



STOCK THROUGHPUT:
A SURVEYOR'S PERSPECTIVE

PRESENTATION FOR



IUMI
150

05 September 2024





KEY OBJECTIVES



1

What happened to “marine” just meaning ships and cargo? Brief overview of the breadth of global STP

2

The 7 Rs and 4 Ts of risk management, the STP static risk assessment and how it’s different from a property engineering survey

3

Vulnerabilities and how the approach a static risk STP claim might differ from a transit claim survey



WHAT IS MARINE INSURANCE...REALLY?

Marine insurance coverage of goods...



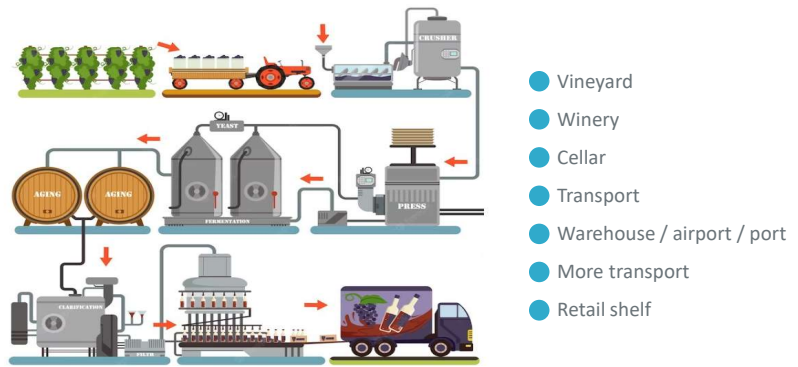
Does **not** require goods
to be on a SHIP



Goods do **not** have to be
MOVING

A REAL-WORLD STOCK THROUGHPUT EXAMPLE

From the time the grapes are harvested to the time the wine is bottled to when it ultimately lands on a retail shelf...the likelihood is that the product was covered by a marine insurance policy.

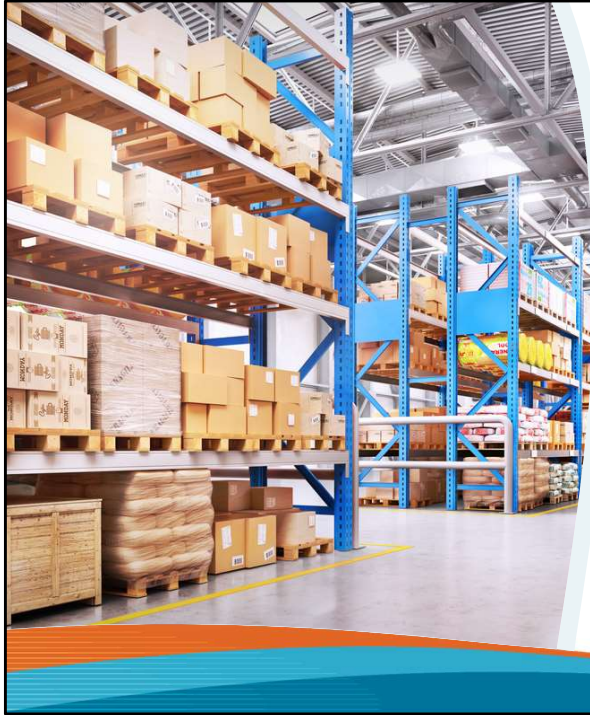


What this slide also shows is that stock throughput “locations” cover many different types of locations.

When we hear STP, our first thought might be a “traditional” warehouse, but STP coverages encompass so much more. And what those look like and how they operate can vary greatly around the world. We need to be aware of this and not allow biases and assumptions to get in the way of clear-eyed and realistic assessments.



Here is just a brief sampling of locations we've visited: a warehouse complex storing personal care products for an NGO in West Africa, a highly automated temperature controlled pharmaceutical warehouse facility in Europe, another West African warehouse, a winery in North America, a cocoa warehouse in West Africa, a tank farm in the Nordics, a hard commodities warehouse in Latin America, a lumber mill and storage yard in North America.



RISK MANAGEMENT PRINCIPLES

THE 7 RS

- recognition or identification of risks
- ranking or evaluation of risks
- responding to significant risks
- resourcing controls
- reaction planning
- reporting and monitoring risk performance
- reviewing the risk management framework

There are many definitions of risk. The ISO Guide 73 definition is that risk is the “effect of uncertainty on objectives”. These 7 Rs principles are often referred to in financial risk management and we need to be mindful that while we may use the same words, they will have different meanings for different audiences. Today we are talking in the context of marine insurance and stock throughput. The objective of the STP enterprise insured would likely be for their business to operate without disruptions to their supply chains or losses of inventory.

The first step is identifying what the risks are. This crucial first step is the basis for everything else – creating the opportunity to make decisions on how to be proactive, instead of just responding to one crisis after another. The STP pre-risk location survey is that first step. For underwriters to know what you are insured. For insureds to better understand the risks around the locations they have chosen to safeguard the products that make their businesses run. For third party warehouses to benefit from another set of eyes on their operations. Everyone has the opportunity to benefit. It is up to each one how

to use the information.

The seven elements of risk management are vital in creating an effective strategy. These elements include establishing the context, identifying risks, assessing risks, prioritising risks, treating risks, monitoring and reviewing, and communication and consultation. Each step ensures that the organisation addresses all possible threats and opportunities in a systematic way. **Effective risk management is the foundation for operational resilience.**

For more on the 7Rs and risk management in general:

<https://www.ferma.eu/app/uploads/2011/10/a-structured-approach-to-erm.pdf>

<https://www.iso.org/iso-31000-risk-management.html>

<https://riskonnect.com/business-continuity-resilience/the-basics-of-iso-31000-risk-management/>

STEP 1: IDENTIFYING RISKS - THE STP RISK ASSESSMENT SURVEY



In Common with Property

Construction
Occupancy
Protection
Exposure



More Stock Specific

- Risk exposure of inventory/stock
- Inbound receiving procedures
- Outbound shipping procedures
- Inventory handling & Storage systems
- Inventory management
- Pest control
- Refrigeration systems
- Security systems
- Response plans
- The human element



Construction, Occupancy, Protection and Exposure.

Full property engineering surveys will delve deeply into building constructions and systems related to the structure. The STP-focused surveys cover the essential COPE information and then also focus on the risks to the inventory stored within the structure or at the location.

Brief review of COPE:

Construction

Analyzing the location of a building, the materials it was constructed with, the building's age, and the quality of the systems within the structure.

Occupancy

Who occupies a building and how the building is used. Is it just for storage or is there also manufacturing or processing happening? Or does it maybe even include a retail element? The type of activity that happens on a property proposes varying types of risk.

Protection

What is the physical security protection like? What about systems? Fire protection? Nearest fire, police, medical response?

It is critical to identify any services that reduce the risk to the property.

Exposure

The external factors outside the building and the occupant - more uncontrollable hazards. Environmental exposures, NatCat, surroundings, neighborhood and neighboring businesses.

On the stock specific side, we ask whether the nature of the goods being stored and insured have any specific vulnerabilities such as requirement for temperature control? Are they especially theft attractive? Are they susceptible to infestation or contamination? For example. When it comes to temperature control, property's primary focus may be on keeping essential building systems functioning and less on making sure that temperature sensitive inventory is protected. That is not necessarily wrong, but we want to know. We want to understand what the inbound receiving procedures are like. What checks are performed? What is documented and how? Can we be sure that goods were in good condition upon receipt? That goods were actually there? How are inventory records kept once goods have been received? Is it just "a guy" who knows where stuff is or is there a computer system, maybe bar codes? If you have no idea what you have, you cannot understand what consequences can arise. Security systems are important, especially for theft attractive goods. The first line of defense is always physical security – fences, walls, securing windows and any possible points of entry. Then the various sensors and alarm systems. There is, however, no structure or security system that will completely prevent a theft or a break in, the goal is deterrence – or if someone is really determined, to SLOW them down – ideally long enough for law enforcement to intervene and stop the crime. Which is a good segue to response plans – whether it's crime or another event such as a wildfire or NatCat, having response plans in place is key. Understanding who will do what when to mitigate the impact of an event can go a long way to minimizing losses.

Finally, the human element. If we relate it to the classic marine example, it can't just be the Captain, the whole crew needs to be trained and the entire company culture must reflect risk awareness and understand what the appropriate responses are.

<https://www.insurancejournal.com/news/national/2015/02/03/356085.htm>

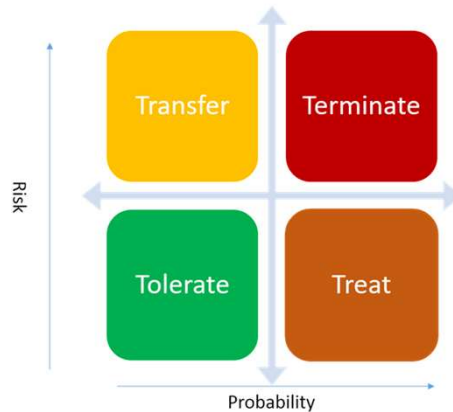
STEPS 2&3: RANKING OR EVALUATION OF RISKS & RESPONDING TO RISKS

Evaluate impact with respect to SEVERITY exposure and FREQUENCY exposure

Evaluate impact over SHORT, MEDIUM and LONG term
Remedy should be proportionate to the level of risk

Consider cost of implementation compared to the risk reduction benefits achieved

Underwriting decisions will have to be made



After identifying the risks, the next step is evaluating the potential impact. How likely is this scenario? What is the likely frequency? What is the likely severity if it does occur? What would it cost to make changes?

The four components of the response plan are TRANSFER, TERMINATE, TREAT, or TOLERATE

Transfer: Transferring a risk involves moving the risk's possible financial effects to another party. Typically, this is done through insurance policies, contracts, or outsourcing agreements. But this transfer is limited to transferring the FINANCIAL risk only.

Termination: Termination is the total elimination or avoidance of a risk by the discontinuation of the linked activity, undertaking, or process. When the discovered risk is judged intolerable or when the possible negative results outweigh the potential advantages, this technique is used. One example of this may be the complete discontinuation of use of a specific warehouse location by an insured – or eliminating coverage for certain locations by underwriters. But a more mundane example would be moving combustible materials away from electrically operated equipment and their batteries or battery charging units to eliminate/terminate the risk of a small electrical fire spreading.

Treat: Treating a risk means taking steps to limit, decrease, or manage its impact and possibility. This technique focuses on proactive risk management in order to reduce any negative effects. Implementing precautions, contingency plans, diversifying resources, or conducting training and awareness campaigns are examples of treatments. Risk management acknowledges their presence while attempting to decrease their impact to an acceptable level. This is the T where the biggest area of opportunity for improvement exists. It requires buy-in and cooperation. We also cannot ignore that in many cases the STP location is not owned or operated by the insured so that the insured/stock owner's ability to effect change may be severely limited.

Tolerate: When a company chooses to tolerate a risk, it indicates that it accepts the possible consequences and decides not to take any particular action to minimize or prevent them. When the potential impact of the risk is relatively minimal or when the expense of controlling the risk outweighs the possible benefits, this technique is often adopted. Tolerating a risk does not imply completely ignoring it but rather closely monitoring it to ensure that it does not increase beyond tolerable limits.

These response tactics are not mutually exclusive, and a combination of strategies can be used depending on the individual conditions of each risk.

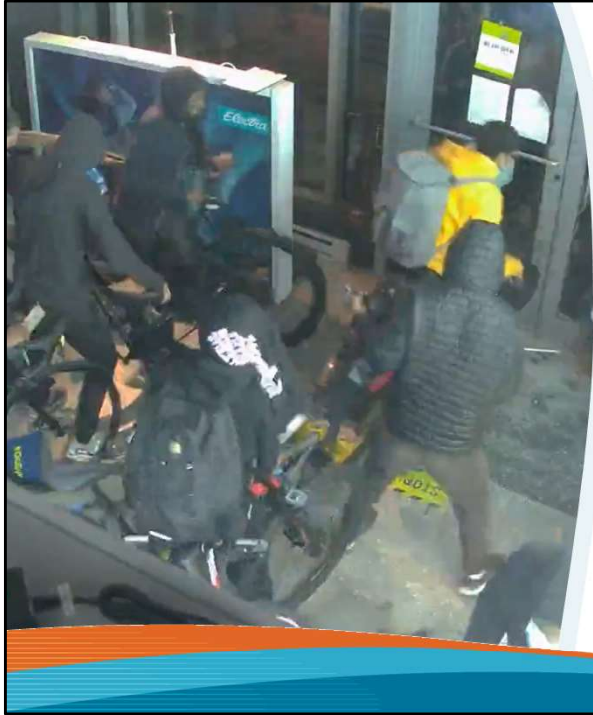


VULNERABILITIES

- Natural catastrophes
- Severe weather events
- Power outages
- Fire
- Pollution & Contamination
- People

At audience request a few links regarding battery storage risks. There have been a lot of presentations on this topic (in fact one is happening today for IMUA: https://www.imua.org/ev_calendar_day.asp?date=9%2F5%2F24&eventid=198 which is too late to attend)

<https://www.nfpa.org/education-and-research/home-fire-safety/lithium-ion-batteries>
<https://www.tuvsud.com/en-us/services/risk-management/fire-protection-engineering/lithium-ion-batteries>
<https://www.fema.gov/fr/case-study/emerging-hazards-battery-energy-storage-system-fires>
<https://pubs.acs.org/doi/10.1021/acsenergylett.2c01400>



CLAIM EXAMPLES

- Grain silo – fire and roof collapse
- Frozen food warehouse – ammonia leak
- Refrigerated produce warehouse – electrical fire
- Pharmaceutical facility – power outage
- Blood reagent - LED lightbulb damage
- Warehouse roof collapse – snow load
- Warehouse roof collapse – heavy rain
- High quantity, low value consumer goods - flooding
- Sporting goods retail location - looting
- Lower severity – high frequency – “leakage” from warehouses

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A quick run through of some claim examples and key points

Grain silo – fire – roof collapse – silo full – authorities involved who initially put a hold on the grain – appeal decision to allow grain to be sold for feed – share C&O expert with property. Mutual interest of property and stock to get the grain cleared out as quickly as possible – large salvage operation

Frozen food warehouse – ammonia leak – closely worked with insured and engaged FDA expert and forensic laboratory to prepare action plan for FDA to allow remediation of fully packaged / encased product – thus successfully mitigating the loss

Refrigerated produce warehouse – electrical fire in loading dock area – local health authorities condemned ENTIRE warehouse – all product had to be cleared out and destroyed – did not help that it was just before a long holiday weekend and in the middle of grape season and warehouse needed to be operational to accept inbound shipments – no time to appeal health department’s decision and potentially move goods to other location for salvage even though most goods had relatively long shelf life. C&O expert crucial to successful recovery action against 3rd party contractor who was servicing electrical panel when fire started.

Pharmaceutical facility – power outage – power outages pose a very large risk for facilities in which pharma products are manufactured, processed and stored. When there is a power outage, back-up systems are usually designed to first restore emergency and essential building functions and security functions, not necessarily storage conditions. Therefore, again, knowing the processes and systems in place is very important to evaluating the risk exposure.

In this case, the product in liquid form was filled into vials which were then partially sealed before product moves to a freeze drying process. Freeze drying is performed under positive air pressure clean room conditions. Positive pressure is maintained by air handlers as part of the HVAC system. The power in the facility was interrupted for an estimated 7 seconds. The air handlers continued spinning for another 2 to 3 seconds after power was lost. The facility lost positive pressure which took considerable time to regain. When the pressure was lost, the FDA mandated GMP (Good Manufacturing Practice) conditions were no longer maintained. Therefore, the product in the semi-open containers was no longer sterile. GMP had no provision to reclaim product exposed to ambient air. The exposed product was considered a total loss.

Blood reagent – LED lightbulbs installed for energy efficiency caused unanticipated damage to product., I included this as an example that the space is constantly evolving and so are the risks. We cannot necessarily anticipate everything. The more questions we ask, the better equipped we can be.

Snow load – inventory tracking issue – impossible to get a completely accurate count due to lack of precise inventory tracking system. Coordinate with property for C&O expert to determine whether installation of solar panels on third party warehouse roof was properly done and/or engineered in advance of installation.

Warehouse – rain load – involve C&O expert who examined applicable code and actual rainfall rates during the event to determine whether warehouse roof was up to code during event. Determined that rainfall rate did not exceed building code requirements – therefore, warehouse was liable.

Sandy – costume jewelry whole and parts – old inventory – need for inventory specialists to perform counts and forensic accountants to determine valuation.

Sporting goods store – looting – just an example of the fact that STP can include retail – and that retail has a high people factor risk exposure. Looting may be the extreme example, but there is plenty of exposure from “normal” retail theft to unintentional damage by customers in a store.

Lastly a quick note that of course we also have lower severity, high frequency scenarios such as when a few bags of coffee “disappear” from inventory – or never make it into inventory over a long period of time.

CLAIM APPROACH REVIEW

Investigations more likely to involve need for experts:

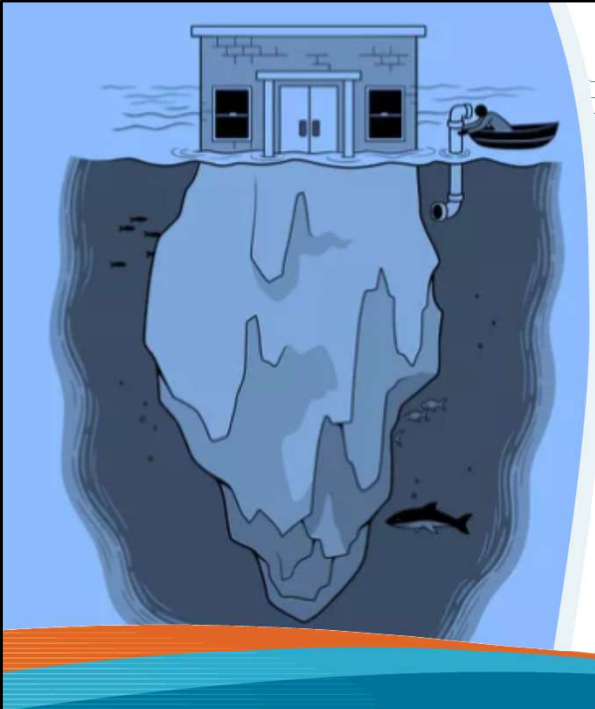
Cause & origin investigators
Inventory specialists
Salvage companies
Forensic accountants
Regulatory and/or legal experts

! Importance of coordinating response with property insurers

Some potential challenges:

Property claim often takes priority
Public adjusters (USA)
Identifying cause/time of loss





CONCLUSION

- Know what you are insuring
- All parties involved benefit from improvements to the risk
- Don't underestimate the people element
- Have a response plan, including assembling your claims team

Image: Investopedia/Mira Norian

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Start by identifying the risk – as an underwriter: know what you are insuring. As an insured enterprise: know what your business STP risk exposure is.

All parties will benefit from effective risk management.

Underwriters through improved results, client satisfaction

The insured because they are in the business of their business, not in the business of filing insurance claims.

Losses are disruptive – beyond a financial impact, they disrupt operations, cost employee time, can negatively impact their market position, disrupt their supply chain, create unhappy customers, and damage their brand reputation.

The third party warehouse can benefit from potentially more favorable liability insurance terms and rates as well as market position and brand reputation.

Don't forget the people. No matter how great the structure, the systems and the procedures - if the people are not trained and committed to a culture of proactive risk management, then you have not maximized your risk management strategy.

And finally, claims happen. Be prepared, have a response plan and team, so as to minimize the disruption and get everyone back on track as quickly as possible. And maybe come away with some new information. Claim experience informs future risk management.

Thank you!

Thank you!



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