The Resilient Enterprise
Overcoming Vulnerability for Competitive Advantage

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Low Probability/high impact Disruptions

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What Can Go Wrong?

- March 2000; Philips fire
- December 2001; UPF Thompson bankruptcy
- September 1999; Taiwan earthquake
- August 2001; dialysis filter deaths
- February 1997; Aisin fire
- February 2001; FMD
- 9/11; Terrorism
Disruption Profile

1. Prep.
2. Disruptive event
3. First Response
4. Delayed Impact
5. Full impact
6. Prep. For recovery
7. Recovery
8. Long Term Impact
Classification:

- Classify outcome
  - How likely?
  - How bad?

- Characteristics:
  - Public fear
  - Government “over-reaction”
  - Unexpected connections and consequences
  - Not very unlikely
Reducing the Likelihood (SC)

- **Classification:**
  - Intentional disruptions
  - Random phenomena
  - Accidents

- **Detection:**
  - The “nightmare scenario”
  - Power law distributions
  - Statistical process control

- **Security:**
  - Layering
  - Balancing
  - Profiling
  - Collaboration
    - Vertical
    - Horizontal
    - Government
    - Employees
    - Community
  - Culture
  - Drilling
Increasing Resilience - Redundancy

☐ System-wide (USPS and Anthrax)
☐ Inventory for redundancy (J&J, SOR)
☐ Redundant capacity (Boston Scientific, Intel)
☐ Redundant IT systems (Merrill Lynch)

☐ Just-in-Time vs. Just-in-Case?
   ■ How to create redundancy without losing quality and increasing costs?
Increasing Resilience - Flexibility

- Interchangeability
  - Plants (Intel, GM)
  - Part standardization (Lucent SCN)
  - Pliable people (UPS, Helix, Southwest)

- Supply chain design
  - Postponement
  - Build-to-Order

- Aligned supply relationships

- Flexible distribution and sales
  - Sell what you have (Dell)
  - Customer help (cantor)
  - Triage (Continental Teves)
Increasing Resilience - Culture

- Culture
  - Continuous communications (informed employees)
  - Distributed power
  - Passion for work and the mission
  - Conditioning for disruptions

- Culture change
  - Safety
  - Quality
  - Many others...
Making Lemonade from Lemons

How to:

☐ Use security measures for process tightening
☐ Take advantage of flexibility to increase competitiveness
☐ Utilize opportunities to increase market share
☐ How to improve corporate image
Any Questions?

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