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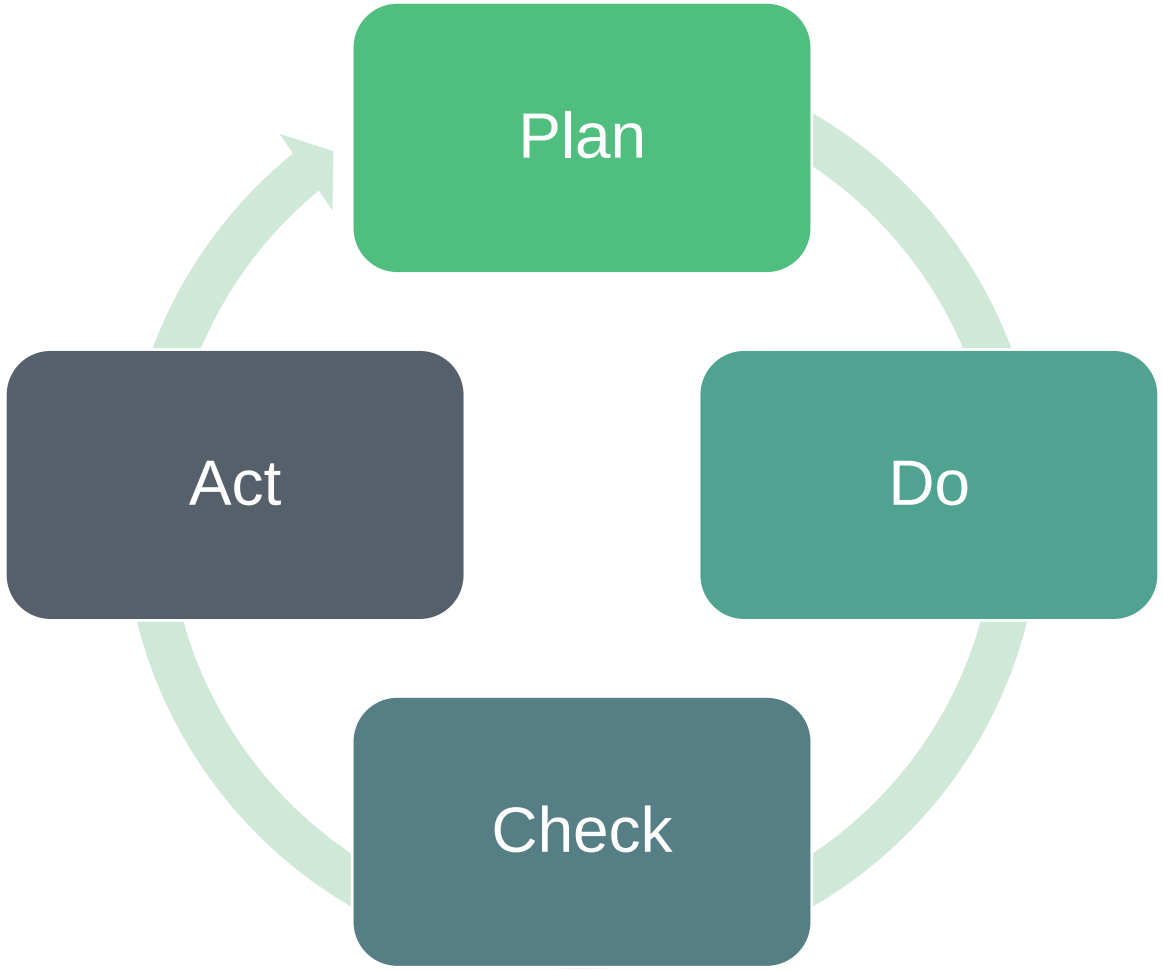
RESILIENT SAFETY MANAGEMENT SYSTEMS

Ron Gantt

March 2021`

SAFETY MANAGEMENT SYSTEMS



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EVERYONE AGREES

ANSI Z10

OHSAS 18001

ISO 45001

AS/NZS 4801

CSA Z1000

"The National Safety Council encourages all organizations to adopt a safety management system on their journey to safety excellence."

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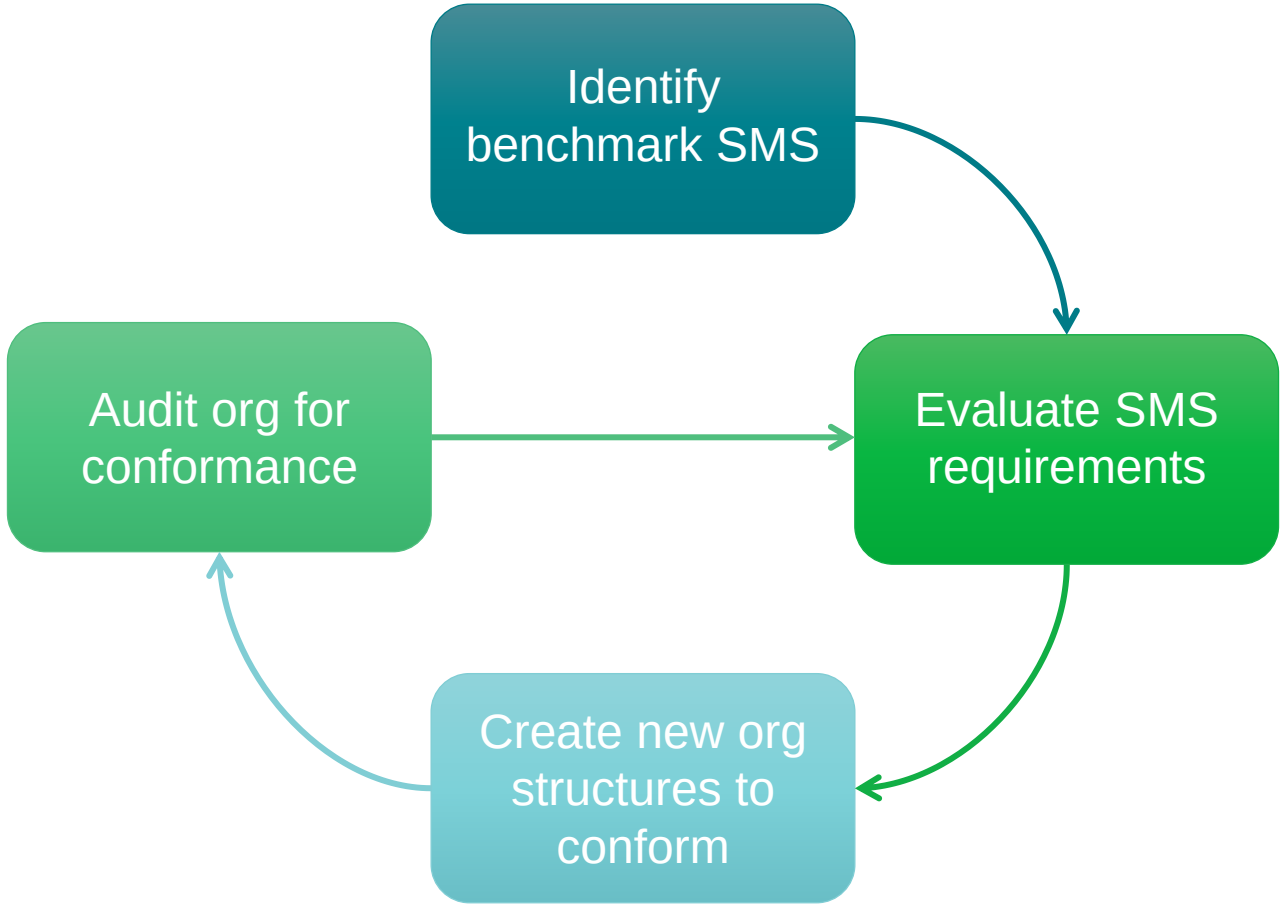
TYPICAL PROCESS



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BUT WAIT…

2007 systematic review of OHSMSs

> "…the review concluded that the body of evidence was insufficient to make recommendations in favor of or against OHSMSs."

2015 study

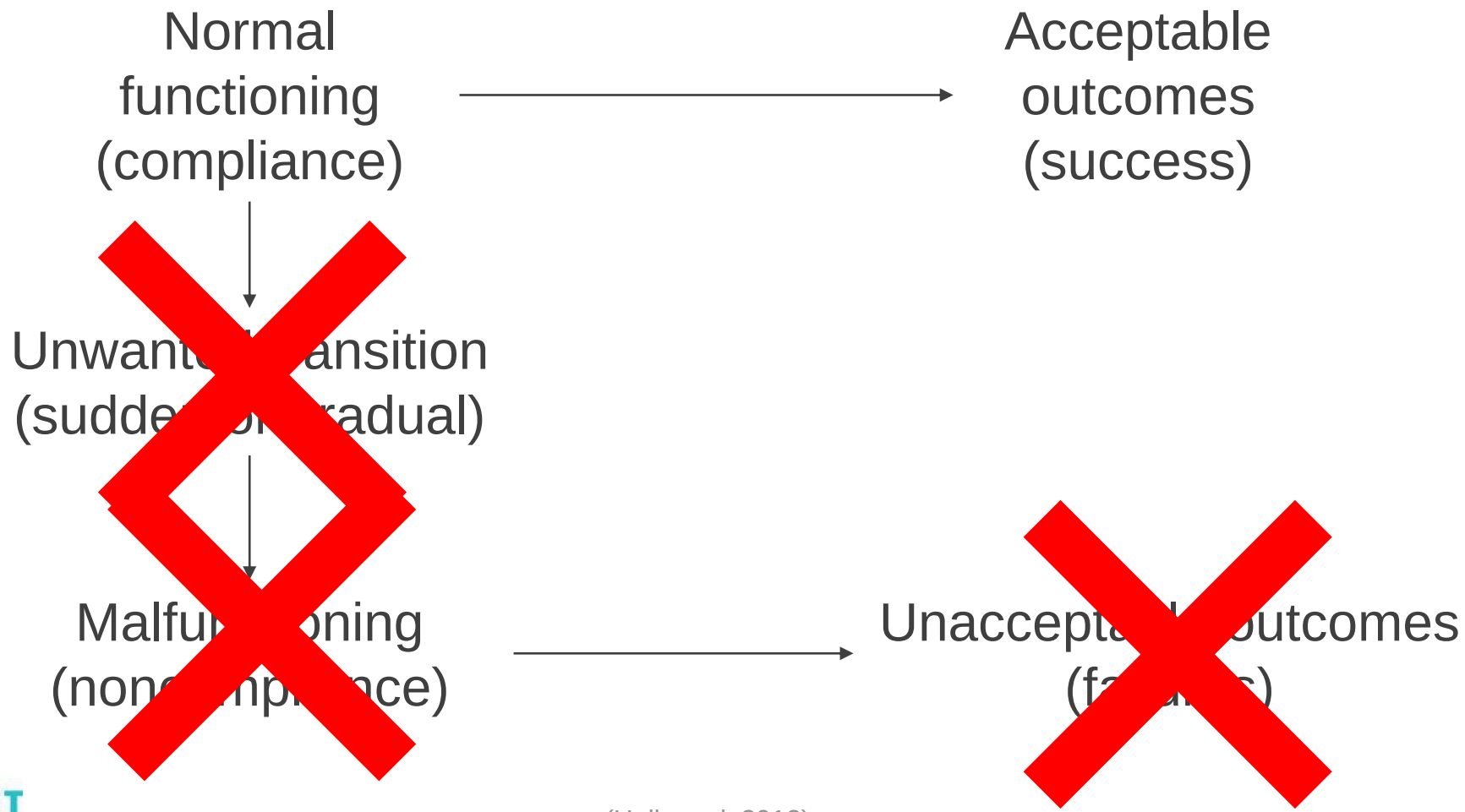
> "This study showed that HSEMS was established well, which is a reflection of the efficient regulatory monitoring of parent company; however, it was not sufficient for preventing injuries and ensuring health and safety of workers."

(Robson et. al., 2007; Gholami et. al., 2015)

WHAT'S HAPPENING?

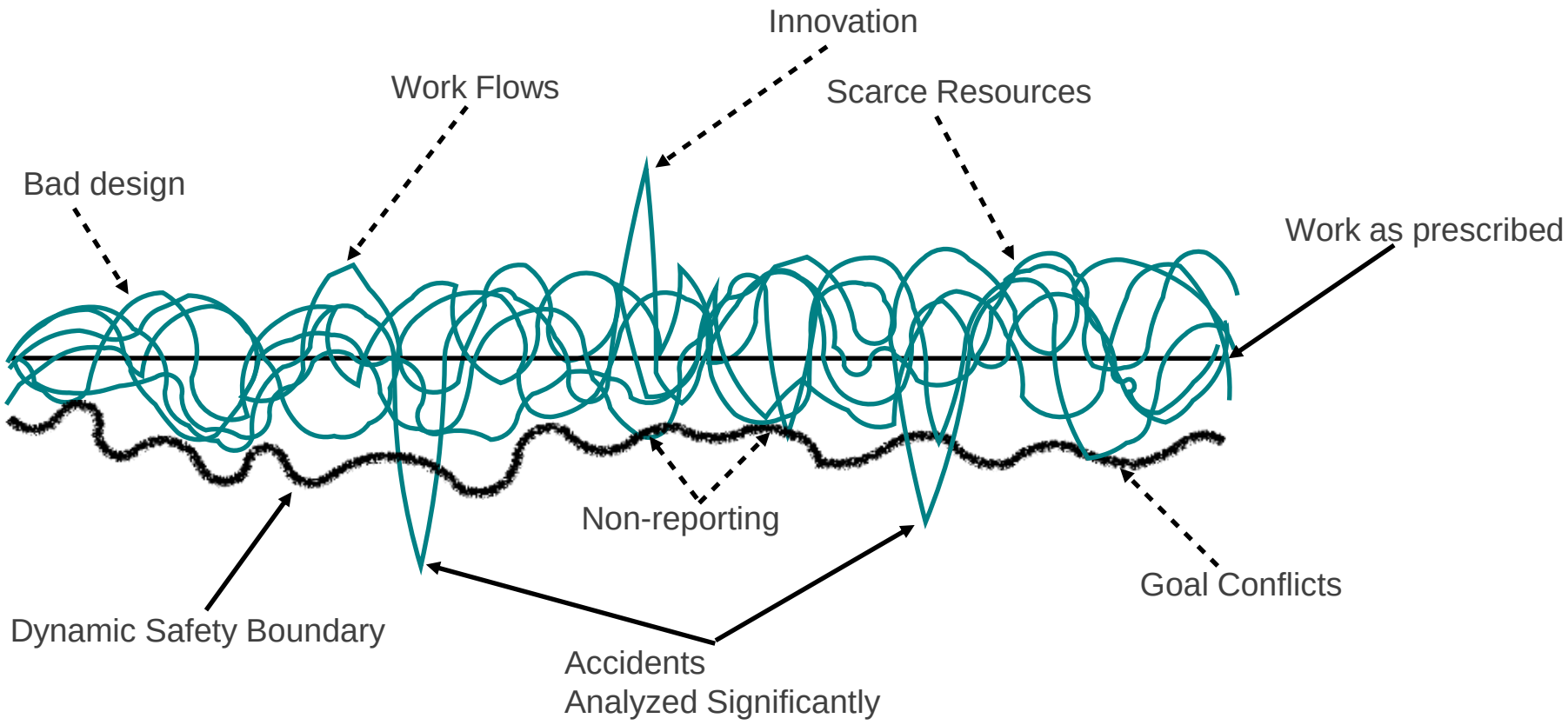
COMMON FUNDAMENTAL ASSUMPTION

Success and failure are two completely different modes of functioning.



(Hollnagel, 2012)

REAL WORK IS MESSY



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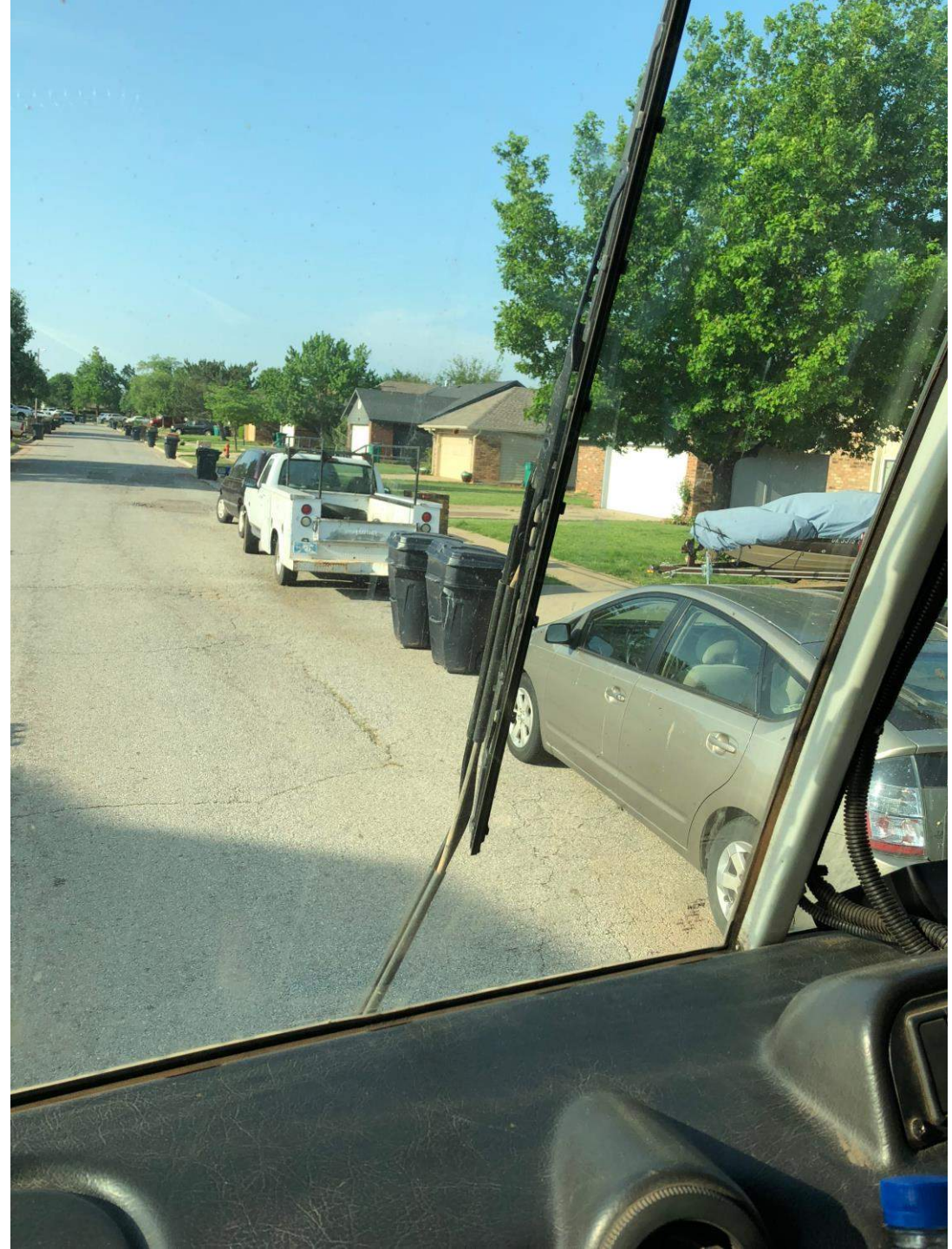
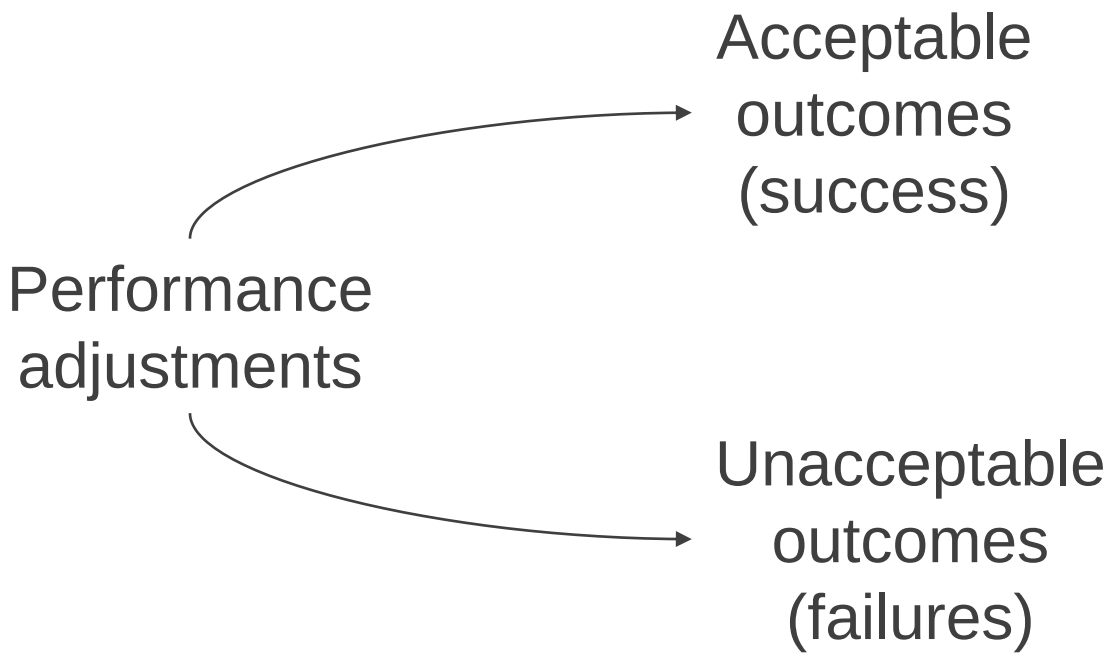


THE REALITY OF WORK

Success and failure emerge from the same conditions

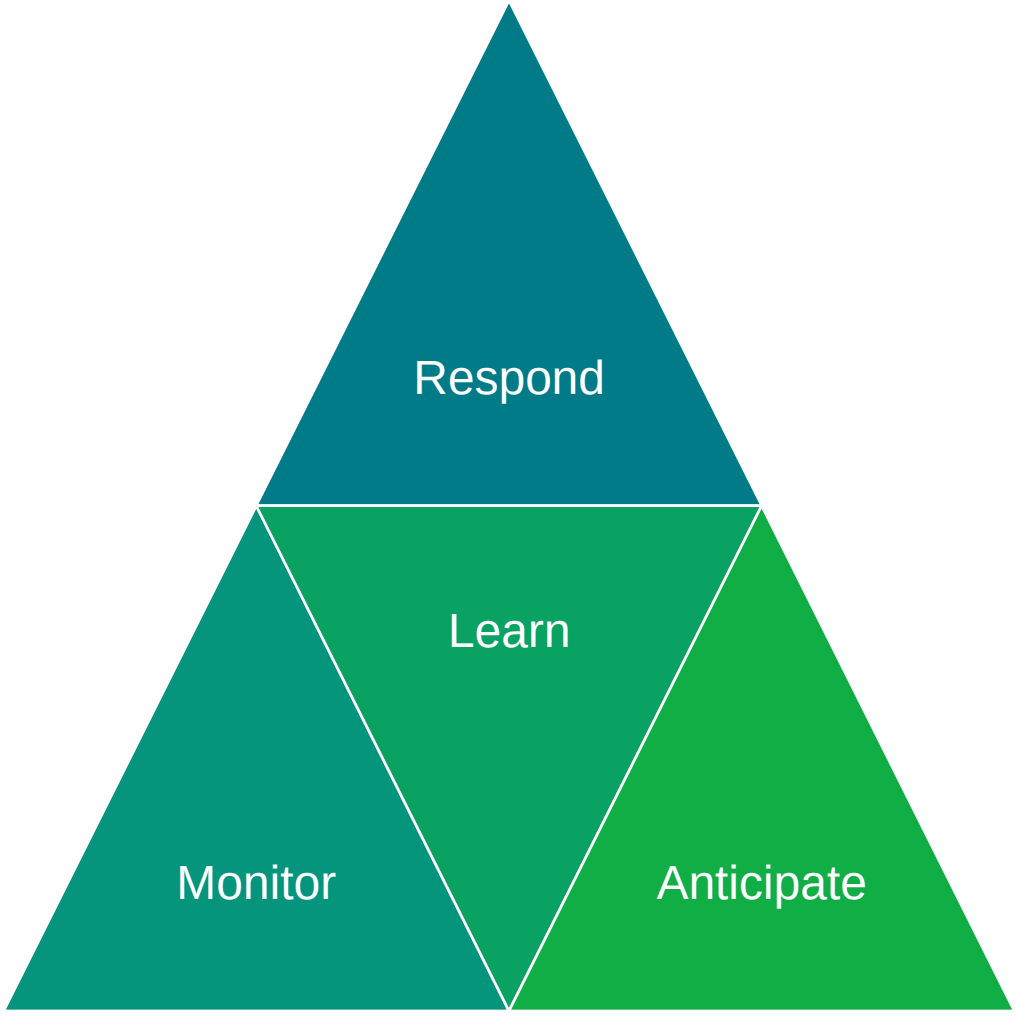


(Hollnagel, 2012)

RESILIENCE ENGINEERING

Resilience

The capacity to be successful in varying conditions.



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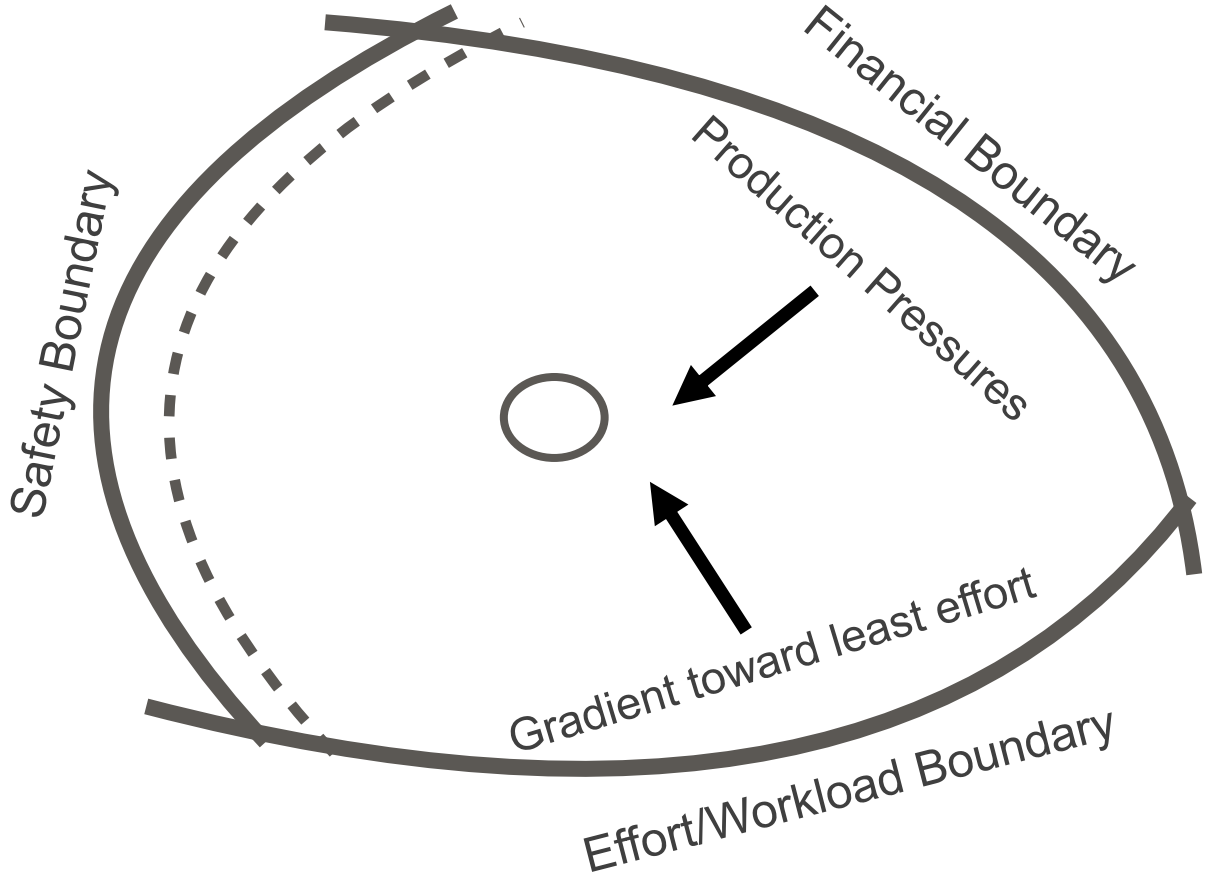
(Woods & Hollnagel, 2006; Hollnagel, 2011)

CAPACITY FOR MANEUVER

We don’t manage accidents or risk…

We manage the *capacity* to do work.

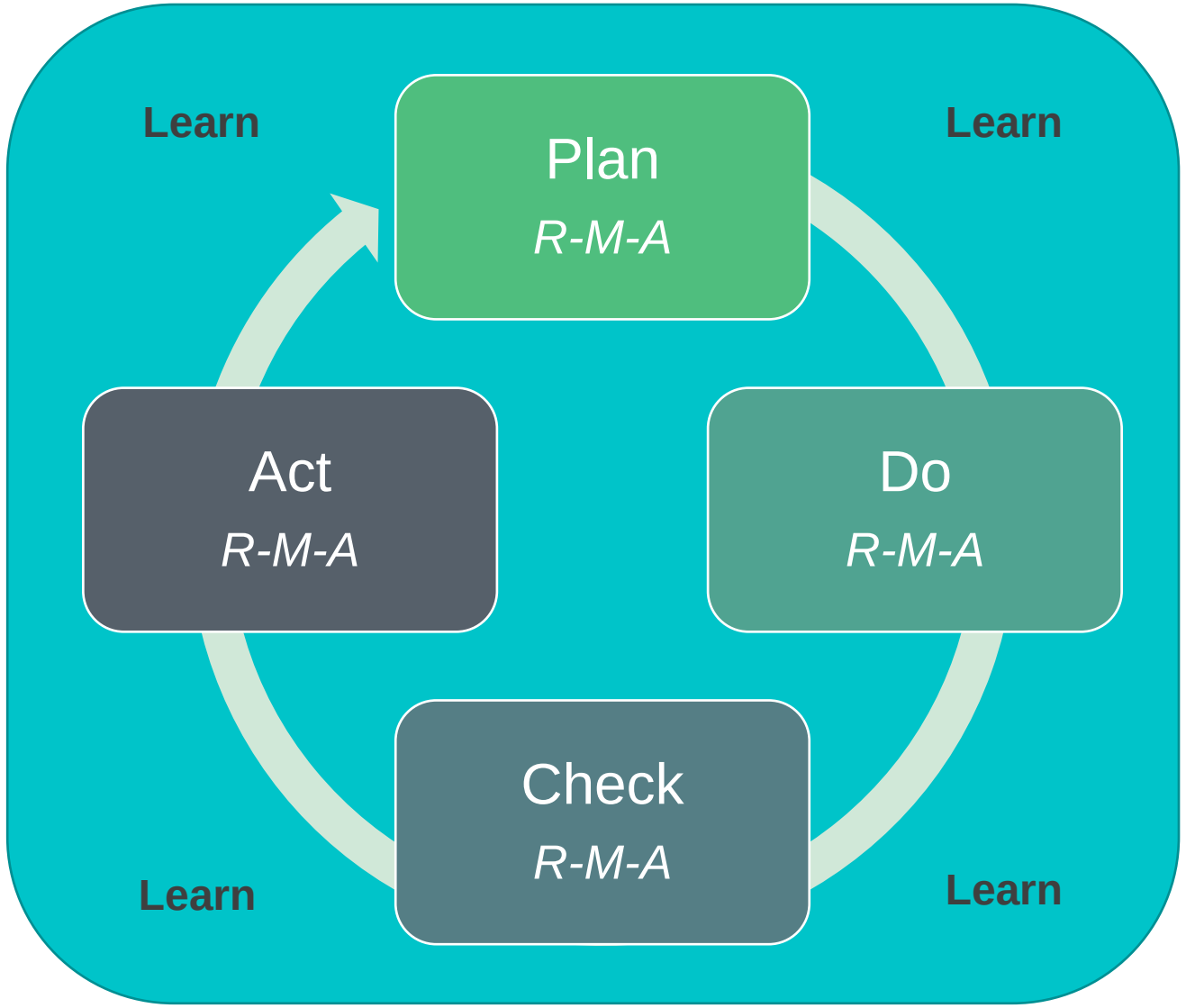


(Rasmussen, 1997; Woods, 2018)

BASIC RECOMMENDATIONS OF RESILIENCE ENGINEERING

- Focus on the functions of the organization, i.e., work, as opposed to hazards and risks.
- Look for sources of brittleness.
- Reward initiative and helping behaviors.
- Create capacity within the system to adapt to changing conditions.
- A key capacity is to learn about what's happening.

RESILIENT SMS



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COMPARISON

Brittle SMS	Resilient SMS
Systematic	Systemic
Safety is defined by its absence	Safety is defined by its presence
Pay attention to hazards and risks	Pay attention to work
Focus on developing and maintaining controls	Focus on developing and maintaining capacity
Static	Dynamic
Learn to find deviations from the standard	Learn to find out what's happening
The whole is the sum of the parts	The whole is the result of non-linear interactions

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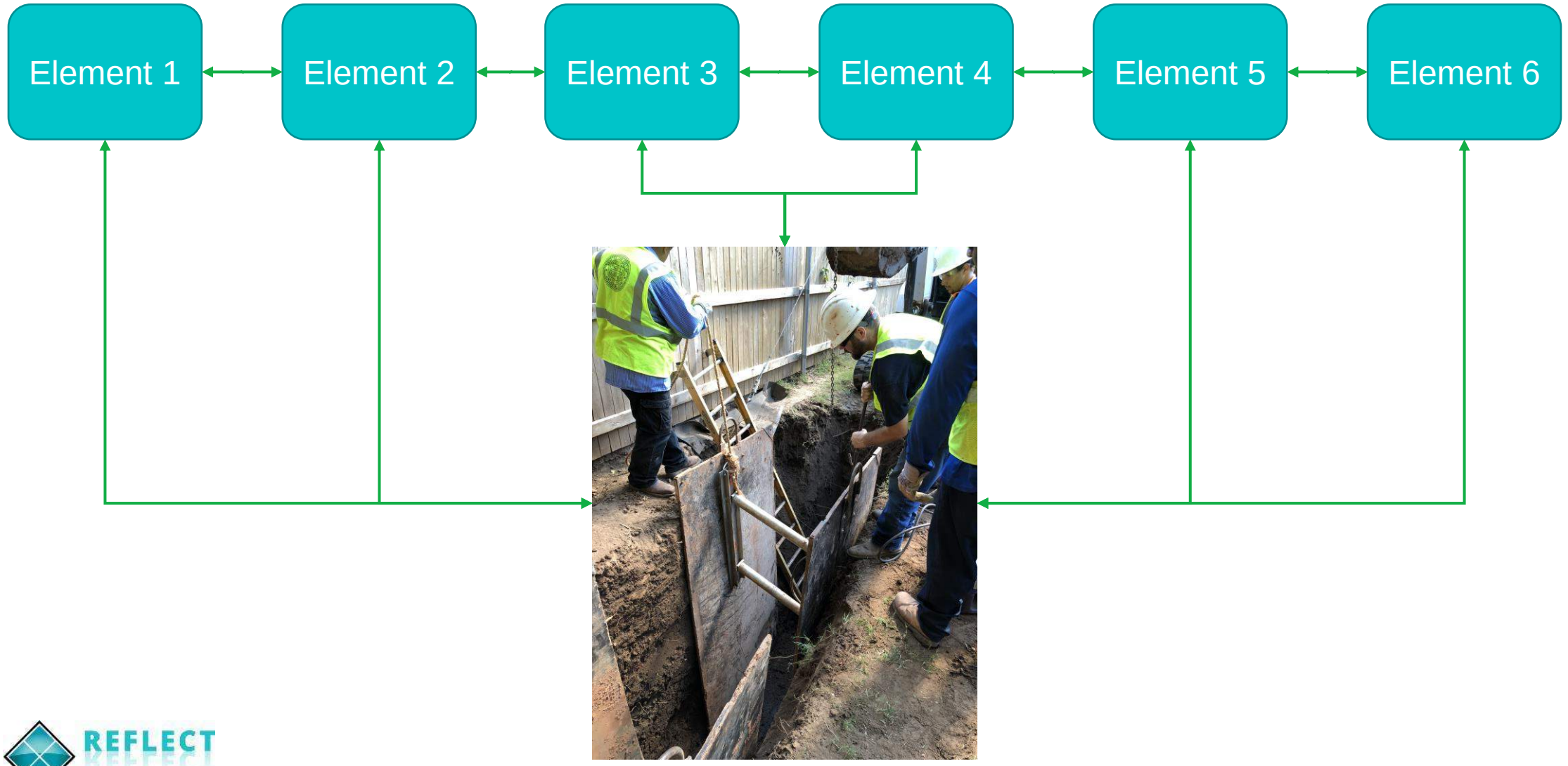
EXAMPLE - AUDITS



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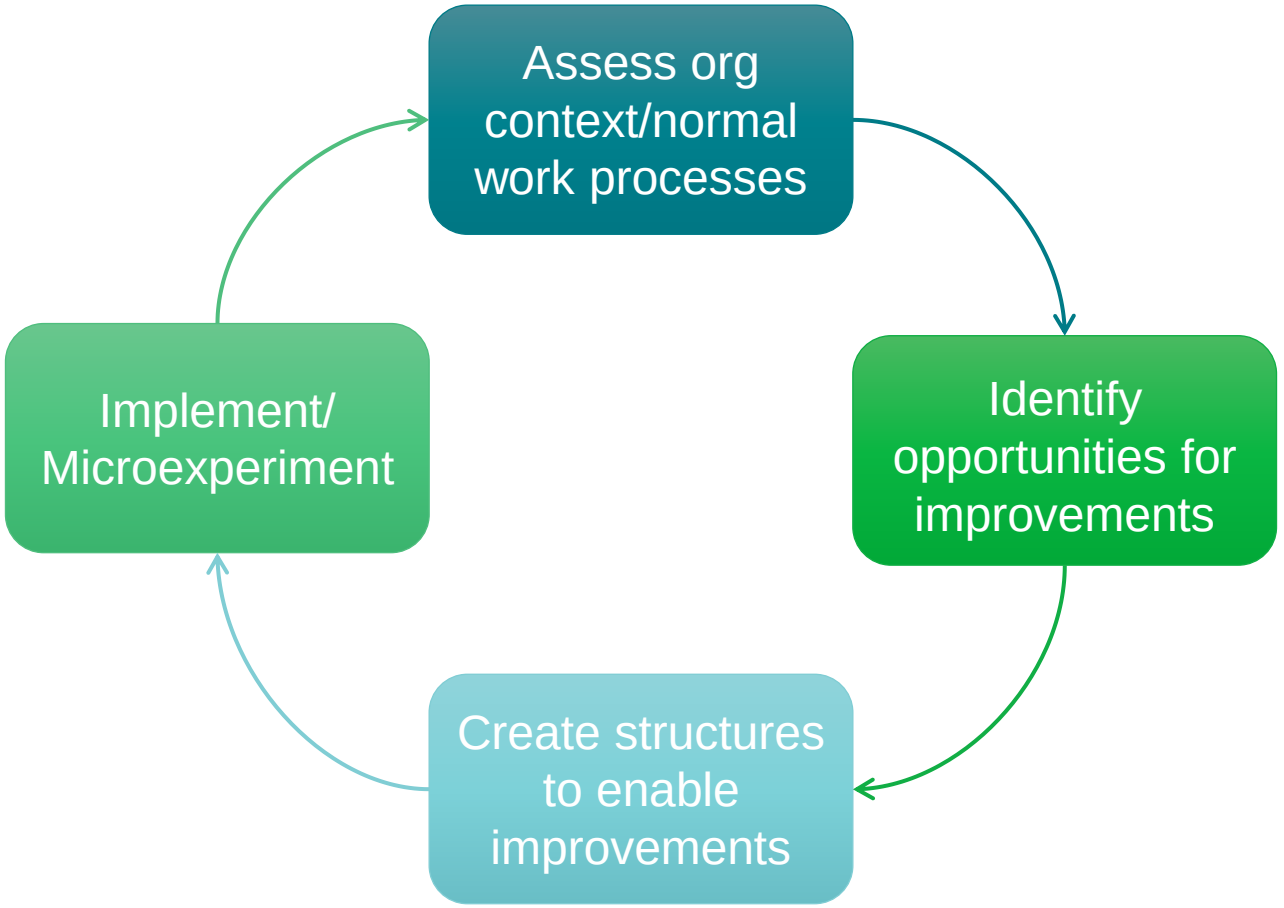
RESILIENT SMS



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RECOMMENDATIONS

1. Change the focus of your SMS to building the capacity for resilience.
2. Use work as the primary focus in your organization.
3. Decentralize decision making and build collaboration as much as possible.
4. Use your SMS to identify and manage capacities (and threats to capacity).
5. Continuous improvement requires continuous learning.
6. Focus on what we are trying to achieve and how to get there.

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“Releasing the adaptive power of people to improve work”

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