

# Level 5: Mitigation – Reducing The Impact Of Unavoidable Errors



## KEY LEARNINGS: LEVEL 5: MITIGATION – REDUCING THE IMPACT OF UNAVOIDABLE ERRORS

### Overview

- Detection gives us a final warning before a mistake causes harm.
- But when even that fails—when errors are already in motion—Mitigation steps in.
- Mitigation doesn't prevent errors—it reduces their impact so they don't become catastrophic.

### What Is Mitigation?

- A strategy focused on damage control and crisis recovery.
- Ensures that even when failure occurs, the consequences are contained and service continuity is preserved.
- Goal: Make errors survivable, not disastrous.

### Examples of Mitigation in Action

- Live events: Backup microphones available in case of technical failure—the show goes on.
- Online exams: Auto-save features allow students to resume tests after internet outages—no lost progress.

### How Mitigation Works: Three Core Tactics

#### 1. Building Fail-Safes Into Critical Systems

- Purpose: Minimize the impact of inevitable failures.
- Example:
  - In electricity grids, if one substation fails, power is rerouted to prevent blackouts.
- Result: Service is quickly restored to affected areas, avoiding widespread outages.

#### 2. Containing the Damage

- Purpose: Stop the spread of error once it begins.
- Example:
  - Cloud services use data redundancy across multiple servers.
  - If one server crashes, data is restored from another—nothing is lost.
- Result: The failure doesn't escalate or affect more users.

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### 3. Creating Response Plans

- Purpose: Ensure quick, confident responses when failures happen.
- Example:
  - Cruise ship crews conduct regular emergency drills so they're prepared to evacuate or respond in real-time.
- Result: Minimized chaos, faster action, and protected lives and assets.

### Key Insight

- Mitigation doesn't erase the mistake—it absorbs the shock.
- It ensures organizations are prepared to act, not just react.
- The difference between a setback and a disaster? Preparedness.

### Conclusion

- When used alongside the other levels—Elimination, Replacement, Facilitation, and Detection—Mitigation completes a comprehensive mistake-proofing strategy.
- Even in the worst-case scenario, mitigation keeps errors from becoming failures—and failures from becoming catastrophes.

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