High Reliability Organization (HRO) Principles
Reference Sheet

Source: Managing the Unexpected, by Karl Weick and Kathleen Sutcliffe

To deal with the unexpected, HROs create a **mindfulness infrastructure**. Mindfulness is a rich awareness and a capacity for action that jointly facilitate the capability to discover and manage unexpected events before they escalate into crises and catastrophes. Failure of an organization to develop a mindfulness infrastructure risks magnifying the damage produced by unexpected events and impairs the organization’s ability to perform reliably when such events occur. The **five HRO principles that make up the mindfulness infrastructure are outlined below in no particular order as all five are interconnected and critical.**

### HRO Principle 1: PREOCCUPATION WITH FAILURE

**Definition:** Regarding small, inconsequential errors as a symptom that something is wrong; finding the half event.

**In practice, this means:**
- We focus more on our failures than our successes.
- We regard close calls and near misses as a kind of failure that reveals potential danger rather than as evidence of our success and ability to avoid disaster.
- We treat near misses and errors as information about the health of our system and try to learn from them.
- We often update our procedures after experiencing a close call or near miss to incorporate our new experience and enriched understanding.
- We make it hard for people to hide mistakes of any kind.
- People are inclined to report mistakes that have significant consequences even if nobody notices.
- Managers seek out and encourage bad news.
- People feel free to talk to superiors about problems.
- People are rewarded if they spot problems, mistakes, errors, or failures.

### HRO Principle 2: SENSITIVITY TO OPERATIONS

**Definition:** Paying attention to what’s happening on the front-line.

**In practice, this means:**
- On a day-to-day basis, someone is paying attention to what is happening and is readily available for consultation if something unexpected arises.
- Should problems occur, someone with the authority to act is always accessible and available, especially to people on the front lines.
- Supervisors readily pitch in whenever necessary.
- During an average day, people interact enough with each other to build a clear picture of the current situation.
- People are always looking for feedback about things that aren’t going right.
- People are familiar with operations beyond one’s own job.
- People have access to resources if unexpected surprises crop up.
- Managers constantly monitor workloads and are able to obtain additional resources if the workload starts to become excessive.
HRO Principle 3: RELUCTANCE TO SIMPLIFY INTERPRETATIONS

**Definition:** Encouraging diversity in experience, perspective, and opinion.

**In practice, this means:**
- People around here take nothing for granted.
- Questioning is encouraged.
- We strive to challenge the status quo.
- People feel free to bring up problems and tough issues.
- People generally deepen their analyses to better grasp the nature of the problems that arise.
- People are encouraged to express different views of the world.
- People listen carefully, and it is rare that someone’s view goes unheard.
- People are not attacked when they report information that could interrupt operations.
- When something unexpected happens, people spend more time analyzing than advocating for their view.
- Skeptics are highly valued.
- People trust each other.
- People show considerable respect for one another.

HRO Principle 4: COMMITMENT TO RESILIENCE

**Definition:** Developing capabilities to detect, contain, and bounce-back from events that do occur.

**In practice, this means:**
- Resources are continually devoted to training and retraining people to operate the technical system.
- People have more than enough training and experience for the kind of work they do.
- This organization is actively concerned with developing people's skills and knowledge.
- This organization encourages challenging “stretch” assignments.
- People are known for their ability to use their knowledge in novel ways.
- There is a concern with building people’s competence and response repertoires.
- People have a number of informal contacts that they sometimes use to solve problems.
- People want to learn and do learn from mistakes.
- People rely on one another.
- Most people have the skills to act on the unexpected problems that arise.
- Asking “what if...?” is a normal part of work.

HRO Principle 5: DEREFERENCE TO EXPERTISE

**Definition:** Pushing decision making down and around to the person with the most related knowledge and expertise.

**In practice, this means:**
- People are committed to doing their job well.
- People respect the nature of one another’s job activities.
- If something out of the ordinary happens, people know who has the expertise to respond.
- People in this organization value expertise and experience over hierarchical rank.
- In this organization, the people most qualified to make decisions make them.
- If something unexpected occurs, the most highly qualified people, regardless of rank, make the decision.
- People typically “own” a problem until it is resolved.
- It is generally easy to obtain expert assistance when something unprecedented occurs that we don’t know how to handle.