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Major Accident Prevention and Lessons Learned: A 4-Step Supply Chain Risk Audit Program *Presentation to Trans Middle East*

EXCERPT

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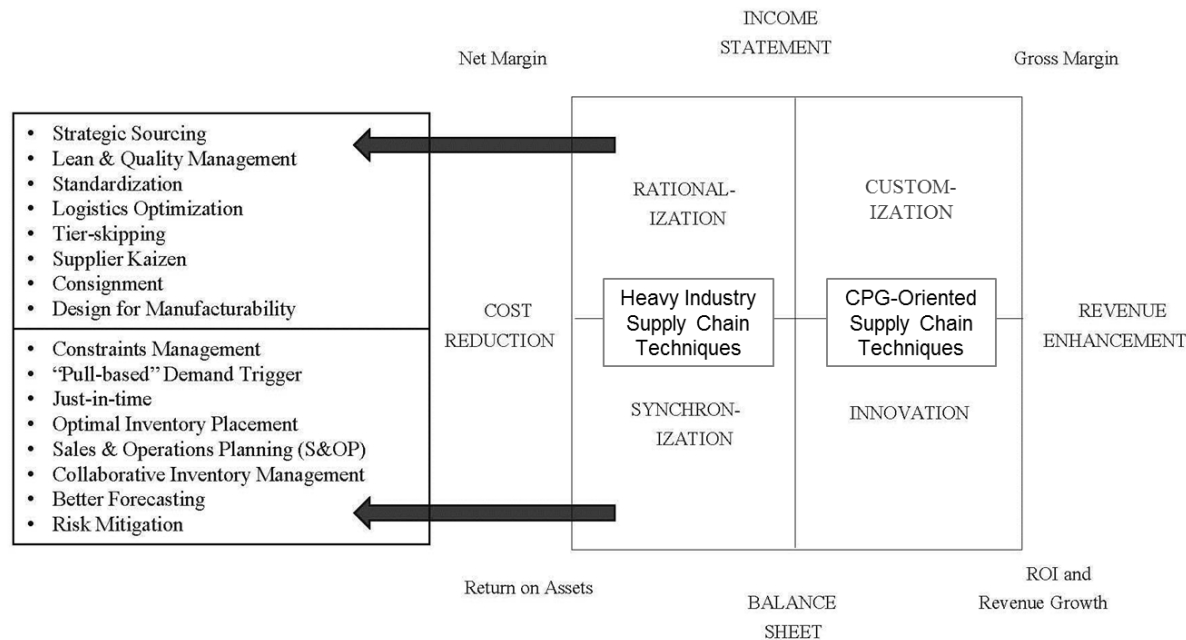
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Supply Chain Management in Ports & Shipping

Supply chain management (SCM) is the co-ordination of the set of operational activities involved in balancing supply and demand of vessels, equipment, and supplies so as to maximize return on invested capital.

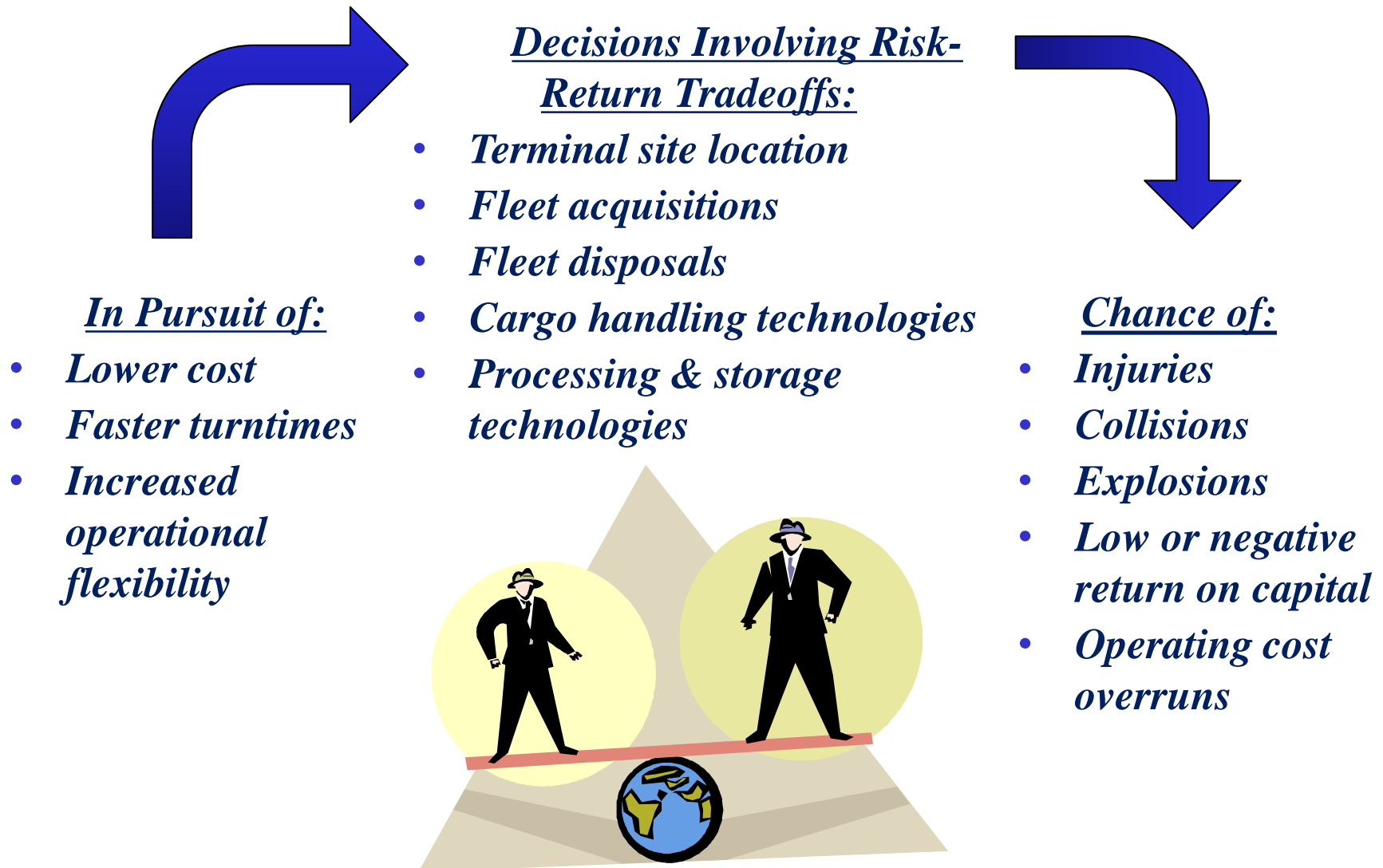
Supply Chain Management Value Drivers in Ports & Shipping



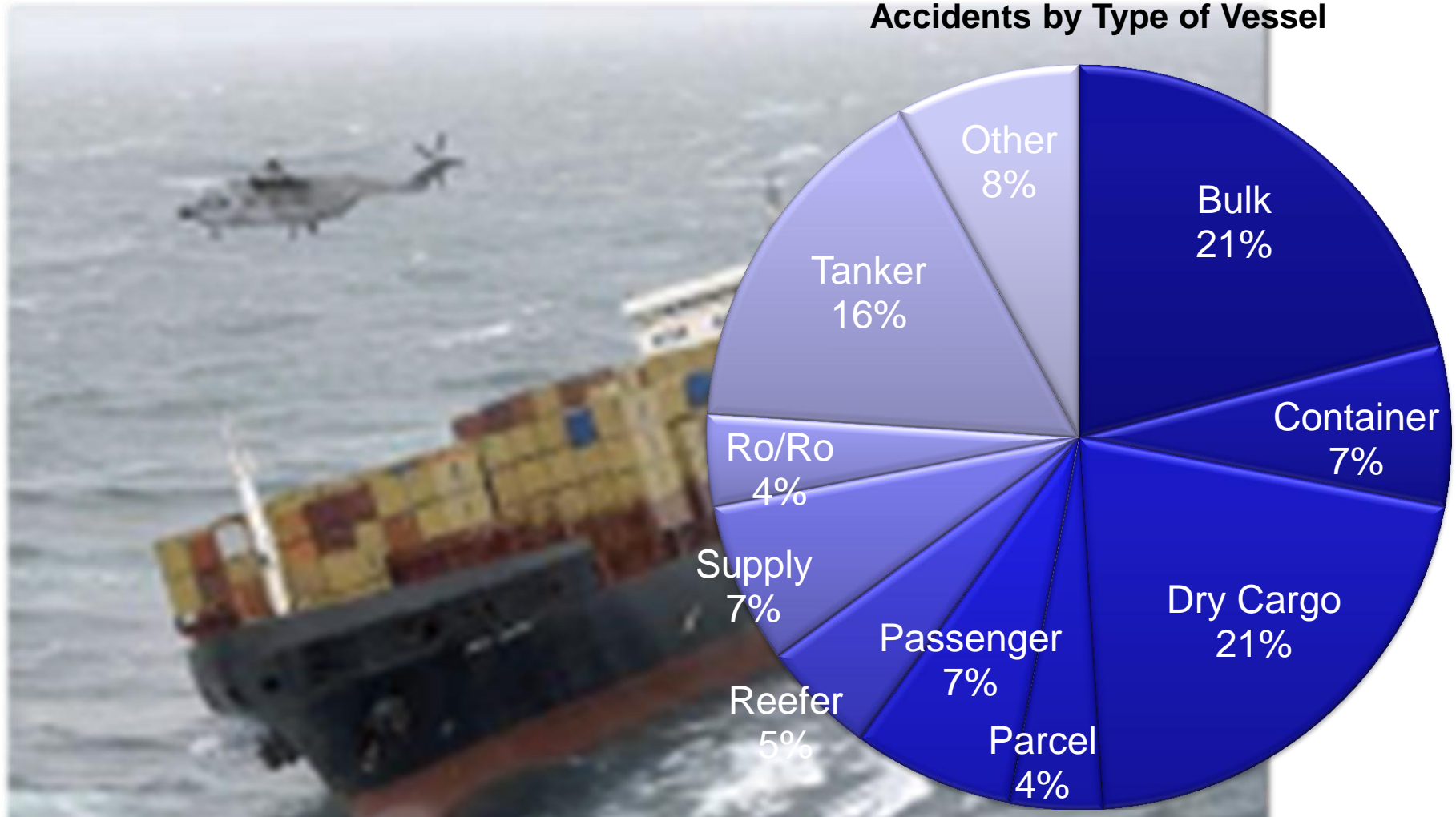
Source: Jacoby, David. Optimal Supply Chain Management in Oil, Gas and Power Generation, PennWell, 2012, page 4.



Supply Chain Management Risk in Ports & Shipping



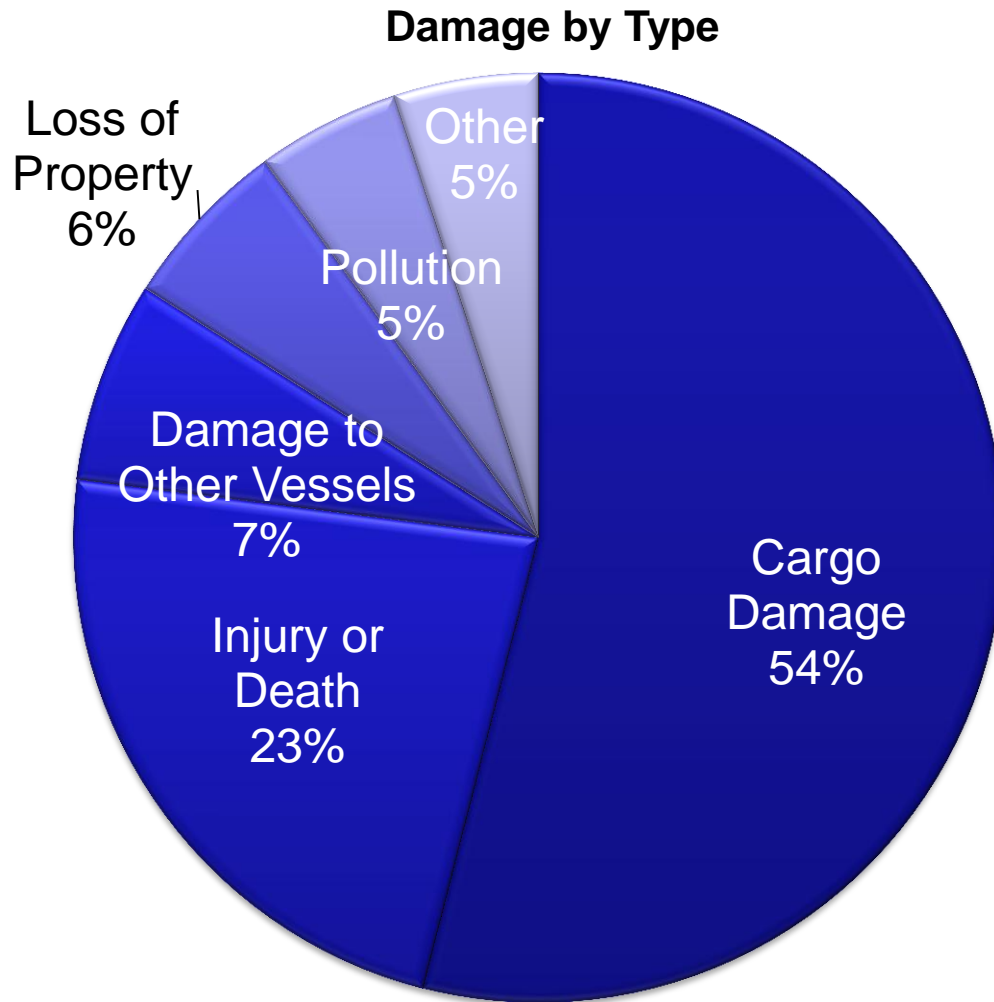
Accidents Happen on All Types of Vessels, With Higher Frequency on Bulk Ships and Tankers



Source: Wang, Foinikis. Formal Safety Assessment of Containerships. Image from "Major Marine Vessel Casualty Risk and Response Preparedness in British Columbia." EnviroEmerg..



Damages Affect Crew, Cargo, Other Vessels, Property, and the Environment



Source: Wang, Foinikis. Formal Safety Assessment of Containerships. Image from "Major Marine Vessel Casualty Risk and Response Preparedness in British Columbia." EnviroEmerg..



Example of Collateral Damages: Rena

- **Ran aground in New Zealand this year due to stormy weather**
- **Heavy waves tore the vessel apart**
- **Leakage of more than 1,000 tonnes of heavy fuel**
- **Up to 20,000 seabirds dead**
- **Up to 300 containers fell overboard (most sank)**
- **20 containers contained cryolite from a South Island aluminium smelter**



Source: Reuters



The Audit Framework: What to Expect

