IPIC 2019

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

## A Port of Barcelona's perspective

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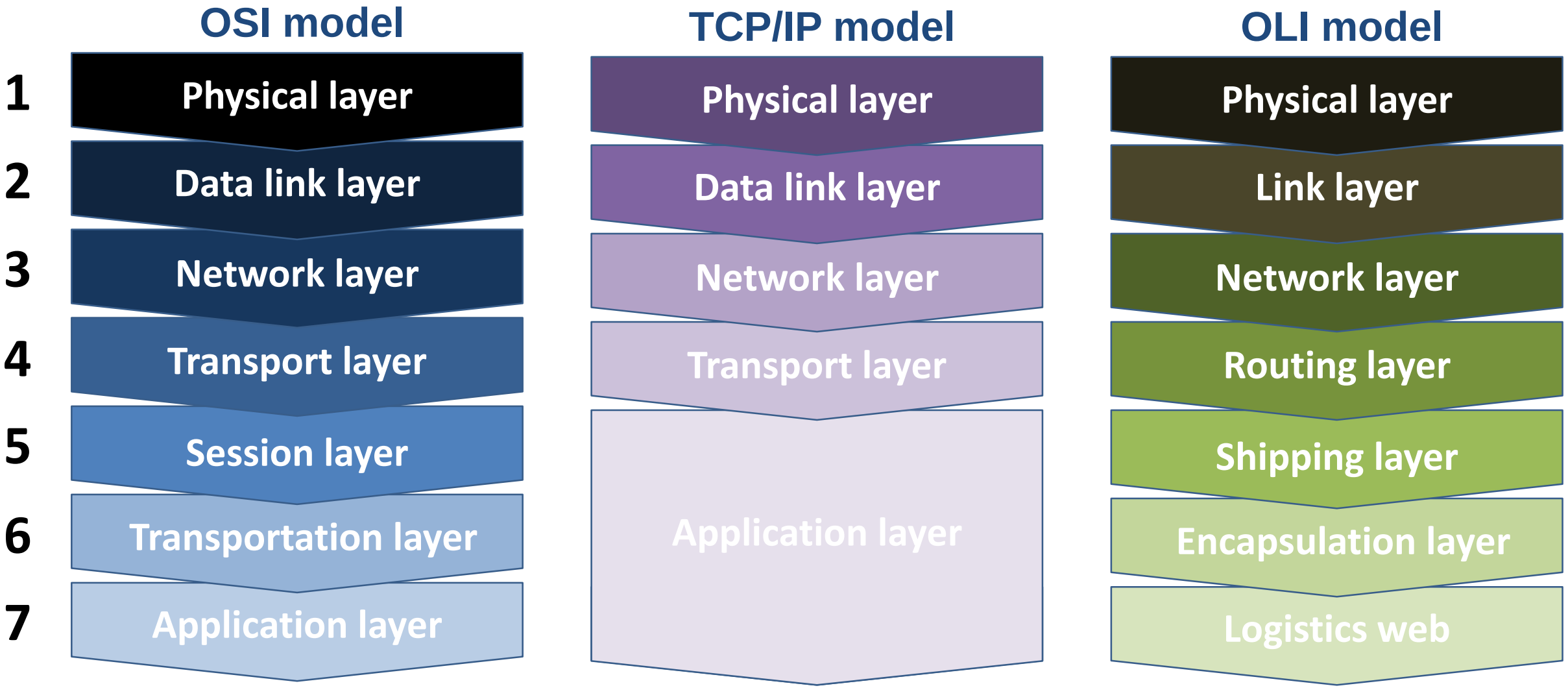
## OSI, TCP/IP, OLI,…

Towards an Open Logistics Interconnection model




Source: Adapted from B. Montreuil, E.Ballot, F. Fontane; “An Open Logistics Interconnection model for the Physical Internet”. IFAC Proceedings Volumes (2012)

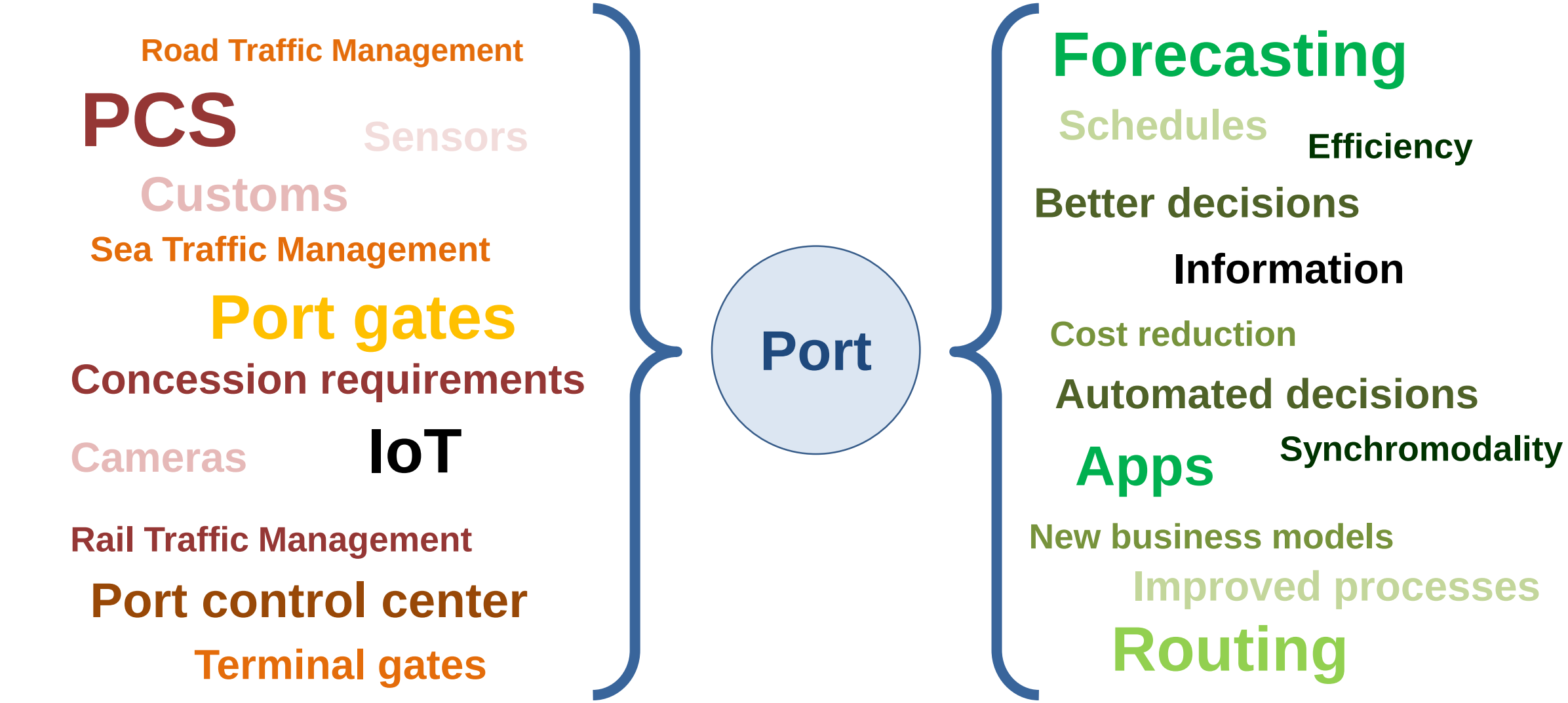
## OSI, TCP/IP, OLI,…

Port role in OLI model

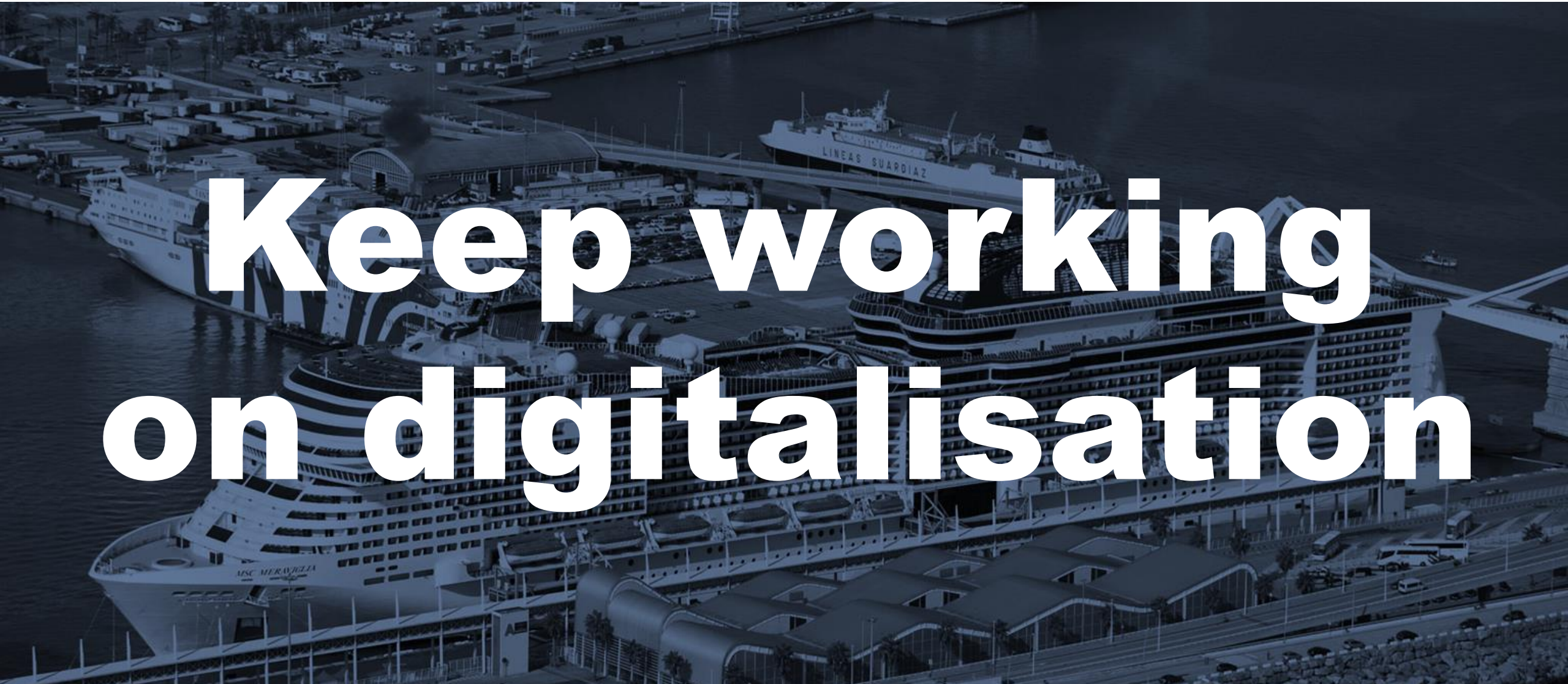
| Function of ports | | OLI model |
|---|---|---|
| Reactive role for ports and hubs: technical development of the infrastructure, concessionaire control,… | Physical elements of the PI: π -containers, vehicles, carriers, stores, sorters,,… | Physical layer |
| | Correction of unexpected operational events on the physical layer. | Link layer |
| | Network interconnectivity: the intermodality of π-containers | Network layer |
| Key information resources provided by ports and hubs | Defines efficient and reliable routes and inter-node transport. | Routing layer |
| Service levels defined mainly by private operators, difficult rol for port and public entities. | Sets and manages the types of shipping services and its monitoring. | Shipping layer |
| | Transposes product decisions into π -containers decisions and monitors it. | Encapsulation layer |
| | Interface between PI and the logistic network: flows, services, stocks,… | Logistics web |

## PORTS AS INFORMATION HUBS

Port role in the routing layer



## WHAT PORTS MUST DO
First recommendation




# Keep working on digitalisation

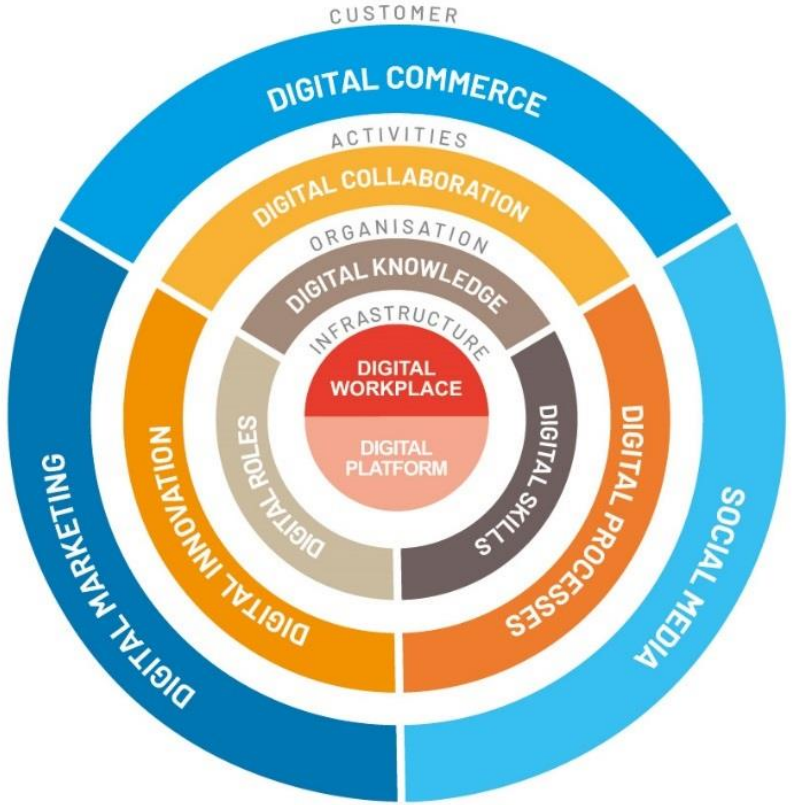
# DIGITALISATION
## Examples of projects

### 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 geolocalition
**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)**

**WHAT PORTS MUST DO**

Second recommendation

# Create an innovation ecosystem

## WHAT PORTS MUST DO
Innovation actions

Port of Antwerp · HPA Hamburg Port Authority · PORT MONTRÉAL · SMART PORTS PIERS OF THE FUTURE · Port de Barcelona · THE PORT OF LOS ANGELES · Port of Rotterdam

SmartCatalonia Challenge
**Port Challenge Barcelona**
2n edition

**CHAINPORT**

**PORTINNOVA**
BARCELONA PORT HACKATHON

# OpenPort
Innovation by Port de Barcelona

BARCELONA TECH CITY · Pier01 BARCELONA TECH CITY

# PierNext
Innovation by Port de Barcelona

**Digital project**

**PORTS 4.0**
Ports of Spain **Tradetech** Fund

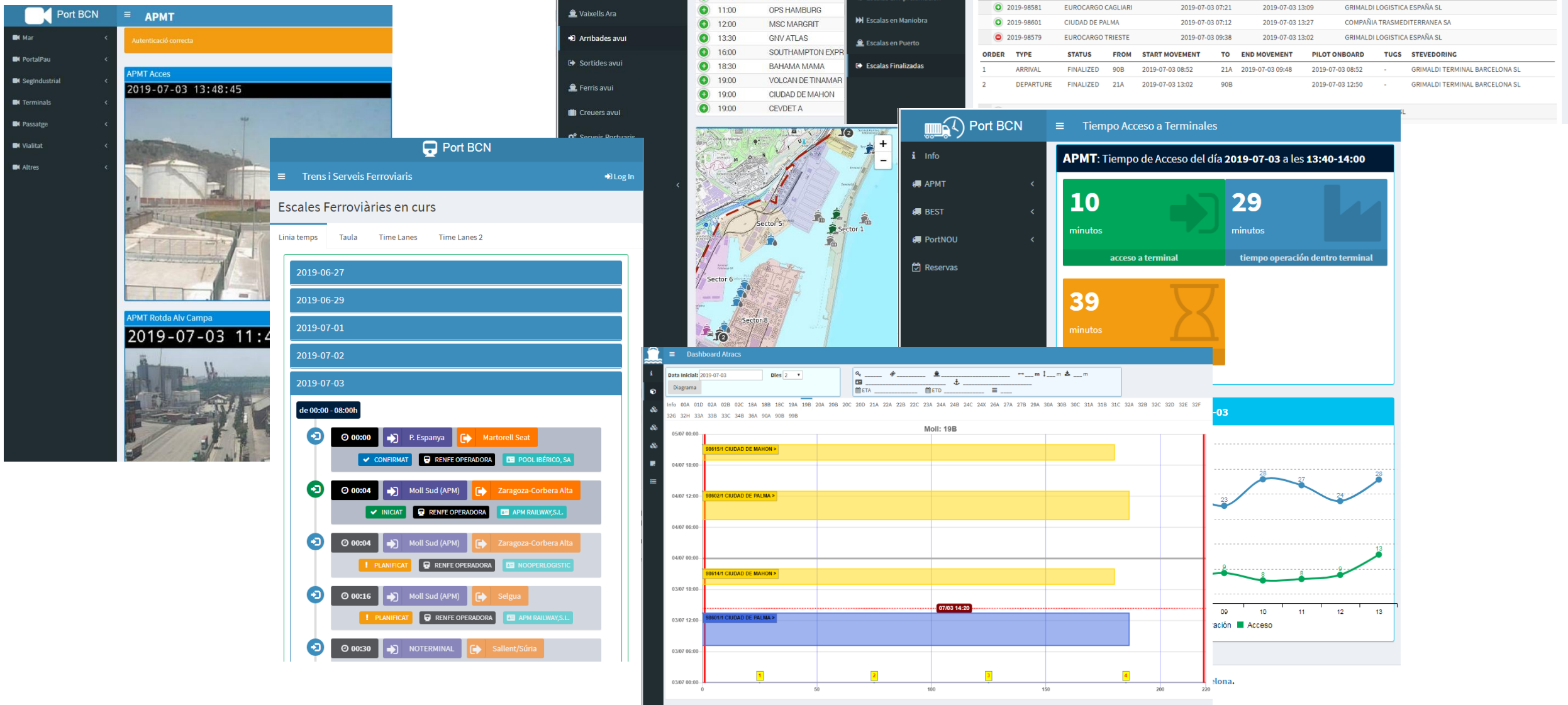
## WHAT PORTS MUST DO

Third recommendation

# Ready to share

# WHAT PORTS MUST DO

## Port de Barcelona's ready to share apps…



## 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**

Port de Barcelona

# Thank you

www.portdebarcelona.cat

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