

Ports (and hubs) acting now to reach the PI in the future

A Port of Barcelona's perspective



Carles Rúa
Head of strategic projects & innovation, Port de Barcelona
Director, Master executive in Supply Chain Management, BarcelontaTech

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Port de Barcelona





Port de Barcelona

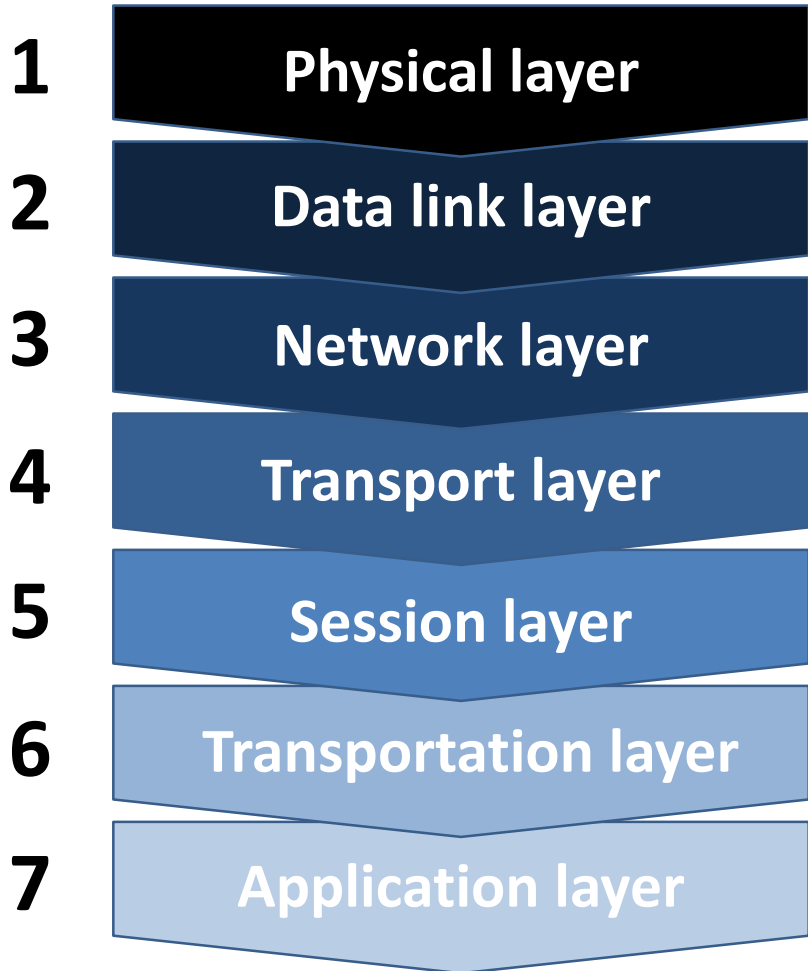




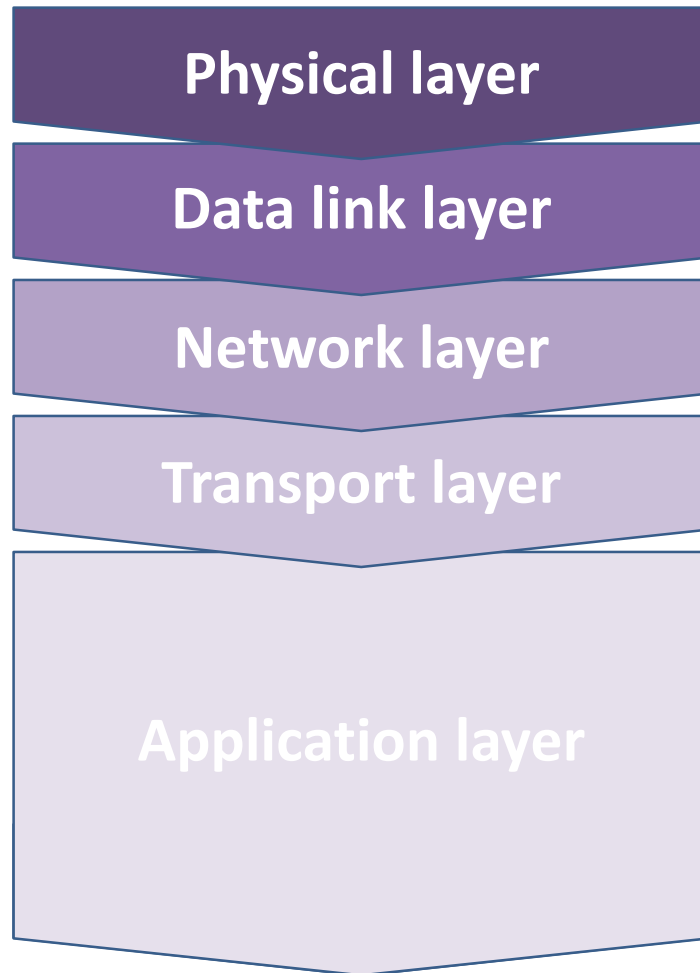
OSI, TCP/IP, OLI,...

Towards an Open Logistics Interconnection model

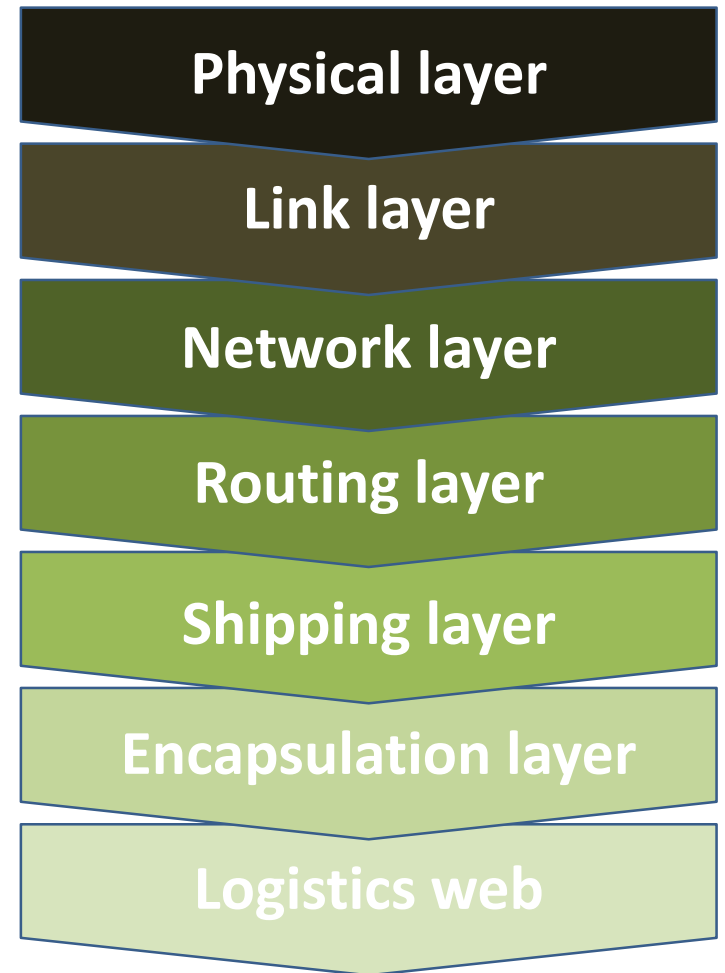
OSI model



TCP/IP model



OLI model





OSI, TCP/IP, OLI,...
Port role in OLI model

Function of ports

Reactive role for ports and hubs: technical development of the infrastructure, concessionaire control,...

Key information resources provided by ports and hubs

Service levels defined mainly by private operators, difficult role for port and public entities.



Physical elements of the PI: π -containers, vehicles, carriers, stores, sorters,...



Correction of unexpected operational events on the physical layer.



Network interconnectivity: the intermodality of π -containers



Defines efficient and reliable routes and inter-node transport.



Sets and manages the types of shipping services and its monitoring.



Transposes product decisions into π -containers decisions and monitors it.



Interface between PI and the logistic network: flows, services, stocks,...

OLI model

Physical layer

Link layer

Network layer

Routing layer

Shipping layer

Encapsulation layer

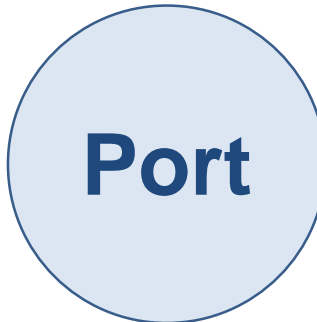
Logistics web



PORTS AS INFORMATION HUBS

Port role in the routing layer

Road Traffic Management
PCS Sensors
Customs
Sea Traffic Management
Port gates
Concession requirements
Cameras **IoT**
Rail Traffic Management
Port control center
Terminal gates



Forecasting
Schedules Efficiency
Better decisions
Information
Cost reduction
Automated decisions
Apps Synchronomodality
New business models
Improved processes
Routing



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WHAT PORTS MUST DO

First recommendation

An aerial photograph of a busy port area, likely Barcelona, showing several large cruise ships docked at piers. The ships are white with multiple decks and are surrounded by port infrastructure, including roads, buildings, and other vessels. The text 'Keep working on digitalisation' is overlaid in large white letters across the center of the image.

**Keep working
on digitalisation**



DIGITALISATION

Examples of projects

CUSTOMER

PortBCN 360

Twitter Optimization

PierNext – Innovation blog

Increase LinkedIn presence

Social media management

New Web definition

Annual facts video (multi-format)

Container 360

Port events App – pilot for SIL

Bport (LinkedIn group for clients)

Digital graphics and infographics

ORGANIZATION

Digital committee

Cybersecurity training

Training in social media

Cybersecurity best practices

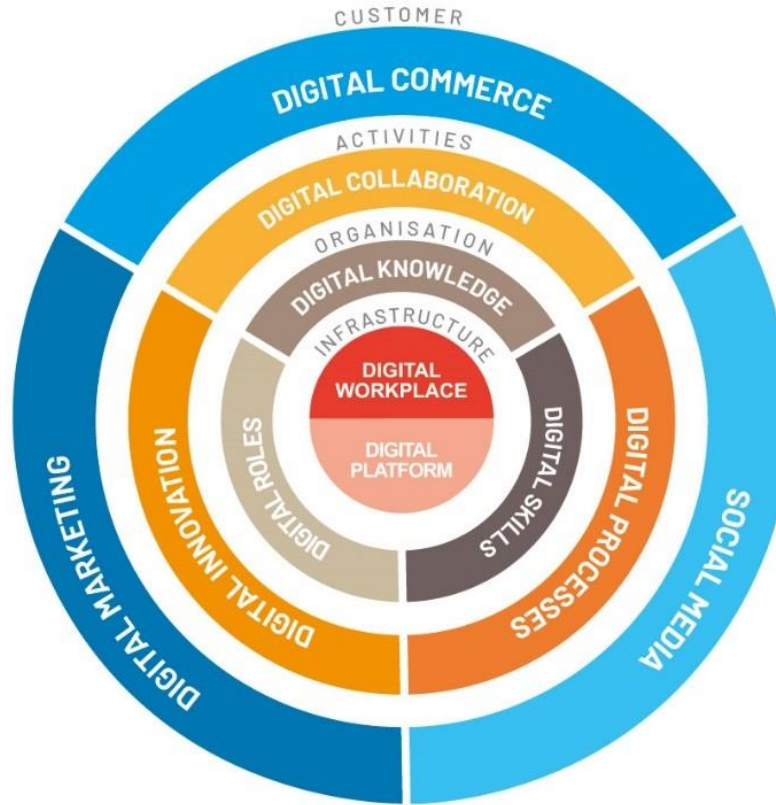
Training in Digital marketing

Port Academy

BIM training

Technical Office for BI

SmartCity participation



ACTIVITIES

Strategy and innovation model

Open Innovation

New CRM

Pilot geolocation

SmartPort model

BCN Booking System

E-contract platform (VORTAL)

SEA TRAFFIC MANAGEMENT

INFRASTRUCTURE

Video-conference equipment

Conference room equipment

iPads

Increase mobile data to 10 GBs

Cloud as infrastructure (test on PierNext)

Pilot HCP (multimedia file storage)



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WHAT PORTS MUST DO

Second recommendation



Create an innovation ecosystem



WHAT PORTS MUST DO
Innovation actions

SMART PORTS PIER'S OF THE FUTURE

SmartCatalonia Challenge
Port Challenge Barcelona
2n edition

CHAINPORT

PORTINNOVA
BARCELONA PORT HACKATHON

OpenPort
Innovation by Port de Barcelona

BARCELONA TECH CITY
Pier01

PierNext
Innovation by Port de Barcelona

Digital project

PORTS 4.0
Ports of Spain Tradetech Fund



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WHAT PORTS MUST DO

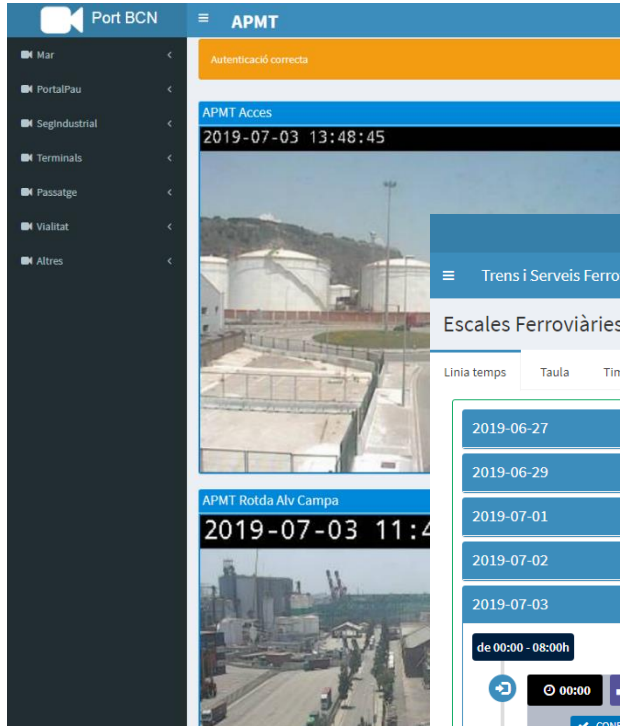
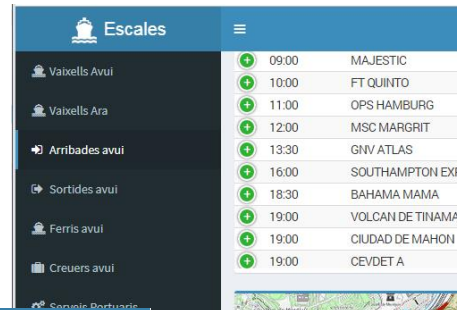
Third recommendation



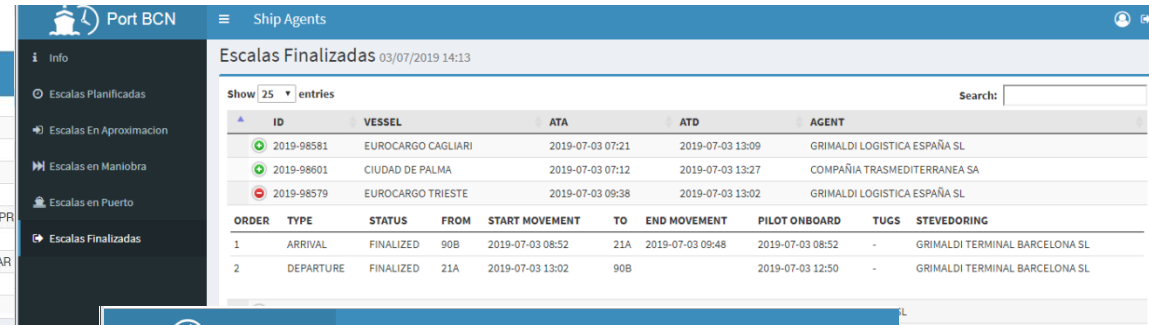
**Ready to
share**

WHAT PORTS MUST DO

Port de Barcelona's ready to share apps...

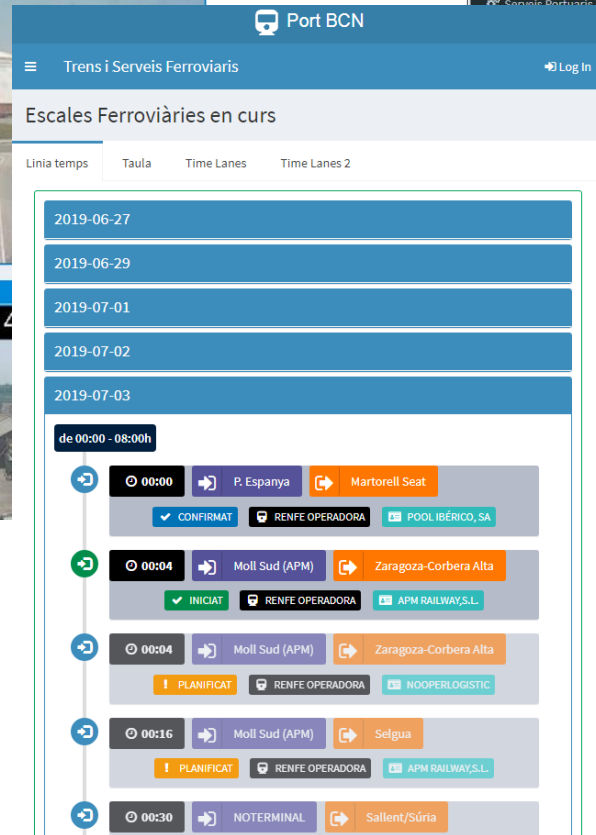



| Time | Ship Name |
|-------|-------------------|
| 09:00 | MAJESTIC |
| 10:00 | FT QUINTO |
| 11:00 | OPS HAMBURG |
| 12:00 | MSC MARGRIT |
| 13:00 | GNV ATLAS |
| 16:00 | SOUTHAMPTON EXPR |
| 18:30 | BAHAMA MAMA |
| 19:00 | VOLCAN DE TINAMAR |
| 19:00 | CIUDAD DE MAHON |
| 19:00 | CEVDETA |

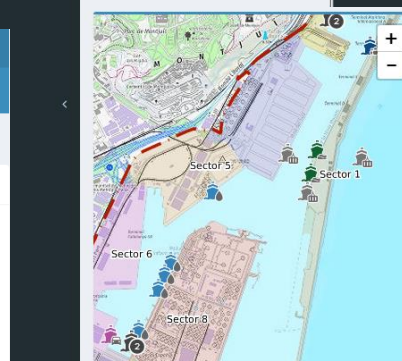


| ID | VESSEL | ATA | ATD | AGENT |
|------------|--------------------|------------------|------------------|------------------------------|
| 2019-98581 | EUROCARGO CAGLIARI | 2019-07-03 07:21 | 2019-07-03 13:09 | GRIMALDI LOGISTICA ESPAÑA SL |
| 2019-98601 | CIUDAD DE PALMA | 2019-07-03 07:12 | 2019-07-03 13:27 | COMPANIA TRASMEDITERRANEA SA |
| 2019-98579 | EUROCARGO TRIESTE | 2019-07-03 09:38 | 2019-07-03 13:02 | GRIMALDI LOGISTICA ESPAÑA SL |

| ORDER | TYPE | STATUS | FROM | START MOVEMENT | TO | END MOVEMENT | PILOT ONBOARD | TUGS | STEVEDORING |
|-------|-----------|-----------|------|------------------|-----|------------------|------------------|------|--------------------------------|
| 1 | ARRIVAL | FINALIZED | 90B | 2019-07-03 08:52 | 21A | 2019-07-03 09:48 | 2019-07-03 08:52 | - | GRIMALDI TERMINAL BARCELONA SL |
| 2 | DEPARTURE | FINALIZED | 21A | 2019-07-03 13:02 | 90B | | 2019-07-03 12:50 | - | GRIMALDI TERMINAL BARCELONA SL |

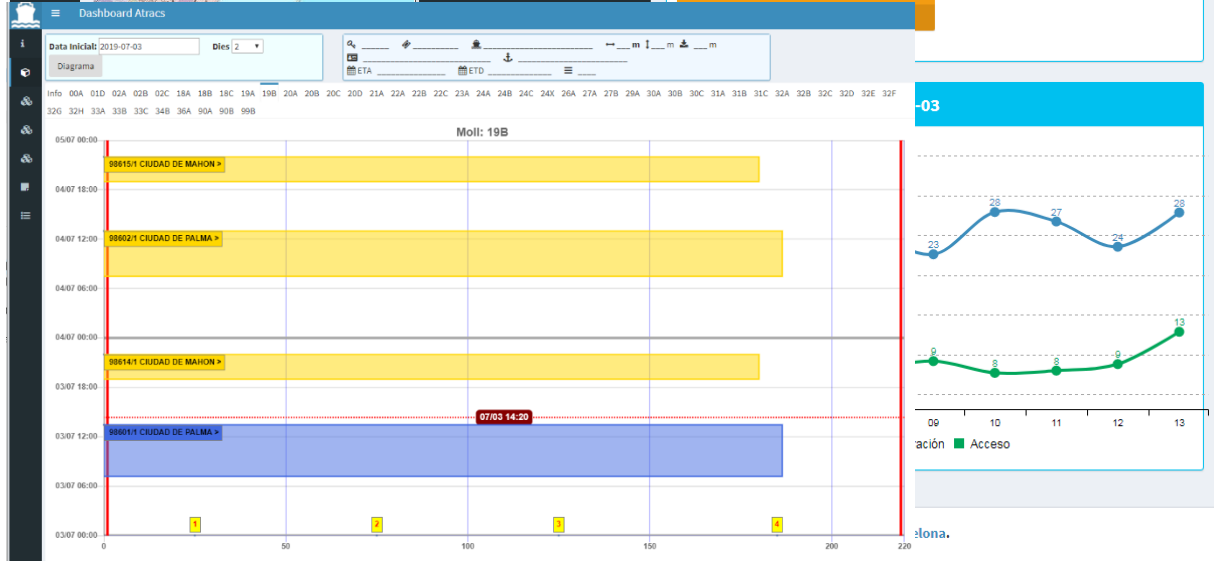


| Time | Origin | Destination | Status | Operator |
|-------|----------------|-----------------------|------------|------------------|
| 00:00 | P. Espanya | Martorell Seat | CONFIRMAT | RENFE OPERADORA |
| 00:04 | Moll Sud (APM) | Zaragoza-Corbera Alta | INICIAT | RENFE OPERADORA |
| 00:04 | Moll Sud (APM) | Zaragoza-Corbera Alta | PLANIFICAT | HOOPERLOGISTIC |
| 00:16 | Moll Sud (APM) | Selgua | PLANIFICAT | RENFE OPERADORA |
| 00:30 | NOTERMINAL | Sallent/Súria | | APM RAILWAY,S.L. |




APMT: Tiempo de Acceso del día 2019-07-03 a les 13:40-14:00

- 10 minutos: acceso a terminal
- 29 minutos: tiempo operación dentro terminal
- 39 minutos: Total



Dashboard Atracs

Data inclòs: 2019-07-03, Dies: 2

Moll: 19B

Arrivals: 086151 CIUDAD DE MAHON, 986021 CIUDAD DE PALMA, 986141 CIUDAD DE MAHON, 986011 CIUDAD DE PALMA

Line Chart: Acceso (Access) over time (00 to 13). Values: 23, 26, 27, 24, 28.



WHY?

Our mission as a port



To contribute to the competitiveness of our hinterland by providing efficient services responding to its needs for maritime transport, land transport and logistic services

Thank you

www.portdebarcelona.cat