

Cybersecurity at MIT Sloan

Building Cyber-Resilient Organizations with Fire Drills and Tabletop Exercises

Cybersecurity at MIT Sloan brings thought leaders from industry, academia, and government together with MIT faculty, researchers, and students to address strategy, management, governance, and organization of cybersecurity of critical infrastructure using an interdisciplinary approach.

All Levels of an Organization Need Cybersecurity Response Practice

Keeping an organization cybersecure is everyone’s responsibility, but knowing what to do, how to do it and when to do it during a cyber crisis can make the difference in if an organization survives a cyber breach. Many organizations prepare themselves for a cyber event with the same dedication as a country prepares for war: practice, practice, practice. After all, no executive wants the first time their team faces a crisis and tests continuity plans to be in an actual emergency. During a cyber breach, the best made plans are often tested in ways no one could have predicted.

The equivalent of war games for companies preparing themselves for cyber response are tabletop exercises (TTX) and fire drills. Companies who are the most prepared to respond to a cyber crisis use these tools to practice at all levels. They prepare their Board of Directors, C-suite executives and team members by simulating situations and practicing responses. This research explores different types of TTX and fire drills, identifying objectives and benefits for each level.

Four Types of TTX/Fire Drills

Target	Objectives
Board of Directors TTX	Awareness, Crisis Management, Education
C-Suite TTX	Crisis Management, Business Continuity
Organization Fire Drill	Test Response Planning and Contingencies
Technical Team Fire Drill	Test Technical Responses (detect and respond)

Lessons Learned are Not Usually What Was Expected

TTX and fire drills uncover situations and holes in response plans. Participants often think they are more prepared than they are. Basic organizational information necessary for proper response often disappears when a few key individuals are not available. Executives usually have unreasonable expectations for how fast response and recovery happens and how reliable foundational systems can be. Often lines of authority and communication channels are unclear or disrupted. The best exercises produce that “ah-ha” realization of the weaknesses in the organization’s plans and give leaders clear ideas on how to create more robust and resilient teams. Teams come together in this type of simulation in ways that usually don’t happen otherwise.

IMPACT: Knowing what to practice, who to involve, and how to run these exercises can save an organization from making expensive mistakes. TTX and fire drills are important tools to prepare organizations for cyber responses. This research helps managers and leaders design appropriate TTX and fire drills for each level of their organization and to better prepare their teams in the event of a real cyber crisis.

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Organizations use tabletop exercises and fire drills to prepare all levels of the organization. After all, no one wants their team to be unprepared in the event of a cyber crisis.
