Using Supply Chain Visibility to Optimize Your Global Logistics Networks and Assess the Performance of Your Logistics Services Providers

WELCOME

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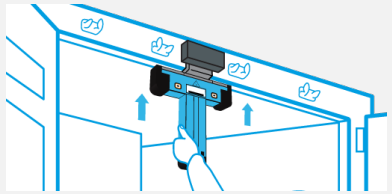
Arviem Provides Supply Chain Visibility through Cargo Monitoring

Providing customers with actionable insights to optimize their logistics networks, reduce working capital and ensure product quality and security

Arviem Combines Sensor Data (IoT) & With Big Data



Data through monitoring devices

Data analytics and notifications

Global device logistics

Content

Definition of global logistics networks & Covid-19 challenges

Common inefficiencies in logistics networks and how they affect the performance of global supply chains

How to use visibility and insights from cargo monitoring data to evaluate the performance of your current logistics network

How to use these insights to assess the performance of your logistics service providers

How to implement continuous improvement initiatives such as network optimization and how to use the data to assess whether implemented changes yield expected results

Global Logistics Networks
Current Challenges

What makes them complicated?

Global Logistics Network

(Noun)

System of organizations that work together to deliver a product from one country to another, relying on a different modes of transportation. A dynamic network that is a key component in global supply chains.

Current Challenges Due to Covid-19

- Urgent Implementation of New Routes to Market
- Lack of Container Availability in Specific Markets
- Containers Out of Location – Empties & Full
- Data Availability Issues; Suppliers Around World Operating with Skeleton Crews

Inefficiencies in Logistics Networks and How They Impact Global Supply Chains

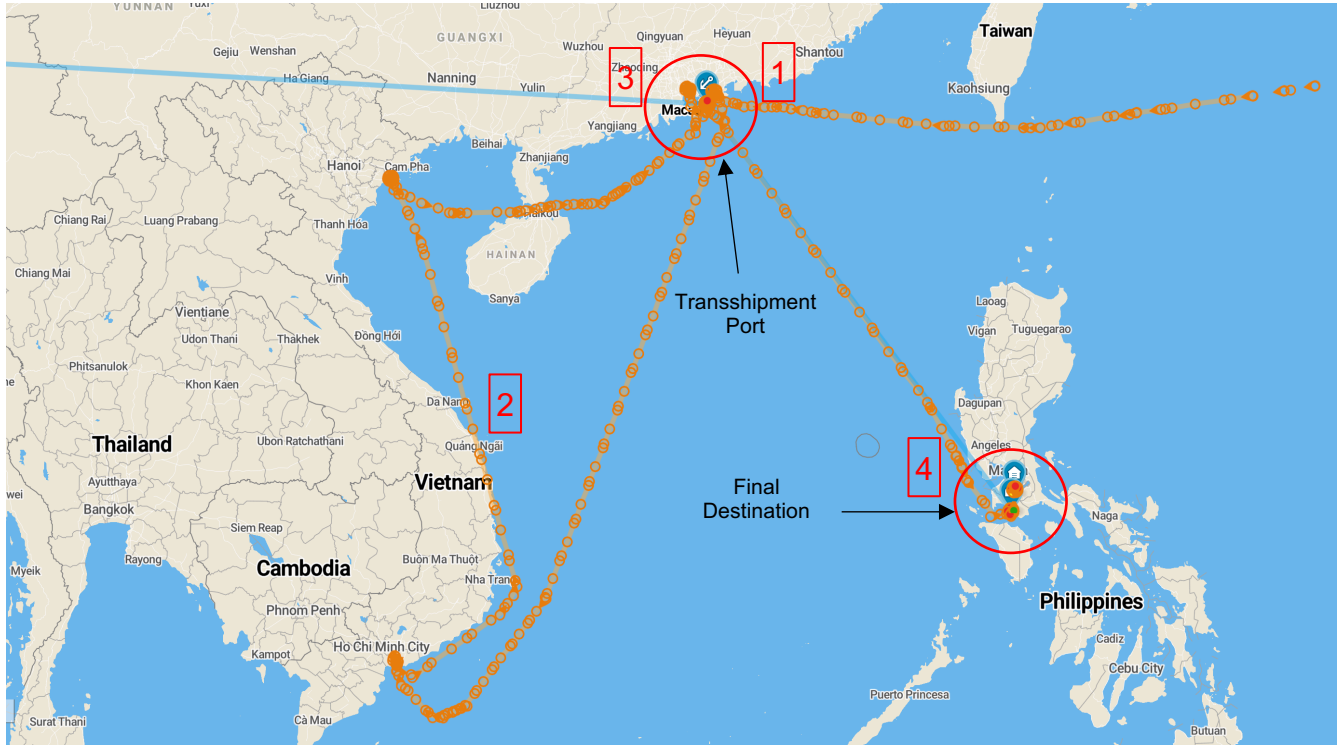
Recurring Inefficiencies in Logistics Networks

- Inefficient container routings
- Bottlenecks at ports
- Cargo quality and security risks

Inefficiencies impact the entire supply chain

Example #1: Inefficient Container Routing

Negative Impact on Working Capital



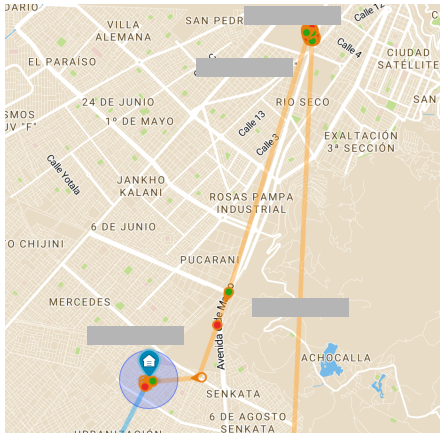
72 day transit time from California to Philippines with containers transshipped in Port of Hong Kong

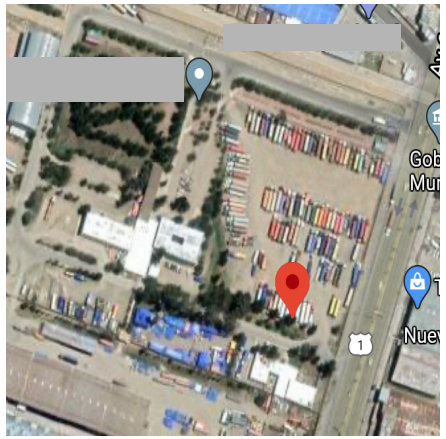
1. Mother vessel stopped in Port of Yantian (30km from Hong Kong) on January 15th and continued to Vietnam & Cambodia
2. Mother vessel continues to Vietnam, returning to Hong Kong on January 25th
3. Containers were offloaded in Hong Kong and sat for 21 days waiting for the feeder vessel to the Philippines
4. Containers arrive at final destination on February 26th

Armed with this data, shipper can calculate the impact on working capital and reduce the transit times on this lane by picking a faster service

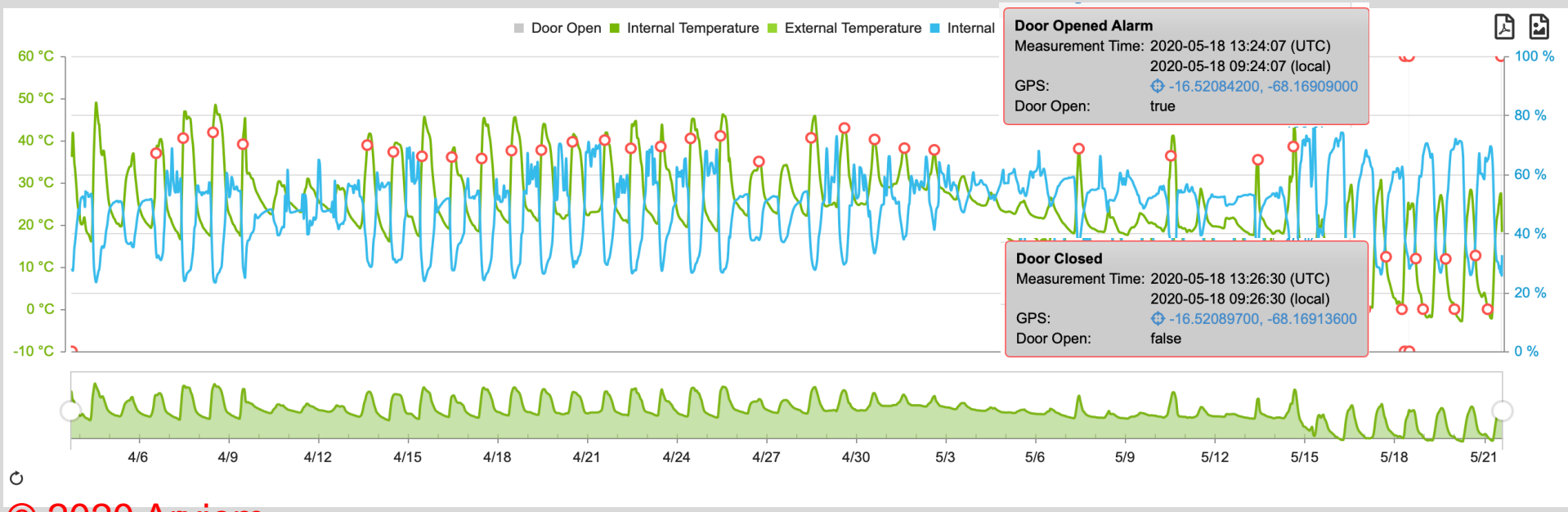
Example #3: Blind Spots

Quality & Security Risks to Cargo





- Containers shipped to in-land customs warehouse In South America for 6 days; not factored into planning
- Negative impact on temperature and humidity – multiple door openings
- Security Implications (C-TPAT, AEO Status)



Door Closed Event	2020-05-19 09:19:12
Door Open Alarm	2020-05-19 09:16:04
Door Closed Event	2020-05-19 09:05:41
Temperature Normalized Event	2020-05-19 08:58:43
Door Open Alarm	2020-05-19 08:58:43
Temperature Normalized Event	2020-05-19 07:47:16
Temperature Alarm	2020-05-19 00:15:40
Temperature Alarm	2020-05-18 18:17:14
Door Closed Event	2020-05-18 14:04:52
Door Open Alarm	2020-05-18 13:57:28

We know what happened. Now why did it happen?

“In many of these cases the cargo owner had very little knowledge about the location or condition of the cargo in transit – we can say the cargo fell into the ‘black hole’ of the supply chain.

How to Use Data from Real-Time Cargo Monitoring to Evaluate the Performance of your Logistics Network

Visibility to Develop a Baseline to Measure Route Performance and Assess Impact on Cargo Security & Quality

Monitor:

- Real-time location
- Deviations from the route
- Temperature and humidity
- Shocks
- Light intrusion and door openings

To Measure:

- Door-to-door transit times
- Port delays

To Identify:

- Product quality risks
- Product security risks

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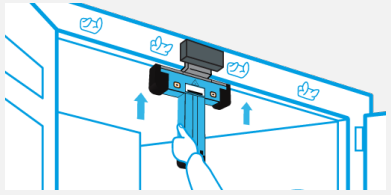
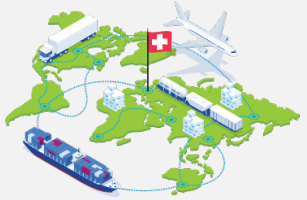


Data through monitoring devices

Data analytics and notifications

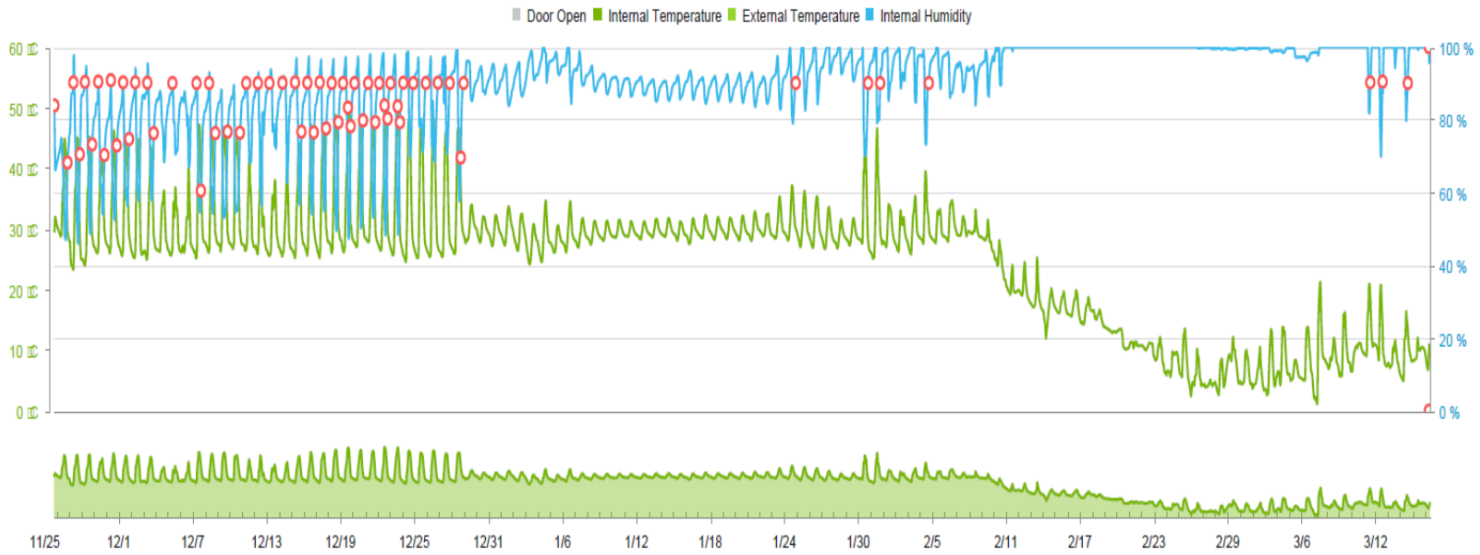


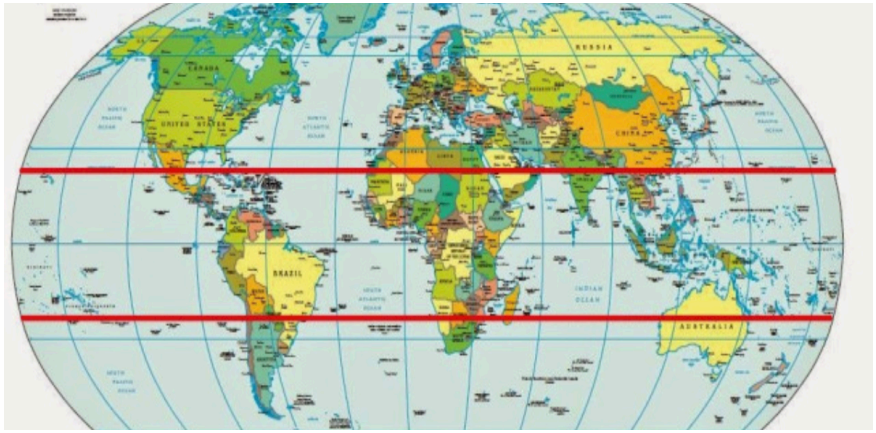
Global device logistics

Real-Time Data to Monitor Cargo Quality and Security

Data, alerts and with granularity down to each transport leg

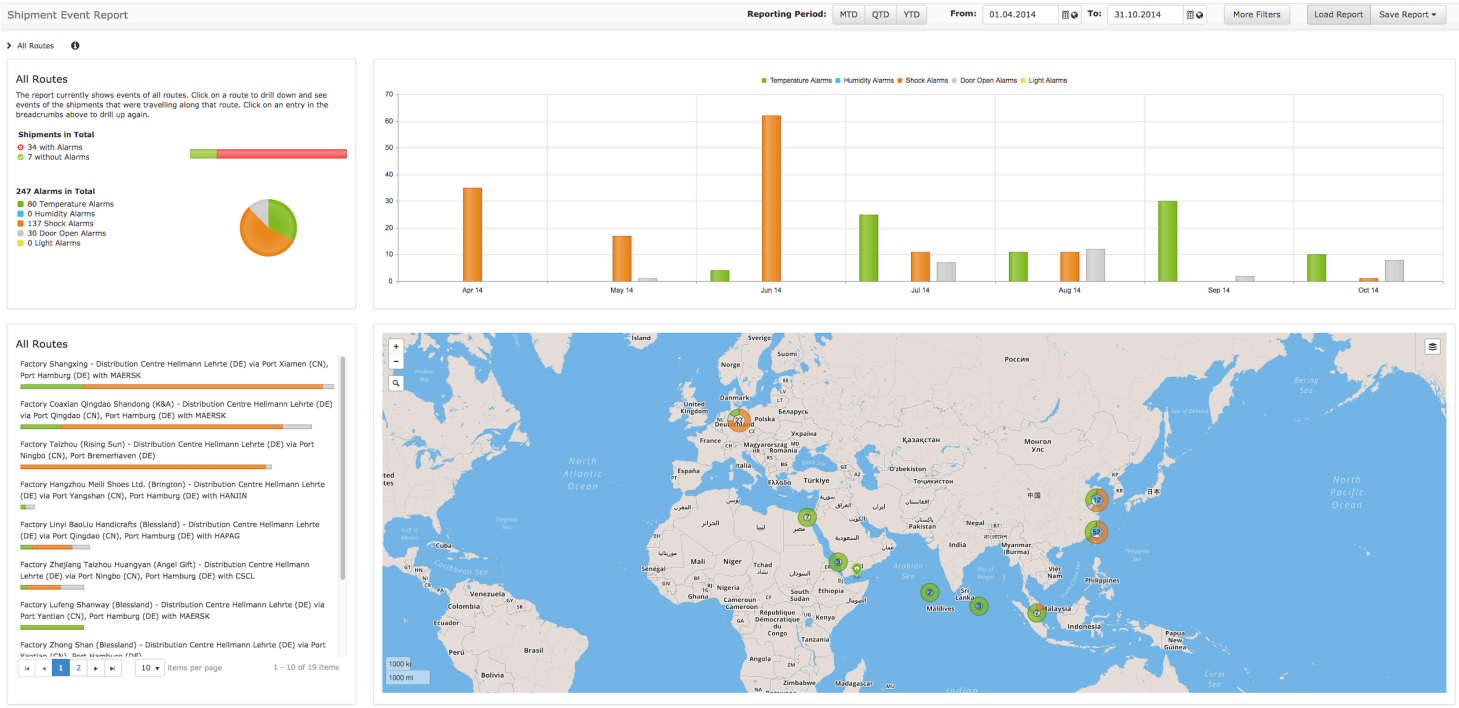
- Receive real-time alerts if humidity or temperature exceeds predefined threshold
- Enables shippers to plan mitigating action in case of potentially damaged goods
- Use data to recognize risks of routes and adjust packaging, plan alternative routes or equipment





User Friendly Data Analytics

Quick & Easy Access to Historical Data to Evaluate Performance



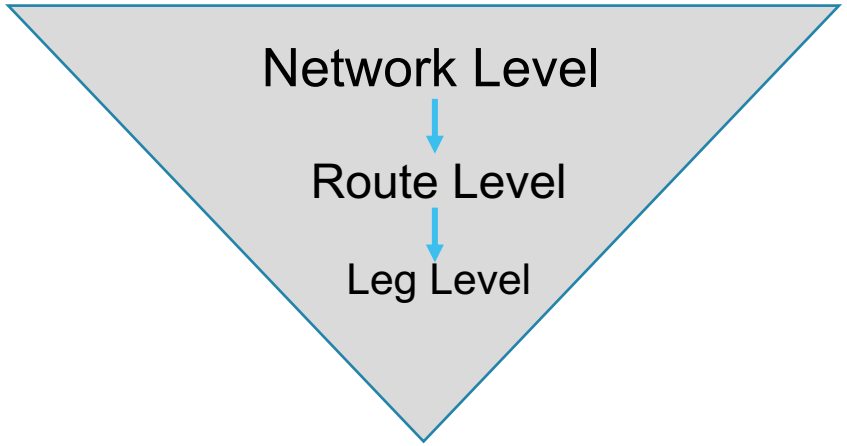
To Define

a. Best performing routes

b. Worst performing routes

c. Temperature, humidity, shock hot spots

d. Measure carbon footprint



How to Assess Performance of your Logistics Service Providers with Real-Time Cargo Data

Leveraging the Benefits of Independent Data with LSPs

Understand the real performance of the transportation network and LSPs at the lane, country/region and global level

1) Assess the Performance of Services

- Are ocean carriers adhering to transit times and container routings quoted during annual contract negotiations?
- Are containers getting stranded at transshipment ports due to due to rolled bookings?
- Are dray carriers pulling containers from the piers within the allocated free time at the ports?

Leveraging the Benefits of Independent Data with LSPs

Have ”Data Driven” conversations with your LSPs to better understand if they’re meeting the terms of their service level agreements

2) Identify Loss, Damage, Destruction of Cargo hotspots

- Impact on the container routings on the temperature and humidity of your cargo?
- Where are containers sustaining high g-forces along the routes?
- Are your LSPs telling you when when regulatory authorities are opening containers for inspections? Are they aware of security risks?

We know what happened. Now why did it happen?

How to Implement Continuous Improvement Initiatives with Real-Time Cargo Data and How to use Data to Determine whether Implemented Changes Yield Expected Results

Independent Data Enables Shippers to Implement the Continuous Improvement Initiatives

- Measure the performance of network. Is it performing to “plan”?
- Identify “pain points” > inefficient container routings, poor performing ports and carriers
- Develop risk profiles for shipping lanes (high risk of theft, product damage)
- Assess the performance of LSPs > Address the “Why it’s happening?” and “What can we do about it?” instead of ”What happened?” and “Who’s to blame?”

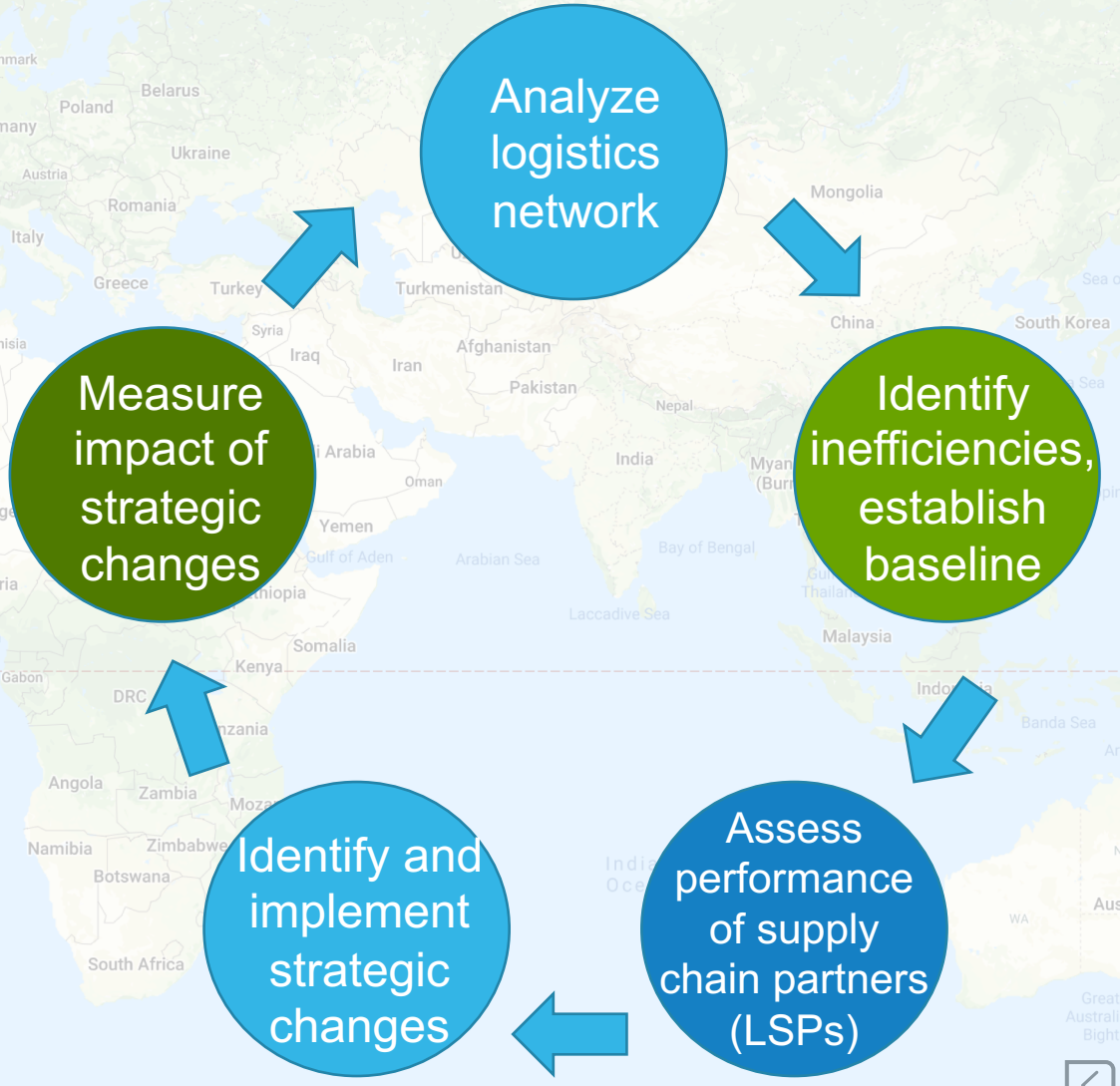
Use Data to establish the baseline to assess the impacts of any strategic changes in global logistics network

Continuous Improvement Initiatives in the Logistics Network

Strategic Initiatives

You can only improve what you can measure!

- Network Redesign
- Addition of New Suppliers
- Establishing New Routes to Market



Key Take-Aways

- Think about your logistics networks and ask the following questions:
  - What data do you know you're missing?
  - What data do you think you're missing?
  - What do you not know that you don't know?

- Think about your LSPs and ask them the following questions:
  - Do they know everything they need to service your needs effectively?
  - Do think they know everything they need to service your needs effectively?
  - Do they not know what they don't know?

- With the social, economic and political challenges facing global shippers, now more than ever they will need independent data to effectively manage their global logistics networks in the years to come

QUESTIONS ?

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