Key Principles Of Poka-Yoke

KEY LEARNINGS: KEY PRINCIPLES OF POKA-YOKE

Overview
- Small mistakes in the service industry can erode trust, waste resources, and damage reputation.
- Poka-Yoke (mistake-proofing) prevents these errors through smart process design.
- Six principles guide how to eliminate or reduce errors before they occur or escalate.

1. Elimination – Remove the Possibility of Error
- Goal: Design processes that make mistakes impossible.
- Examples:
  - Autonomous airport shuttles eliminate human driving errors.
  - Uber's crash detection sends emergency info automatically.
- Key Idea: Remove the human element where possible to stop errors before they start.

2. Replacement – Swap Risky Processes for Reliable Ones
- Goal: Replace human-dependent tasks with automated or more reliable systems.
- Examples:
  - Self-serve soda machines with sensors stop overfilling.
  - Autopilot systems in aircraft maintain control during routine flying.
- Key Idea: Minimize variability by transferring tasks to systems that don't make human errors.

3. Prevention – Make Mistakes Physically Impossible
- Goal: Design environments where only the correct action is possible.
- Examples:
  - Hotel key cards work only for specific rooms and dates.
  - Movie ticket scanners deny access for wrong time or invalid tickets.
- Key Idea: Physically or digitally block incorrect actions before they happen.

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4. Facilitation – Make the Right Action the Easy One
- Goal: Guide users to naturally make the right choice by simplifying it.
- Examples:
  - Google Maps provides turn-by-turn directions to avoid navigation errors.
  - Amazon's one-click checkout simplifies correct purchase actions.
- Key Idea: People choose the path of least resistance—make that path the correct one.

5. Detection – Catch Mistakes Before They Cause Damage
- Goal: Identify errors early enough for intervention.
- Examples:
  - Banking apps send low balance alerts.
  - Netflix's auto-pause asks if you're still watching.
- Key Idea: Spot issues quickly so they can be corrected before they escalate.

6. Mitigation – Reduce the Damage from Mistakes
- Goal: Limit the consequences of errors that slip through.
- Examples:
  - Google Docs' auto-save allows file recovery after accidental deletion.
  - Fire exit doors automatically unlock during emergencies.
- Key Idea: Even if mistakes happen, minimize harm or disruption.

Why These Principles Matter
- These six principles form the foundation of mistake-proofing across industries.
- Especially vital in services, where human factors (distraction, fatigue, emotion) introduce error risk.
- Trust is the currency of service industries—reducing mistakes protects that trust.

What's Next?
- These principles evolve into five practical levels of service mistake-proofing.
- Future lectures will cover how to strategically apply them to service operations for lasting quality and customer confidence.