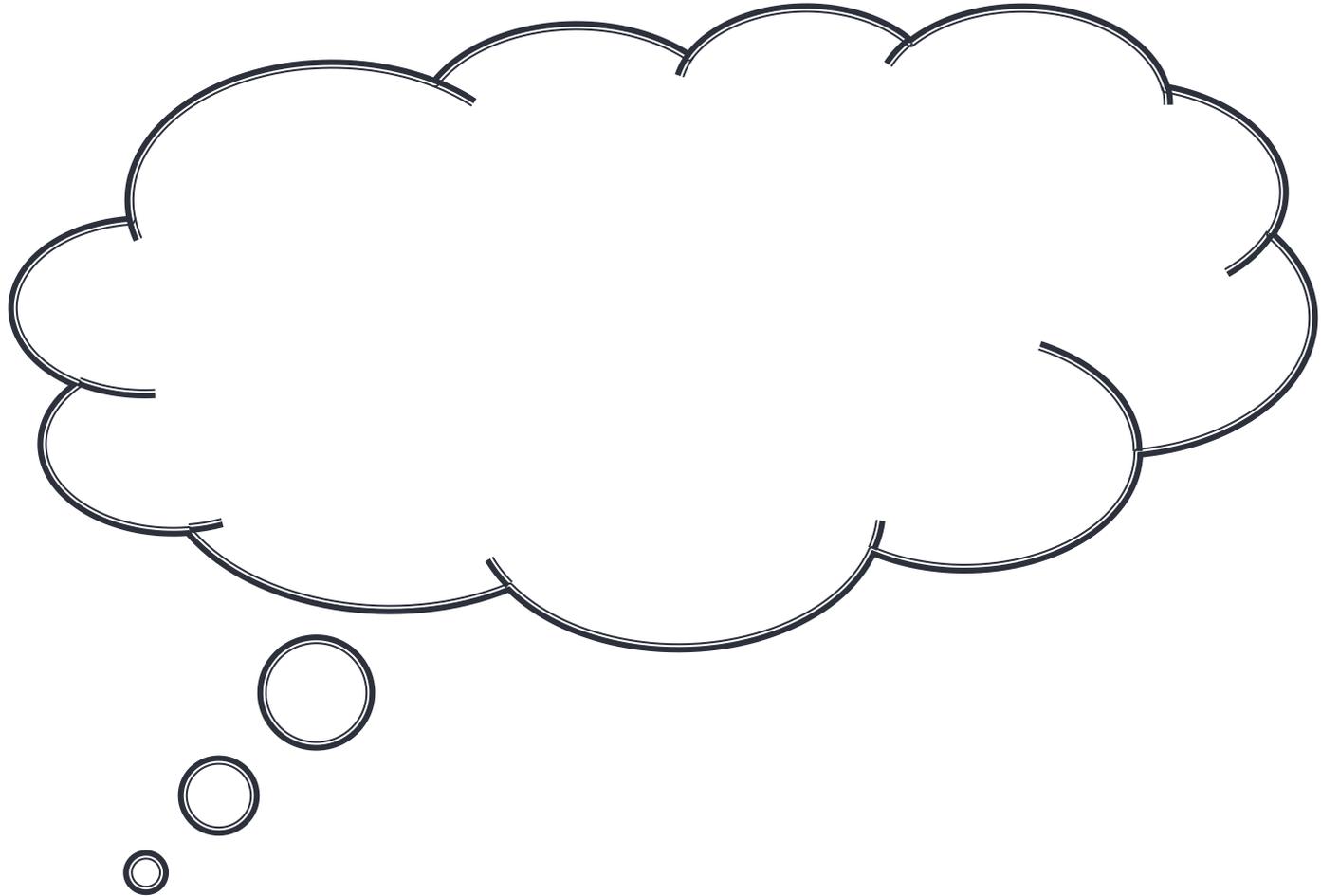


3. Sensitivity to operations





4. Commitment to resilience



4. Commitment to resilience

- HROs try to anticipate unexpected events but also assume that they will be surprised
- HROs strive to build people's response repertoires and competencies so that they can better cope with surprises in the moment.
- Commitment to resilience helps people think creatively and act flexibly at just the moment that it's hardest to do so



How do we manage unexpected events?



How do we manage unexpected events?



How do we manage the unexpected?

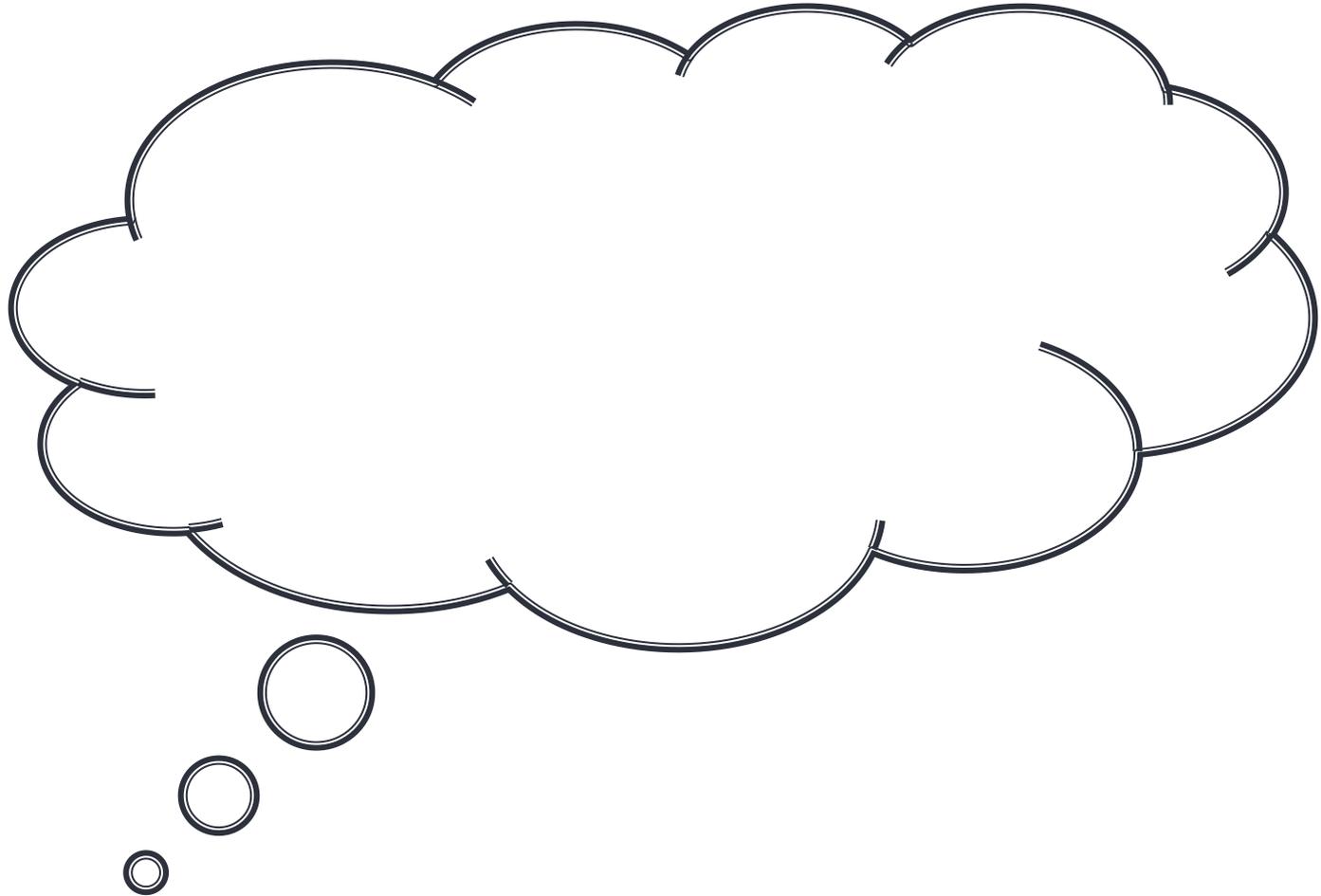
| Prevention approach | Resilience approach |
|---|---|
| Able to anticipate and prevent adverse events | Not always possible to anticipate adverse events |
| Look backward - Analyze past failures to determine and resolve causes Look forward - Attempt to identify potential future problems | Create capacity for managing the unexpected Train people to improvise when faced with novel events |

4. Commitment to resilience





5. Deference to expertise



5. Deference to expertise

- Most organizations put a premium on hierarchy and power such that important choices are made by important high-ranking people.
- HROs have flexible decision making structures and shift decisions in high-tempo times away from formal authority toward expertise and experience.

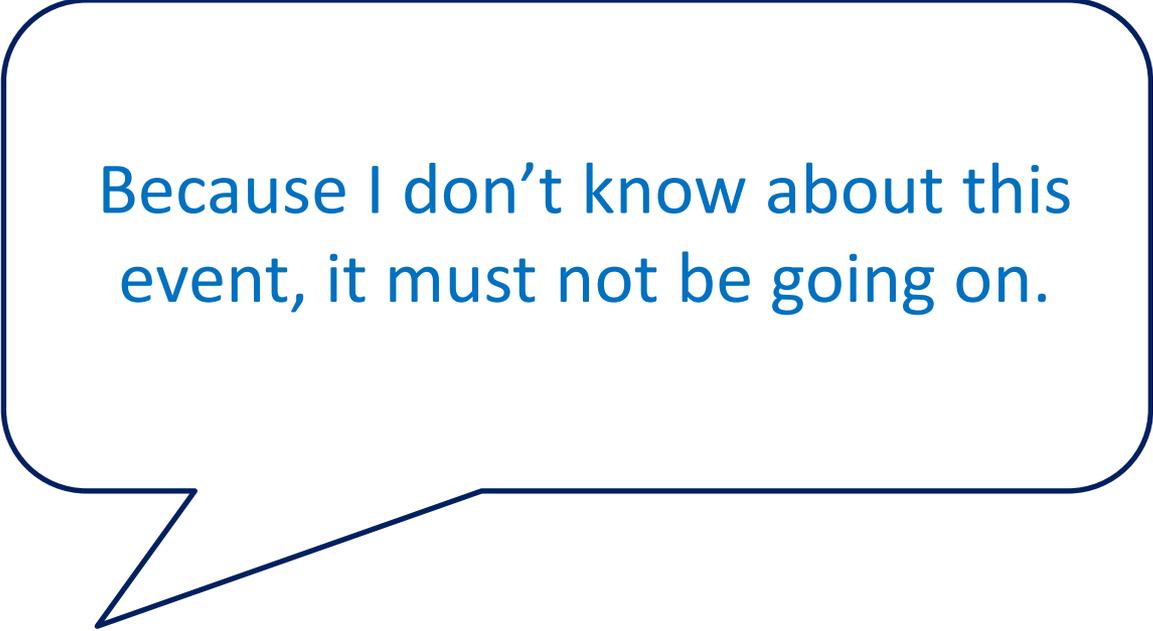
Deference to expertise moves
decision making to the front-
line, to people at the “sharp
end” of care



Deference to expertise
helps guard against “blind
spots” in organizational
knowledge

Fallacy of centrality

(Westrum, 1982)



Because I don't know about this event, it must not be going on.

Deference to expertise
acknowledges that
different experts bring their
own perspective to the
problem



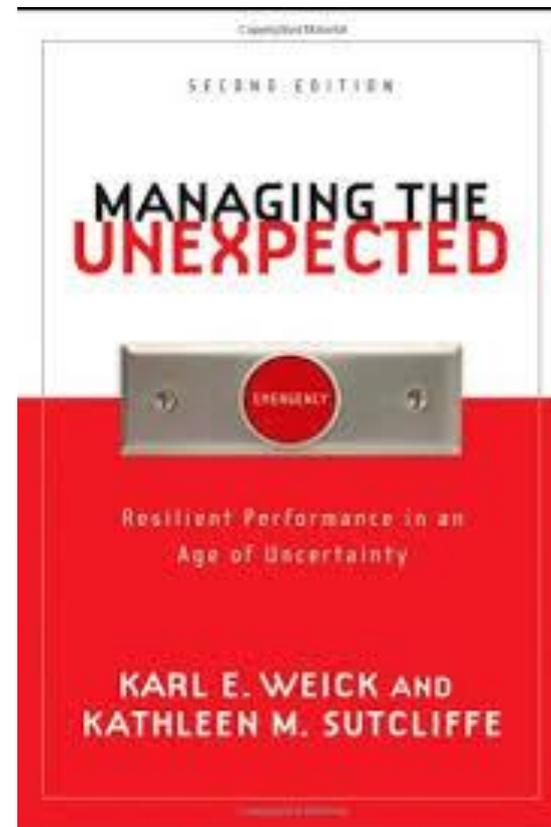
5. Deference to expertise





**What are some ways to
build the capability for
high reliability organizing?**

Use an HRO lens to examine current practices and problems





Increase awareness of situation



Increase awareness of situation

For operations-sensitive leadership, use the **STICC** briefing protocol to surface latent problems

- **Situation** = Here's what I think we face.
- **Task** = Here's what I think we should do.
- **Intent** = Here's why.
- **Concern** = Here's what we should keep our eye on.
- **Calibrate** = Now talk to me.

Make better sense of failures



Make better sense of failures

- Adopt Winston Churchill's debriefing protocol to better understand your system after unexpected events occur.
 - Why didn't I know?
 - Why didn't my advisors know?
 - Why wasn't I told?
 - Why didn't I ask?

HRO resources

- *Managing the Unexpected* (Weick and Sutcliffe, 2007)
- High-Reliability Organizing website
<http://high-reliability.org/resources>
- Institute for Healthcare Improvement:
<http://www.ihf.org/IHI/Topics/Reliability/>
- Agency for Healthcare Research and Quality:
Becoming a HRO
<http://www.ahrq.gov/qual/hroadvice/index.html>

Goals for today

- Now, you should be able to answer the following questions:
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Thank you!
