

Port Risk Matrix: a Practical Approach



TT CLUB
IS MANAGED
BY **THOMAS
MILLER**

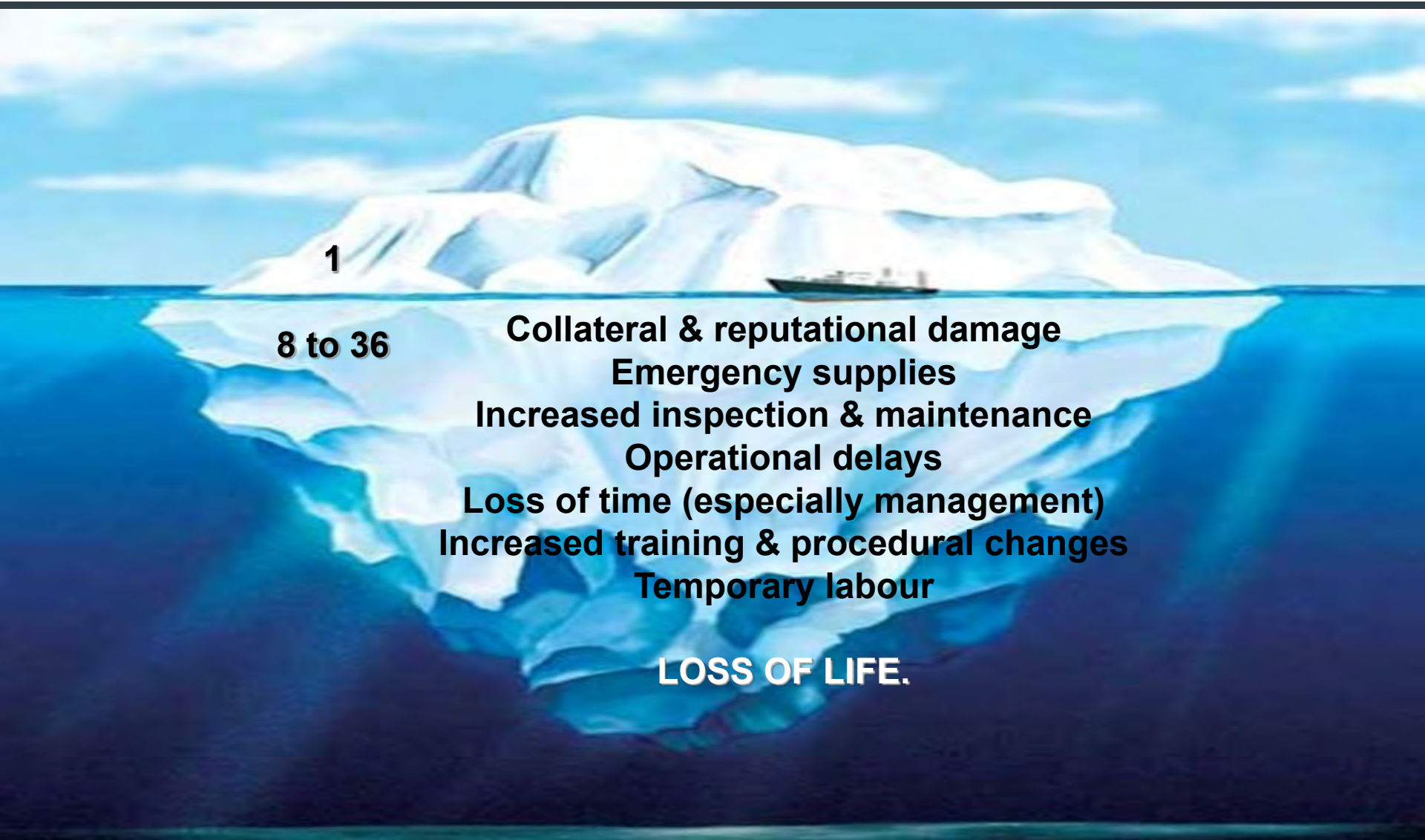
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Cost of Claims

Claims analysis overview

Claims analysis and loss prevention



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8 to 36

Collateral & reputational damage
Emergency supplies
Increased inspection & maintenance
Operational delays
Loss of time (especially management)
Increased training & procedural changes
Temporary labour

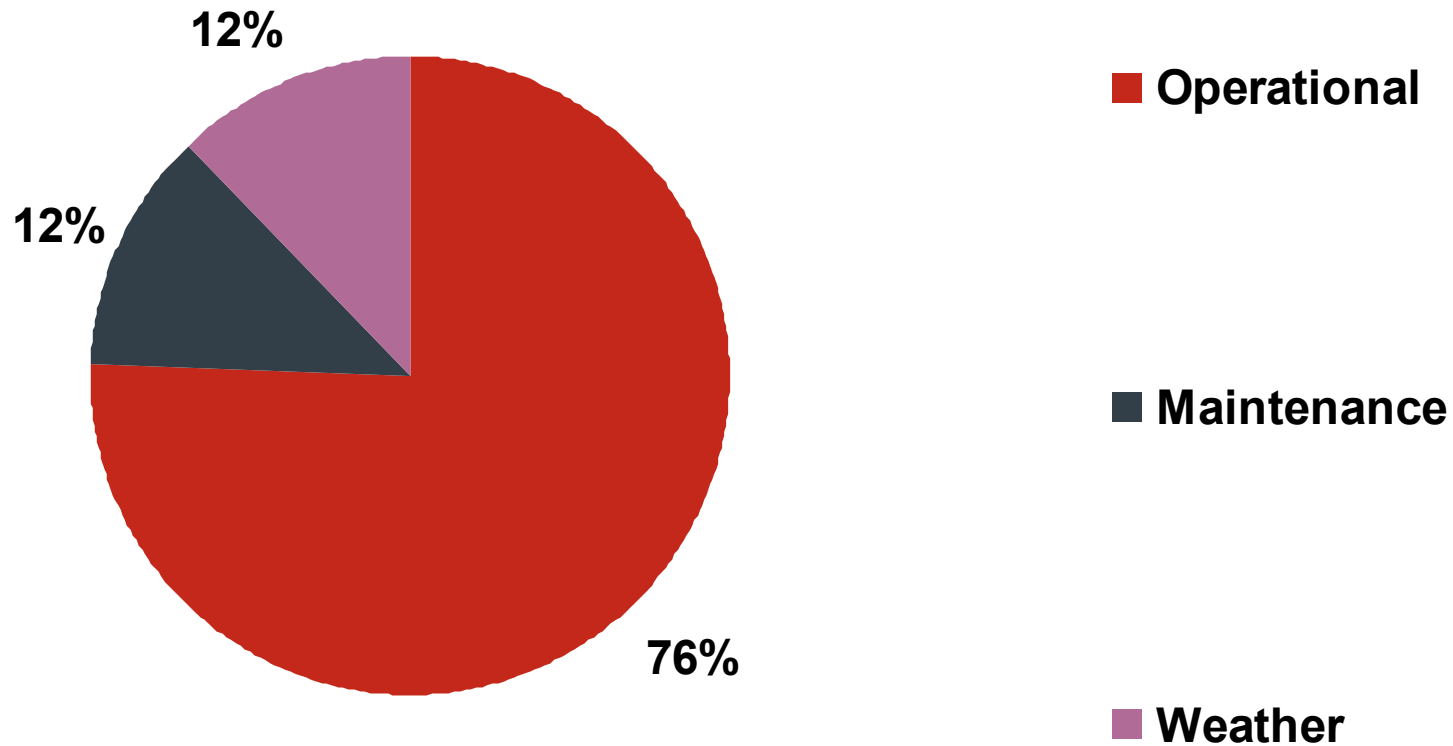
LOSS OF LIFE.

Analysis of the main causes of claims:

- Includes last 5 years data
- 2010 – 2016
- All claims over US\$10,000
- 6,889 claims
- Includes all claim types:
 - Property
 - Liability
 - Bodily injury

Ports and Terminals

Main cost cause categories



Claims analysis overview

Claims analysis and loss prevention

Operational issues

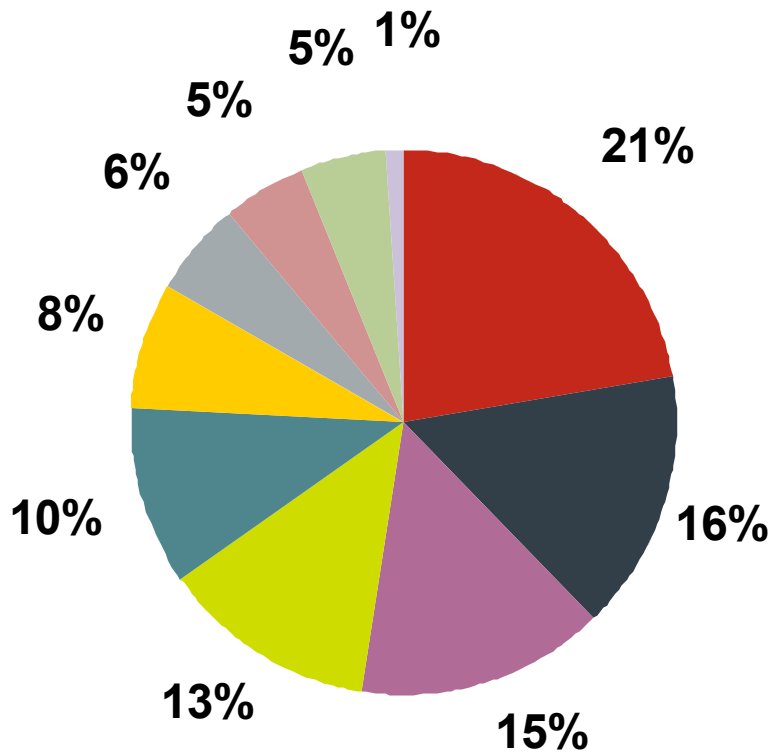
Maintenance Issues

Weather issues

Bigger ships and bigger and more cranes



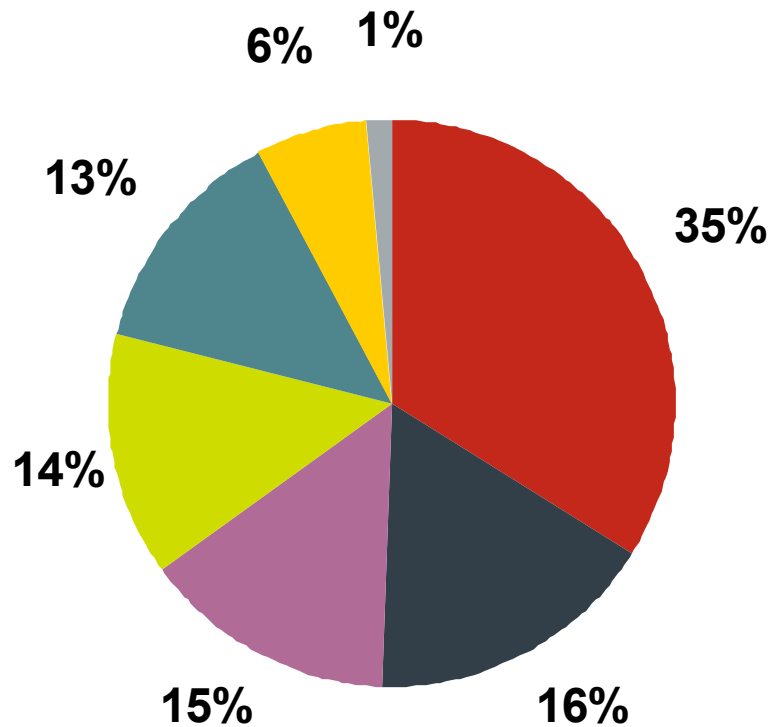
Ports and Terminals Operational issue costs



- Wharf Crane
- Lift Truck
- Yard Crane
- Systems & Processes
- Theft
- Truck/ Vehicle
- Ship in Port
- Straddle
- Single Person Incident
- Other

Ports and Terminals

Wharf crane issue costs



- Boom to ship collision
- Other Spreader, Hoist Issues
- Other Collision
- Weight, twistlock, cell guide issue
- Stack Collision
- Twin Twenty Issue
- Other







Boom to ship collisions – Loss prevention

35% of quay crane claims costs

Totally preventable with quay crane boom anti-collision sensors

Laser sensors – www.sick.com







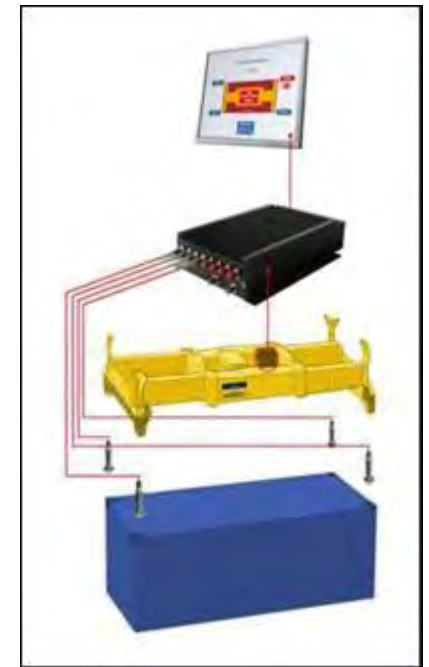


Detects & prevents:

- Lifting of trailer or rail wagons still connected to container
- Lifting if not all twistlocks engaged
- Snag load situations
 - Container still locked with stack or stuck in cell guides
- Slack rope detection after landing without box

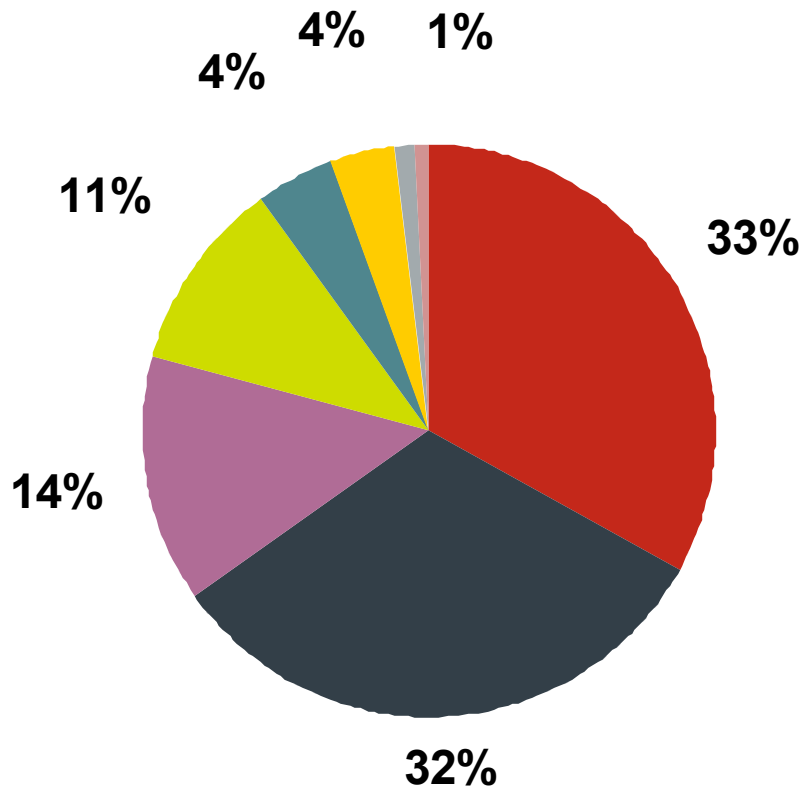
Measures and records:

- Each twistlock & total container weight
 - Safer handling of containers
 - Better ship planning to ensure trim and stability
- Load eccentricity in single & twin lift
 - Help prevent trucks overturning
 - Can side shift spreader before exiting ship cell guides
- Twistlock load cycles
 - Optimise twistlock replacement intervals
 - Spreader & crane life cycle management & overload tracking



Ports and Terminals

Bodily injury claim costs



- Lift Truck
- Yard Crane
- Single Person Incident
- Truck/ Vehicle
- Wharf Crane
- Straddle
- Other Operational Issues
- Systems & Processes





Traffic management – Loss prevention

84% of injury costs caused by equipment and vehicle drivers

Prevention:

- **Traffic management procedures:**
 - One-way traffic flows
 - Limiting vehicles & pedestrians in yard
 - Site induction procedures
 - Safe area for truckers to secure/unsecure loads
 - Speed limits set and enforced
- **Technologies:**
 - RFID system on all pedestrians and mobile equipment
 - Mobile equipment anti-collision sensors
 - Rear view cameras





14% of injury costs caused by single person accidents

Prevention:

- Safety awareness
- Tool box talks
- Safety lock out systems
- Good housekeeping

Training:

- Continuous safety awareness
- Enhanced focus on driver training (simulators)

Procedures:

- Preventive not breakdown maintenance
- Better crane securing procedures & brake maintenance
- Structural inspections
- Ship movement & berthing procedures
- Security – theft
- Systems & processes – pack it right
- Traffic management

Re-design/Technology:

- Wharf crane boom anti-collision sensors
- Wharf & yard crane stack profiling
- Mobile equipment travel anti-collision
- Fire suppression
- Container weight & eccentricity measurement.

Governed by the industry for the industry







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