Supply Chain Disruption Management

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Thinking about disruptions

- Awareness
- Prevention
- Response
- Consequence management
Some Lessons

- Focus on failure modes not on causes
- Business framework for security investments
- Culture
- Government
- Collateral benefits

Focus on failure Modes

- Facility (plant, warehouse, HQ) down
  - Bomb, fire, strike
- IT/communications disruption
  - Virus, physical damage
- Supplier down
  - Weather, terrorist attack
- Transportation/distribution disruptions
  - Government action
- Loss of personnel
  - Terrorist attack, epidemic
- Demand step change/loss of major customer
  - Terrorist activity, war
- Multiple mode failures

- Federal Employee Credit Union – The Oklahoma Murrah Building 4/16/95
- NY Board of Trade – 9/11/01
- Maroochi Shire, Australia – sabotage of waste water 04/2000
- ING Canada Property & Casualty – Quebec Ice Storm 1/15/98
- Melissa virus March 1999
- Merrill Lynch – 9/11
- Dell vs. Apple – Taiwan earthquake 9/21/99
- Nokia vs. Ericsson – Philips plant fire 3/17/00
- Land Rover/UPF Thompson – supplier default 12/15/01
- FMD in UK – Spring 2001
- Rocket USA – UPS strike 8/4/97
- Cantor-Fitzgerald – 9/11/01
- GHSP – aftermath of 9/11/01
- Federal Employee Credit Union – The Oklahoma Murrah Building 4/16/95
- GHSP – aftermath of 9/11/01
- Cisco – the tech meltdown
- Ford Europe – Channel Rail traffic shift – March 2002
Investment in security

- Redundancy
  - Added safety stock (I/B and O/B)
  - Dual supply relationships
  - Knowledge of vulnerabilities; suppliers
  - Backups: IT, knowledge, process, relationships
  - Insurance
  - Note: lean operations and "belt tightening" create vulnerabilities

- Flexibility
  - Supply contracts; multiple suppliers
  - Standardization; standard parts
  - Cross training

- How much to invest?
  - Real options
  - Insurance methodology

Role of Culture

- Security awareness
- Information flows
- Esprit-de-corps
- Changing culture
  - 1970s - 1980s: everybody sells
  - 1980s – 1990s: quality movement
  - Safety culture
  - Government campaigns (anti smoking...)

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Role of Government

- Government reaction can be an overkill
  - Port closing causing damage after 9/11
  - UK Government response to FMD damaged tourism
  - Some regulations are unworkable and/or useless
- The place for public-private partnerships
- 100s of Government initiatives and regulations (some useful)
- US – new government agency

Some Good News

- Many of the security measures have collateral benefits
  - Better collaboration
  - Better supply chain operations (customer service, flexible response, etc.)
  - Better controls (less theft, IP loss, etc.)
  - Stronger standards
  - Participation in communities
- Attacks are usually not as bad as originally seems
Any Questions?