

# Port of Valencia's Port Community System

**valenciaport**  **pcs.net**  
P o r t C o m m u n i t y S y s t e m



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*Los Angeles, May 9<sup>th</sup> 2013*



- Valenciaport: Leading South Europe port
- Challenges for ports
- Port Community System: the need to manage complexity
- Valenciaportpcs.net: Adding value to the port



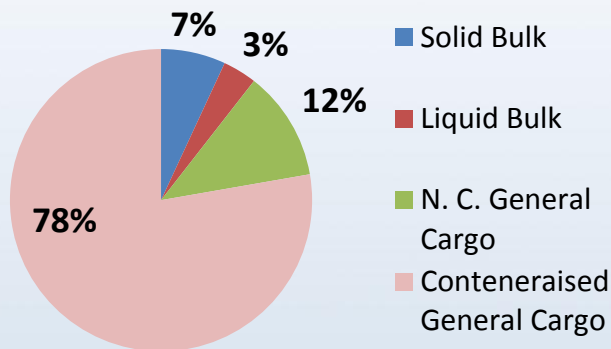
# Valenciaport

## Leading South Europe Port

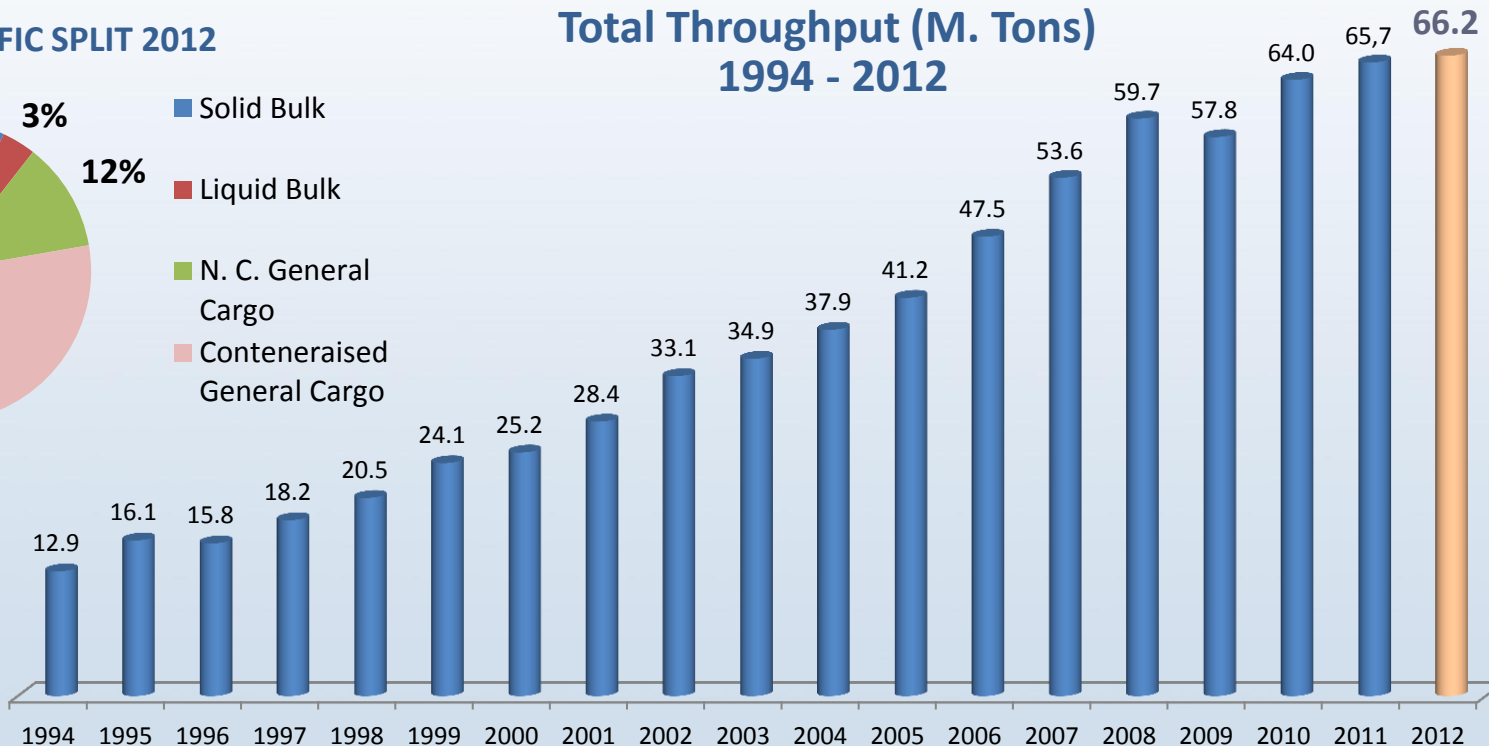


## Valenciaport: vigorous growth rate for more than 20 years

**TRAFFIC SPLIT 2012**



**Total Throughput (M. Tons)  
1994 - 2012**

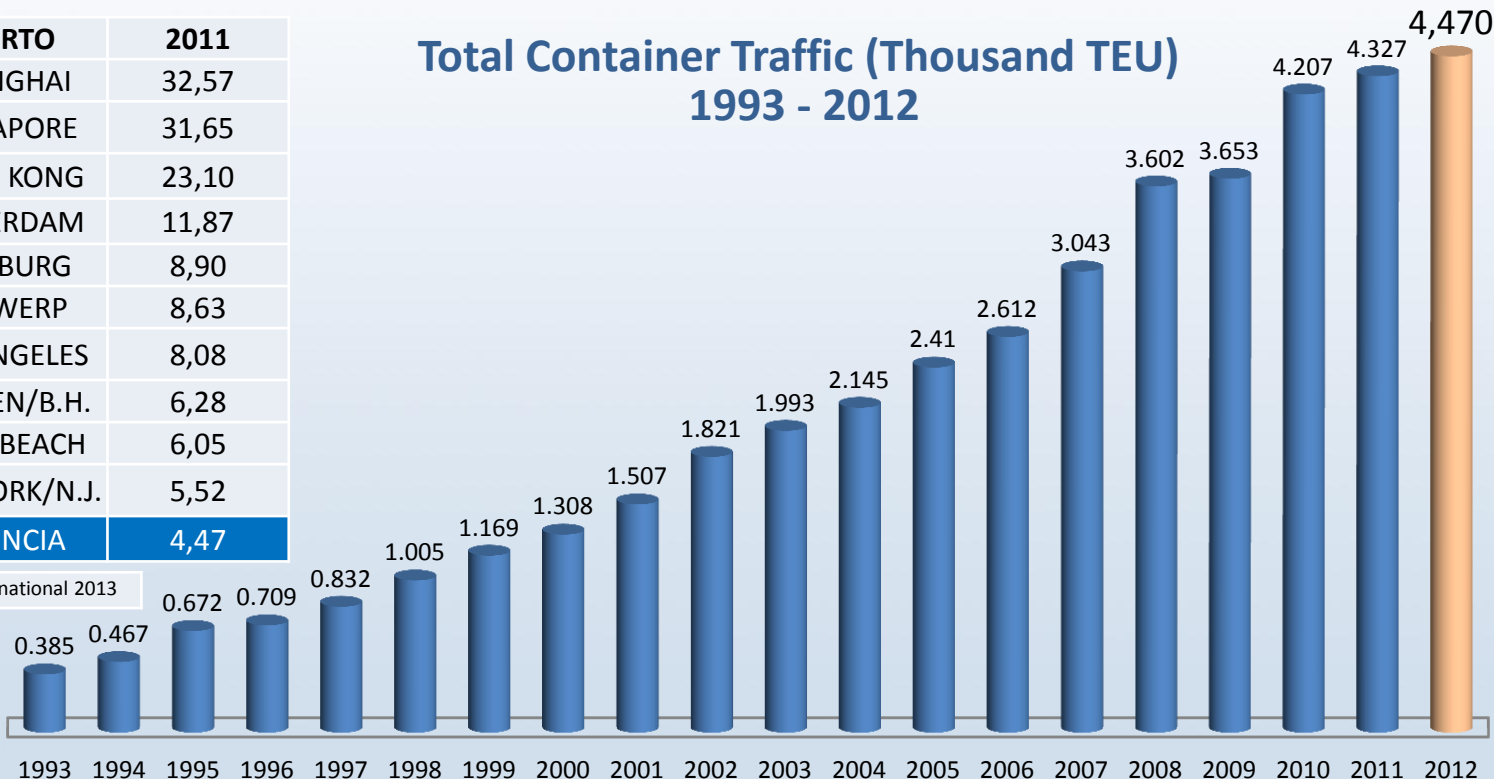




## Valenciaport: vigorous growth rate for more than 20 years

RANKING	PUERTO	2011
1	SHANGHAI	32,57
2	SINGAPORE	31,65
3	HONG KONG	23,10
11	ROTTERDAM	11,87
14	HAMBURG	8,90
15	ANTWERP	8,63
16	LOS ANGELES	8,08
20	BREMEN/B.H.	6,28
22	LONG BEACH	6,05
24	NEW YORK/N.J.	5,52
30	VALENCIA	4,47

### Total Container Traffic (Thousand TEU) 1993 - 2012



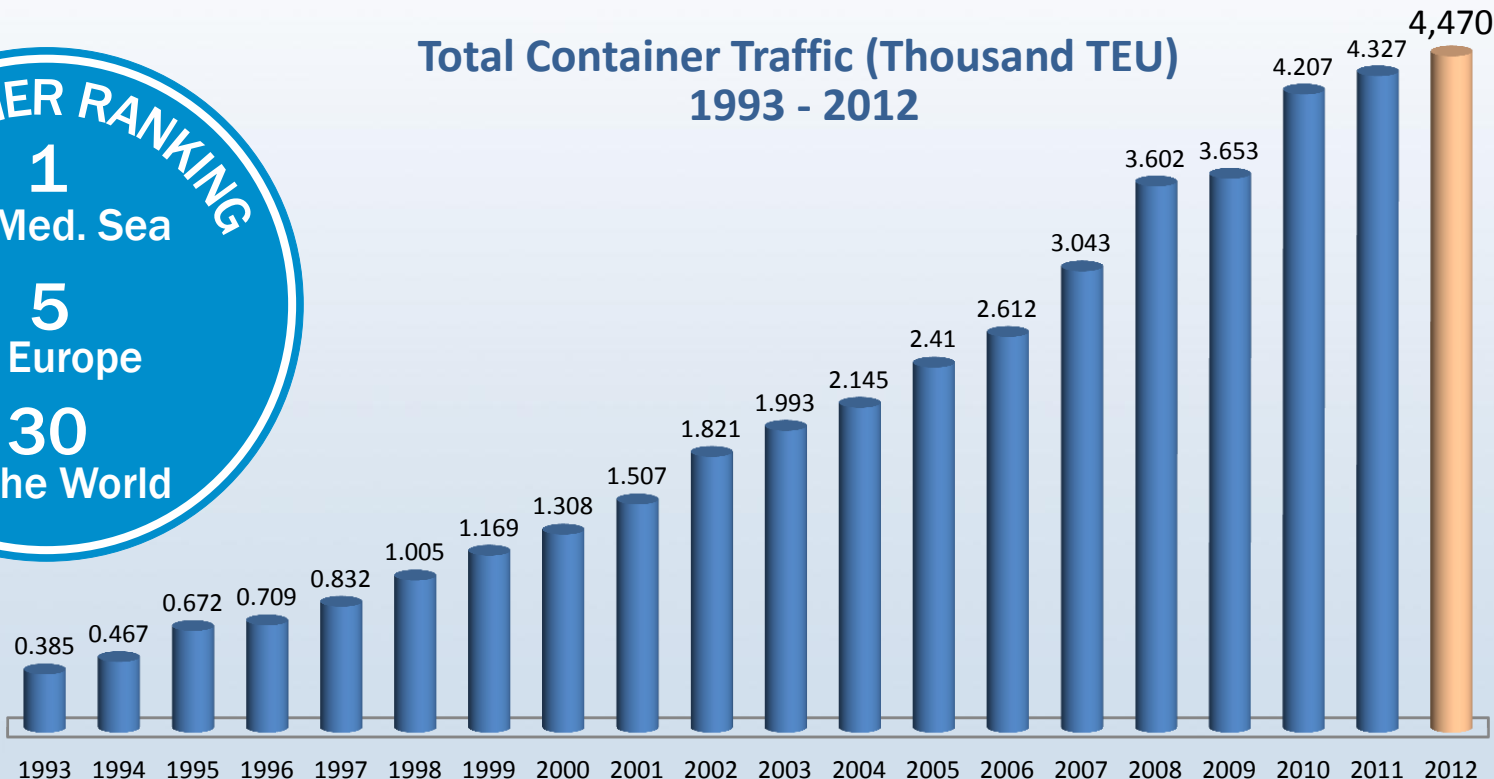
Source: Containerisation International 2013



## Valenciaport: vigorous growth rate for more than 20 years



**Total Container Traffic (Thousand TEU)  
1993 - 2012**



# Challenges for ports





## Managing Growing Complexity

<50s

Bulk or non-container cargo

1956

First sea container on board

70s – 80s

Global container standardization

1996

6,000 TEU vessels

2006

14,000 TEU vessels

2013

18,000 TEU vessels

### Ports in the first half of XXth century



Container:  
the “catalyst” to  
change



### Ports in XXIst century

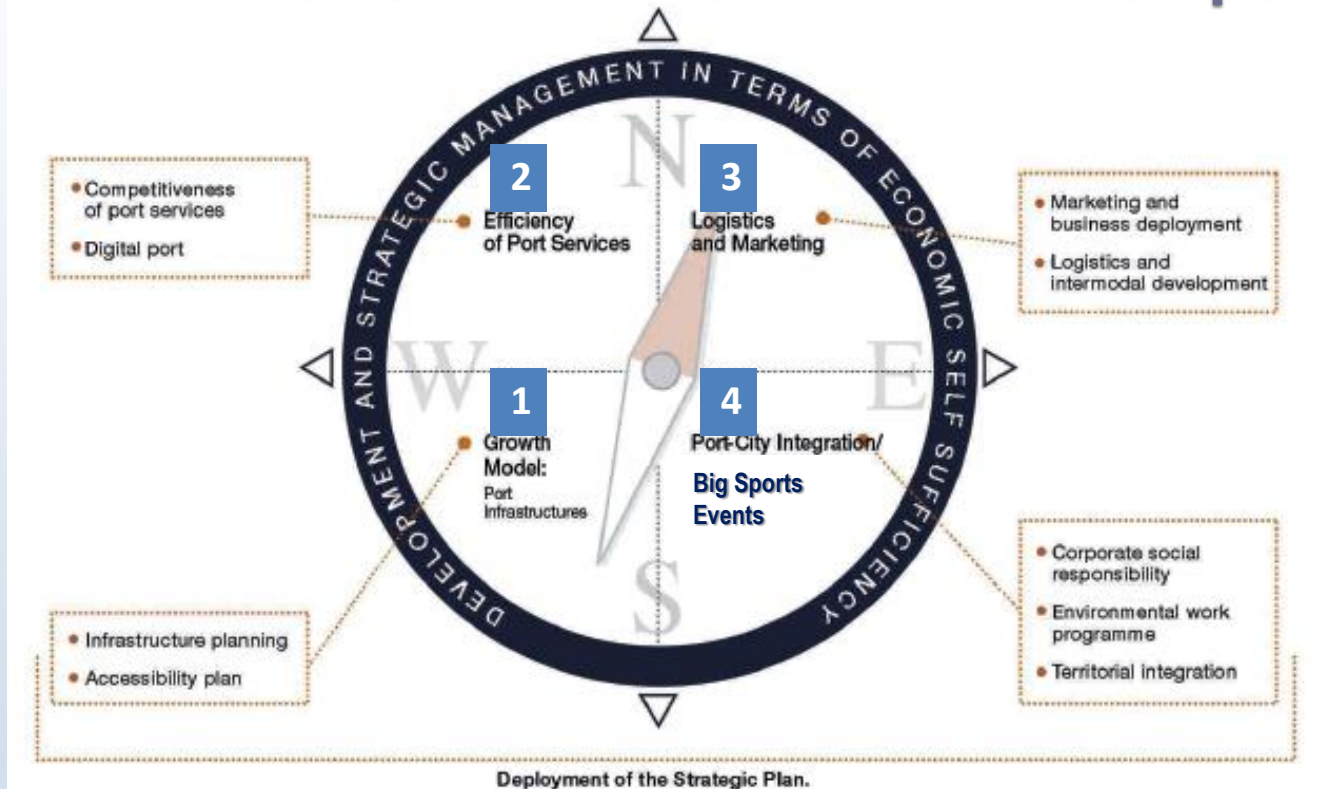


- Multipurpose Terminals
- Inefficient Operation
- High use of HR
- Large Transit Time
- Low Security

- Specialized Terminals
- High tech. Operation
- Less use of HR
- Shorter Transit Times
- High Security



# PORT MISSION: to contribute to hinterland competitiveness



## Focus on 4 Strategic Axes





Year 2002  
5000 TEU vessel  
MSC Carolina



Year 2012  
14000 TEU vessel  
MSC Melatilde



## Valenciaport in 2002:

- 7068 Vessel calls
- 96.4M Vessel G.T.
- 1982 Container vessel calls
- 1.8M TEUs
- 1.35M I/E TEUs
- 900 000 Road gate operations
- 908 TEUs / Vessel
- 8 day, average time stay for import containers in port



## Valenciaport in 2012:

- 6935 Vessel Calls
- 206.8M Vessel G.T.
- 3146 Container vessel calls
- 4.47M TEUs
- 2.1M I/E TEUs
- 1.7 M Road Gate operations
- 1421 TEUs / Vessel
- 2 days, average time stay for import containers in port





## Port Community System

The need to manage complexity 



## Target

### (Users/Customers)

- Port Operators
- Authorities:
  - Port Auth.
  - Customs
  - Harbour Master
  - Coast Guard
  - Immigration
  - Sanitary Inspection
  - ...
- Shipping Lines
- Line Agents
- NVOCC
- CN Depots
- Road /Rail / River Operators
- Forwarders
- Logistic Operators
- Inland Terminals
- Customs Brokers
- Shippers

## Business Model

- Fully Private

- Mixed

- Local / Port Authorities

- National Authorities

## PCS: What does it mean??????

## Operation Model

- Fully Private

- Mixed

- Public Authorities

## Services

- Extension of TOS

- B2G / Single Window

- Wide Range: B2B, B2G, G2G







Referring to **Ports** we can say:

**“Technology is nothing without improving efficiency”**

We'll try to understand what a PCS is and what we've been doing in Valenciaport:

- The **Port Community** as a whole
- **Vessel** Operation
- **Cargo** Loading / Unloading
- Container **Gate In/Out**
- **Security & Control**: Customs and other authorities

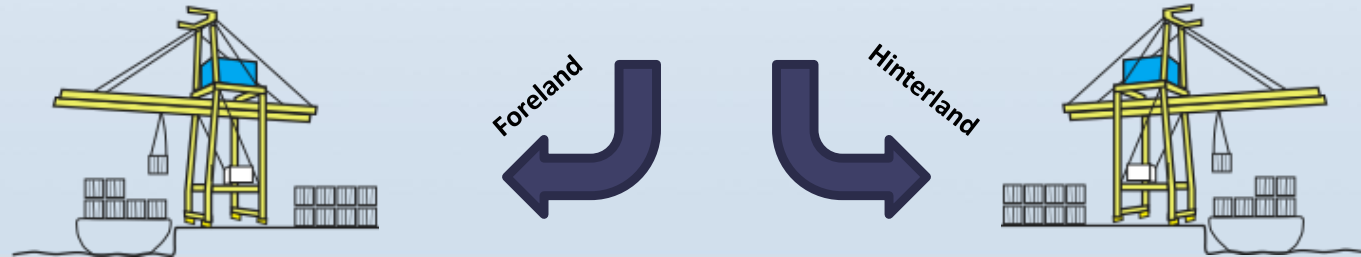


**valenciaport**  **pcs.net**  
Port Community System

All the **Port Community** at the same **Virtual Table**



**valenciaport**  
Autoridad Portuaria de Valencia



## Port Community ITC Integration from Local to Global helps it grow to a Port Cluster



## Efficiency of Port Services

### 1st Phase: Isolated Port

#### Target:

- To automate internal procedures
  - Internal Information Systems

#### Technology:

- Voice services
- Documentary services
- Data services

### 2nd Phase: Communicated Port

#### Target:

- To set connections with port agents for key trading procedures and implementing Single Windows
  - Cargo Manifest
  - Customs Declarations
  - Vessel call request & authorization
  - Dangerous Goods

#### Technology:

- EDI

### 3rd Phase: Port Community

#### Target:

- Creating communities, both at landside (with inland carriers) & at seaside (sea carriers)
  - Port Community System
  - IT Operations own company
  - Seal of Quality Guarantee

#### Technology:

- Internet technology
- Integration with Web / RFID technology

### 4th Phase:

### A Port Community worldwide communicated

#### Target:

- To increase effectiveness by means of operations automation in a paperless procedures.
- To modernize logistic management
- To increase communication by means of a total integration with external agents.
- To boost integration connecting Maritime - Port - Landside operations and improving collaboration within Port Community
- Strengthen ties with partner ports.

#### Technology:

- Microsoft .NET Solutions
- SOA Architecture
- RFID / OCR Solutions
- XML based

Infostructure Services



Using the same Integrated  
ICT Environment...

Speaking the same data  
language...

the Port Community  
System

## Mar / Sea

salidas y llegadas  
*schedules*

reservas de carga  
*bookings*

instrucciones  
de embarque  
*shipping  
instructions*

## Puerto / Port

escalas  
mercancías  
peligrosas

*stopovers  
dangerous  
goods*

declaración  
mercancía  
información  
aduanas

*goods  
declarations  
customs  
informations*

instrucciones  
a terminales

*instructions  
to terminals*

## Tierra / Land

transporte  
terrestre  
*inland  
transport*

ferrocarril  
*railway*

Seguimiento integral / *integral track and trace*

Informes y monitorización de calidad / *quality monitoring and reporting*

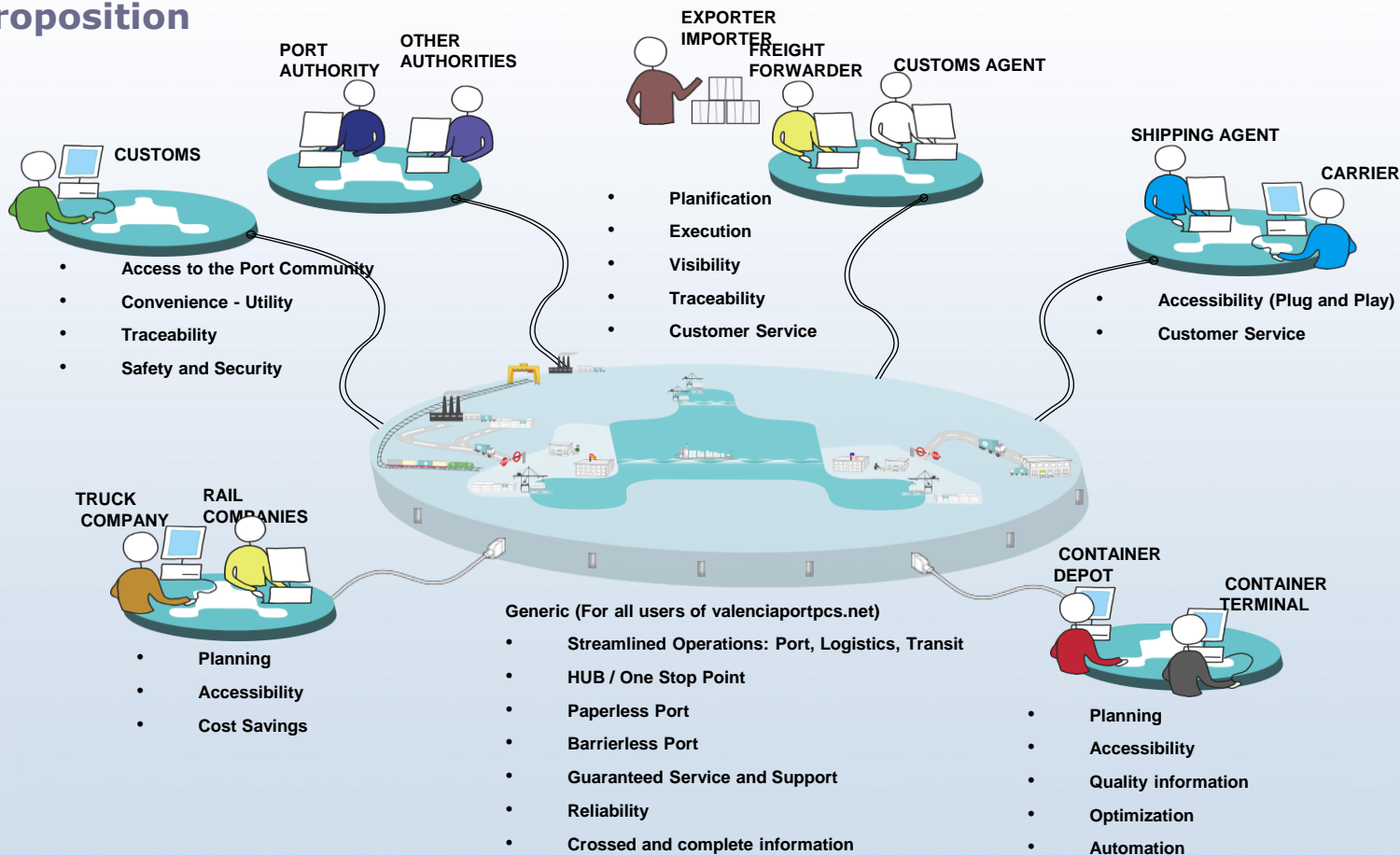


# Valenciaportpcs.net

## Adding Value to the port



## Value Proposition





## Some valenciaportpcs.net figures in year 2012

Companies working in  
valenciaportpcs.net

475

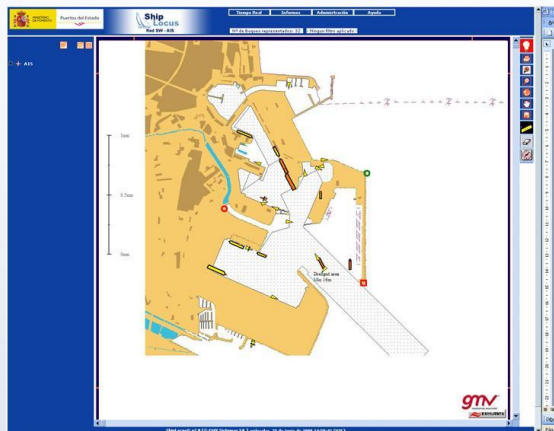
Shipping Agents	70
Freight Forwarders	148
Road & Rail Carriers	280
Port Terminal Operators	21
Empty Container Depots	17
Public Administrations	8

Main figures

Information transactions	30.000.000	messages
Vessel Loading / Unloading Orders	56.567	work orders
Road Gate Operations	1.122.960	container movements
DG Notifications	156.594	DG declarations
Vessel Call Management	9.700	authorizations



## Vessel Operations



*Fully Operational Vessel  
Traffic System Based on  
AIS Technology*



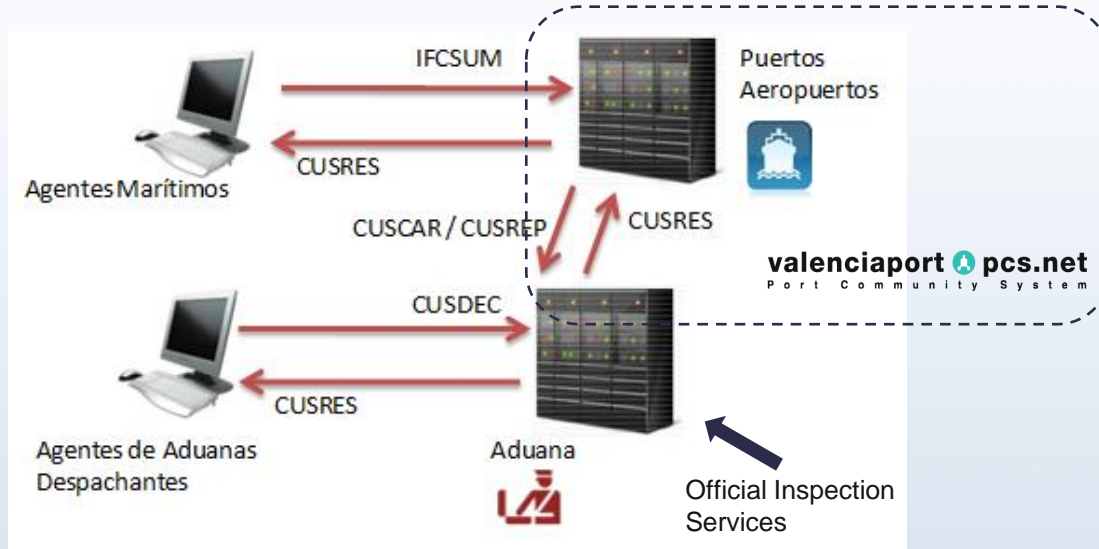
Synchronized  
Systems

### **PCS Single Window for Call Management:**

- Berth and Anchorage Request and Authorisation / Pilots, Tugs and Mooring Request
- Contact to ALL Public Administrations: Port Auth, Maritime Auth, Customs, Police, etc.
  - Used on 99,5% vessel calls
- Vessel arrival automatic information to importers



## Valenciaport & Customs Single Window



- Both Customs and Port Authority can cross cargo information from two different sources: Cargo control is more efficient

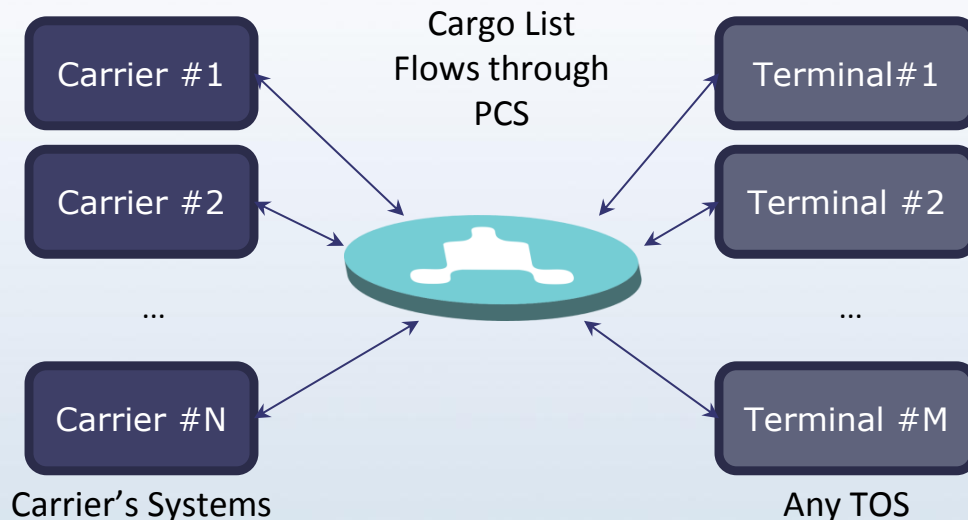
- All the Cargo declarations are made online and the reliability of information increases

### *Case of Success: Single Window for Cargo Declaration:*

- Customs and Port Authority exchange information about goods: Customs Declarations and Summary Declaration of Vessel
- 100% of the cargo information is electronic
- Customs Declarations can be made in the moment the vessel is in Port



## Container Loading/Unloading Lists



- Each **Carrier** can work with any terminal with the same link and standards: Work becomes **TOS independent**

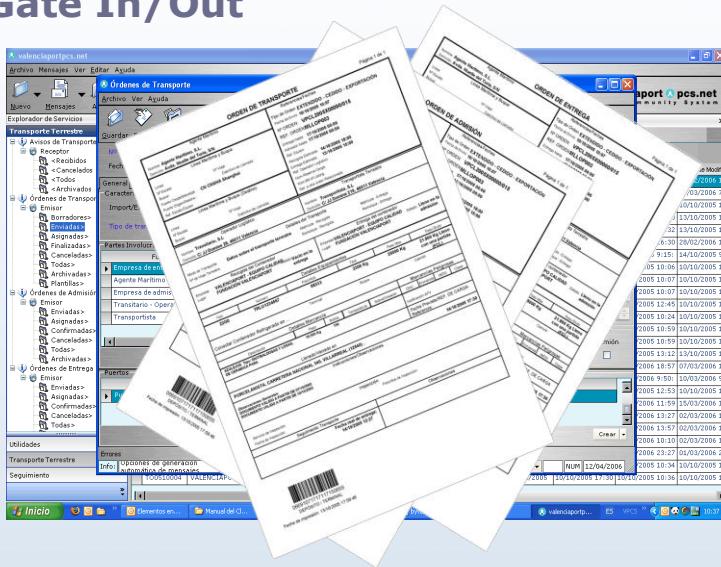
- Cargo Lists are **fed** with additional **information** to carrier and terminal ones: customs status, DG authorizations, Port Authority permission, etc.

### *Case of Success:* **Automatic Customs Check for Export:**

- Customs Police receives cargo export list in the PCS at the same time that the Container Terminal
- The list is automatically crossed with the customs declarations authorizations from Spanish Customs Central System, no paper authorisation is needed
- Checking a 5000 movements list takes only 3 minutes (4 hours before having this tool)



## Gate In/Out



- **99%** of the Gate in/out **movements** in Valencia are managed **electronically**
- The procedure covers all the inland logistic operations in a **single electronic document** including Transport Order, Release Order and Admittance Order.
- There is a **Quality agreement** to send the electronic document the day before.
- The actors involved are: Freight Forwarder, Shipping Line, Truck Company, Container Terminal and Container Depot

### *Case of Success: No Queues at the Container Terminal Gates*

- All the information is at the Terminal System before the arrival of the truck
- The average time at the gate was 5 minutes with the paper procedure, now it is only 35 seconds
- At Noatum Terminal (2 MTeus) with 4 gates have now more throughput than before with 10 gates



## Security and Control



- The Gates of the Port have control systems including: **OCR** detection of plate number and Container Number, **Radiation** Detection, **RFID** readers for preferential trucks
- 50 additional OCR plate readers are distributed along the Port
- Container terminals use their own systems of OCR and RFID
- The information is **centralized** and merged with **Black Lists** and PCS logistics information, ISPS information is available online

### *Case of Success: Pilot of unattended Import Customs control*

- OCR gates are linked with Customs through the Port Community System
- The truck gets to Gate and systems queries on trucks Black list and on Customs Authorisation
- The gate opens only in less than 3 seconds: truck doesn't stop





## Full Tracking

Information Coming From

- Carriers (INTTRA & GTNexus)
- Authorities: Port Authority, Maritime Authority, Customs, Police, etc

Kind of Information

- Documental Events in the Port
- Cargo Status in the Port and in the Foreland (INTTRA & GTNexus)

Criteria to query on

- Container Number
- Bill of Lading / Booking number
- Vessel Call ID

Get the Information Through

- PCS Web Site
- Email, RSS or SMS subscription



valenciaport pcs.net  
Port Community System

Inicio | Track & Trace | Consulta de Escalas | Subcontratación

English

User: Registered User Close Session

### Track & Trace

Search

Container #:   
Booking #:   
B/L #: MSCUD345319

Search

Extended options  
Add: Select an option

Favorites

- ★ Container # = "MSCU3692470"
- ★ B/L # = "MSCUD345319"
- ★ Port of Origin = "USMIA"
- ★ Port of Destination = "ESVLC"
- ★ Vessel = "CASABLANCA"
- ★ Place of Origin = "USNYC" and  
ETA = "04/07/2009"
- ★ Reference "FF" = "12345434"
- ★ Party "EX" = "US Exporter Inc."
- ➕ Add this Search as Favourite

My subscriptions

To view and to manage your subscriptions, as RSS, email and messaging (IFTSA events) click here.

#### Track & Trace Results for B/L # 'MSCUD345319':

ORIGIN	PORT OF LOAD	PORT OF DISCHARGE	FINAL DESTINATION
VALENCIA, ES 03/05/2009	VALENCIA, ES 08/05/2009	MIAMI, US 21/05/2009	ORLANDO, US 23/05/2009

BOOKING #: BN200905080001  
B/L #: MSCUD345319  
MSCUD3453320  
MSCUD3453321

TRANSHIPMENTS:  
PORT-OF-SPAIN, TT 15/06/2009  
CAUCEDO, DO 10/06/2009

REFERENCES:  
AAV (Carrier's Agent Document): AAV12345678  
AGB (Contract Party Reference): AGB12345678  
ANT (Consignee's Reference): ANT12345678  
FF (Freight Forwarder's Reference): FF1234567890  
SI (Shipping Instruction Reference): SI1234565678

VESEL: MSC CAROLINA  
CONTAINERS: 6

Print details | Subscribe by RSS | Subscribe by Email

#### MSCU3692470

TYPE: 20' DRY VAN

Print details | Subscribe by RSS | Subscribe by Email | Expand all Events

LOCATION	EVENT	DATE	VESSEL	VOYAGE
VALENCIA, VC, ES	Berth Departure Authorised	18/05/2009		
VALENCIA, VC, ES	Loaded	17/05/2009	MSC TOKYO	28A
VALENCIA, VC, ES	Terminal Loading Reported	17/05/2009		
VALENCIA, VC, ES	Gate In Full	15/05/2009		
VALENCIA, VC, ES	Container Gate Reported	07/05/2009		
VALENCIA, VC, ES	Transport Instruction Released	07/05/2009		
VALENCIA, VC, ES	Shipping Instruction Confirmed	31/05/2009		
VALENCIA, VC, ES	Berth Request Authorised	26/04/2009	MSC TOKYO	
VALENCIA, VC, ES	DDGG Notification Vessel	20/04/2009		
VALENCIA, VC, ES	DDGG Notification Authorised	20/04/2009		
VALENCIA, VC, ES	Booking Confirmed	18/04/2009		

#### MEDU2708780

TYPE: 20' DRY VAN

Print details | Subscribe by RSS | Subscribe by Email | Expand all Events

LOCATION	EVENT	DATE	VESSEL	VOYAGE
VALENCIA, VC, ES	Berth Departure Authorised	18/05/2009		
VALENCIA, VC, ES	Loaded	17/05/2009	MSC TOKYO	28A
VALENCIA, VC, ES	Terminal Loading Reported	17/05/2009		
VALENCIA, VC, ES	Gate In Full	15/05/2009		
VALENCIA, VC, ES	Container Gate Reported	07/05/2009		
VALENCIA, VC, ES	Transport Instruction Released	07/05/2009		
VALENCIA, VC, ES	Shipping Instruction Confirmed	31/05/2009		
VALENCIA, VC, ES	Berth Request Authorised	26/04/2009	MSC TOKYO	
VALENCIA, VC, ES	DDGG Notification Vessel	20/04/2009		
VALENCIA, VC, ES	DDGG Notification Authorised	20/04/2009		
VALENCIA, VC, ES	Booking Confirmed	18/04/2009		

## **Empowers Port Community:**

- > Managing complexity
- > Increasing efficiency
- > Enhancing competitiveness



# Thanks for your attention!



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*Los Angeles, May 9<sup>th</sup> 2013*

