

Security of the supply chain

Specific focus on air transportation

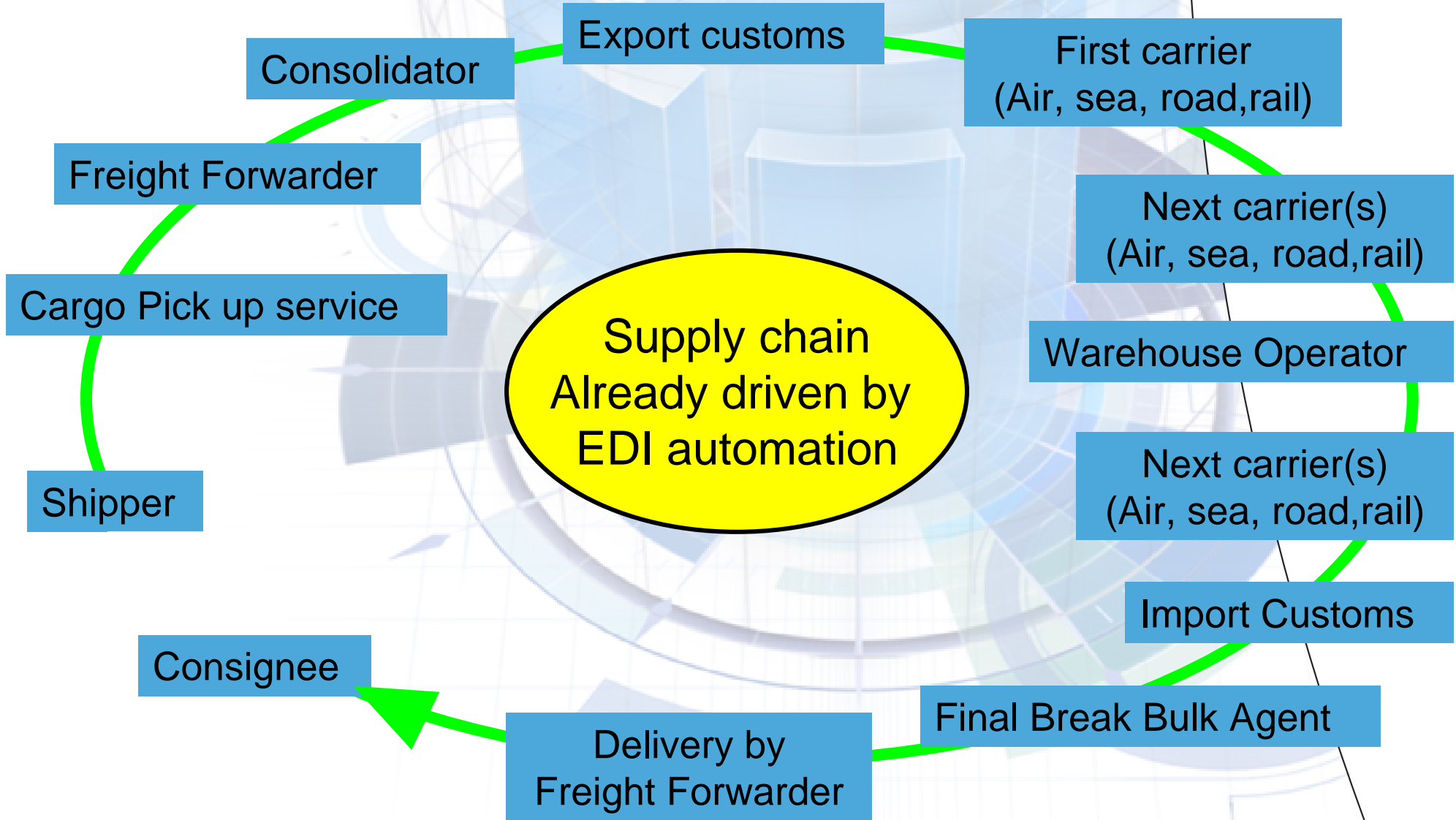
Interest of industrial platforms



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Presentation to the EURITRACK workshop

Cargo Flows & process (Stakeholders)



New risks to take into account

- Threats
 - Attacks against Aircrafts (explosives, manpads, lasers...), trains and ships

- New traffics :
 - Weapons of Mass Destructions (WMD)
 - Chemical, Biological, Radiological Threats (Dirty Bombs components)
 - Explosives & other dangerous materials (as per Annex 17 of ICAO)

- Growing illicit traffics:
 - Bio hazards & Sanitary issues
 - Smuggled goods & narcotics
 - Arts objects and counterfeits etc
 - Chemical hazards



New Context

Maritime containers

- Currently, less than 1% of shipped cargo is screened worldwide, while 100% of passengers luggage are.
- 90 percent of the world's cargo moves by container..
- maritime containers in 2006 numbers **14 millions**.
- Growing flow, in a new “no stock supply chain context” context

Air Containers

- 1.5M Unit Load Devices including 650 000 containers
- Growing market (10% per year): double in the next 10 years
- Large commercial aircraft used for passengers and freight:

Security issue and « economic war » in aeronautics

Challenges faced by Air Cargo

Given the increasing Cargo market of 10 % per year

- Improve Air cargo security level
- High security Future Smart Container will need to present a **total added cost of about \$300** a year.
- Means 3B\$ added costs over next 10 years to recover
- While **better productivity** for the processes (cost reduction)
- **While Reducing the staff to operate the security**
- With Improved liaison with the Public Safety forces (& Military) (Border/Police, Customs, Fire Brigades, Rescue, Health & Sanitary) to ensure controlled delays (**more interoperability, need for simulation and training, joint operations...**).

Not very easy

Regulations pressure

- **World Customs Organisation** – Framework of Standards to Secure and Facilitate Global Trade
- **International Standards Organisation** – Standards for supply chain security
- **International Maritime Organisation** – International Ship and Port Security Code (ISPS)
- **European Commission** – Amendment of EC/Third Country Customs Mutual Assistance Agreements to include security issues
- **European Union** – Security amendments to the Community Customs Code
- **National and International agreements** e.g. US Container Security Initiative (CSI)

- Strong US presence up to authority decisions and normalizing pressure

Air container security is a key issue for Europe for the time being (still “in time”)

General Trends to master the situation

1. **Travel process:** Deeper into the supply chain
 1. Trade Facilitation
 2. **Inter-modal facilitation**
 3. **Interoperability between the stakeholders**

2. **“Trust but Verify”:** « Known Shipper/Unknown Shipper rules “
 1. Certification process
 2. **Risk-Management « Common Risk Analysis »**
 3. **Security issues are often linked to people**

3. **Modern tools:** « Risk managed vs. 100% screening “
 1. Clever monitoring of « All hazards » concern
 2. Efficient (timely) scanners, sensors (from 1% to n% means ?)
 3. Clever containers self control, quality control etc
 4. Clever routes and follow-up (RFID)

4. **Regulations and standardization to be under control**

Integrate in the major new global tools

- **Communications** communication for the Goods...(See IP V6,...)
- **Localisation**: localisation of the goods
- For **Checking / sensing**: screening the goods
- For **Information System**: Internet of Goods transfers

Need for understanding, testing and training

In real conditions, with continuous upgrades for:

- **Risk management** (focusing limited resources, with fast lanes...)
- **Credentialing** (asserting and validating the claims of identity, content,...)
- **Screening and inspection** (highly dependent on 1- and 2-) effectiveness
- **Automate** (up to where?) **Tracing and Tracking Enforcement**
- **Command, control and integration** (real-time intelligence, potential threats dynamic adaptation, optimising enforcement and interdiction response times)

An answer in a given environment

Interacting properly with

- **Regulatory compliance** (legacy customs, immigration, border control and financial oversight missions)
 - **Economic development** (trade, travel, and investment facilitation)
 - **Border clearance** (legacy customs and immigration missions)
 - **Revenue collection** (duties, tariffs, and taxes)
- Within EDI legacy systems and their new versions (SAP, ERP..)



Platforms in a real environment

Result :2 dimensional revolution:

Technology

Products

Systems

LSI

Services

Cargo

Bar code, **RFID**
Metal, explosive detection
Gas, CBRN detection
Gamma, Neutron, X-ray
Spectroscopy

Cargo screening
Cargo tagging
Cargo sealing
Smart container
Luggage screening

Container tracking
Luggage tracking

**Supply Chain Management
and Security**

Shipper
Forwarder

Carrier

Radio, Satellite
Communications
Detection

Truck screening
Anti-missile system
RADAR

GPS, AIS, LRIT
VTS, ATC, TCAS
AVI, AVL

Maritime Security

Fleet owner
Traffic control

Infrastructure

Fences, sensors
Biometrics, access card
Image processing, IT

Video surveillance
Perimeter protection
Access control

Communications, IT system
Command & Control
ID management system

Airport Security
Border Security

Guarding
CCTV operation
Training

globally: from manned services to smart scanners, with embedded auto-secured (sub) systems & services