DGF OCEAN SECURE

Improving reliability on global supply chains
Saragossa, October, 25th

DHL

GLOBAL FORWARDING / FREIGHT		SUPPLY CHAIN	EXPRESS
Intercontinental Transportation	Europe-wide Transportation	Contract Logistics & Industry Solutions	Time-definite International Shipments

| Air Freight |
| **OCEAN FREIGHT** |
| Multimodal |
| International SCM |
| Industrial Projects |
| Customs Brokerage |
| Lead Logistics Provider |

DHL OCEAN FREIGHT key facts

- over 4,000 professionals
- over 330 sites worldwide
- over 2.7 Mio TEU per year (FCL)
- over 45,000 weekly point pairs (LCL)
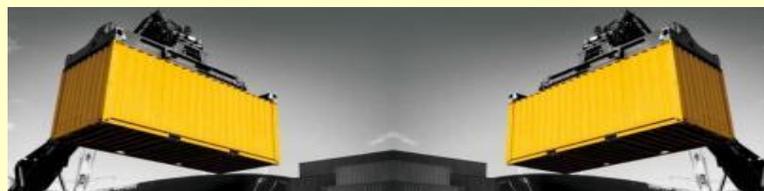
Ocean freight market, 2010: top 4
thousand TEU

1,241 Panalpina
1,647 DB Schenker
2,728 DHL
2,945 Kuehne + Nagel
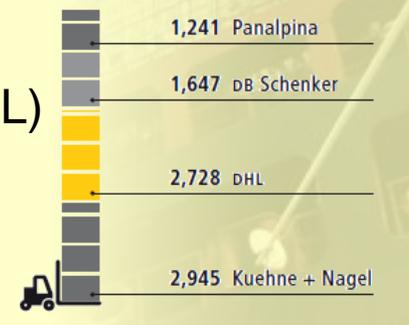
Source: DPDHL annual report 2011

Enabling of enhanced ocean freight services to create more transparency for increased customer satisfaction

CASSANDRA

Container securtiy devices
acquire data at the container

External sources
Receive data through suppliers

Communication networks
transmit data to remote users

Online portals
manage situations & shipments

OCEAN SECURE

Container Security Devices (CSD)

Physical data monitoring

Online Portal

Generate visibility combined with external sources in one tool

AIS, Terminal provider, trucker, port authorities, carrier, etc)

In-transit visibility
Monitoring of mission critical parameters and notification of remote users in case of exception

In-transit intervention
Execution of corrective or remedial action protocols prompted by in-transit alarms

Standard operations
Setup of improved processes through insights into door-to-door container conditions

Transmitting container data by satellite and/or GSM
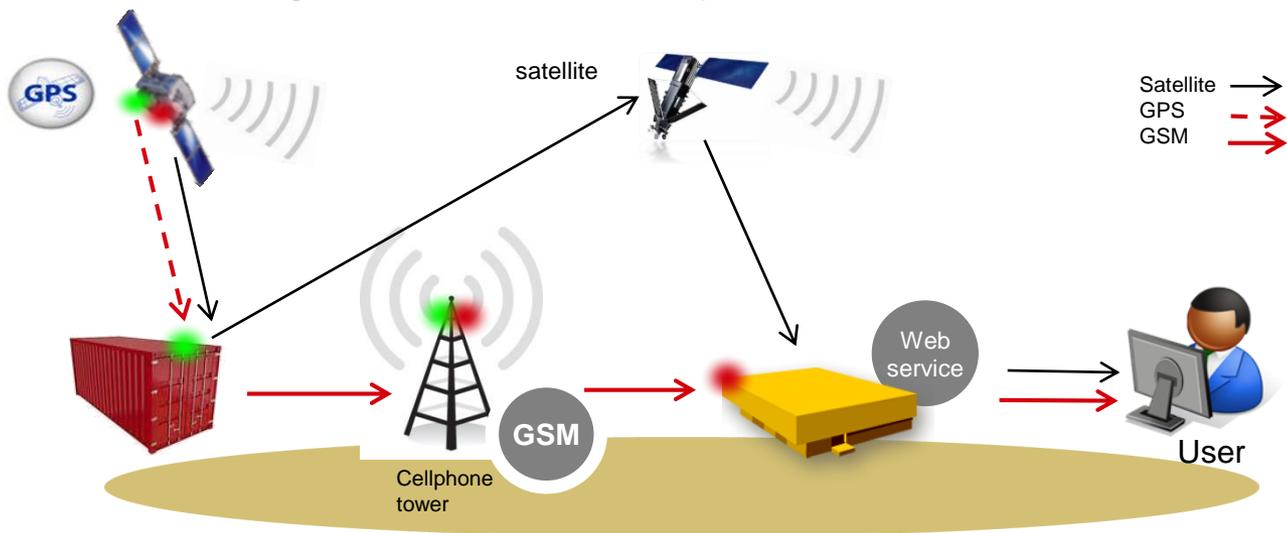
|	**Satellite**	**GSM-GPS**	**GSM**
Communication transfer by	Satellite	Mobile communications network (GSM)	Mobile communications network (GSM)
Navigation	Position obtained by signals of GPS	Position obtained by signals of GPS	From location of one or several cell phone towers

GPS= Global Positioning System; requires a direct line of sight from the container to several satellites for cross-referencing.
GSM= Global System for Mobil Communications; less accurate than GPS but orientation on the approximate whereabouts of a container.

Forwarders orchestrate the many actors and processes along door-to-door supply chains.

Utmost importance to collect shipment information from original source to avoid dublications of work

Increasing importance of good functional information flow between business and authorities to improve efficiency

Information flow

| Consignor | Forwarder | Carrier | Terminal | Haulier | Customs | Consignee |
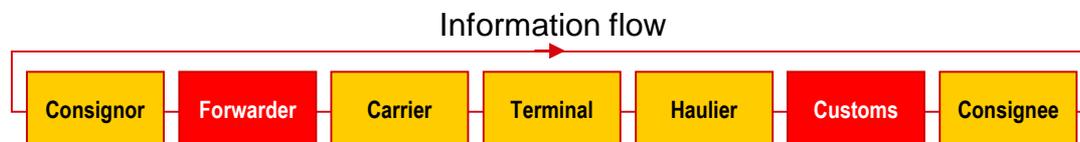
Consolidation of existing business information and releasing it in good quality at the right time to the right person in charge is the key to satisfy our customers

Continous development of supply chain processes, especially in terms of customs regulations is absolutely essential to decrease vulnerability and improve reliability

Conclusive and controlled flow of original data is leading to faster and more reliable clearance of containerized ocean freight.

Continously harmonized processes guarantee an improved performance of all involved parties
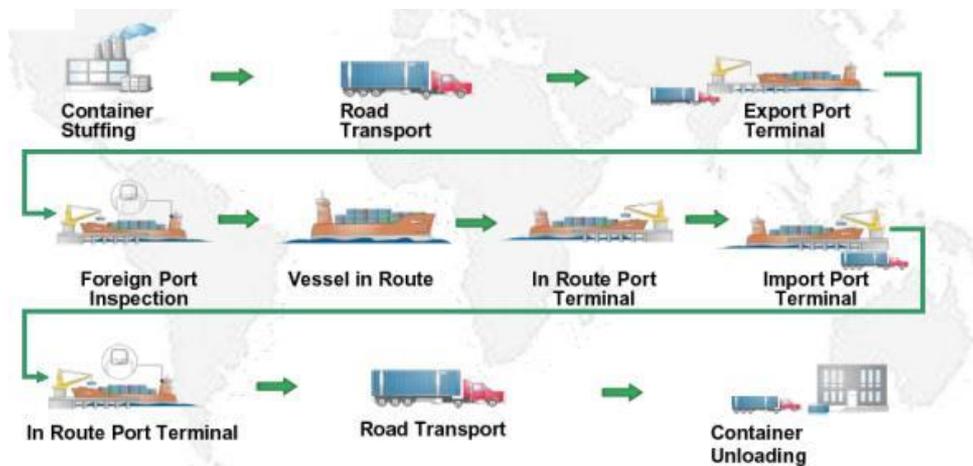
Aim is a **reduction** of

Port congestions
Transittime
Costs

and **improvement** of

Reliability
Performance
Visibility

With nearly 3 million shipped containers in all kind of verticals and all trades globally, there's lots of valuable expertise to share with authorties to enhance processes

Information from container devices and other sources need to be bundled and processed to translate raw information into situational awareness.
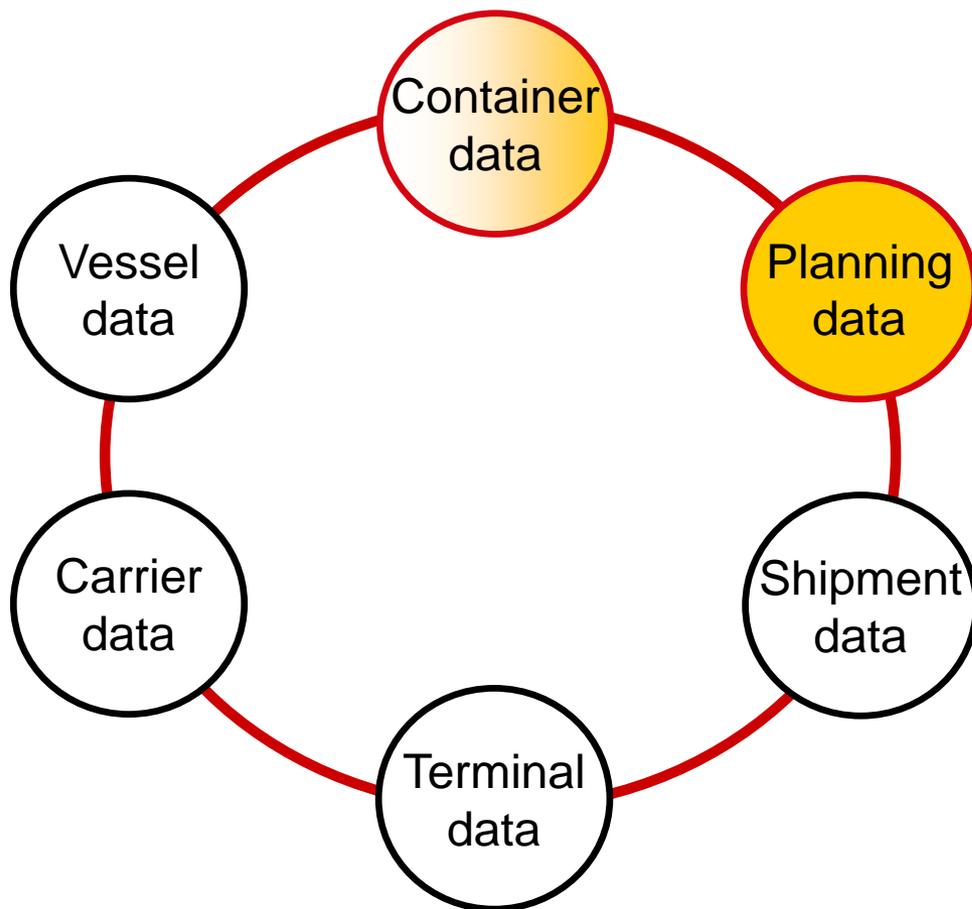

Life Sciences and Health
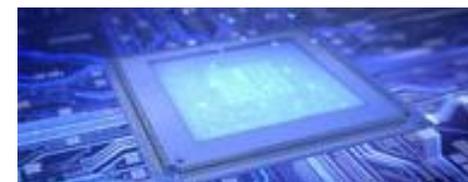
Technology and Electronics

Automotive

Government and Defense

Container data

Planning data

Shipment data

Terminal data

Carrier data

Vessel data

Optimized digital data flow will reduce transaction costs and increase quality for shipper, freight forwarder and authorities

Simplified customs procedure for known customer for import/export in seaports

Integrated information flow allows more efficiency, which equals lower operating costs

Higher reliability of supply chain, which drives the satisfaction of our customers

Increased control and less chance for physical intervention through authorities and single unit inspection
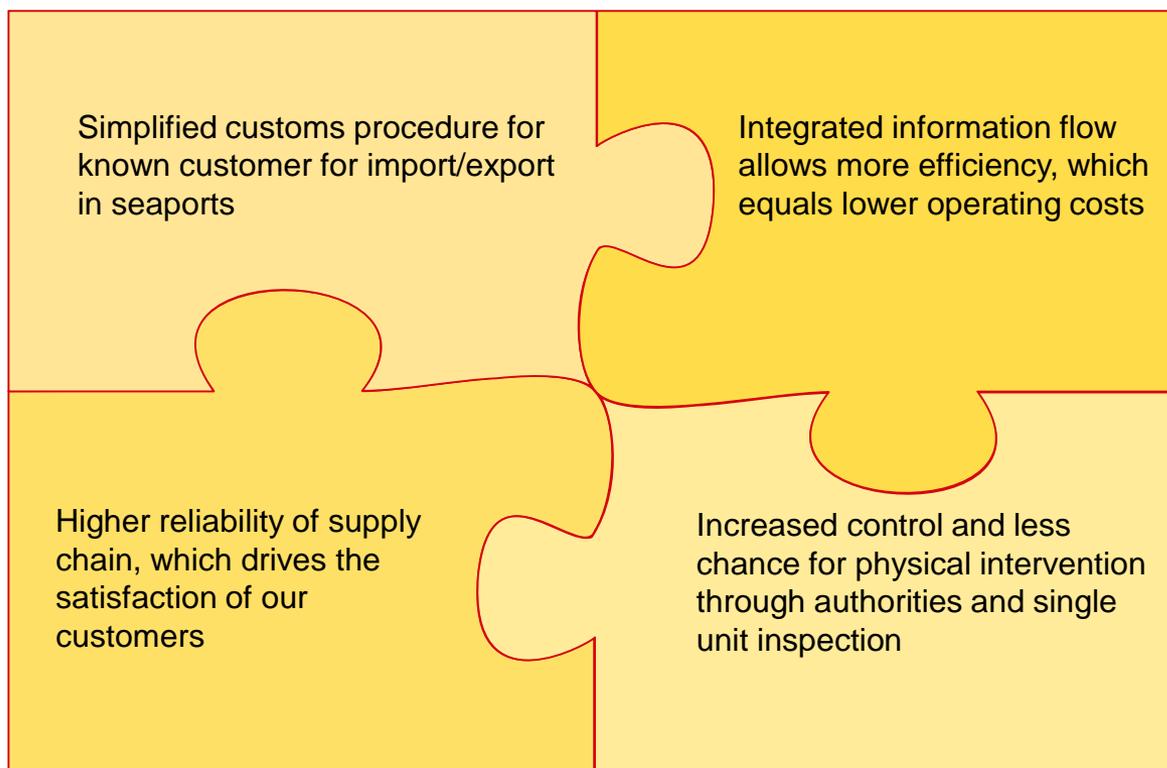
Your questions?

- Freight forwarder have the data sets available but not consolidated nor analyzed

- Data sharing is a critical topic – and makes it difficult to find trial customers

- Very interesting to cross the silos and learn the different intersts of involved parties

- It will take more time to enroll a full scale product based on data sharing – but we are making good progress

- Data consolidation concepts, process maps & data standardization guidelines are the easy part – the devil is in the details