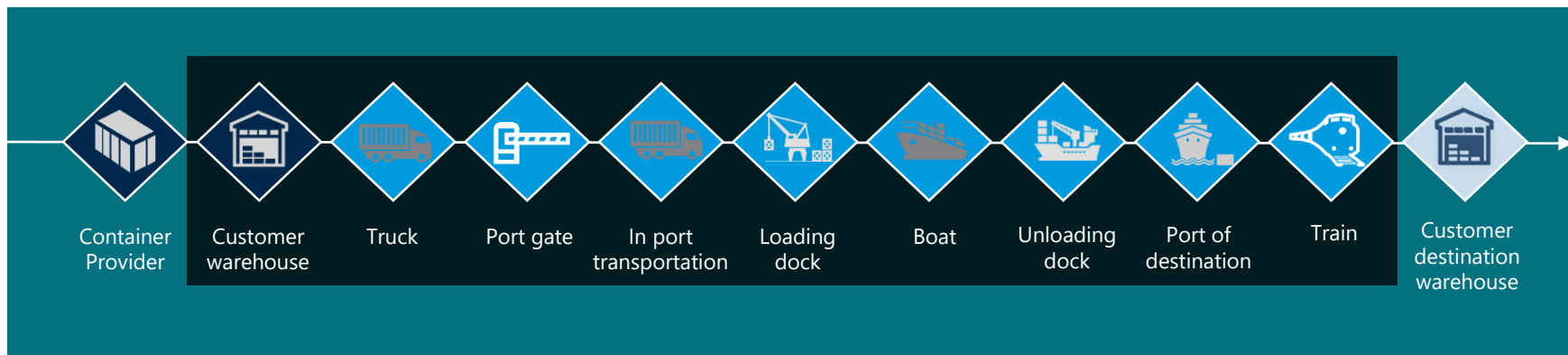# AXA XL Risk Consulting & Contguard Partnership

Transport & Logistics risk consulting service relying on connected cargo technology

"Shipping with intelligence"

14th May 2019

The supply chain industry's visibility and control challenge

Container Provider — Customer warehouse — Truck — Port gate — In port transportation — Loading dock — Boat — Unloading dock — Port of destination — Train — Customer destination warehouse

Facing The Uncertainty

70% of the world's goods are in transit at all times with almost no visibility & control [1]

$55bn direct losses
$220bn indirect losses

- No visibility to abnormal supply chain events
- Contingency planning issues
- Lack of schedule control – unreliable ETS & ETAs [4]
- Cargo quality issues

[1] 2017 Berg Insights benchmark
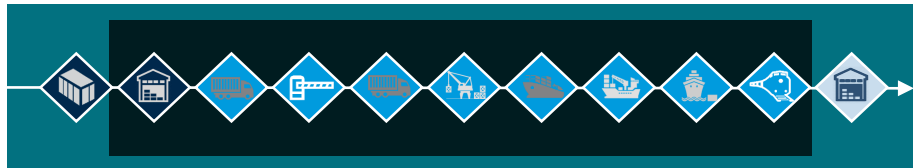[2] Lloyds loading lists – referencing BSI report (2016)
[3] Maritime Security – An introduction – 2nd edition 2016 (Butterworth Heinemann)
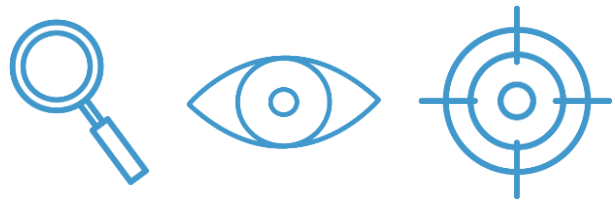[4] ETS / ETA : Estimated Time Schedule / Arrival

Marine IoT to mitigate the 'black hole' phenomenon

The AXA XL Risk Consulting "Connected Cargo" solution leverages data collected by sensors located in containers, in order to take cargo risk mitigation actions that improve the end-to-end transport value chain.
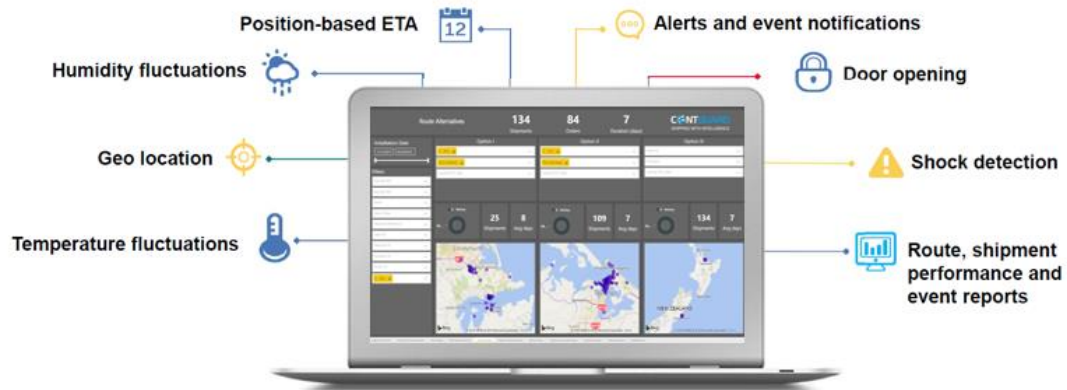
Solving the 'black hole' phenomenon

OFF THE SHELF CARGO TRACKING DEVICE

Dry Container | Loose Cargo (Amazon) | Reefer Container

Track. Predict. Analyze

Position-based ETA

Humidity fluctuations

Geo location

Temperature fluctuations

Alerts and event notifications

Door opening

Shock detection

Route, shipment performance and event reports
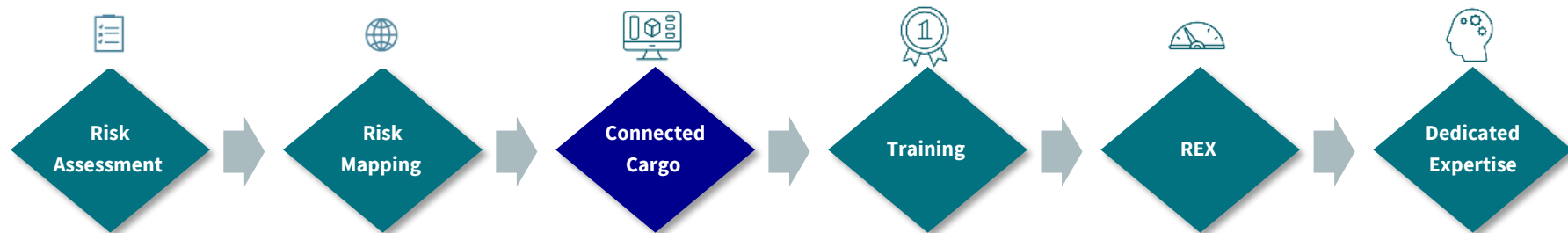
Marine IoT embedded into our Marine risk consulting services

As part of our Marine risk consulting services, "Connected Cargo" is the innovative solution that helps identifying and bridging gaps in the end-to-end cargo supply chain.

Risk Assessment → Risk Mapping → **Connected Cargo** → Training → REX → Dedicated Expertise

1. DELIVER TECHNICAL EXPERTISE

- Information and intelligence Consultancy
- Claims Surveys
- Managing goods
- Real time Risk control

2. CONTROL YOUR SUPPLY CHAIN EXPOSURE

- Audits, Recommendations, Contingency Plans
- Risk assessment and mapping
- Risk management program: Definition, implementation and follow up
- Risk Management assistance with subcontractors

3. FOCUS ON HUMAN FACTOR

- Training sessions
- Experience feed back
- Benchmark of best practices
- Globalized Corporate Supply Chains

AXA XL Risk Consulting & Contguard Risk Management Solutions

AXA XL Risk Consulting issues risk improvement recommendations based on Business Intelligence provided by Contguard and help customers in implementing relevant risk mitigation actions to optimize their supply chain.

Contguard is a global monitoring and big data company that relies on advanced technology to provide:

- Real time end-to-end cargo tracking
- Multi-modal end-to-end shipment data for cargo in transit, into a warehouse or on the road
- 24/7 real time cargo monitoring services and incident alerts
- Business Intelligence and actionable insights about customers containers and cargo traveling across the world

Off the shelf Container/cargo tracking devices

Global Operations Network - service and device-logistics partners

BI and AI-based supply-chain optimization

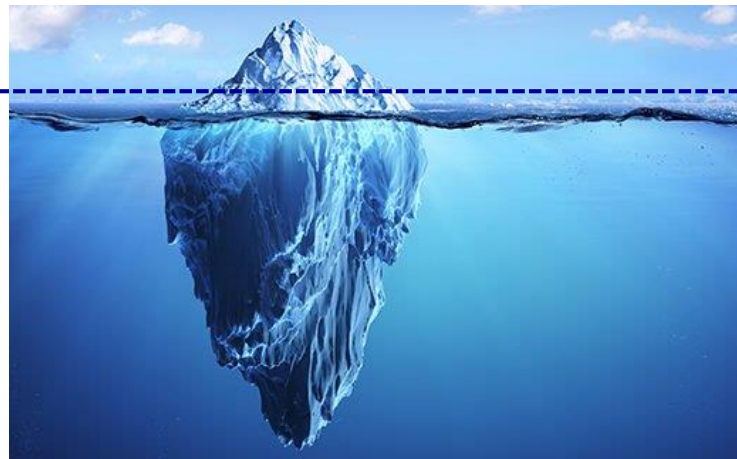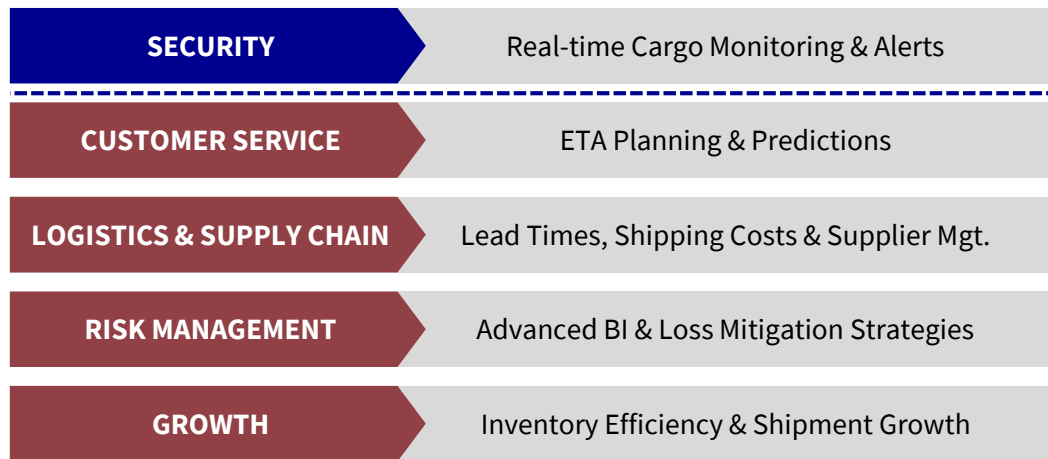Management and analysis platform - web/mobile UX

24/7 Control & service center

AXA XL Risk Consulting provides expert Transport & Logistics risk prevention advice thanks to its network of specialized consultants:

- Risk improvement recommendations and actions plan for the risk manager
- Decision-making reports to help the client in the implementation of a long-term and sustainable risk prevention program

Key client benefits of cargo connected solutions

Direct benefits (lower loss rates and hence lost sales) are easier to realize in the short-term, but they are just the tip of the iceberg; return on investment is increasing over time.

SECURITY	Real-time Cargo Monitoring & Alerts
CUSTOMER SERVICE	ETA Planning & Predictions
LOGISTICS & SUPPLY CHAIN	Lead Times, Shipping Costs & Supplier Mgt.
RISK MANAGEMENT	Advanced BI & Loss Mitigation Strategies
GROWTH	Inventory Efficiency & Shipment Growth

- **Reduction of lost sales & protection of brand reputation damage, due to stock outs & stolen goods reaching the market**
- Proactive decision-making based on real-time data, actionable insights and on-the-spot loss prevention
- Identification of supply chain inefficiencies for continuous improvement
- Optimization of inventory levels by better prediction of goods arrival
- Improvement of Cash Conversion Cycle (CCC), through Proper Inventory Management
- Overall reduction of shipping costs
- Increased market share

Target Industry Sectors & Contguard References

A "Connected Cargo" offer especially suits to clients transporting high valuables, temperature-controlled goods and fragile cargos, especially when facing significant attritional losses.

- **High value & sensitive goods:**
  luxury goods, jewelry, fine arts, semi-conductors, specialized-purpose machineries, mobile & smart phones, automotive…

- **Temperature-controlled goods:**
  seafood, fruits & vegetables, flowers, pharmaceutical & chemical products…

- **Fragile cargos:**
  fine arts, cars & components, special-purpose machineries…

Appendix

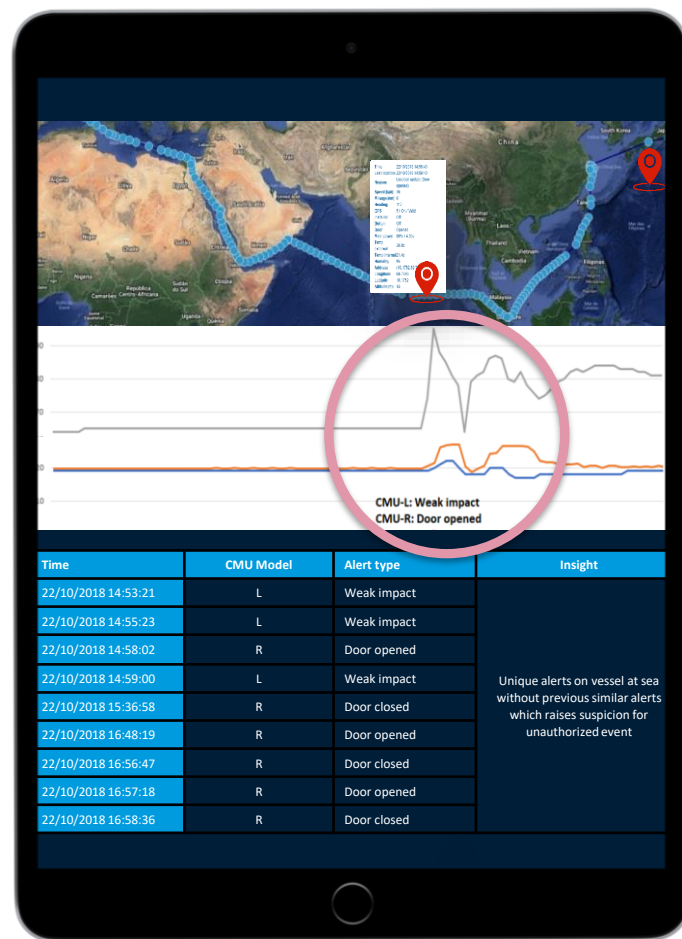*(use cases)*

Missing Cargo

In-depth analysis found the following data deviations

- Container experienced a <u>low impact</u>

- The <u>door</u> of the container was <u>opened</u> for no plausible reason

- The <u>temperature and humidity</u> in the container <u>rose</u>

- By cross-referencing the data, the team was able to <u>identify the location</u> where the incident occurred

Conclusion: High probability of theft at open sea
Impact: about 7 Million of euros saved in cost avoidance

Detecting theft and its Location !

CMU-L: Weak impact
CMU-R: Door opened

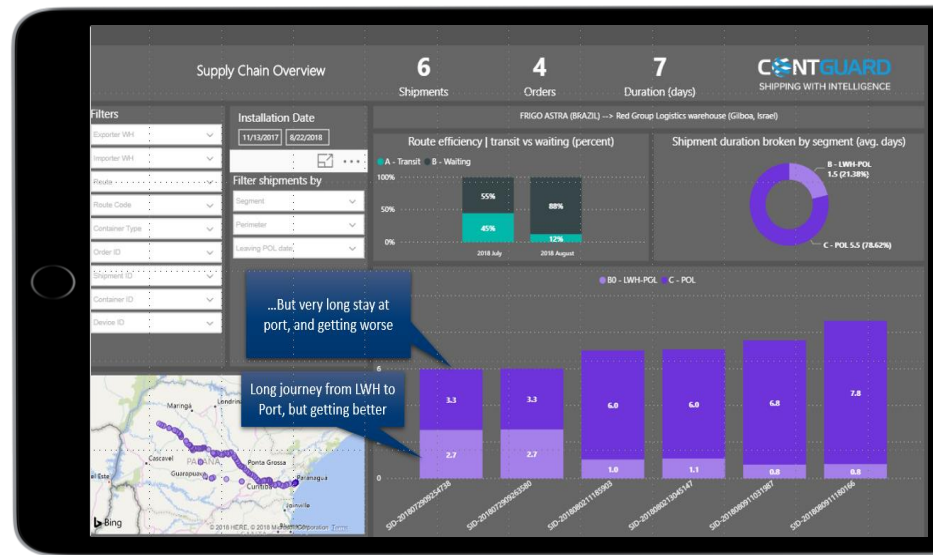| Time	CMU Model	Alert type	Insight
22/10/2018 14:53:21	L	Weak impact	
22/10/2018 14:55:23	L	Weak impact	
22/10/2018 14:58:02	R	Door opened	
22/10/2018 14:59:00	L	Weak impact	Unique alerts on vessel at sea without previous similar alerts which raises suspicion for unauthorized event
22/10/2018 15:36:58	R	Door closed	
22/10/2018 16:48:19	R	Door opened	
22/10/2018 16:56:47	R	Door closed	
22/10/2018 16:57:18	R	Door opened	
22/10/2018 16:58:36	R	Door closed	

Perishable Goods

In-depth analysis found the following data deviations

- The temperature <u>exceeded</u> the recommended range for major parts of the journey

- Meat <u>Loaded</u> into a hot container (not pre-cooled)

- <u>Early disconnect of power</u> in the loading port(**POL**), hours before the container was loaded to the ship

- <u>Late connection to electricity</u> in the destination port(**POD**) after discharge from the truck

- <u>Disconnection of electricity</u> in order to save truck fuel

> *"Contguard gave us actionable, real-time insight into our supply chain, filling our gaps in visibility for the first time. We can now make in the moment decisions that improve speed and efficiency, and adopt changes that directly impact the shelf life of the chilled meat itself for our customers."*

Detecting Damaged goods, Locations and Responsibilities!

Unit 745456 – cont MSCU7322200

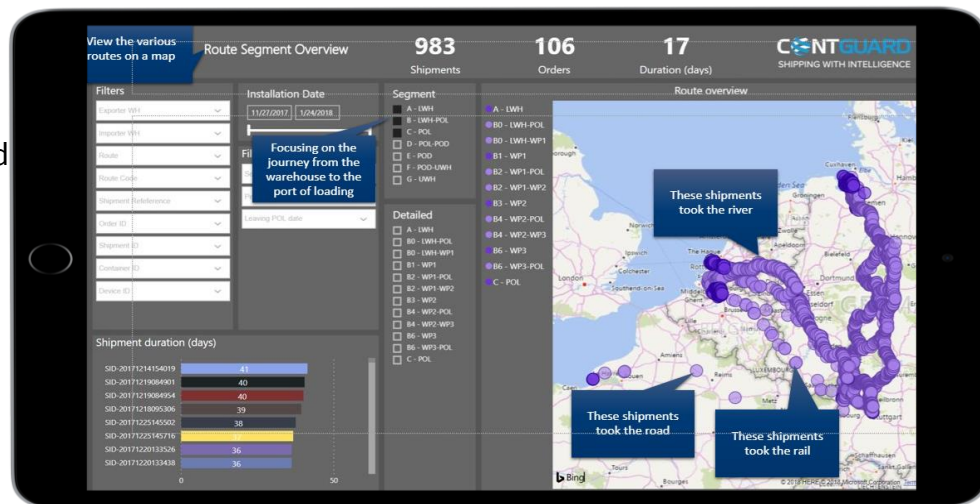Exceeding temperature range

Lead Time Reduction

In-depth analysis found the following data deviations

- Unexpected shocks were identified on one of the routes

- The cargo was transported by rail and not by truck as agreed

- The shipment was stuck at the port of load(**POL**)

- Unauthorized opening of container at the port of discharge(**POD**)

Results:

Customer was able to **reduce lead times** by over 33% within two months. Saving hundreds of thousands of dollars in **inventory damages** caused by **demurrage** and late delivery fees.

"The insights report provided to us by Contguard helped us to reduce lead times for thousands of valuable shipments. This has greatly reduced our costs, saving us hundreds of thousands of dollars in storage and late fees. Now that our shipment times are more consistent, we are able to efficiently manage our inventory, further reducing production costs."

Split Cargo – Pharmaceutical Industry

Early detection
→ *Increase Customer Satisfactions, reduce Claims & costs!*

Bill of lading for 5 containers

2 containers not loaded and disconnected

3 containers shipped

In-depth analysis found the following data deviations

- Two out of five containers were <u>not loaded</u> onto the vessel

- The remaining containers were <u>disconnected</u> from power

- The BL (Bill of Lading) specified 5 containers

- Multiple risks :
  i) Increased claim cost if remaining containers are shipped,
  ii) Demurrage charges at POL & POD,
  iii) Delayed payment for goods

- Customer quickly issues a new BL for the 3 containers already shipped, ensuring their fast release at the POD

- Contact POL to reconnect electricity to the containers and save the goods

- Customer arranges for TPL to load 2 containers on next day vessel

Changing the risk profile

1 Claims

Reduced claims cost

Handle Early – on impact vs. on arrival

Reduce business downtime : faster repair, lower shipment costs

2 Frequency

Avoid frequency loss

Identify patterns – course correct

Port strikes, custom procedures at port, defective crane, transport mode, supplier performance, specific route risks

3 Severity

Avoid severity loss

Handle early – reduce severity

Intervene, apportion liability to responsible parties, reduce damage (e.g. wetting)

Thank you

Maxime AMBOURG
Offer & Innovation
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