SUPPLY CHAIN CONNECTIVITY & DISASTERS RESILIENCE: ROLE OF REGIONAL INTEGRATION

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詹滿容

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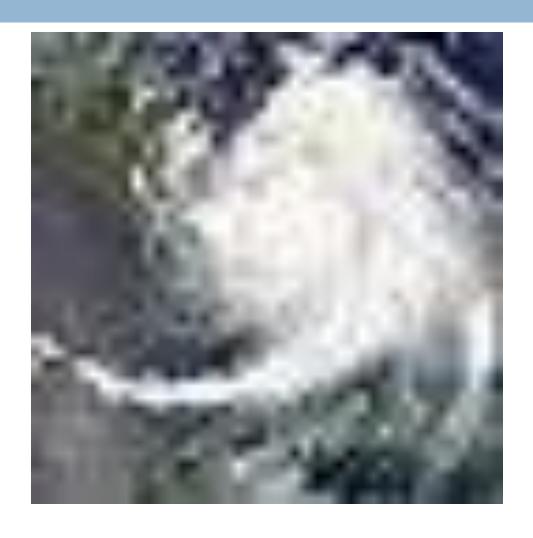
Japan's Earthquake, Tsunami, Nuclear Explosion (March 2011)



→ Crippled SONY Warehouse



Hurricane Katrina: Smashes the Gulf Coast (2005)



New Orleans: Virtually Everything Destroyed



Flood in Pakistan (2009)



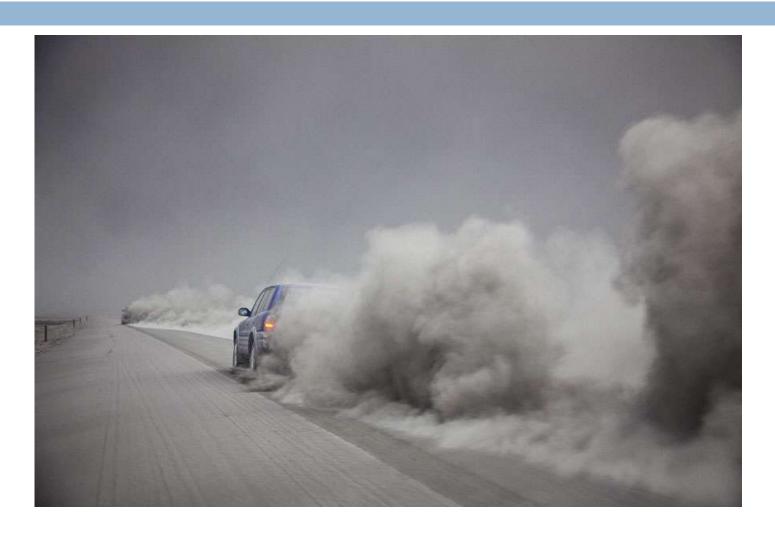
Heat Wave in Russia: August 2010



Volcano Eruption in Iceland (2010.04)



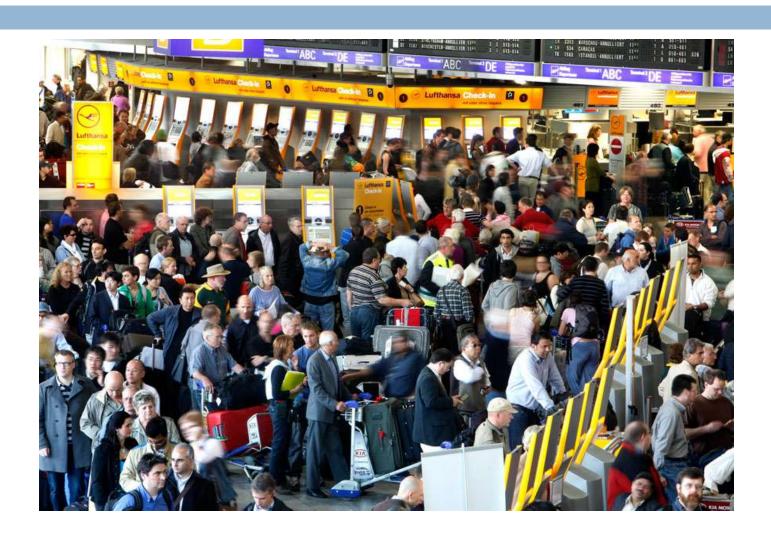
...Driving through Ashes from Volcano Eruption...



Winter Storms in Europe: 2009 & 2010



...Stuck at the Frankfurt Airport



Private Sector: Key Factors of Supply Chain Vulnerability

- □ Globalization: → More complex,
 Longer Supply Chain
- Product Variant: Food, Mineral, Energy
- Outsourcing
- Reduction of Suppliers
- □ Focus on Efficiency: JIT
- Central Distribution
- □ Central Production

Risk Measurement & Challenges

- Risk= Probability ofOccurrence x Level of Impact
- Challenges:
 - How to minimize probability of Occurrence?
 - How to lower level of Negative Consequence?

Supply-Chain Risk Management

- Disaster Prevention or Mitigation
- Early Warning System
- □ Contingency Plan: Disaster Recovery, Safety of the employees, Retrieval of business back-up data, emergency communication, Relocation of business operation, sourcing of alternative suppliers.
- Adequate Insurance Program:

Approaches to Risk Mitigation

- Cost Benefit Analysis : Single Sources vis-à-vis
 Multiple Sources:
 - Efficiency & Effectiveness: "We're in the Same Boat!"
 - Propriety Knowledge & Technology in Design Stage;
 - Additional Sources may only provide single location risk mitigation & may add little disaster resilience
- Supplier Flexibility Agreement: Volume Increase of up to 25% in one week's time, and 100% in 4 week's time.
- Inventory Policies: Stockpiles, Replenishment Rules & Safety Stock or "Pooled Risks"

Hard Infrastructure Building for Supply Chain Connectivity

- Right Amount: Capacity, Pricing,Maintenance
- Right Time: Opportunity, InterestRates
- Right Type: Air, Sea, LandConncectivity
- Right Place:

Soft Infrastructural Building for Supply Chain Connectivity

- □ Systems & IT:
 - ■Inadequate System,
 - Lack of Broad Penetration of IT
- Regulations & Licensing
 - Lack of Transparency & Predictability
 - Freedom to cross-border Logistics Operation
- Governance: Lack of Coordination
- Safety: Lack of Appropriate Technology & Regulations

Public Private Partnership

- Multi-Approach to Secure Regional Trade
- Develop Pilot Projects;
- Encourage harmonization & standardization;
- Establish Center of Excellence

Taiwan's Contributions in APEC for Supply Chain Connectivity

- Emergency Preparedness
- APEC Center for Typhoon (ACT)
- APEC SME Crisis ManagementCenter
- Cloud Computing for Value Chain
- APEC Food System;

Thank You!