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Institute of Shipping Economics and Logistics

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EUROPEAN CONFERENCE ON 4TH 4 TRANSPORT LOGISTICS ICT

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Supply Chain Visibility enhancing security & efficiency

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Agenda

- **Container Chain Visibility**
- **The INTEGRITY Approach**
  - **Integration of data sources**
  - **SICIS platform**
  - **Data pipeline**
  - **Container Security Devices**
- **Supply Chain Event Management**
- **Experiences and further actions**

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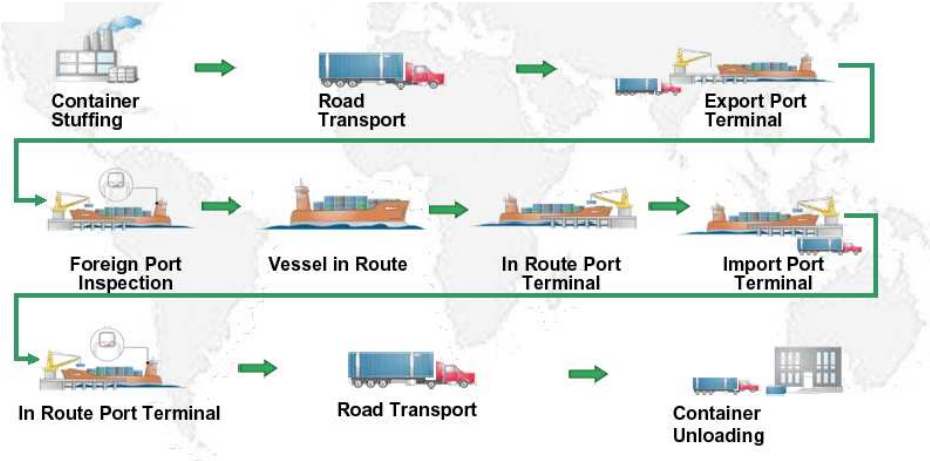
Visibility of the container chain



- **Logistics (efficiency) Challenges**
  - **A lot of parties involved in door-to-door chains**
  - **Different languages**
  - **Different media**
  - **Chain status data sharing is limited**
- **Security Challenges**
  - **Those who have to report are partly not knowing what´s in it**
  - **Containers are anonymous boxes**
    - no-one can easily check what´s in it (visibility of cargo)
    - all parties have to trust in data and their quality

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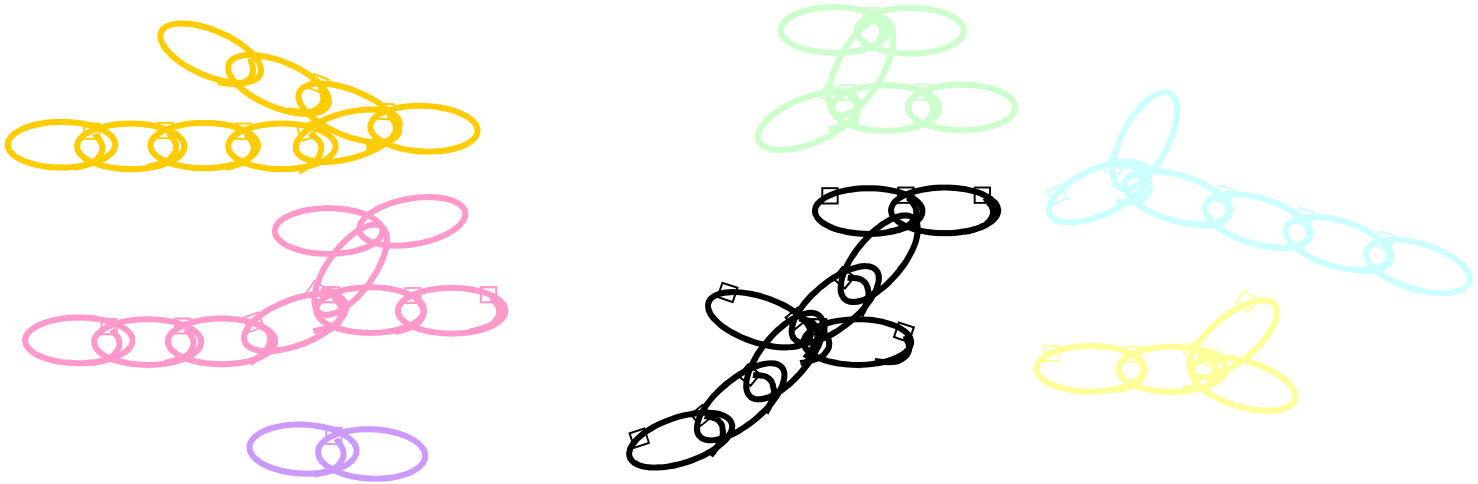
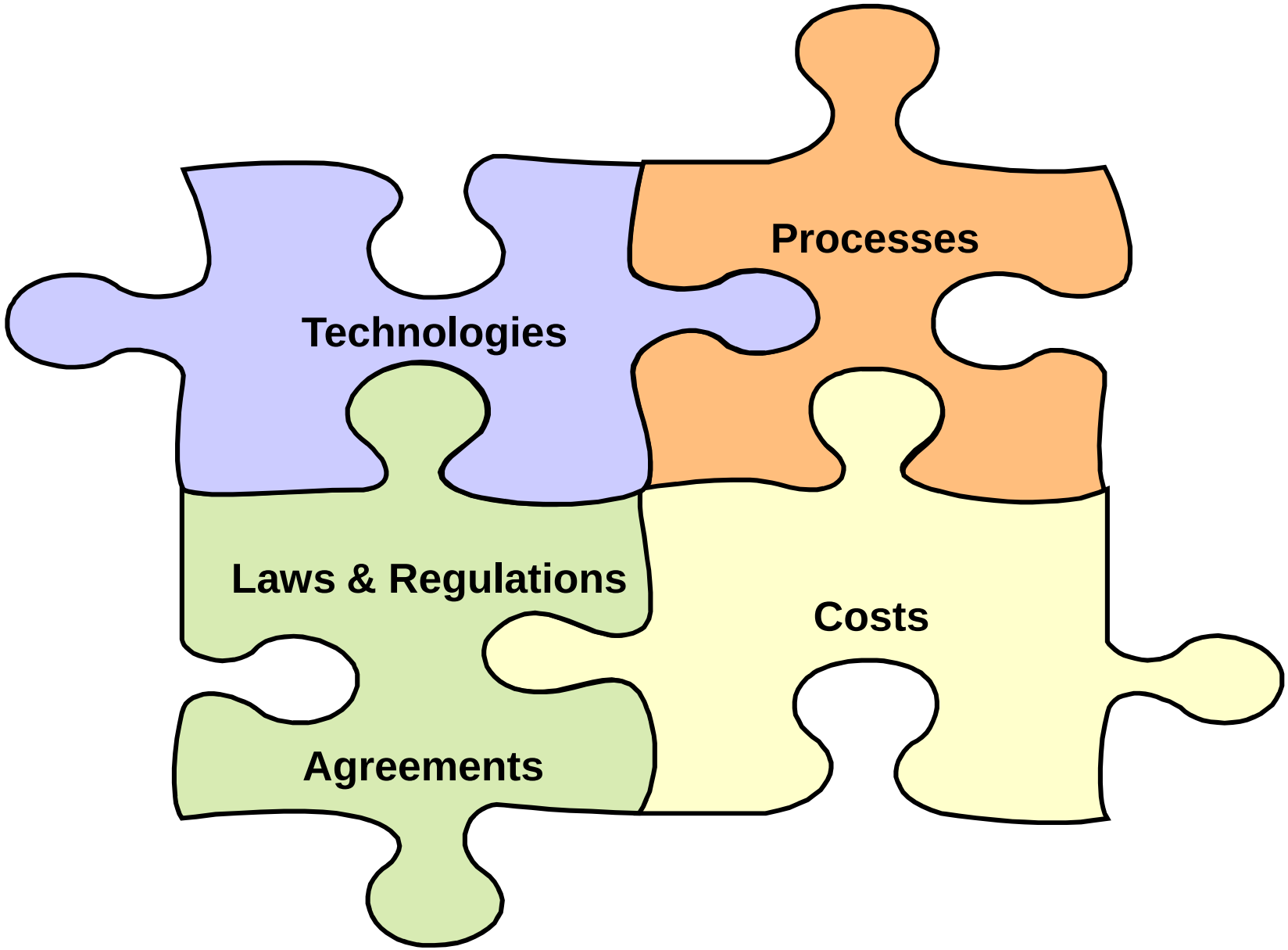
The Chain Perspective – as is



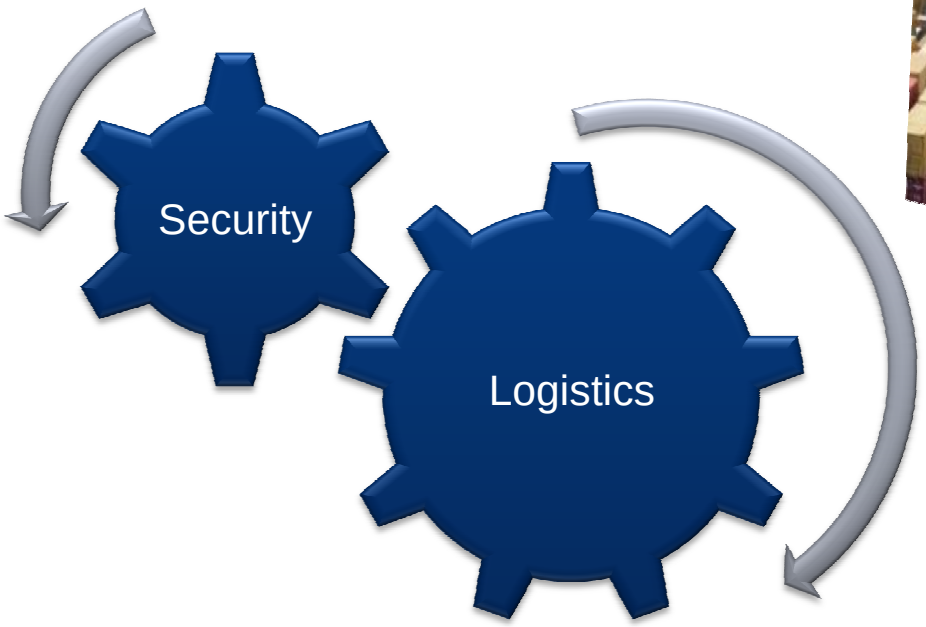
Tony Webster, Director Logistics of A.S. Watson Benelux :

“For lots of companies, the logistics chain is still a black hole. Because of that, they can only respond to deviations from schedule at a late stage. And that kind of last minute work always costs money.”

Supply Chain Visibility - Interoperability Aspects



Key issues



Mutual influence

- Regulations, Reporting requirements
- Delays and unpredictability
- Sticks and carrots

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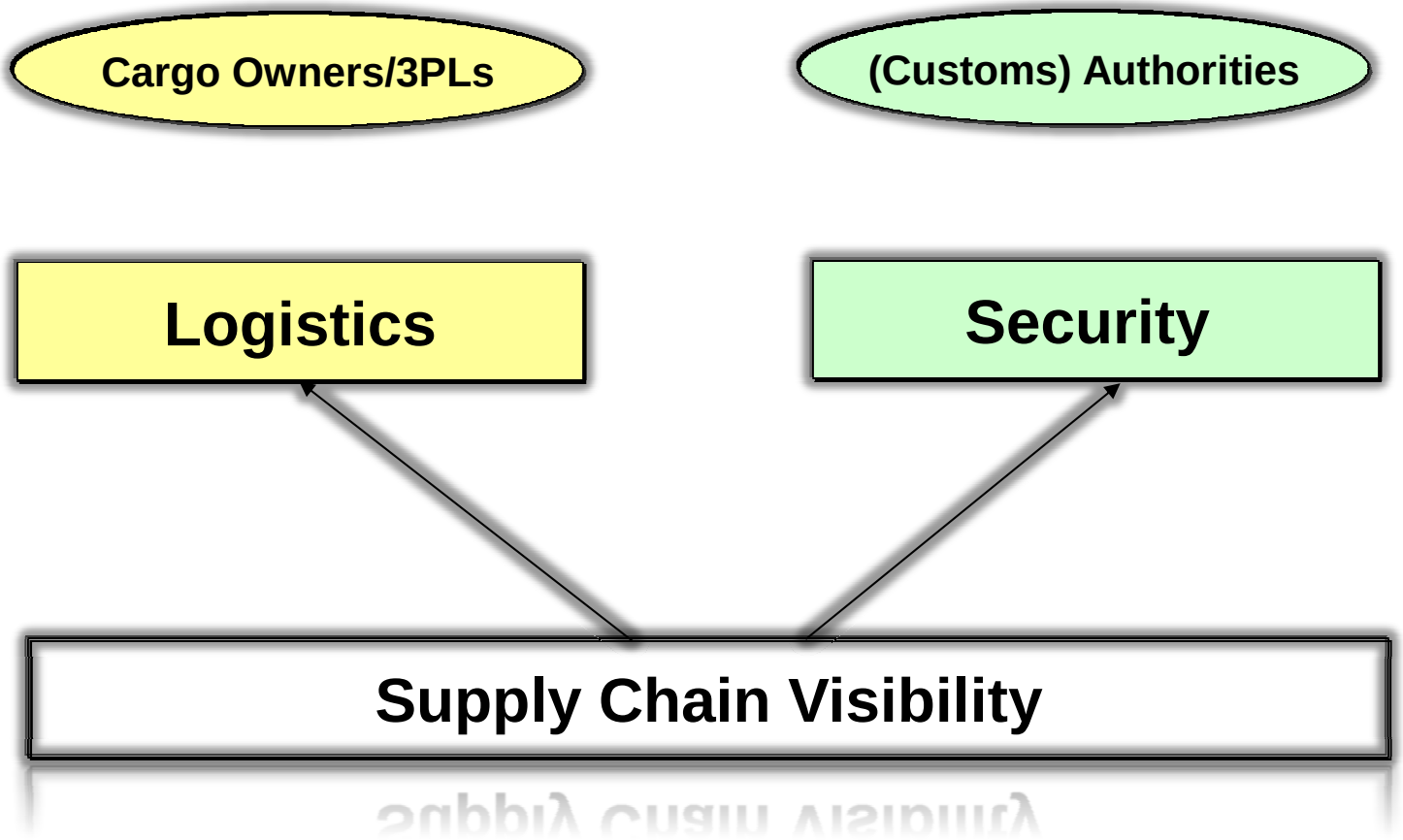
Security issues

- **Increased security measures are treated as just adding costs to the logistics processes**
  - **Building fences and access controls**
  - **Advance reporting of data**
  - **Educating persons**
  - **…**
- **Potential for optimisation of existing processes (efficiency) is underexploited**

Win-Win Situation?

- **How to integrate security and logistics aspects into one approach being acceptable for all stakeholders?**



Why Supply Chain Information Visibility?

- … to make chains more transparent and predictable
- … to enhance risk management
  - Logistics risks
  - Financial and fiscal risks
  - Security risks
- … to support the different actors in performing their duties

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INTEGRITY Partner

INTEGRITY

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	tct Trimodal Container Terminal Venlo	B·A·P Logistics
	DeCeTe Duisburger Container-Terminalgesellschaft Multimodal Container Network	

Customs Authorities

Ministerie van Financiën

HM Revenue & Customs

INTEGRITY – Measures

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Trusted Parties AEO	Scanning X-Ray	Screening radiation portal
Auto-ID Container RFID	Security devices e-Seals, Smart Units	Databases Tracking, events
Satellite tracking GNSS/Galileo AIS signals	Algorithms risk detection	EDI/web services validity checks

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How to achieve Supply Chain Information Visibility?

- **Integration of reliable sources**
  - **Nearly all required information do exist somewhere but are not shared!**
  - **Visibility Platforms can offer additional value**
- **Trust!**

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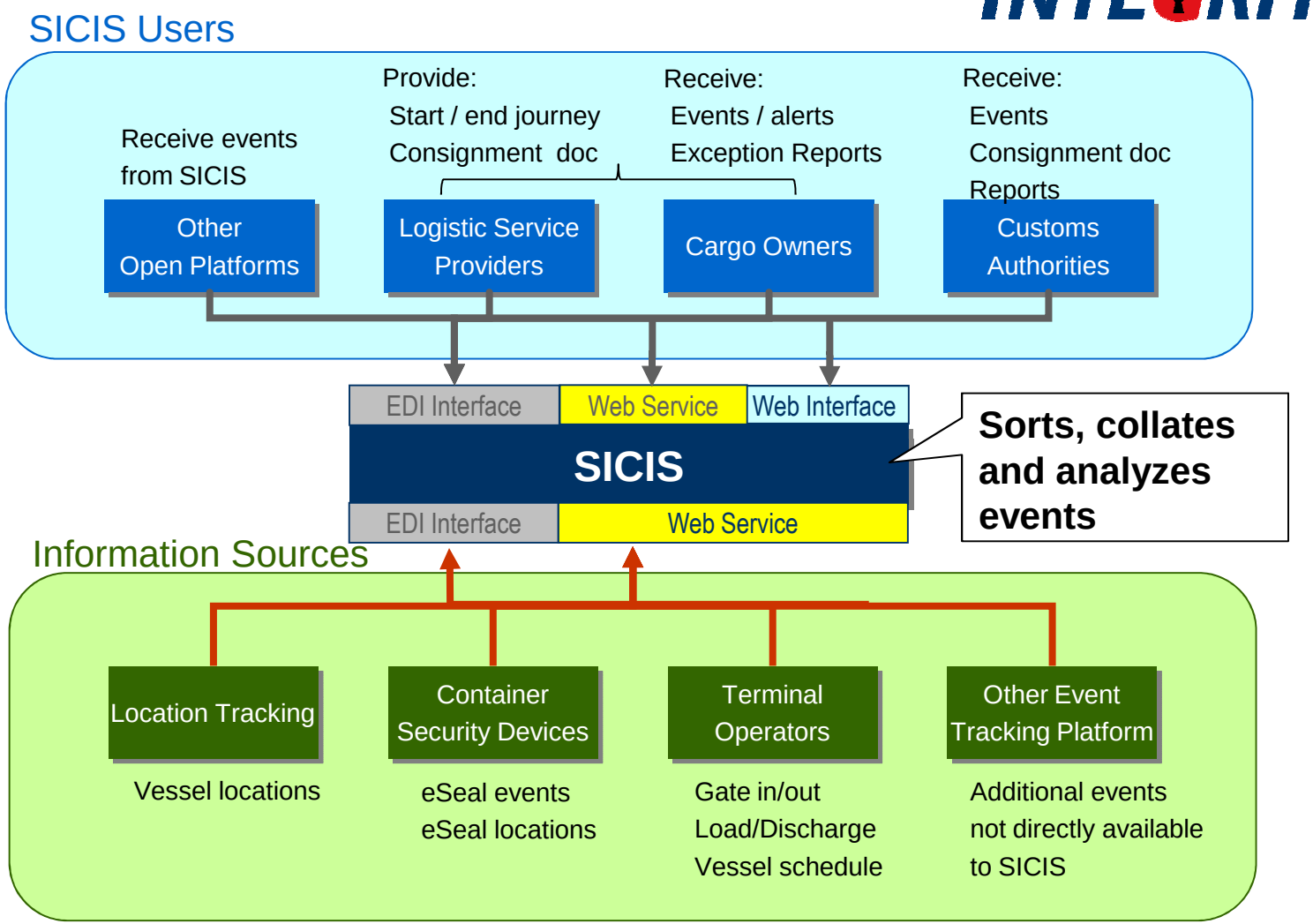
SICIS – Information Sources and Integration



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Container Security Devices (CSDs)

•Attach the CSD to the container

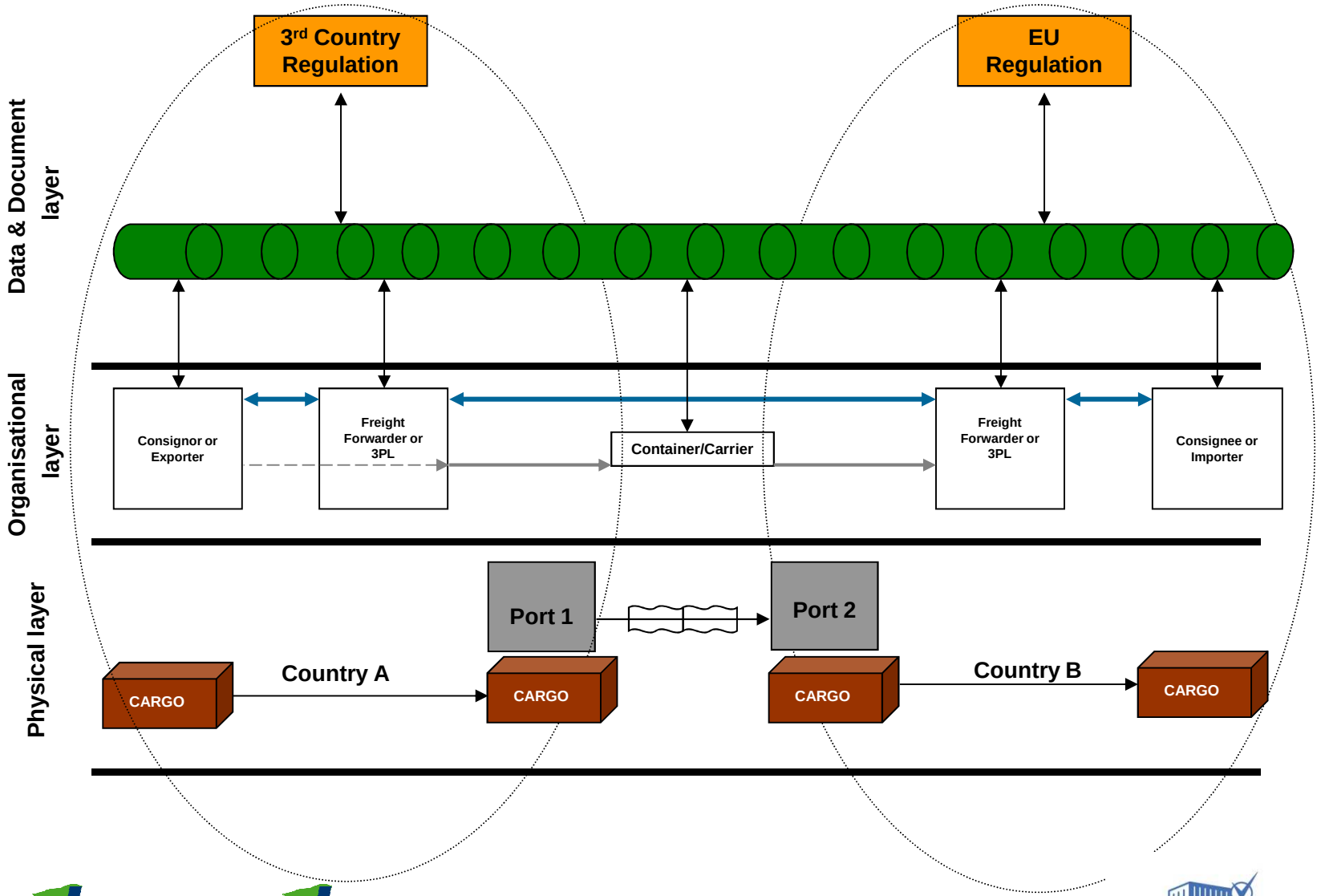
• Close the container door

•Assign and lock the container with a handheld

Container Security Devices …

- **… offer perfect monitoring capabilities**
  - **position detection through GPS**
  - **communication via GPRS or satellites**
  - **door opening sensors, light and temperature sensors, etc.**
- **... but no significant share of containers equipped with CSDs is expected in the near future**
  - **INTEGRITY concept allows manual “start journey” event via web interface as well**

Data pipeline



Data pipeline

- **“Need to know” principle**
  - **No more, no less**
  - **High quality data from its origin**
  - **Data ownership and access rights: careful**
- **Vision: from push to pull …**
  - **Customs procedures of the future?**

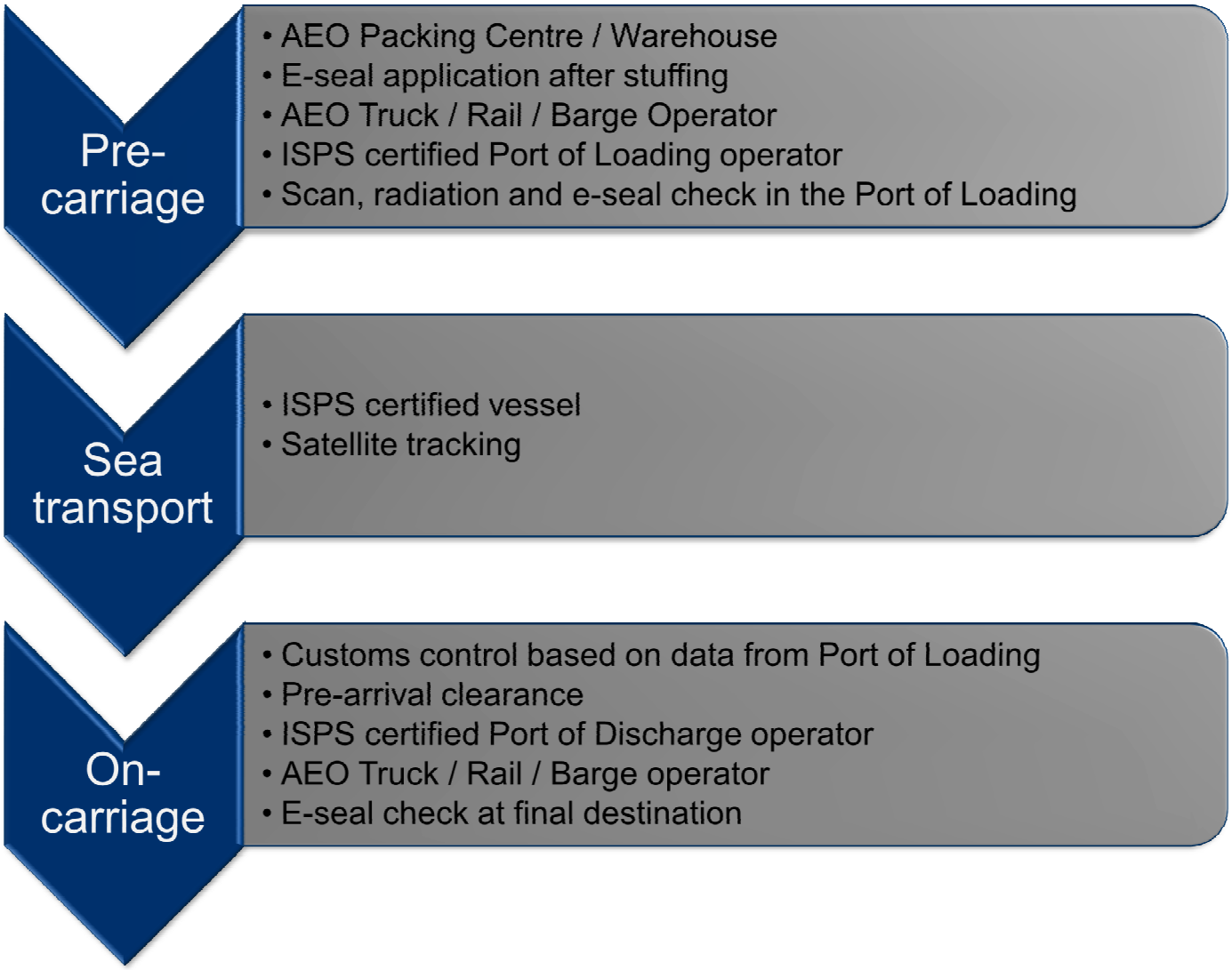
Customs Authority

3PL

Terminal Operator

Cargo Owner

INTEGRITY – Example security pipeline



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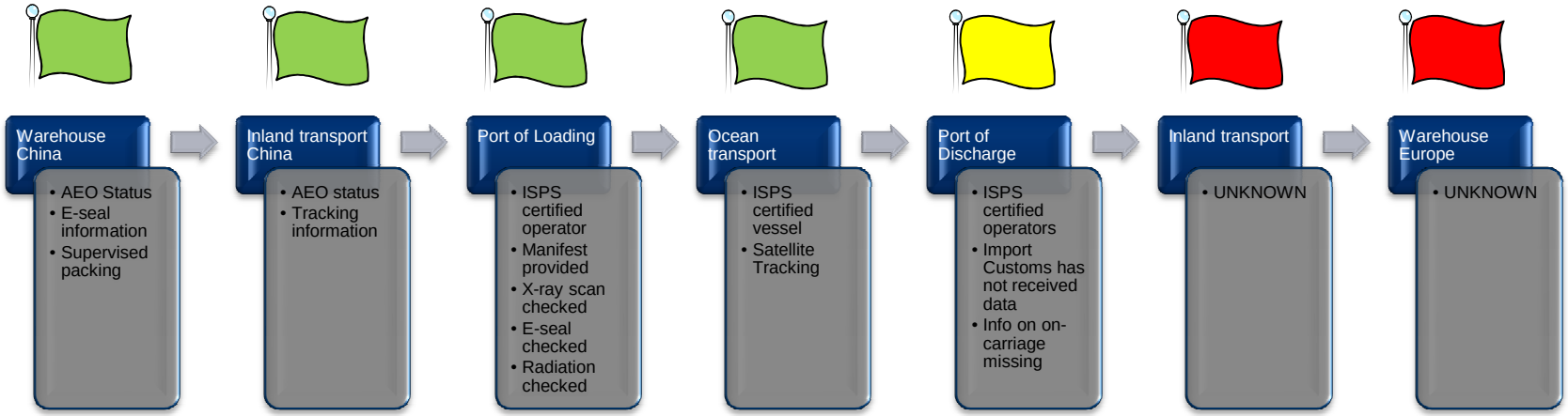
Supply Chain Event Management (SCEM)

- comparing plan and status information (proactive)
- detecting risks (logistics, security)



SCEM Scenario – example from inland waterway transport

Lessons learnt in INTEGRITY

- **INTEGRITY demonstration**
  - **more than 5,400 container transports in 14 tradelanes**
  - **extension to additional port operators and CSD providers**
  - **CSDs from Savi Networks, CIMC and LongSun**
  - **reliable data from high quality sources**
  - **Customs and SME participation was extremely useful**
- **Operational links**
  - **joint demonstration with SmartCM**
  - **integration of CHINOS results (FP6)**

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Lessons learnt in INTEGRITY

- **Experience 1: technical challenges were minor**
  - agreement on import procedures for CSDs to China (heavy Customs involvement)
  - willingness to share data
  - including factories as start of the door-to-door chain
- **Experience 2: Innovative data pipeline idea …**
  - technical implementation seems feasible
  - SICIS is a significant step towards this aim (but not the end)
  - consignment data difficult to obtain in an analysable form
  - further developed in CASSANDRA and its living labs

Lessons learnt in INTEGRITY

- **Experience 3: Answering the "Who" questions is essential**
  - **Who is benefitting? Who gets value?**
  - **Who is willing to pay (and how much)?**
  - **Who is operating the data pipeline?**
- **Experience 4: Setting up business …**
  - **Chicken and egg problem for reaching economies of scale**
  - **link to existing services with large user communities?**
  - **not supported by everyone (companies earning money with intransparency)**
- **Experience 5: Changing minds …**
  - **takes (more) time!**

About Teddy bears

- **Interoperability between SICIS and SmartCM Neutral layer**
  - **technically proven**
  - **focus on CSD data**
- **Conceptual integration with EURIDICE**
  - **on milestones**
  - **maritime and hinterland**
- **Contribution to standardisation process in efreight**
- **Best practice example in Logistics4Life**

More about Teddy bears ….

- **Visit the Theatre play at the ECITL 2011**
  - **Organised by INTEGRITY**
  - **Friday 13:00**
  - **Room Zephyros**

Contact

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