



13th ITS EUROPEAN CONGRESS

FULFILLING ITS PROMISES

Brainport Eindhoven, the Netherlands | 3-6 June 2019

Evoluon Congress Center
Helmond Automotive Campus

Port Multimodal Inland mode of transportation predictor & prescriptor

Stefano Persi, CEO Mosaic Factor

Agenda

- Mosaic
- Ports of the Future **CHALLENGES**
- Corealis expected **IMPACT**
- Corealis **LIVING LABS**
- **MULTIMODALITY** operations issues
- **Cargo Flow Optimizer**



This project has received funding from the European Union's horizon 2020 research and innovation programme under grant agreement No. 768994



Mosaic Factor is specialized in Big Data and Artificial Intelligence for mobility and logistics. **Know the context, understand the problem and familiarize with the data to find the right answers and extract real value.**

FORECASTING

SIMULATION

OPTIMISATION



Ports of the Future CHALLENGES

1

Volumes of cargo

increase while Ports arrive in a shrinking number of vessels

2

Ports operators need to comply with **increasingly stricter environmental regulations** and societal views for sustainability

3

Sustainable land-use strategy in and around the port

4

Strategic **transition** to new, **service-based, management models** to improve capacity and efficiency

5

Lack of information of multimodality options to have access to it, as customers, independently of the total volume to be transported

Corealis expected **IMPACT**

- Lower environmental impact of port operations, to achieve significant **reduction of the CO₂ port emissions and noise**



- **Improve the terminal operations efficiency**
- **Maximise the use of the infrastructure and equipment**
- **Decrease operational and external costs** such as congestion, waiting and idle times
- Embrace **circular economy** models in port **strategy** and operations



- Establish **efficient connections with hinterland transport network** and promote the use of the **most energy-efficient transport modes**



Corealis LIVING LABS



Antwerp port (BE)



HaminaKotka port (FIN)



Livorno port (IT)



Piraeus port (GR)



Valencia port (ES)

MULTIMODALITY operations issues



Antwerp port (BE)

- One of the **biggest ports in Europe** (88 km from the North Sea)
- The city of **Antwerp**, with more than half a million inhabitants is next to the port
- The **roads** that are going from and to the port are **saturated with trucks** involving Antwerp as the most traffic saturated urban area in Belgium
- Multimodality options: **rail and road** mode but also **barges** to transport the goods inland

MULTIMODALITY operations issues



Obtain an **improved multimodal Split of the containers** that arrive at the terminal and are needed to be sent to final destination

Cargo Flow Optimizer

To improve organization of containers placed on port's terminal

To predict the best available inland transportation to achieve final destination

To propose new shared services related to inland transportation



Cargo Flow Optimizer

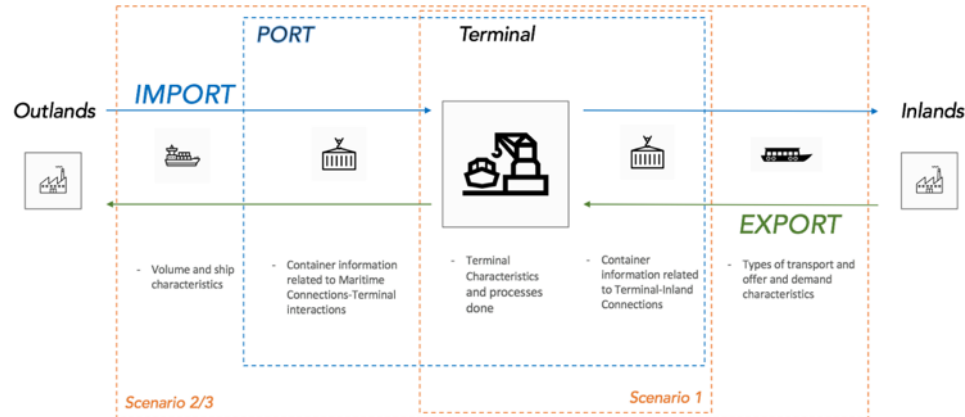
Promote **Data Sharing**
between different key
Stakeholders



Obtain the data to **develop a
predictive and prescriptive
model** based on real and
historical data



Stakeholders to choose the
**best option to optimize the
supply chain**





**Massification of demand
to shift to rail**



Cooperation and Data Sharing between Port
Authorities, Terminal Operators and
Transportation operators

Understand what data
has to say by
understanding the
context first.

Stefano Persi

CEO at MOSAIC FACTOR

stefano.persi@mosaicfactor.com

www.mosaicfactor.com

 @mosaicfactor