Developing Public-Private Partnerships in Homeland Security: How Risk Impacts Government Policy and Business Requirements.

Risk vs. Business Requirement – Industry Perspective

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Introduction

- What are the tools for Risk Management (mitigation)?
- What is Marine Insurance?
- How does it differ amongst it types?
- How Marine Insurance works as a Risk Mitigation tool
- What we do to determine, manage and mitigate risks
- Case studies

What is Risk Management (Mitigation)

- Consideration of all alternative methods for dealing with Risk
  - Avoid
    - Don’t go into that line of business
    - Sell that line of business
  - Loss Prevention and Reduction
    - Engineering control
  - Retention – Planned assumption
    - Self insure
  - Transfer
    - Insurance
    - Contractual

What is Marine Insurance

- Oldest type of insurance
  - Ancient Phoenicians in 3000 BCE shared the common rise
- Formalized by the Italians in early current era (+/-500 AD)
- Lloyds Coffee house – 1734 developed into the center for global marine market
- Now over a 30 billion dollar market (IUMI estimated 2010)

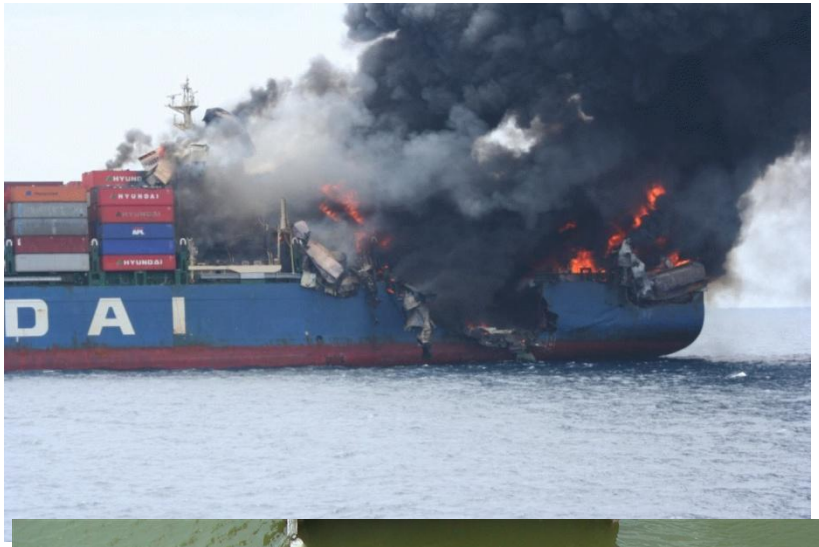
Marine Insurance - Types

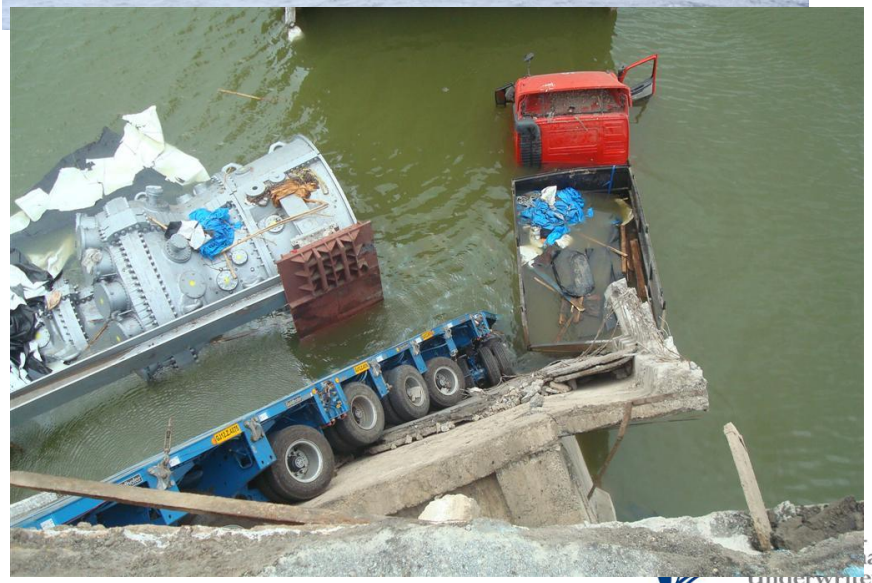
- Combination of Dynamic and static Risks
- Dynamic
  - Cargo in transit
  - Hull
- Static Risks
  - Ship Builders
  - Ports and Terminals Liabilities
  - Cargo in Storage/Delay in Transit

Dynamic – Cargo in Transit

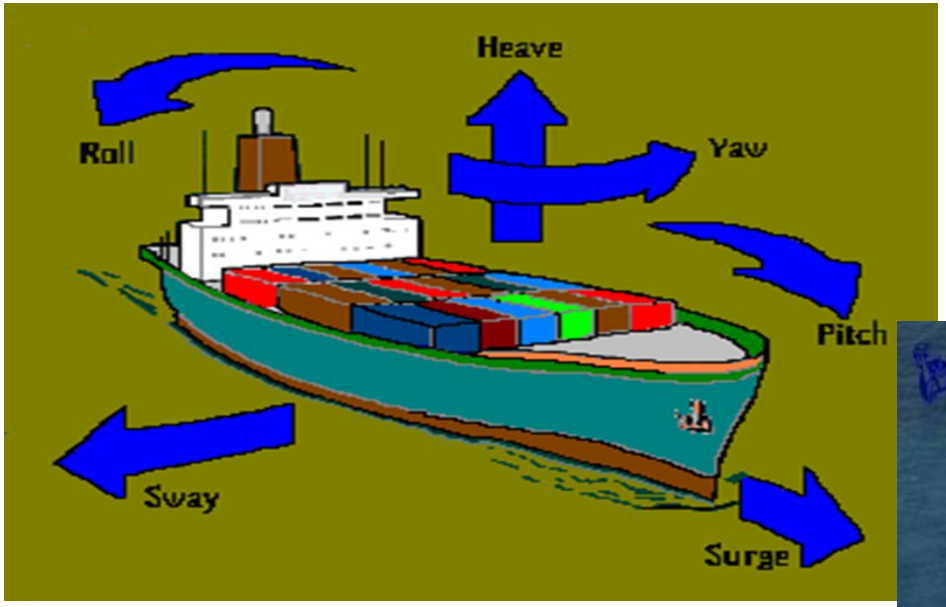
Analysis of risk

- Where to/from
- Piracy
- Weather
- Transit restrictions
- Volcano
- Tsunami
- Port Damages





Dynamic - Hull



Static – Marine Liability

- Analysis of Risk
  - CAT
  - Political
  - Social
  - Location
    - Near population
  - Activities

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Static – Ship Builders

Static – Cargo in Storage/ Delay in Transit

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Supply Chain Risks

- Interruptions caused by something that does not cause Physical Damage or loss to the subject of the insurance. For Example:
  - Car parts delayed due to the Japanese Earthquake causing shutdowns in the US car market
  - Iceland volcano shutting down air and vessel traffic

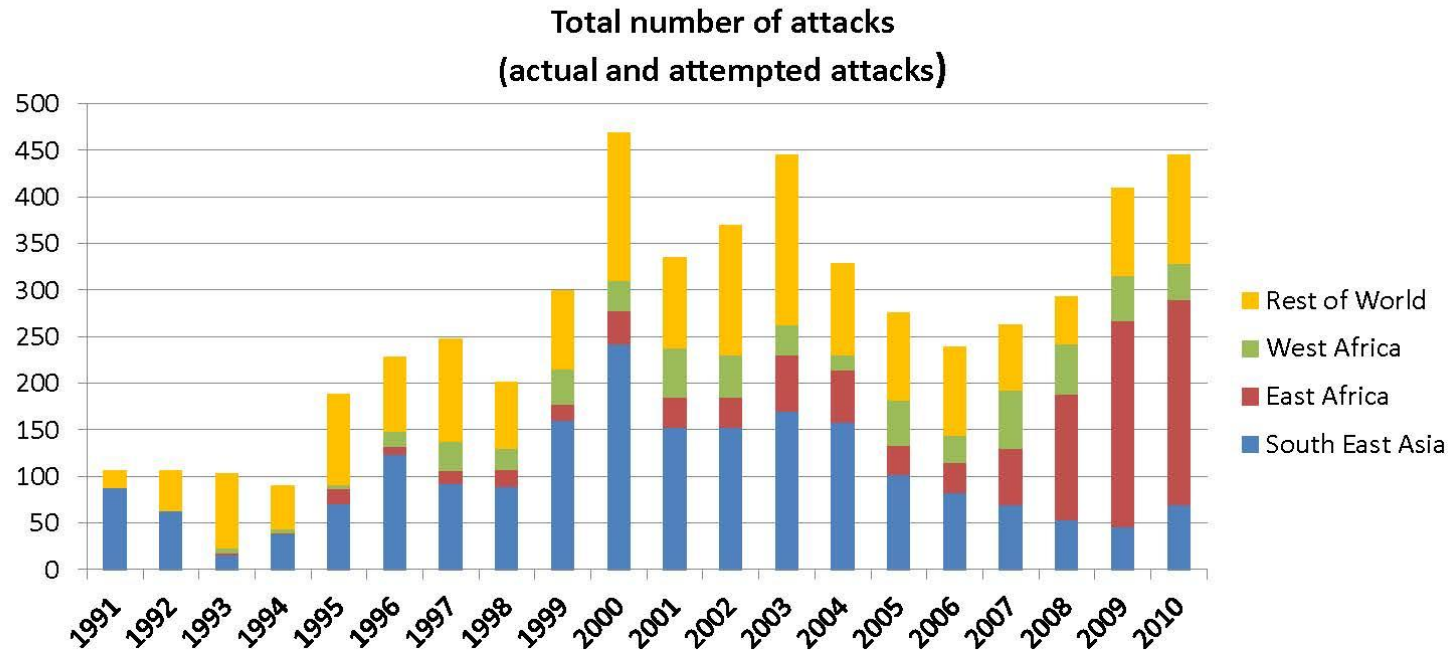
Case Studies - Hurricane Ike

- Cargo on dock in Houston Ship Channel for project in Peru
- Houston was a layover/consolidation point
- 2008 – struck just east of Houston and Galveston
- Storm Surge up the ship channel
- Over 9 feet 30 miles inland
- Dock overtopped by storm waters
- Project delayed for over 6 months due to cargo damages

Case Studies - Piracy

The Piracy - Figures

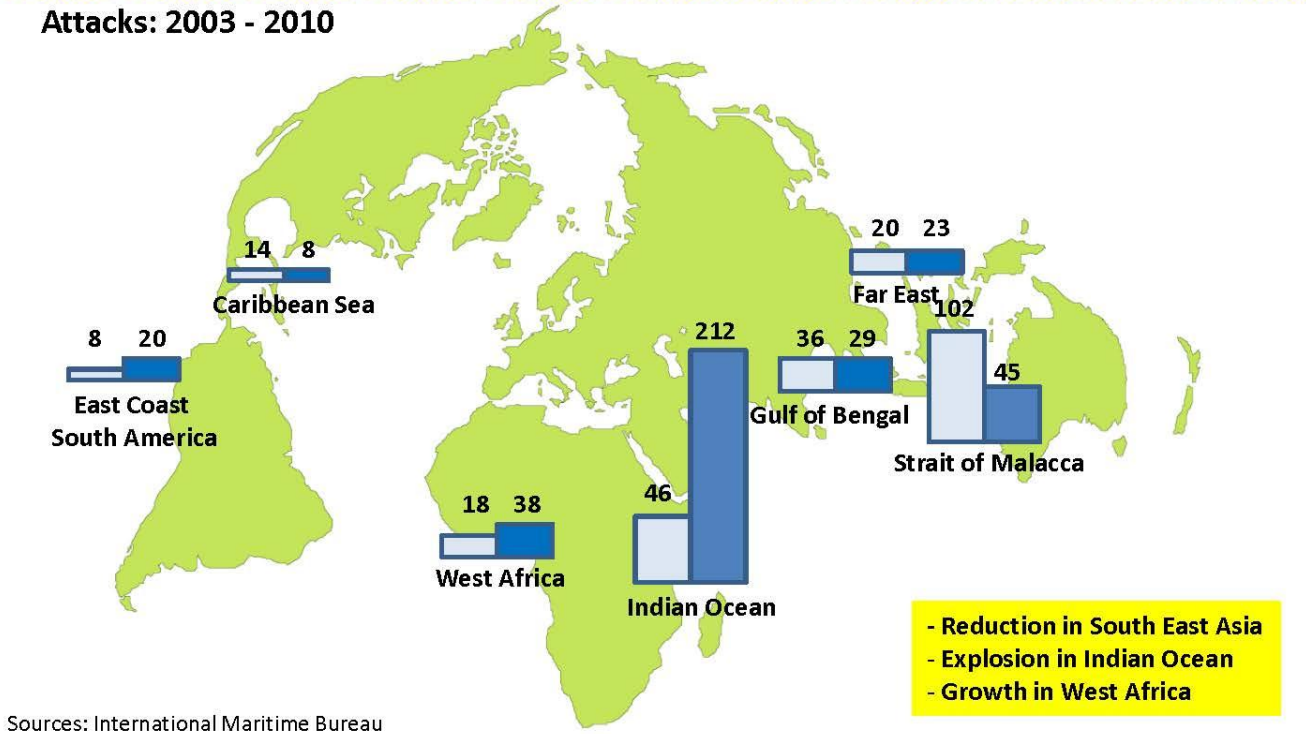
The Piracy in the world



Sources: International Maritime Bureau

Case Studies - Piracy

The Piracy - Figures



Sources: International Maritime Bureau

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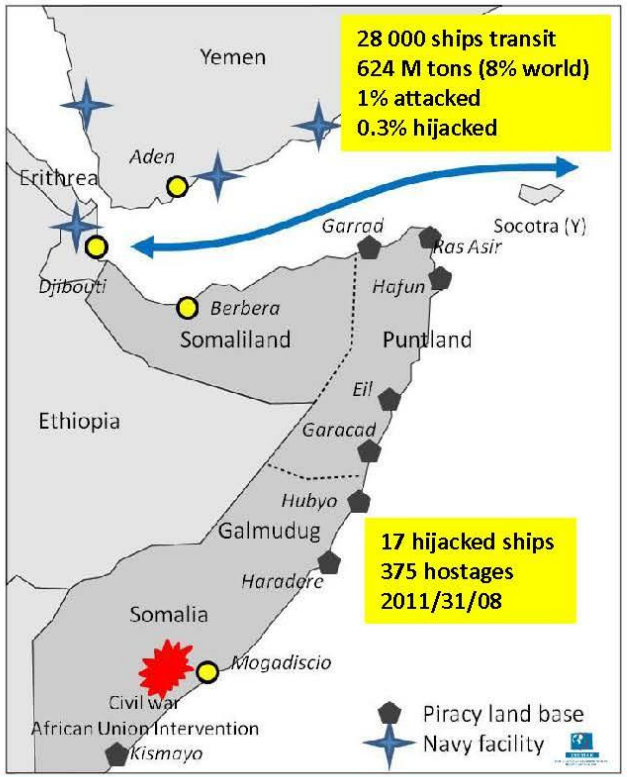
Case Studies - Piracy

The Piracy - Figures

The piracy in Somalia



Somalia
Several political entities
Multitude
of tribal authorities
5 to 10 gangs
1500 pirates
6000 US$ invest for hijacking campaign
Earning by pirate 400 US$
6 / 8 land bases

Counterpiracy
35/45 warships from 20 nations
Some ships security companies
1 000 private armed guards
Somaliland coast guards
Puntland Marine Force

Case Studies - Piracy

The Piracy - Figures

Cost of piracy

Cost for shipping
Freight rate **Piracy risk surcharge**
Crew salary Special prime
Insurance Premiuns War risk surcharge: 2010 global cost 4 Bil US$ Kidnap & ransom: 2010 global cost 540 M US$ Extra 30 000 – 60 000 US$ by transit, 2011: extended area
Security Guards & Equipements 100 000 US$ for 10 days
Bunkering Enlarge routing Arabian Sea, speed steaming in Gulf of Aden Rerouting via Cape (+0.7 MUS$)
Ransom 2009: 177 M US$, 2010: 238 M Average 2007: 1,5 M US$, 2010; 5,2 M US$ + 50% additional costs

Cost for global economy
Extra Cost of shipping & trade 2010 global cost 8/10 Bil US$
Regional trade 2010 global cost 1.25 Bil US$ Eg: Kenya 414 MUS$; 95 $ / TEU, 15 $ / ton wheat

Cost for countries
Military Counterpiracty & dedicted programs 2010 global cost 2 Bil US$
Prosecutions by justice in Africa, USA, Europe 2010 global cost 31 M US$
Antipiracy organisations in East Africa 2010 global cost 24.5 M US$

Sources: Loyd List Daily, The Economic Cost of Maritime Piracy, oceansbeyondpiracy.org

What is being done?

- Rerouting
- Convoys
- Hardening ships
- Crew training
- Rapid response

Questions

RISK VERSUS BUSINESS REQUIREMENTS

Nov 2011

Commissioner Janette Sadik-Khan New York City Department of Transportation
Presented November 7, 2011 by James C. DeSimone, Deputy Commissioner & COO Ferry Division

NEW YORK CITY DOT

RISK

According to the *Business Dictionary*:

- risk is the probability or threat of damage, injury, liability, loss or other negative occurrence that is caused by external or internal vulnerabilities and may be neutralized through preemptive action

- the probability that actual return will be less than expected return

Business Requirements

According to *Merriam-Webster Dictionary*:

- requirement is defined as something essential to the existence or occurrence of something else

- business requirement is defined as something essential to the existence of the business - in the private sector, organizational existence is primarily dependent on profitability, while in the public sector tends to be dependent on the service provided versus a public need

External Vulnerabilities

ENVIRONMENTAL

- a vessel goes to sea and is battered by heavy weather that results in loss of containers overboard, or a hull fracture and pollution, or passengers thrown around and injured
- as a vessel is docking an unanticipated heavy current causes it to allide with a pier resulting in hull damage
- a vessel collides with another vessel through no fault of its own resulting in loss of life and damage to the vessel

Security or Threat-based

- an oil tanker is rammed by a terrorist small craft resulting in loss of life and pollution
- a ferry is boarded by a passenger with an IED in backpack that is detonated in passenger spaces resulting in loss of life and damage
- a port experiences a terrorist attack that results in a complete business shut down

Internal Vulnerabilities

- physical fitness - the captain of an oil tanker becomes incapacitated while approaching pilot station which results in the vessel grounding and pollution
- human error - a crew member on a passenger vessel *ignores* the vessel security plan which results in a major security breach, injury to passengers and crew and damage to the vessel
- mechanical - the steering gear on a container ship fails as the vessel is navigating a narrow channel which results in a collision, personal injury and damage to the vessel

Risk Mitigation

- risk management begins with competent personnel
- objective vulnerability assessments
- well-developed and effective management systems, accountability and monitoring procedures (internal controls, safety management systems, security plans, spill response plans, emergency procedures, etc.)
- personnel training and effective drills
- appropriate technology
- periodic competence assessments
- strict adherence to all applicable regulations and statutes
- demonstrated support of senior management and employee feedback to promote continuous improvement

Private Sector Risk Mitigation

- In a normal business cycle – what is risk mitigation worth?
  - MTSA & ISP mandate risk mitigation
  - customer expects risk mitigation
  - vessel owners' liabilities require risk mitigation
  - it's expensive, but tends to improve bottom line
- In a down business cycle – what is risk mitigation worth?
  - MTSA & ISP mandate risk mitigation
  - customer expects risk mitigation, but might not want to pay for it
  - vessel owners might be willing to assume more risk
  - it's expensive and safety and security tend to be victims of economic downturns

Public Sector Risk Mitigation

- In a normal business cycle – what is risk mitigation worth?
  - MTSA & ISP mandate risk mitigation
  - public expects risk mitigation, but it's expensive
  - vessel owners' liabilities necessitate risk mitigation
  - public agencies may be held to a higher standard
- In a down business cycle – what is risk mitigation worth?
  - MTSA & ISP mandate risk mitigation
  - public expects risk mitigation, but might not be willing to pay additional fees and taxes for it
  - public agencies might be willing to assume more risk provided they are in compliance with regulations and statues
  - it's expensive and safety and security tend to be victims of tight budget cycles

Challenges

- human element and internal vulnerabilities
- external vulnerabilities
- economic uncertainty
- public perception
- objectivity of assessment

Summary

- maritime industry is an inherently risky business and risk management has always been prominent
- there is no way to neutralize risk in the maritime industry aside from not being in the business in the first place – must accept a certain level of risk and strive to mitigate
- there is a natural nexus between safety and security and how we mitigate the related vulnerabilities, all of which leads to safer and more secure operations and improved bottom line outcomes
- must ensure that risk and vulnerabilities are assessed objectively and understand that we cannot eliminate risk- we can only mitigate to an acceptable level

Questions?

Thank You