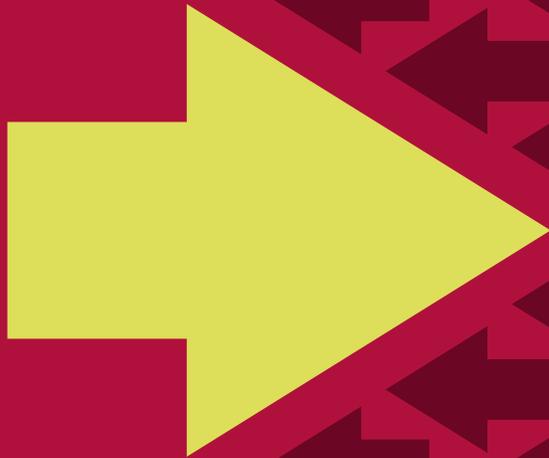


Case Discussion: Chilean Mining Rescue & Summary



Amy Edmondson & Herman “Dutch” Leonard

CRISIS MANAGEMENT FOR LEADERS:

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**HARVARD
BUSINESS SCHOOL**

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The fifth program of HBS's series on Crisis Management for Leaders looked at the rescue of 33 Chilean miners and applicable lessons for the COVID-19 crisis. Program leaders and professors Amy Edmondson and Dutch Leonard also summarized lessons from the series, focusing on teaming, leadership, an iterative problem-solving process, and communication.

There are parallels between the Chilean mine situation and the COVID-19 crisis.

On August 5, 2010, a massive collapse covered Chile's remote century-old San José mine and left it unstable. Missing were 33 miners. It was not known whether some or all had died or were trapped thousands of feet underground. There was a small area in the mine with enough food for two people for about 10 days, but it was unknown if any miners had reached this space.

The situation was unprecedented. It was technically complex, resource constrained, managerially and politically difficult, and emotionally charged. Rescuing the miners seemed impossible. The COVID-19 crisis shares many of these characteristics. A difference is the time: the miners had to be reached within 20 days; how long the COVID-19 crisis will last is uncertain.

The Chilean Mining case study highlights the importance of teaming.

Teaming is different from routine teamwork. Teaming is on-the-fly coordinating and collaborating, across boundaries, without the luxury of stable team structures. Teaming is required to get things done in novel situations when no playbook exists.

In the case study, the miners teamed up to survive; the engineers to find a solution; and the executives and politicians to support, communicate, and lead. This is analogous to COVID-19 where there are patients, doctors and nurses, and political and business leaders.

Leaders' early statements and actions were extremely important.

Early actions and decisions proved critical in the miners' eventual rescue.

- **President's proclamation.** Chile's president Sebastián Piñera boldly stated, "We will bring those men home, dead or alive, sparing no expense." The statement was brutally honest, conveying that death was a possibility, but set a clear and achievable goal. Piñera's words showed leadership and commitment. His statement brought the country together in support of the miners and the mission.
- **Enlisting expertise.** André Sougarret, a mining engineer, was tapped to lead the rescue effort. He was picked for his technical competence and strong leadership capabilities.

MAIN IDEAS

- In a crisis, teaming and early decisions and actions are critically important.
- The leaders of the rescue of the Chilean miners used iterative problem solving and engaged in execution-as-learning. They also showed tremendous persistence.
- Effective crisis communication is essential; several frameworks provide guidance.

"It was the moral equivalent of finding a needle in a haystack."

Amy Edmondson

"Teaming is especially needed when work is complex and unpredictable. That's what we are facing today."

Amy Edmondson

- **Reframing the problem.** Early on, the leaders reframed one unsolvable problem (can we extract 33 miners trapped underground before they die?) to two extremely challenging problems: 1) Can we locate and reach the miners to deliver food, medicine, and communication technology before they die; and 2) Can we get them out?

On day 17, the rescuers broke through and found that all 33 miners were still alive. They were able to provide food and communicate. After 53 more days of constant effort, all 33 miners were rescued.

Rescue efforts used an iterative problem-solving process.

Once the problem was reframed, the team acted. They used an iterative problem-solving process, as discussed in previous programs. They had a shared purpose, were well organized, listened to experts, had process discipline and a culture of innovation—and persisted, even at times where the situation didn’t look good. These are the same elements that are necessary for organizations to cope with the COVID-19 crisis.

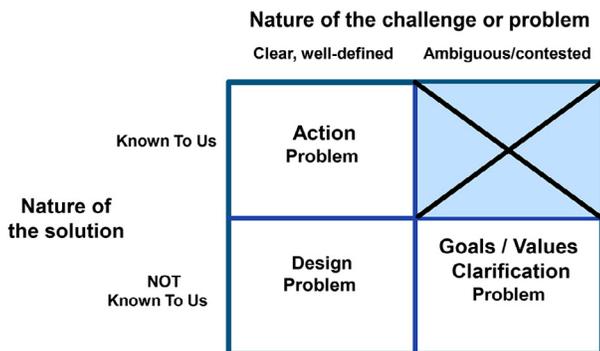
Two practices used in rescuing the miners, which were discussed in [Program 3](#) and which are applicable now, are:

- **Innovation logic.** In predictable, business-as-usual circumstances, managers use management logic, which involves hierarchical control and emphasizes efficiency. But in novel circumstances, management logic falls short. Success in crisis situations requires innovation logic where the focus is experimentation and learning.
- **Execution-as-learning.** In a crisis, an organization is doing things that have never been done. The way to learn is through acting and executing.

A general lesson is the nature of the solution relates to the nature of the problem.

A way to think about the nature of problems is whether they are clear and well defined or ambiguous. The nature of solutions can be categorized as known or not known. Understanding the nature of the problems and solutions leads to different actions.

Figure 1: The Nature of Problems and Solutions



An ambiguous problem, where the solution is unknown, requires **clarification**, as the president of Chile did. A clearly defined problem where the solution is not known is a **design problem**, which in the mining rescue was tackled by the engineers. A well-defined problem with a known solution is an **action problem**. COVID-19 presents each of these problems.

“They knew they didn’t have the answer. They knew they didn’t have a blueprint. Time was of the essence. There was no choice but to act under uncertainty . . . they had to ACT to learn.”

Amy Edmondson

In a crisis, effective communication is essential. Frameworks provide guidance.

One of a leader’s most important roles during a crisis is communication. Three frameworks for effective crisis communication are:

<p>The Stockdale Paradox (slightly revised)</p>	<ul style="list-style-type: none"> ▪ Be brutally honest about the situation (facts) ▪ Offer a rational basis for optimism (hope) ▪ Offer emotional understanding of the loss involved (empathy)
<p>The Four-Part Script</p>	<ol style="list-style-type: none"> 1. Say what you know (and the basis for your knowledge). Do not speculate. 2. Say what you are doing 3. Say what others need to do 4. Offer understanding, empathy, and perspective
<p>The Four Canonical Questions</p>	<ol style="list-style-type: none"> 1. Who are “we?” [Identity] 2. What things that we care about are at risk? [Values] 3. What happened/is happening? [Situational awareness] 4. What do people like us, with values like ours, do in a situation like this? [Action]

“People are inevitably going to find answers to these questions. It will be better if they come from you, the leader.”

Dutch Leonard

An example of effective communication is New Zealand [prime minister Jacinda Ardern’s two-minute speech](#), while a terrorist event was still occurring in Christchurch. With honesty and empathy she explained the facts she knew, what was being done, and what others needed to do. She emphasized the values of what it means to be a New Zealander and what New Zealanders care about.

Program Recap

Leadership in a crisis is *adaptive* leadership. It is the *process* of bringing a new, and generally *unwelcome reality* to an individual or group, and helping everyone adapt.

The main ideas from the series include:

- **Structure:** Form a critical incident management team
- **People:** Engage people who know the company, its values, and the situation
- **Process:** Use an iterative problem-solving method
- **Teaming:** Create conditions where it is safe to innovate and experiment
- **Communicate, communicate, communicate!**

Each participant has the capabilities to lead resilient organizations through this crisis. Take care of yourself. Be safe. Keep others safe. Ask only of yourself to do the best you reasonably can.

Additional Resources

- View the complete program lineup for [Crisis Management for Leaders](#)
- Download the [slides](#) from this program
- Download the [video](#) of this program