

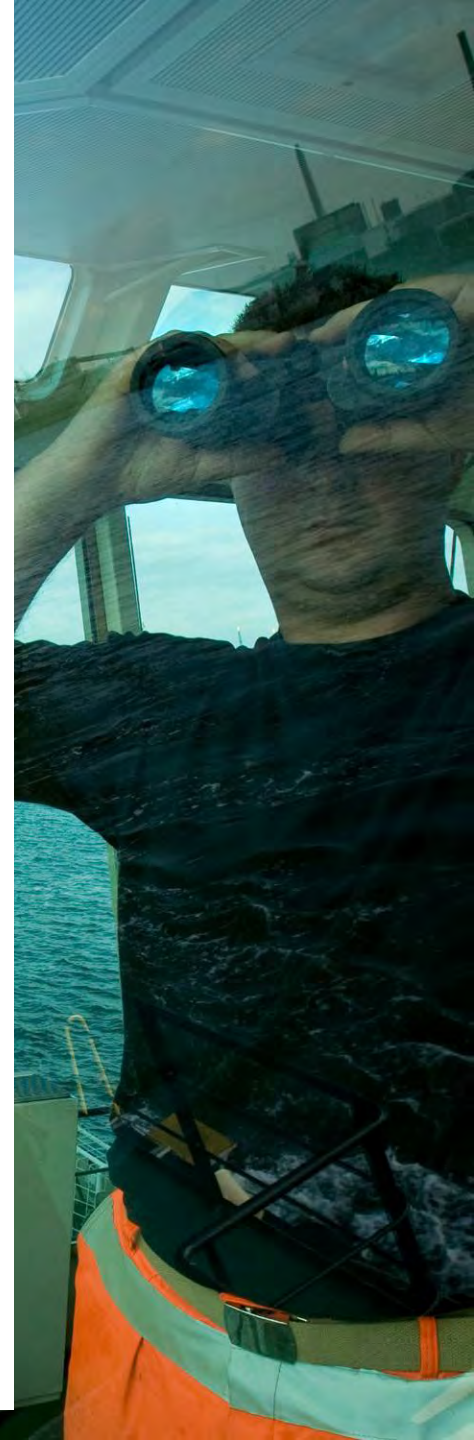
Antwerp Port System

Kristof Waterschoot
Manager Trade Facilitation, Port of Antwerp

Seattle, May 13th



**Port of
Antwerp**



1. Introduction on the PoA

2. The 4 basic port processes

3. The Antwerp Approach

4. Example applications



Port of
Antwerp

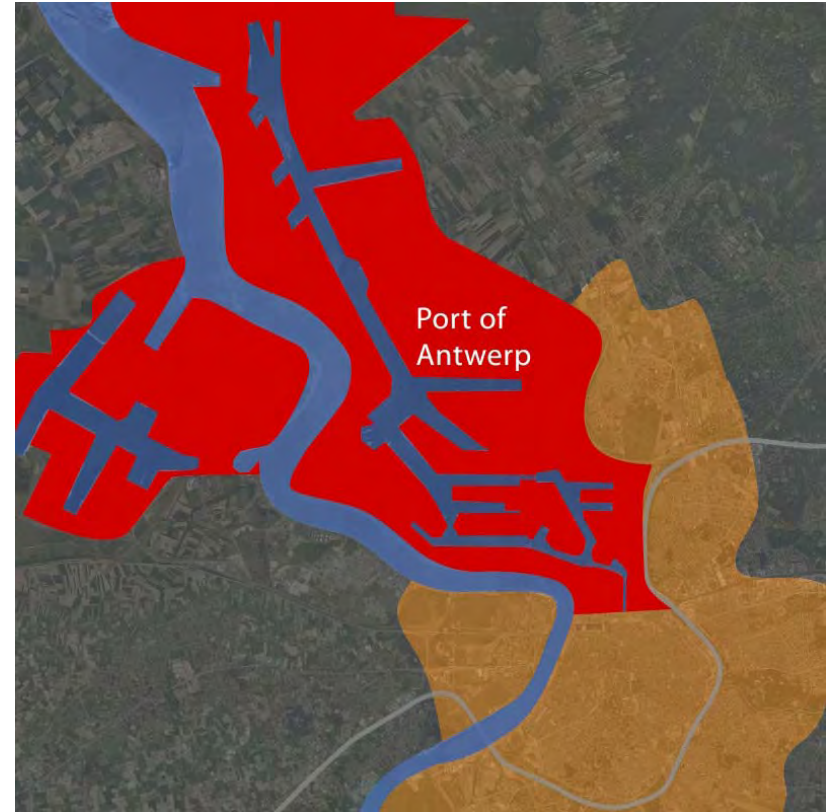


Location



The Port of Antwerp today

- Total area: 13,057 ha
- Quay length: 151 km
- Railway: 1,055 km
- Roads: 352 km
- Covered storage space: 545 ha



Second-largest European port



Employment

183,106 jobs



64,870 direct



118,236 indirect

Source: National Bank of Belgium, 2009.

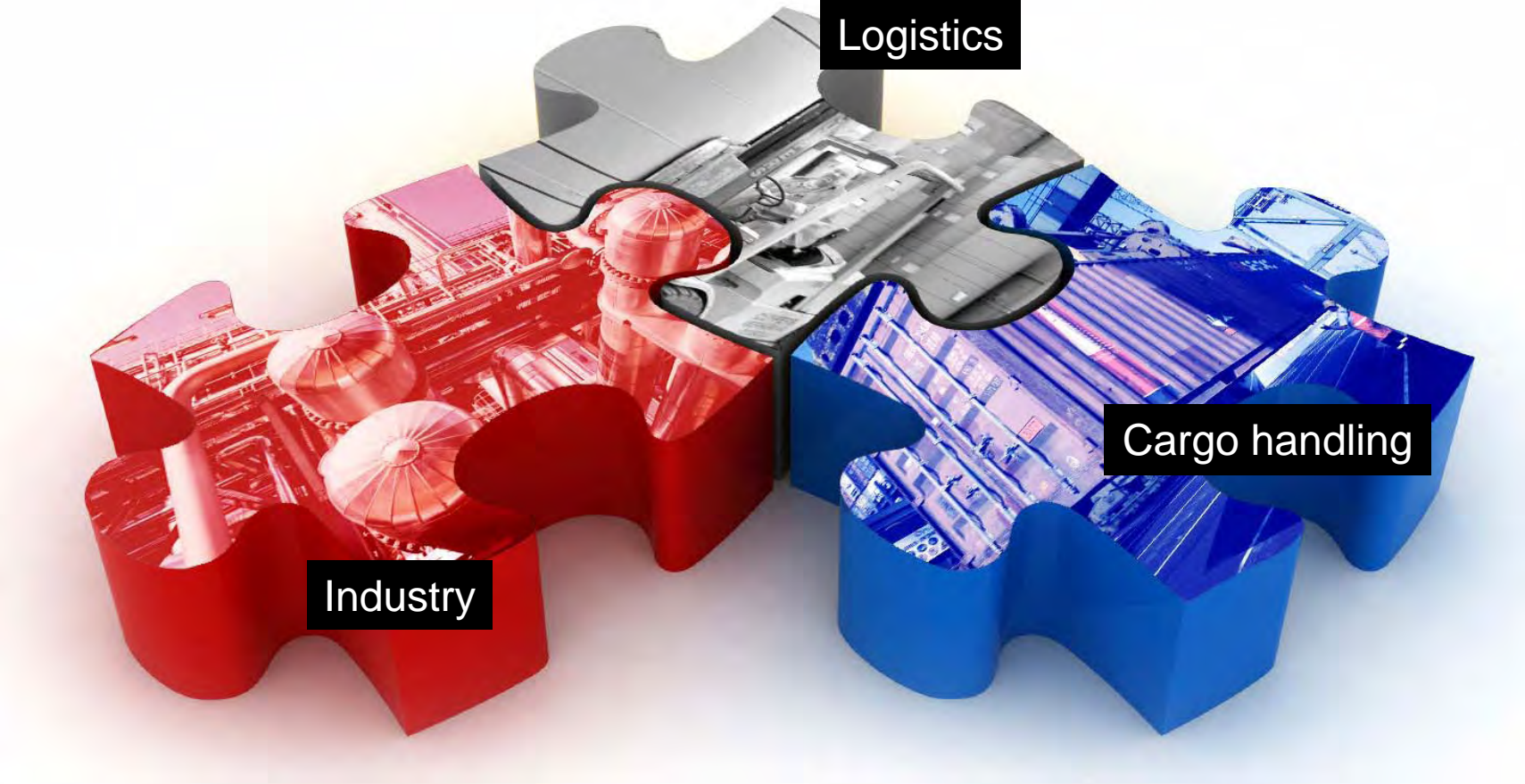
Economic engine

- 19 billion euros of added value
-
- = 9,5% of Flemish GDP
- = 5,5% of Belgian GDP



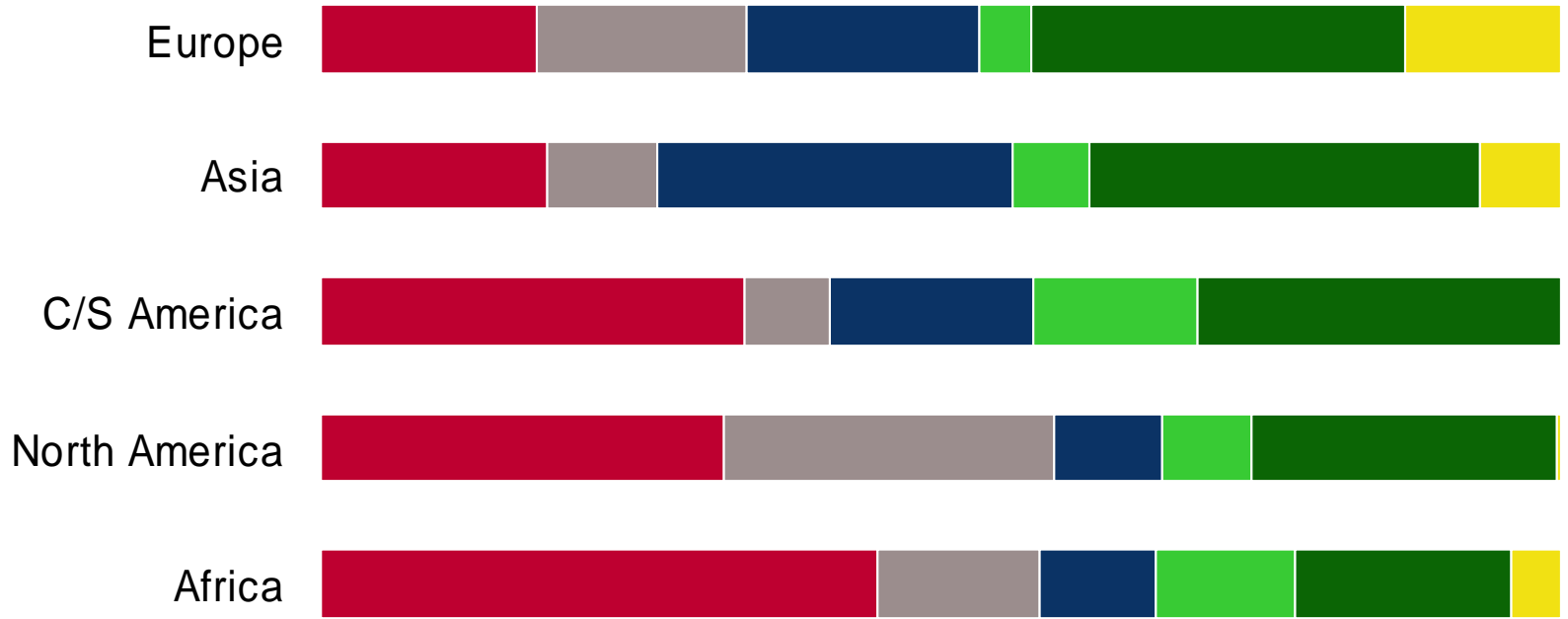
Source: National Bank of Belgium, 2010.

Multifunctional port



Containers: European market shares per continent 2009

■ Antwerp ■ Bremen ■ Hamburg ■ Le Havre ■ Rotterdam ■ Zeebrugge



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Port of
Antwerp



PCS distinguishes 4 basic port processes

1. The nautical process
2. The notification of dangerous cargo
3. The customs process
4. Cargo transportation process

1. APICS: complex nautical proces

- Antwerp Port Information & Control System
- Complex nautical process; many users involved:
 - ⇒ Innovative port information system needed that:
 - Allows for efficient and safe traffic management
 - Reduces waiting times
 - Monitors all traffic in and around the port
 - Coordinates the planning of all related infrastructures (locks, bridges, ...) and all related chain partners (sea, river & dock pilotage, river & dock towage, boatmen, ...)

Scenario for a sea-going vessel approach

PREANNOUNCEMENT



REQUEST FOR BERTH



PILOT ORDER

ADMITTANCE REPORT



ETA ANNOUNCEMENTS



ATA REPORTS



LOCK PLAN NOTIFICATION



VHF CONTACT



RIVER TUGS ORDER



DOCK TUGS ORDER



DOCK SERVICES ORDER



PILOT ON/OFF BOARD



LOCK IN REPORT



RTA INSTRUCTION



HAILING NUMBER ASSIGNMENT



LOCK OUT REPORT



MOORING REPORT



ETA -60d

ETA -6 hrs

KON

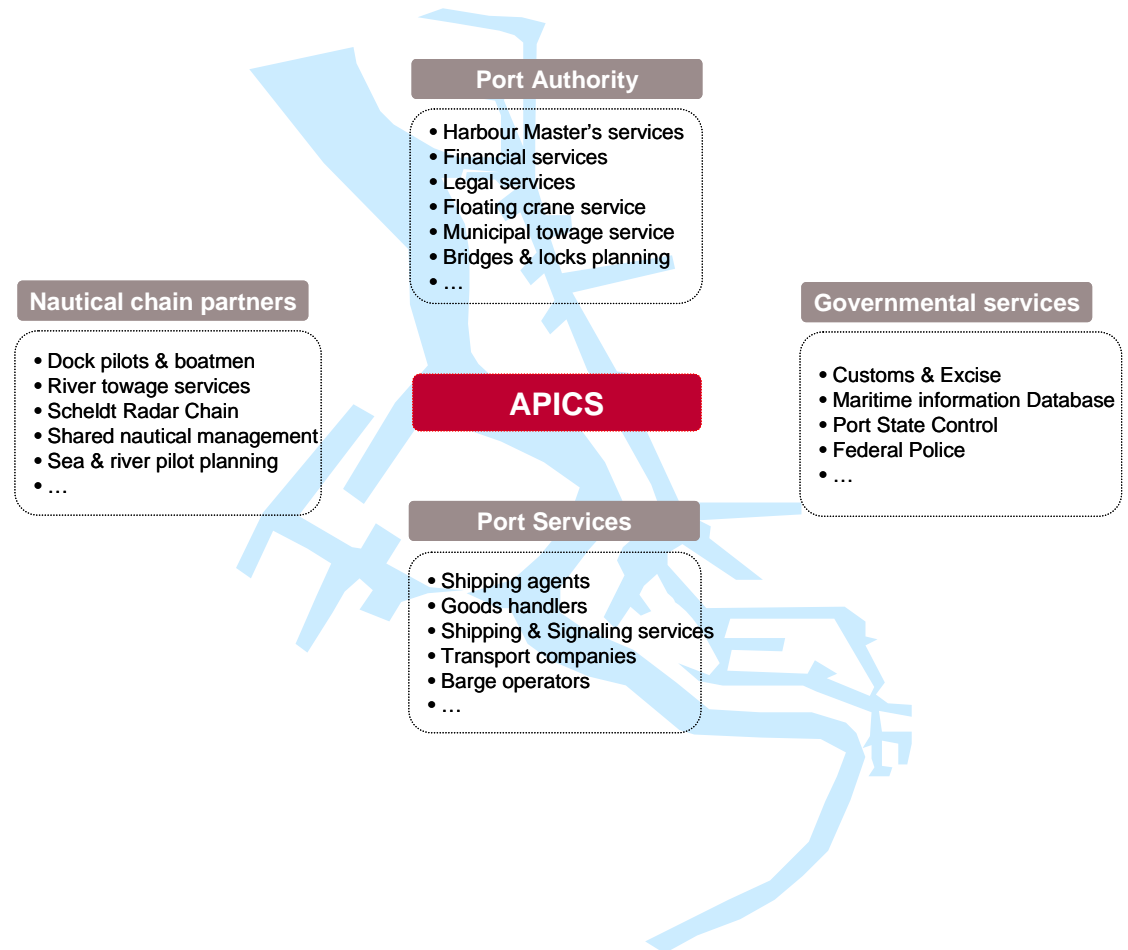
ETA -24 hrs

B 35



APICS

- 2 Member states
- 3 geographical areas
- 4 points of nautical entrance
- 7 locks
- 19 bridges
- AND
- > 800 users:
 - Port Authority services
 - Nautical chain partners
 - Governmental services
 - Port services



Daytime screen APICS

INFO HELP RAPPORTEN WEER TOESTAND INTERFACES

WELKOM **WILLEM**
Hoog water 04:20 5,50 Laag water 11:07 -0,13
11:54 VRIJDAG 04-12-2009

OPVOLGING
INKOMENDE SCHEPEN
PRIBORD

6 - 12 - 24 - 48
ALLES
DIEGANG >
LENGTE >
VAART
ALLES
BESTEMMING
ALLES
ZOEKEN
WISSEN

	ETA	ATA	RTA	LDS	VR	ORD	SCHIP	LOA	GBR	DGR	TYPE	SLR	SLD	PR	ISPS	NAAR	LPL	PL	NR	ST	SLINE	VAN	
CP	07:45	BESI	09:21		VB		BIRKA EXPRESS	154,5	22,7	5,8	RORO	0	0									W	
CP	10:30	VCSI	11:11		ONT		FLINTERBOTHNIA	82,5	12,6	4,0	CARGO	0	0									W	
CP	10:45	KASI	11:34		VB		KRAFTCA	205,0	25,8	7,0	RORO	0	0									W	
CP	10:00	DOE	09:49		VB		JACOBUS BROERE	104,3	17,0	5,8	CHTAN	0	0									W	
		KRK	08:03				MUREEN	135,0	11,5	2,0	BARGE	0	0									W	
		KRK	10:40				MSC MAAS	110,0	11,4	4,0	BARGE	0	0									W	
		KON	11:43				SIGAS LANRICK	88,0	14,9		LPG	0	0									W	
HEM	17:00						COASTALWATER	91,3	12,4	4,0	CHTAN	0	0									W	
CP	13:00	HAN	11:42		VRJ		HENDRIKA MARGARETHA	81,1	12,4	2,8	CARGO	0	0									W	
CP	13:00	HAN	11:44		AB		PORHOV	95,0	13,2	4,1	CARGO	0	0									W	
CP	13:30	35	11:41		AB		ANJELIERSGRACHT	129,8	19,0	5,0	CARGO	0	0									W	
WIN	23:59						SUDERAU	87,9	12,9	3,5	CARGO	0	0									W	
VLI	11:45	VLI	11:23		VB		NEKTON	84,8	12,6	2,9	CARGO	0	0									W	
		WKP	11:34		ONT		UNION-ELISABETH	88,6	12,6	3,1	CARGO	0	0									W	
VLI	13:30	SCZ	11:42				MSC CHRISTINA	242,8	32,3	11,6	CONTS	0	0									W	
VLI	13:00	A1	11:28		AB		STOLT JADE	176,8	32,3	11,6	CHTAN	0	0									W	
VLI	13:45	A1	11:52		AB		MARIANNE K.	88,0	12,8	3,5	CARGO	0	0									W	

PASSAGES
REIS
SCHIP
LOG
TOELATINGEN
BERICHTEN
OPMERKINGEN

PAS	ETA	BRON
VLI	04-12-2009 13:30	SRK
CP	04-12-2009 15:50 P	

PAS	ATA	BRON
SCZ	04-12-2009 11:42	SRK
LKN	04-12-2009 09:59	SRK
LKN	04-12-2009 09:46	LIS

BERICHTEN
ZOEKEN
WISSEN

REGISTERS

LOCODE

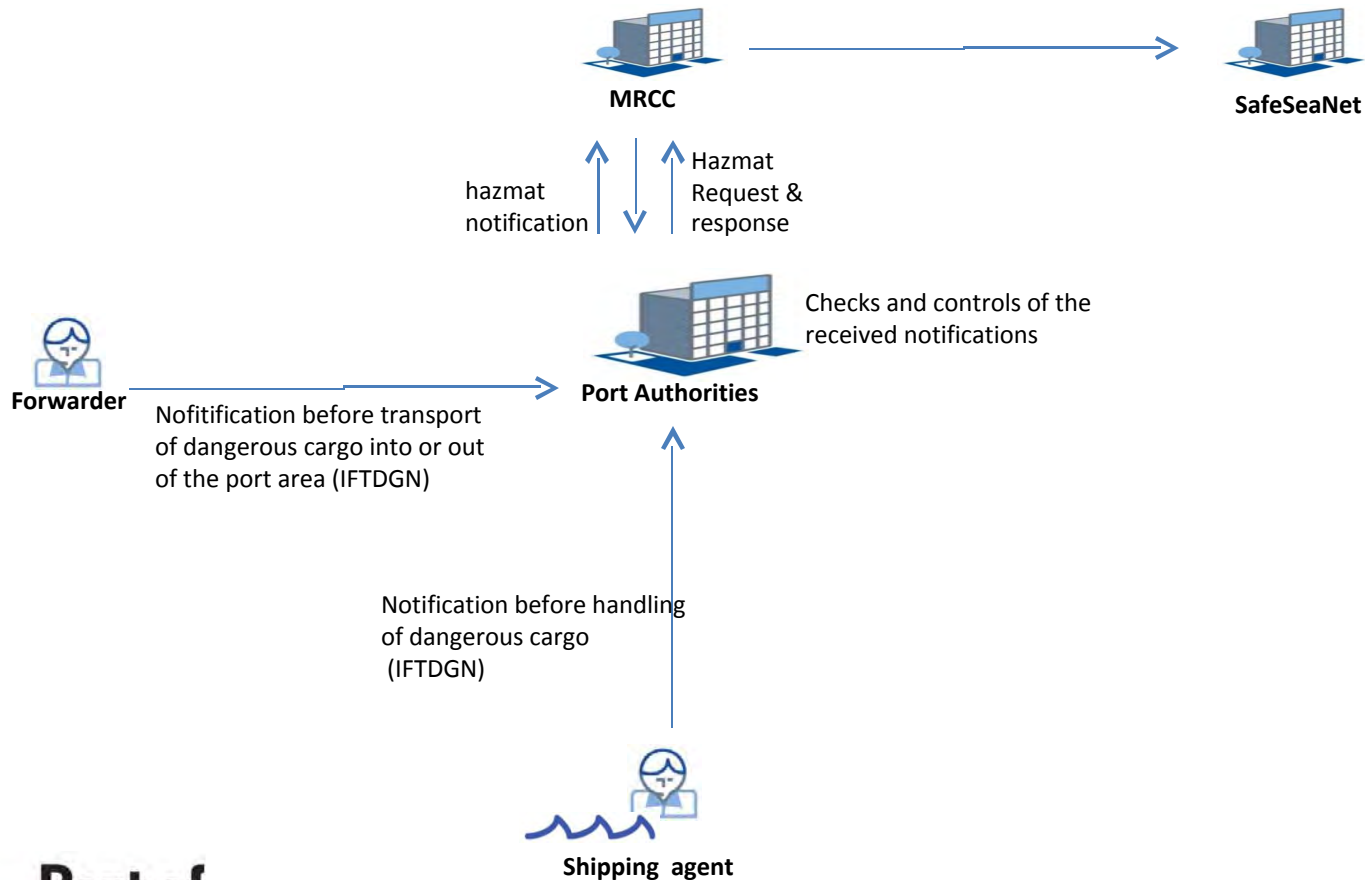
TABELLEN

BEVELIGING

2. Dangerous Cargo

- Use of EDI mandatory
Messages :
 - IFTDGN : International Forwarding and Transport Dangerous Goods Notification
 - CANMES : Cancellation Message
 - APERAK : Application Error & Acknowledgement Message
- Operations to be notified
 - Pre-carriage, on-carriage (freight forwarders)
 - Loading, discharging, transshipment, transit (agents)
- “Complementary “ notifications
 - Freight forwarders and agents
(aprox. 600 companies)

Dangerous cargo notification process



Existing dangerous goods application

```

AHLAN310S1 - Apics1.ws
File Edit View Communication Actions Window Help
===== DETAIL GOEDEREN 1 ===== ZIE NA = 13/09/04 = 12:53:33 =

BERICHTNR HAPAG 0010031 59
INTERN NR 104629299 aangifte
KORRESP. HAPAG HAPAG LLOYD BELGIUM BINNEN 10/09/04 1516
DOSSIERNR HANDELING LOS lossen
CNI NUMMER 1
-----
? NR UN-NR IMDG TECHNISCHE BENAMING FLASHP. 0
TOESTAND EN GEVAARSEIGENSCHAPPEN CNT TOEL GEWICHT NEC-GEWICHT
BIJKOMENDE INFO VERP AANTAL BIJK.RISICO
1 2368 3 ALPHA-PINENE (L-ALPHA PINEN +029 C
LIQUIDFLAMMABLE LIQUID J N 1345.00 KGM 0.00
DR 7 3
-----
B-Bijk. info C-Cargo tank cleaning E-EMS G-Toestand & gevaar H-Toel.HKD
0-Opmerking R-Radioactiviteit T-Techn. benaming X-Detail 20-Fouten

```

NOTIFICATIONS

First level control

- Flashpoint does not correspond to the given class
- UN number and class are not corresponding
- Name of authorised person is not given
-



Automatic control

Second level control

Control on the contents of the messages :

- Reference to second party
- Name of the vessel is wrong
- Notification is not complete
- "TBN" items are not completed
- Quantity limitations not followed
- Are the special requirements on the operation followed ?
- Direct Transfer
- Fire watch present
- All parties involved notified

Third level control

Reports on alleged violations
Containers with dangerous goods on berth :

- No notification has been made
- Content of the notification is not correct or not complete
- Old labels are still on the containers
- Given containernumber is wrong

3. Customs Process

- PLDA = Belgian e-customs application
- In Belgium, importers, exporters and customs brokers are required to fulfill their customs formalities with the aid of automated customs clearing systems.
- EDI-messages :
 - CUSREP : customs conveyance report message
 - CUSCAR : customs cargo report message
 - CUSRES : customs response message
 - CUSDEC : customs declaration message

The complexity of the customs process

Same regulation and messages in the EC
but large differences between member
States in several domains

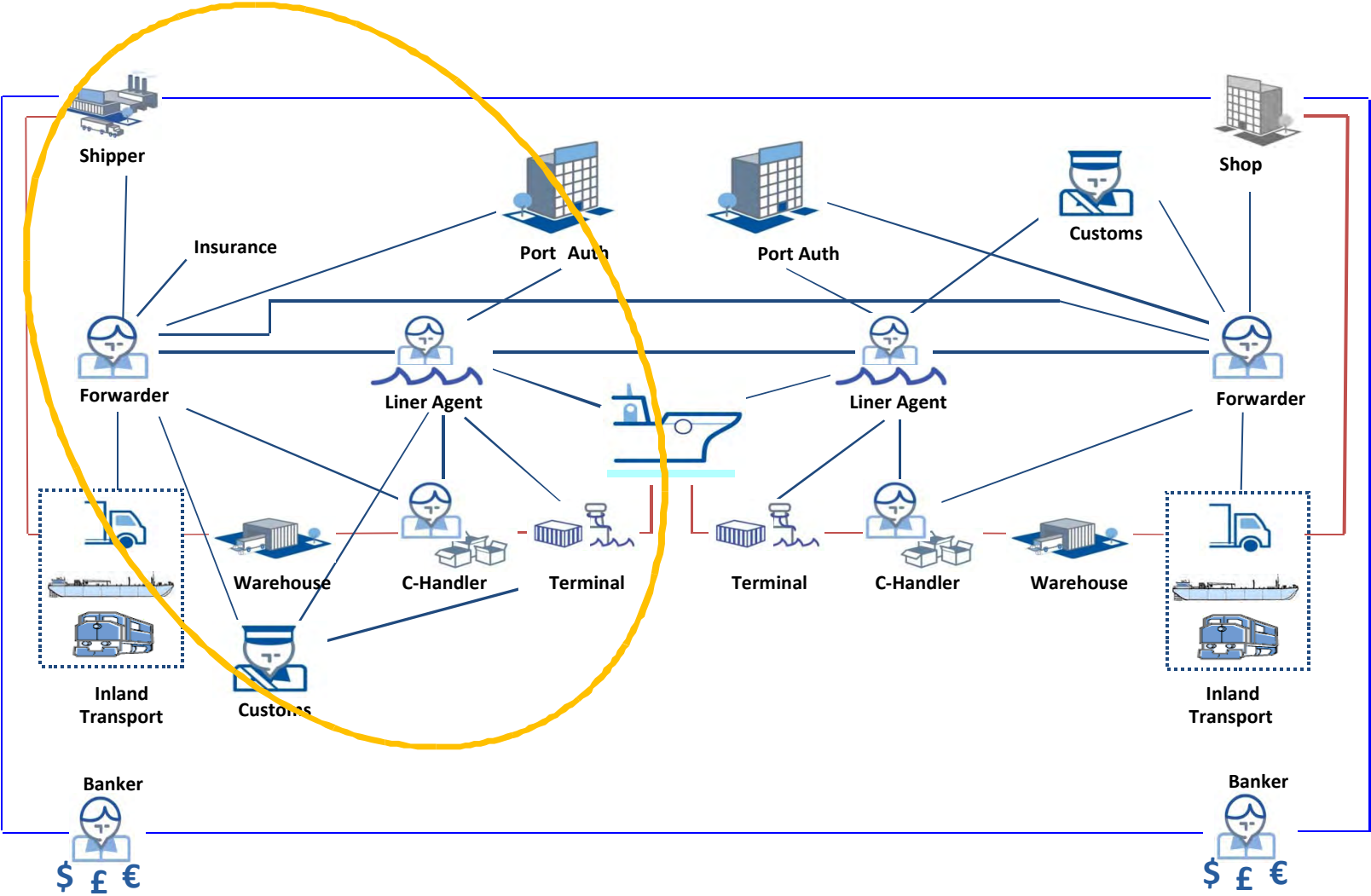
- Business logic
- Message standards
- Communication protocols
- Certification processes

<u>Member state</u>	<u>System</u>
Belgium	PLDA
France	Delt@
Germany	ATLAS
The Netherlands	SAGITTA
United Kingdom	Chief

NCTS is the common EC system for transit goods



Customs Process

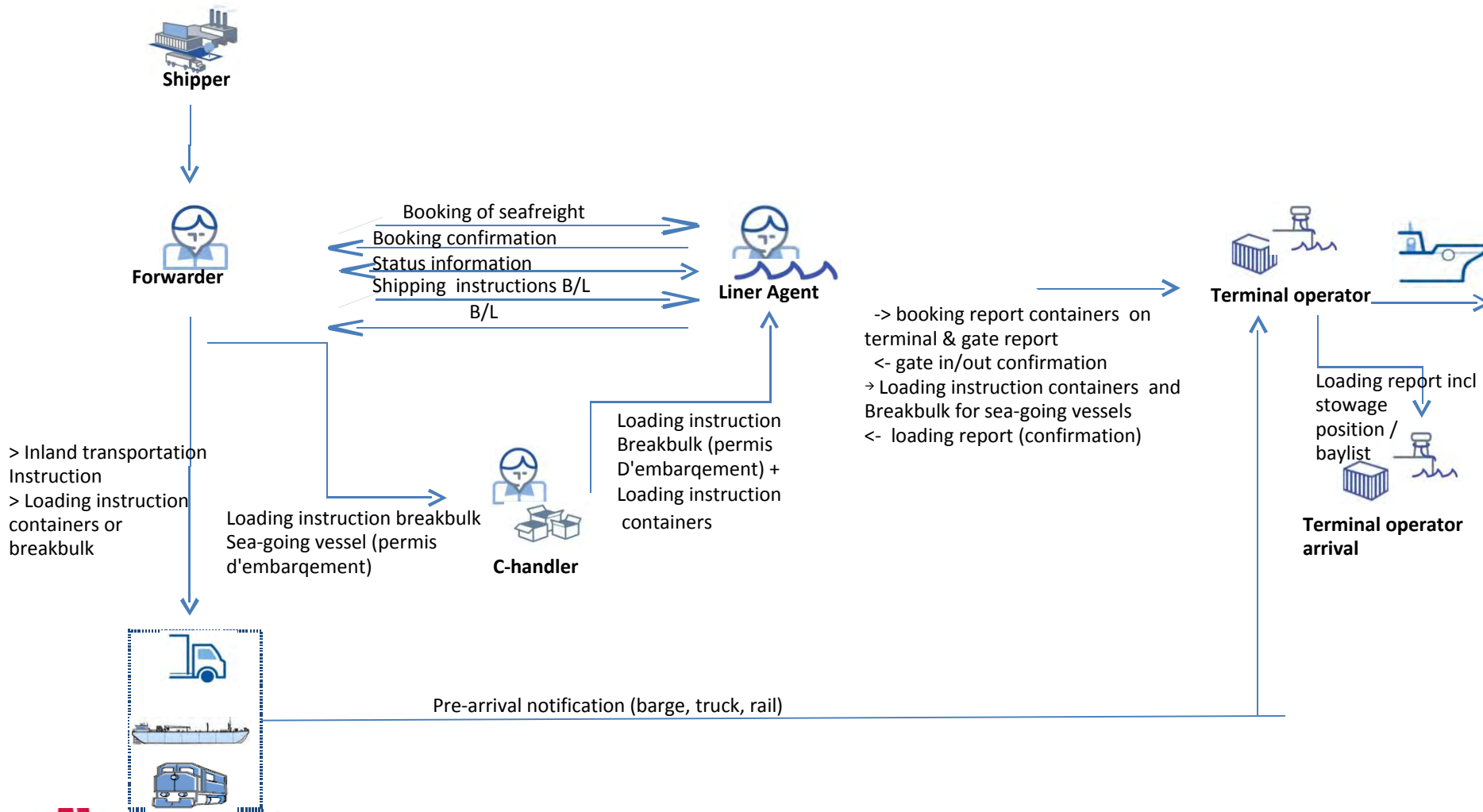


4. Cargo transportation

Private companies IT-systems

- Container business is most automatised, in the breakbulk sector there is still a lot of work to do
- EDI messages : examples
 - IFTMAN : notice of arrival
 - CODECO : gate report
 - COREOR : container release
 - BAPLIE : stowage position
 - COPRAR : loading/discharge instruction
 - COARRI : loading/discharge report

Cargo process



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**Port of
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What is the Antwerp Port Community System ?

The Antwerp PCS is a cooperation between

- Antwerp Port Authority
- Alfaport Antwerpen -Federation of Port Companies and Logistic Service Providers
- private IT-sector (Descartes – Porthus)

The Port Community System gathers the network of existing **systems and IT solutions** who services electronic messages and information between :

- G2G
- B2G
- B2B



A seaport is more than a transit hub

- A seaport is partner in the total logistic chain
- Competition with other ports is about logistics and transport networks
- Customer wants a total supply chain solution



APCS: Mission

- APCS aims at:

Enhancing the interaction between all actors in the logistics chain by facilitating and stimulating the **electronic exchange of information**

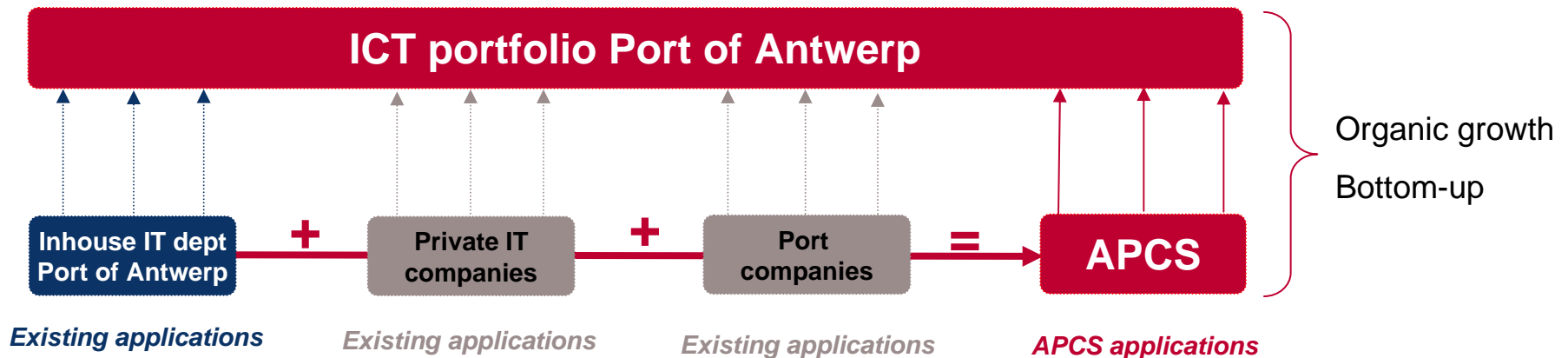
Establishing more standardization by stimulating the **use of the existing ICT portfolio**

Creating added value by improving the **efficiency of communication**

Reducing costs and delays by improving the **efficiency of transport and cargo handling procedures** in the port of Antwerp and between the port and the hinterland

APCS

- Development of a strong IT portfolio
- Existing applications: Bundling of already existing ICT applications and functionalities
- **+**
- APCS applications: Market-driven development of new applications, in cooperation with the private sector



APCS: website

- Today a wide portfolio of IT applications already exists
- This portfolio has been developed by:
 - Port of Antwerp in-house IT department
 - Private ICT companies
 - Individual port companies and service providers
- ***APCS will bring together all these applications under 1 umbrella, the “APCS website” (live may 30)***

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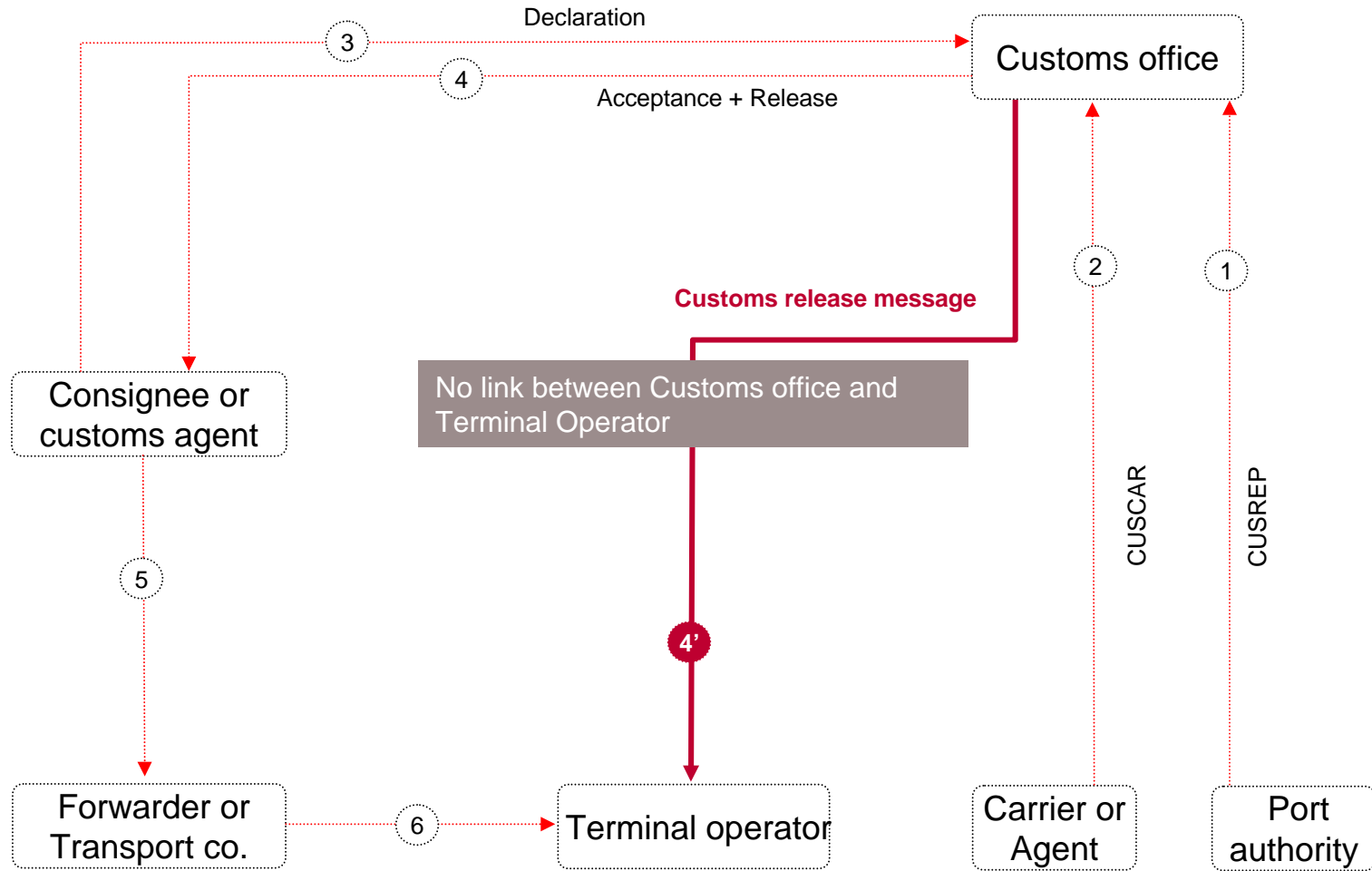
1. E-Balie

- MASP – ECS: Confirmation “Arrival at Exit”: Terminal operator -> Customs office at exit
- Original application developed by a private company (terminal operator)
- White label application managed by APCS
- Facilitation of communication: Structures massive amount of information flows, links the container number with the movement reference number (MRN)
- Standardization in exchange of information: uniform platform for all terminals and clients

2. Customs release message

- Release message to the terminal operator
- No existing application => White spot application
- Scoping & functional analysis: APCS + CCS + Customs Authority
- Technical analysis, application building & testing: Private IT company
- Application management: Customs Authority

- **Example: Customs release message**



3. Pre-arrival notification

A. Pre-arrival notification trucks on container terminals

Trucking companies need status information about the container

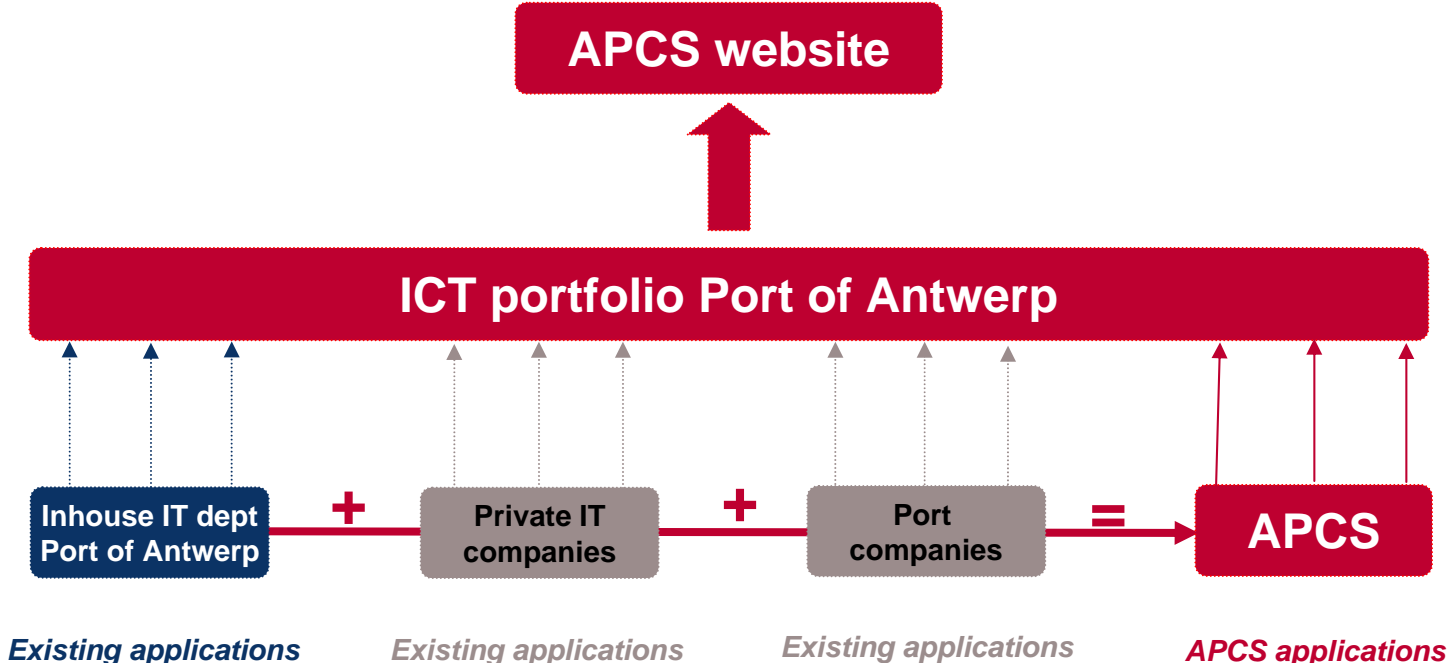
The terminal operators need status information about the transportation planning of the trucking companies

Several container terminals now have their own IT tool to optimize this process.

The trucking sector asked for one uniform portal. APCS will build one portal for all the Antwerp container terminals

B. BTS2 pre-arrival notification barges on container terminals

Conclusion





Port of
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