IPIC 2019

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

Port de Barcelona

9 July 2019

Port de Barcelona

OSI, TCP/IP, OLI,…

Towards an Open Logistics Interconnection model

	OSI model	TCP/IP model	OLI model
1	Physical layer	Physical layer	Physical layer
2	Data link layer	Data link layer	Link layer
3	Network layer	Network layer	Network layer
4	Transport layer	Transport layer	Routing layer
5	Session layer	Application layer	Shipping layer
6	Transportation layer		Encapsulation layer
7	Application layer		Logistics web

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

Port de Barcelo

DIGITALISATION

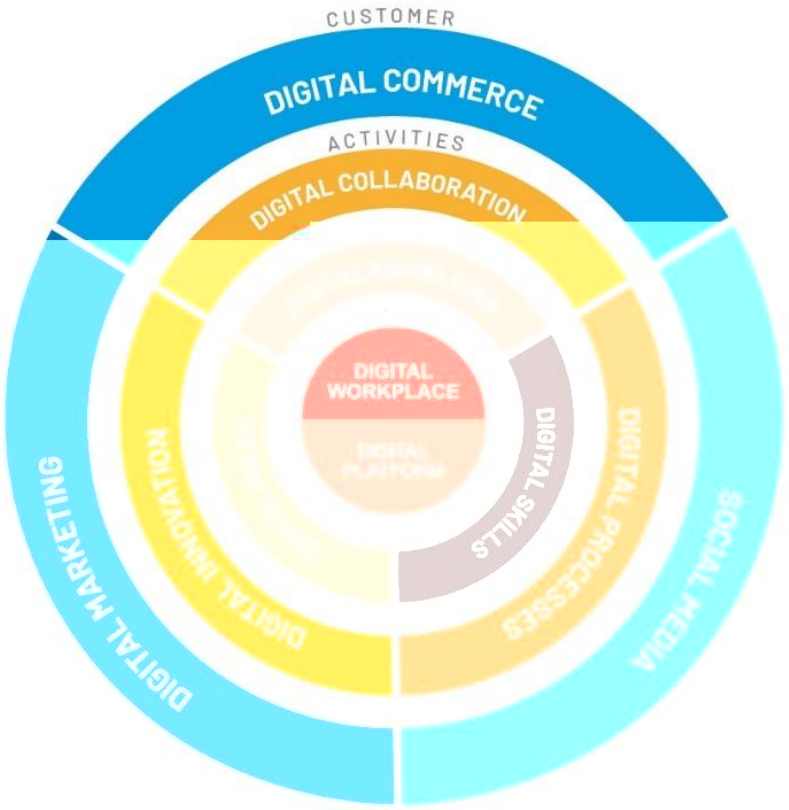
Examples of projects

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

Innovation actions

Port of Antwerp
HPA Hamburg Port Authority
PORT MONTRĒAL
SMART PORTS
PIERS OF THE FUTURE
Port de Barcelona
LA 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

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

IPIC 2019