

Deliverable Markt 2.0 – i.r.t. Proof of Concept Data Corridor

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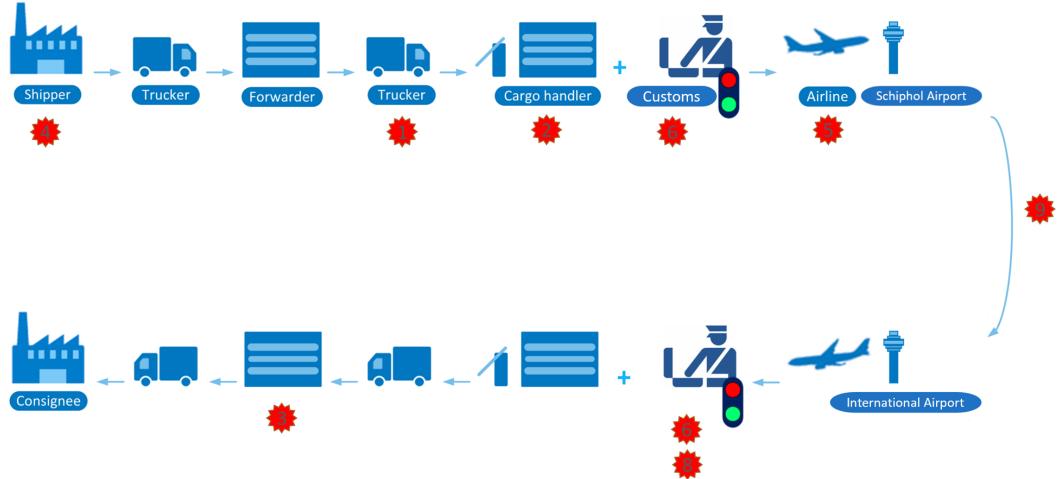


1. Which business issues have been identified so far? a. Summary

- 1) Landsided Congestion
- 2) Incoming RFS trucks form a Black Box for the GHA
- 3) Receiving forwarder is unaware of incoming shipments
- 4) Trend: Increasing Demands of Shippers concerning Traceability
- 5) Trend: Move from using full freighters to using belly freight
- 6) Black box at Customs Inspection: shipment selected or not?
- 7) More strict EU regulations and enforcement from 2021 onwards
- 8) Import declaration process characterized by inefficiencies
- 9) Trend: increase of cross border eCommerce leading to big volume of shipments and data

1. Business issues identified so far

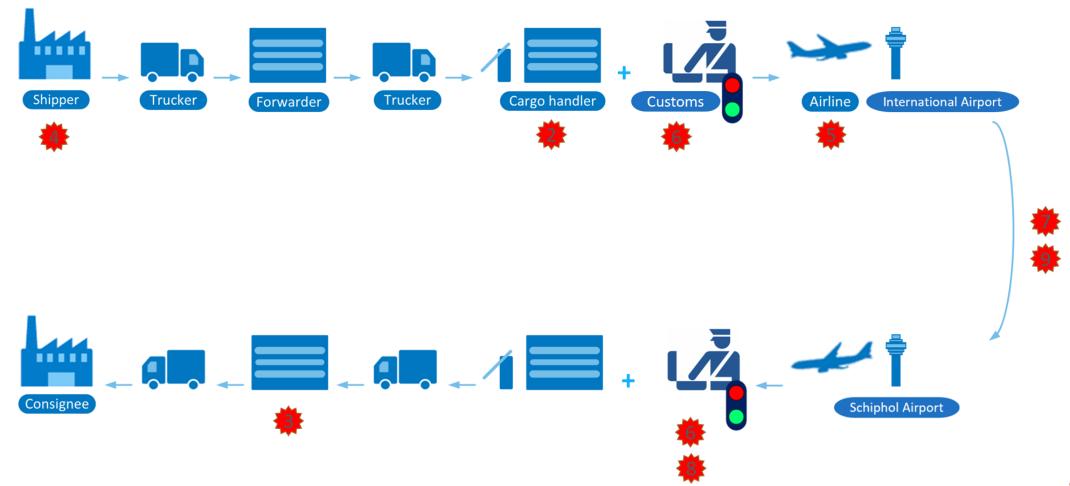
b. Prevalence in the outbound chain





1. Business issues identified so far

c. Prevalence in the inbound chain





Root causes

Solution Area

Root causes

Description

Landsided congestion refers to the situation in which the so-called 'pick up and delivery' (PU&D) of shipments by trucking companies causes severe congestion around the terrain of the Ground Handler (GHA).

Root causes

Business Impact

Description

- Trucking companies prefer a 'late'
 PU&D since it enables them to
 consolidate shipments from multiple
 forwarders
- Trucks arrive unannounced at GHA
- Content of the truck is often unknown to GHA until offloading

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	Yes
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes



Root causes

Business Impact

Description

- Waiting time for trucks
- Shipments missing allocated flight
- Associated costs for both 'new booking' + 'inefficient use of labor'
- GHA required to do 'ad hoc' logistics
- Undesirable CO2 footprint

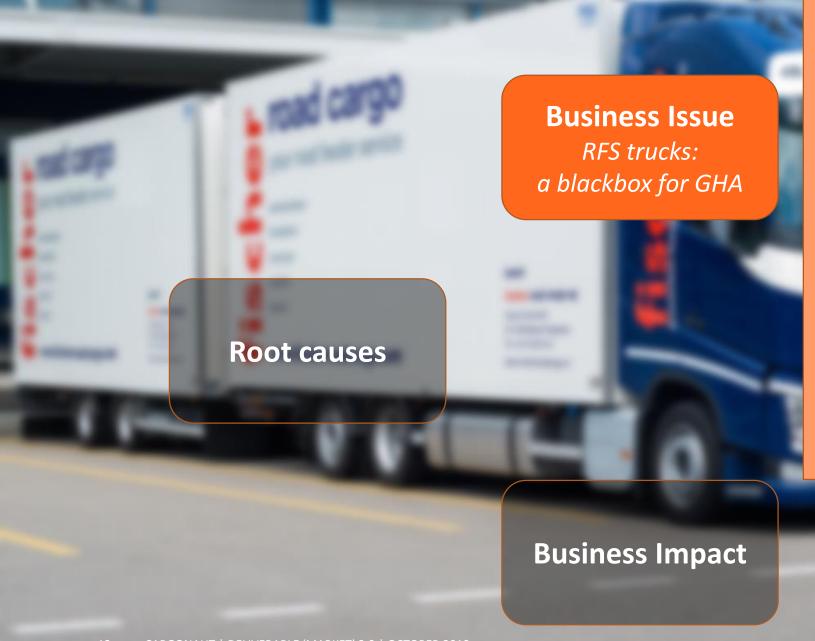
Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	Yes (-)



Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	Yes
Data Quality	No

Solution Area





Description

Road Feeder Services (so-called 'Trucks with wings' which have a flight number and operate on behalf of an airline) form a blackbox for Groundhandlers since the content of the trucks are unknown untill the moment that shipments are offloaded.





Description

 GHA is neither informed in advance about the content of the trucks nor on the flight number of the truck. The time of arrival is known (fixedschedule) but not enough for adequate planning.

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	No
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes





Description

- Ad hoc planning for GHA
- Suboptimal flow of shipments
- Occasionally: shipments missing flight

Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	Yes (-)

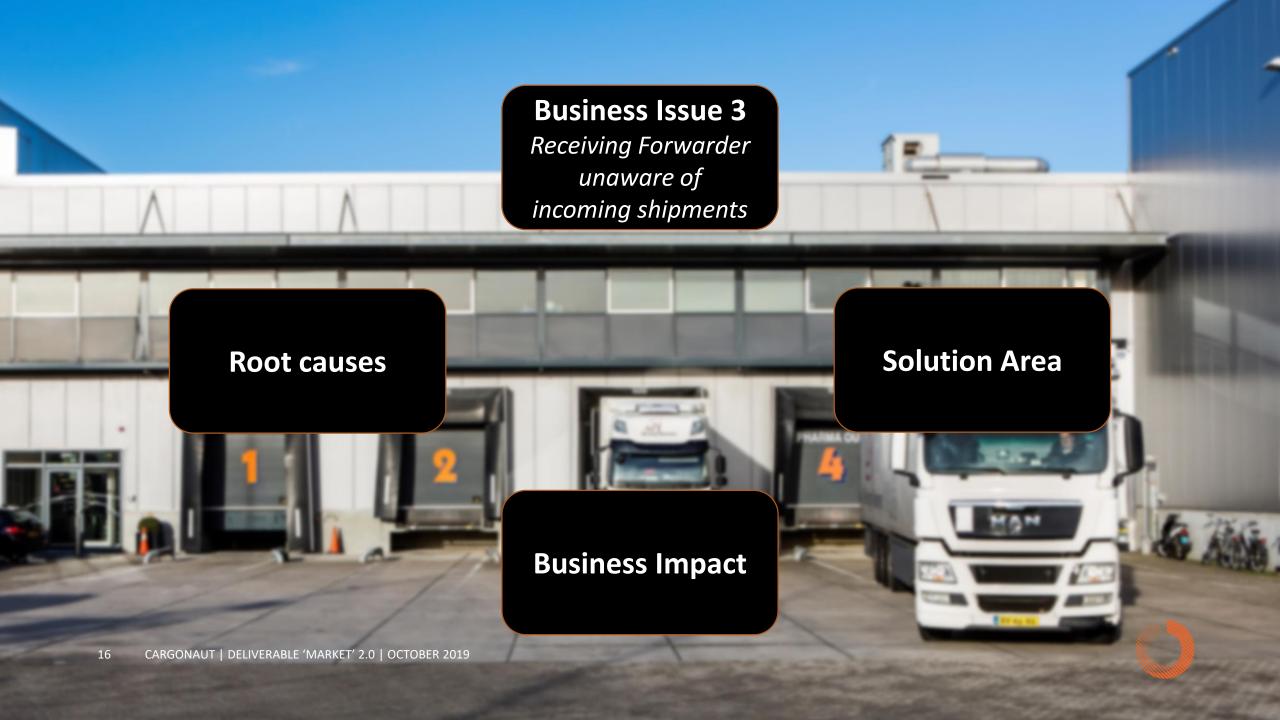


Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	Yes
Data Quality	No



Solution Area







Receiving Forwarder unaware of incoming shipments

Description

 Information about incoming shipments is not used to inform the receiving forwarder prior to arrival of the flight

Root causes

Root cause relates to	Prevalent ?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	No
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes

Receiving Forwarder unaware of incoming shipments

Business Impact

Description

- Manual process of nomination based on paper requires human resources, is time-consuming and a manual process is more prone to errors
- In case the receiving forwarder is unknown, the shipment is stalled at a 'Housing Agent' who will track down the respective forwarder. This implies delay in delivery and requires storage of goods

Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	No (-)

Root causes

Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	Yes
Data Quality	No

Business Issue Receiving Forwarder unaware of incoming shipments





Trend: Shippers demanding T & T

Root causes

Business Impact

Description

Shippers require forwarders (and airlines) more and more to provide insight in real-time qualitative data related to their shipments, such as georeference and temperature levels of the shipments. Due to the facts that the air cargo chain has several 'black boxes', this demand for transparency is currently not met. There are no T&T milestones available for shipments that are located at the GHA, in the air; or at Customs. This provides competitive advantage to integrators who have control over their own (whole) chain.

Trend: Shippers demanding T & T

Root causes

Business Impact

Description

 The fragmented market i.r.t. the traditional air cargo chain (with multiple actors); + secrecy around contractual relations + the issue of liability form tresholds to meeting the T&T demand of shippers

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	No
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes



Trend: Shippers demanding T & T

Root causes

Description

The impact is mainly: loosing business:

- shippers choose for companies that are able to provide them the real time insights they require
- shippers develop their own air cargo chain to maintain full control

Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	No

Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	No
Data Quality	No

Trend: Shippers demanding T & T

Solution Area

Trend: move from full freighters to Belly Freight

Root causes

Solution Area

Trend: move from full freighters to belly freight

Root causes

Description

More and more cargo is transported by passenger planes (belly) instead of by full freighter. This trend is noted as business issue since it has implications for the way the cargo is booked and handled, in other words: for air cargo logistics.



Trend: move from full freighters to Belly Freight

Root causes

Business Impact

Description

The move towards belly freight is caused by the fact that the demand for passenger transport increases faster than the demand for cargo transport.

*Since the business issue concerns a 'trend' it has no root causes such as the other business issues which related to air cargo logistics.

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	No
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes



Trend: move from full freighters to Belly Freight

Root causes

Description

- GHAs are required to load shipments differently since both passenger luggage and cargo is loaded
- To coordinate effectively, information systems of the 'air cargo chain' should be able to communicate with those related to 'passengers'

Impact on	Relevant?
Business operations	Yes
Customer experience	-
Sustainability [CO2 emissions]	Yes (+)



Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	No
Data Quality	Yes

Trend: move from full freighters to Belly Freight

Solution Area





Business Issue Blackbox at Customs **Root causes Business Impact**

Description

Whether a shipment has been selected for physical inspection by Customs can not be verified/ nor anticipated on by forwarders and shippers. This counts for Customs at the outbound side as well as for Customs at the inbound side.

Business Issue *Blackbox at Customs*

Root causes

Business Impact

Description

- The airline is by law required to file at Customs which they do based on data that has been shared with them
- Customs is only allowed to share updates concerning shipment-inspections with the entitled party who filed. Actors 'up stream' can by law not be informed

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	No
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes

Business Issue *Blackbox at Customs*

Root causes

Description

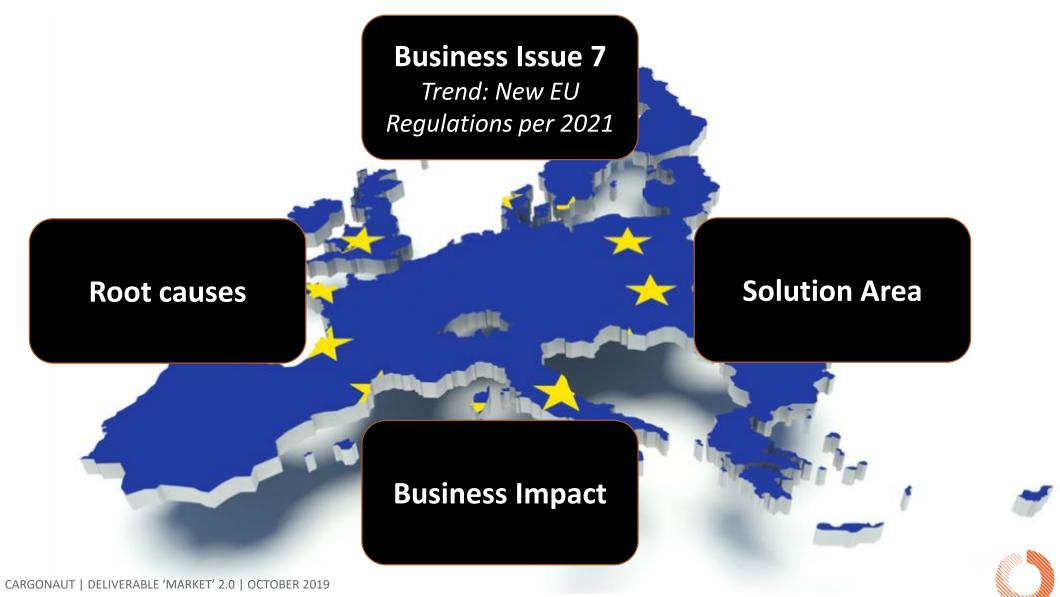
- Shippers can't anticipate on delay of shipments (i.r.t. warehouseplanning + complying with customer demands)
- Unpredictability has a negative impact on logistical planning for Airlines;
 GHA; FW; and trucking companies

Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	Yes (-)

Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	Yes
Data Quality (> more detailed)	Yes

Business Issue *Blackbox at Customs*

Solution Area



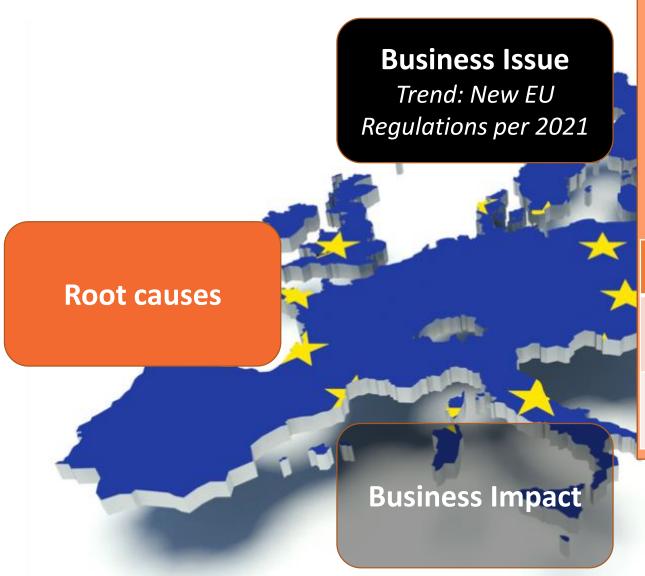


Description

This business issue refers to the adjustments that actors in the air cargo chain have to make in order to be compliant with 3 more strict regulations for shipments entering the EU per 2021:

- will require airlines to share data with Customs 'pre-loading' instead of 4 hrs before landing; also the required level of detail changes from MAWB to HAWB.
- VAT rules: the current exemption for goods < 21 euro will be abolished





Description

The new EU regulation concerning ICS 2.0 was created in response to the PLACI directive of the World Customs Organization.

The new VAT ruling (<21 euro) was created since the EU missed out on taxes for the increasing volumes of small eCommerce. Also the exemption harmed the level playing field for European webshops.

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	N/A
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	N/A





Description

The business impacts resulting from this trend are multiple.

- VAT: eCommerce platforms will need to charge customers ahead for these taxes.
- ICS 2.0: sharing data more in advance and in more detail requires adjustments of admininistrative procedures by businesses

Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	No



Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	Yes
Data Quality	Yes

Business Issue Trend: New EU Regulations per 2021

Solution Area



Import declaration process characterized by inefficiencies

Root causes

Solution Area



Import declaration process characterized by inefficiencies

Root causes

Description

This business issue refers to the situation that importing forwarders can only start creating the import declaration after they have received the invoice related to the shipment: which is often late (when the shipment has already arrived) and on top of that the invoice is rarely paperless and of a poor data quality (invoice data is often incorrect or incomplete)



Import declaration process characterized by inefficiencies

Root causes

Business Impact

Description

- Invoice data accompanies the actual shipment and is not digitally shared in advance
- Non-digital invoice and related data-re-entry is prone to errors in this administrative process

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	Yes
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes



Import declaration process characterized by inefficiencies

Root causes

Description

- Customs can't preclear 'in the sky' (in the sense of a fiscal fastlane) if invoice is not available in advance
- Importing forwarder is confronted with costs related to rework (reentry data), delay and possible fines

Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	Yes (-)



Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	Yes
Data Quality	Yes

Import declaration process characterized by inefficiencies

Solution Area





Business Issue Trend: Increase of Cross-border *Ecommerce* **Root causes Business Impact**

Description

The trend of the tremendous increase of Cross-borderEcommerce contributes to both a huge volumes of physical packages as well as a huge increase of data traffic through out the air cargo chain. This creates challenges for all actors in the air cargo chain, which is 'far from paperless'.

Business Issue Increase of Crossborder Ecommerce

Root causes

Business Impact

Description

The business driver behind this trend concerns the increasing worldwide connectivity and digitization, which fosters global trade.

*The 'trend' itself has no rootcauses as such; the result of increased eCommerce definitely leads to problems across the air cargo chain

Root causes relates to	Relevant?
Process stability (occurence of 'errors' impacts the effectivess of business operations)	Yes
Process flow (occurence of 'waste' or 'bottlenecks' impacts the efficiency of business operations)	Yes

Business Issue Increase of Crossborder Ecommerce

Description

The increasing volumes of cross-border eCommerce lead to challenges in the air cargo chain (which is still in transition towards 'paperless') both for logistics as well as for the data infrastructure that has to process increasing volumes of shipment data.

Impact on	Relevant?
Business operations	Yes
Customer experience	Yes
Sustainability [CO2 emissions]	N/A

Root causes

Cathalist	Key to Solution?
Data Accessibility (for relevant actors)	Yes
Data Timing	Yes
Data Quality	No

Business Issue *Increase of Crossborder Ecommerce*

Solution Area

- specified for each international PoC-partner



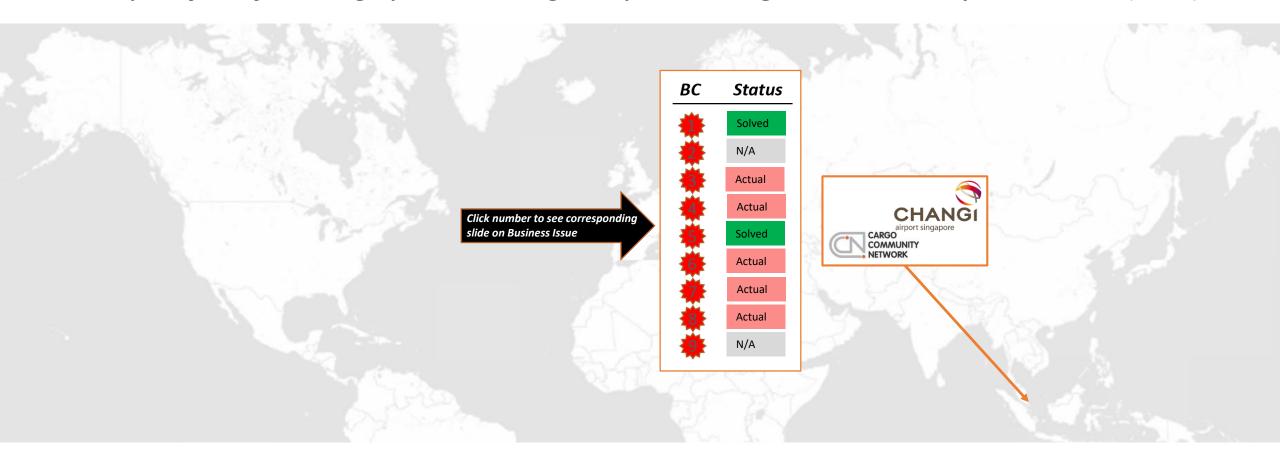


- specified for Amsterdam Schiphol Airport; Cargonaut (PCS)





- specified for Singapore Changi Airport; Cargo Community Network (CCS)



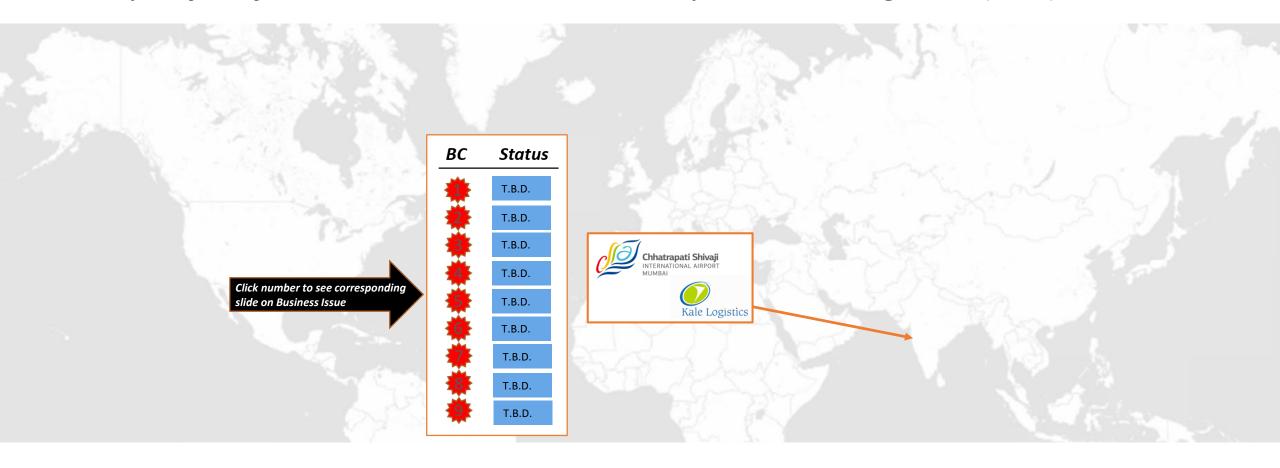


- specified for Hong Kong International Airport; Global Logistics HK (CCS)





- specified for Mumbai International Airport; Kale Logistics (CCS)





3. How sharing data from the source enables optimization of the air cargo chain and helps to solve business issues

