ICONET INTERACTIVE WORKSHOP

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Agenda

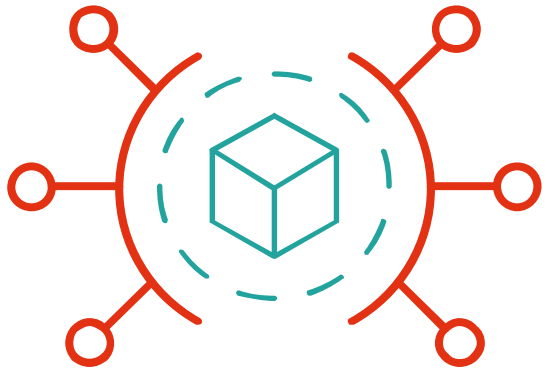
01 **Project description**

02 **GPICS presentation**

03 **Simulation framework**

04 **Interactive workshop**

ICONET – Meeting ID



ICONET Introduction

ICONET Factsheet

- Project start: 01/09/2018
- Duration: 30 months
- Budget: 3,078,698 EUR
- 16 partners
- GA no: 769119
- Coordinator: Inlecom
- Website: www.iconetproject.eu

Consortium

1. INLECOM GROUP **ILS** Group Belgium
2. ZORGIOS IOANNIS **CLMS** Greece
3. CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE TELECOMUNICAZIONICNIT Italy
4. EBOS TECHNOLOGIES LIMITED **eBOS** Cyprus
5. ELUPEG BV **ELU** Netherlands
6. EUROPEAN COUNCIL OF TRANSPORT USERS (EUROPEAN SHIPPERS COUNCIL) **ESC** Belgium
7. IBM IRELAND LIMITED **IBM** Ireland
8. ELECTRONIC GERMAN LINK GMBH **EGL** Germany
9. UNION INTERNATIONALE DES SOCIETES DE TRANSPORT COMBINE RAIL-ROUTE SCRL **UIRR** Belgium
10. NEW GENERATION SENSORS SRL **NGS** Italy
11. PROCTER & GAMBLE SERVICES COMPANY NV **PGBS** Belgium
12. SONAE CENTER SERVICOS II S.A. **SON** Portugal
13. STOCKBOOKING **SB** France
14. INSTITUTO TECNOLOGICO DE ARAGON **ITAINNOVA** Spain
15. HAVENBEDRIJF ANTWERPEN **PoA** Belgium
16. VLTN GCV **VLTN** Belgium

ICONET Vision

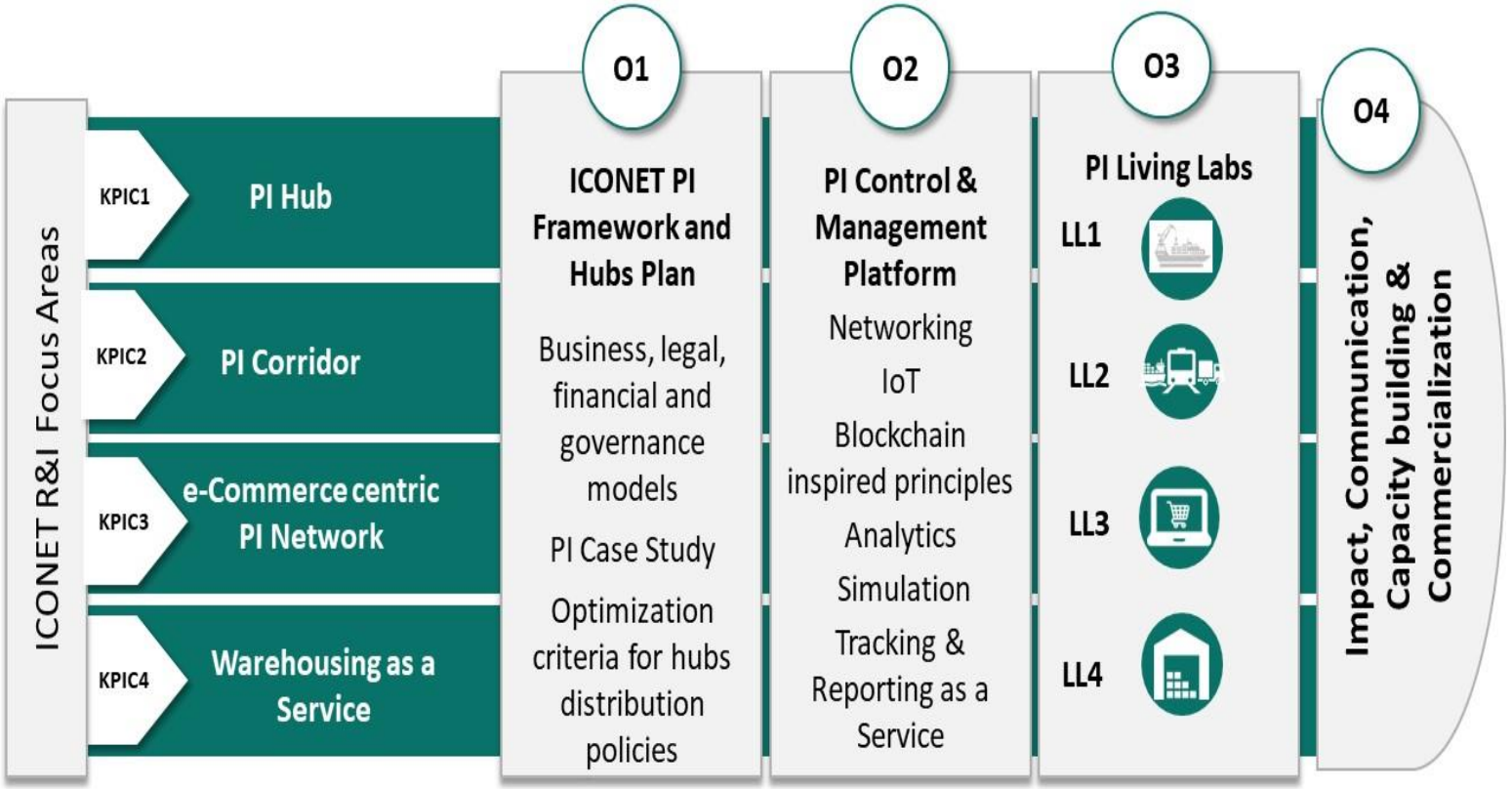
Explore and create innovative **PI network services that optimise cargo flows** against throughput, cost and environmental performance, based on Governance policies and SLAs, constantly and fully aware of network operations and status

New business and governance models and enablers for the PI operations, addressing the barriers for collaboration and maturity issues

Generic PI Case Study and **Simulation models** for PI network design, addressing decision support with respect to the number and placement of PI nodes

PI Hyperconnectivity **Open Reference Architecture** and **Platform** for enabling the required connectivity at the digital level

ICONET Objectives



KPIC = Key PI Capability O = Objective

Establish a **"cloud-based PI framework and platform"**, in a pathway that integrates PI-driven capabilities, by means of an incremental and verifiable approach that exploits progress in digital and physical interconnectivity through open and public APIs

PI Concepts / Roles

- The main Generic PI Case Study (GPICS) elements

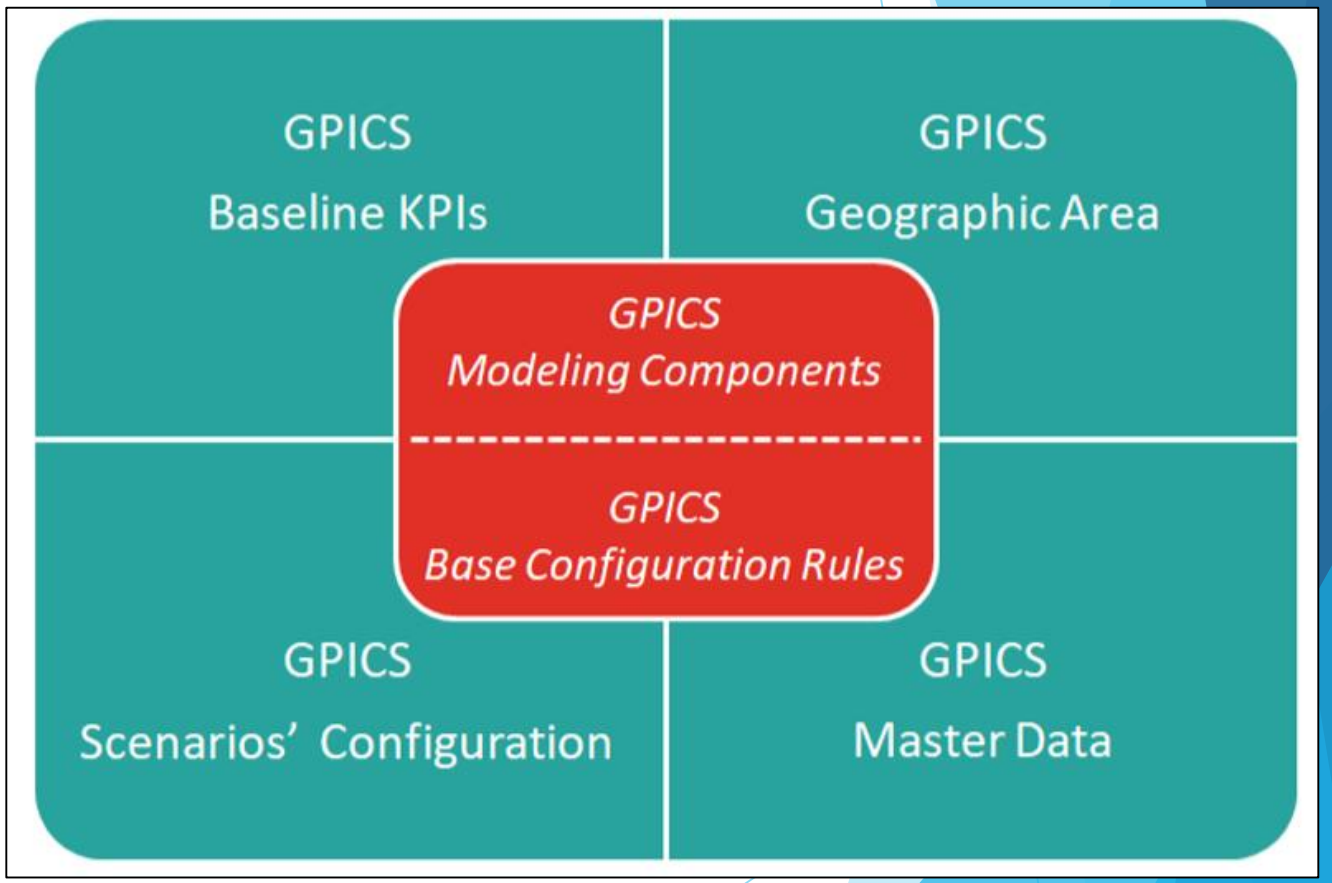
GPIC structure	
GPICS Container	Unit load manipulated, stored, moved and routed through the systems and infrastructures of the Physical Internet.
GPICS Node/Hub	Location specifically designed to carry out logistics and transport processes and activities on PI containers.
GPICS Mover/Transport	Moving element used to carry PI containers through the PI nodes/hubs.
GPICS Corridor	Connection between two PI Nodes/Hubs directly connected.
GPICS Route	Set of GPICS corridors which connect a GPICS Node origin and a GPICS Node destination.
GPICS Network	Set of containers, nodes, movers/transport, corridors, and routes.
GPICS Roles	Actors/Agents involved in the operation of the PI Network.

PI Concepts / Roles

Sender	Receiver	Transport (LSP)	Coordinator
• Creates a PI Order • Activates the flow • Initial information	• Receives the order • Delivery time window	• Responsibility of moving containers • Handling operations	• Communication capabilities. • Overview of the state of the system

Generic PI Case Study (GPICS)

- ICONET's Generic PI Case Study (GPICS) is the project's methodology to build a generic PI scenario.
- GPICS has 6 main components:
  - Geographic area
  - Master data
  - Scenarios' configuration
  - Baseline KPI
  - Modeling components
  - Base Configuration Rules

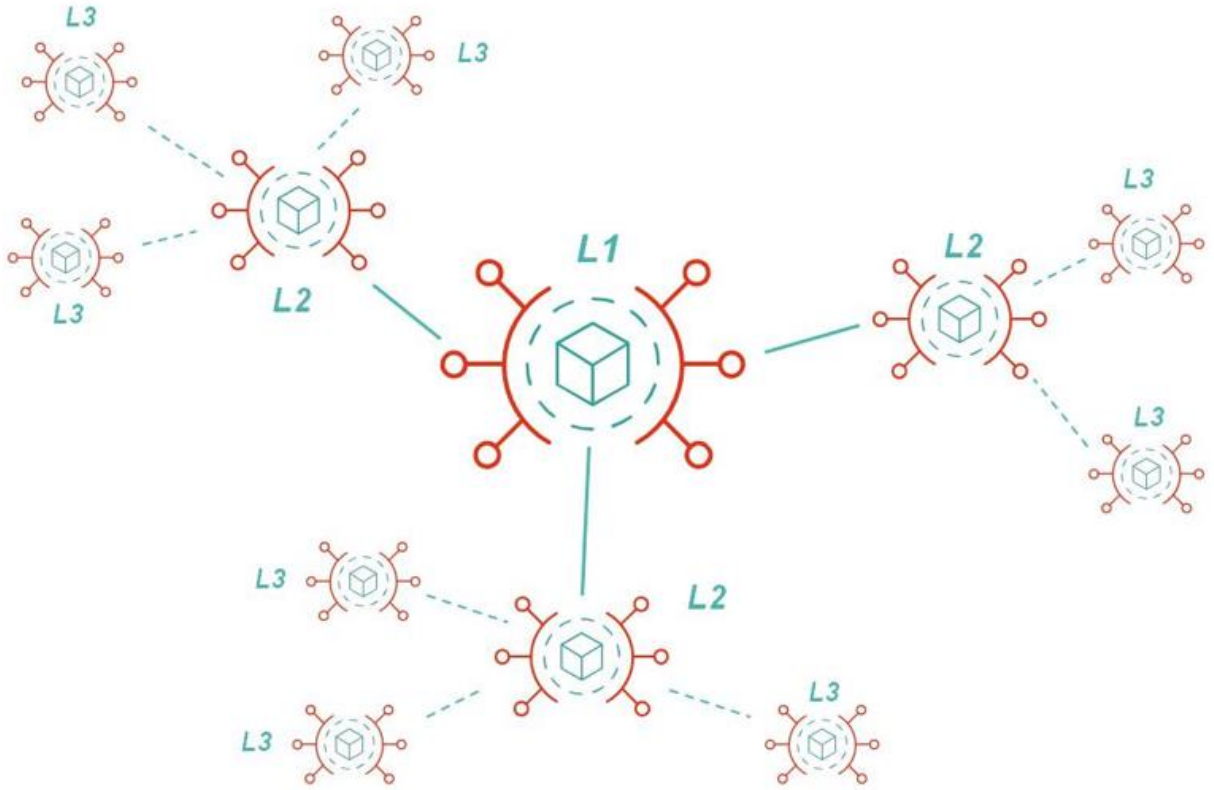


Generic PI Case Study (GPICS)

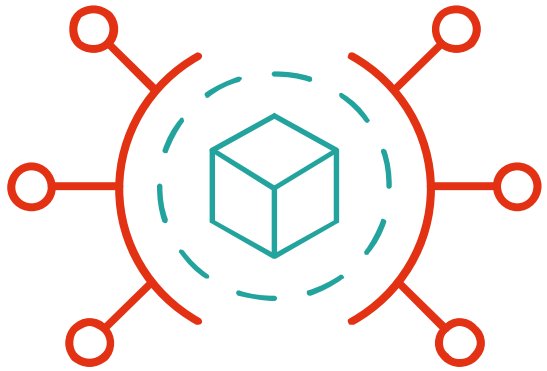
- GPICS multilevel structure

	GPICS	SONAE / PI URBAN LOGISTICS NETWORK	STOCKBOOKING / WAREHOUSING AS A SERVICE
LEVEL 1	COUNTRY	BLACK WAREHOUSE	CENTRAL WAREHOUSE
LEVEL 2	NUTS - 2	SHOP	REGIONAL WAREHOUSE
LEVEL 3	URBAN	POINT OF DELIVERY	SATELITE WAREHOUSE

Example of three-level structure



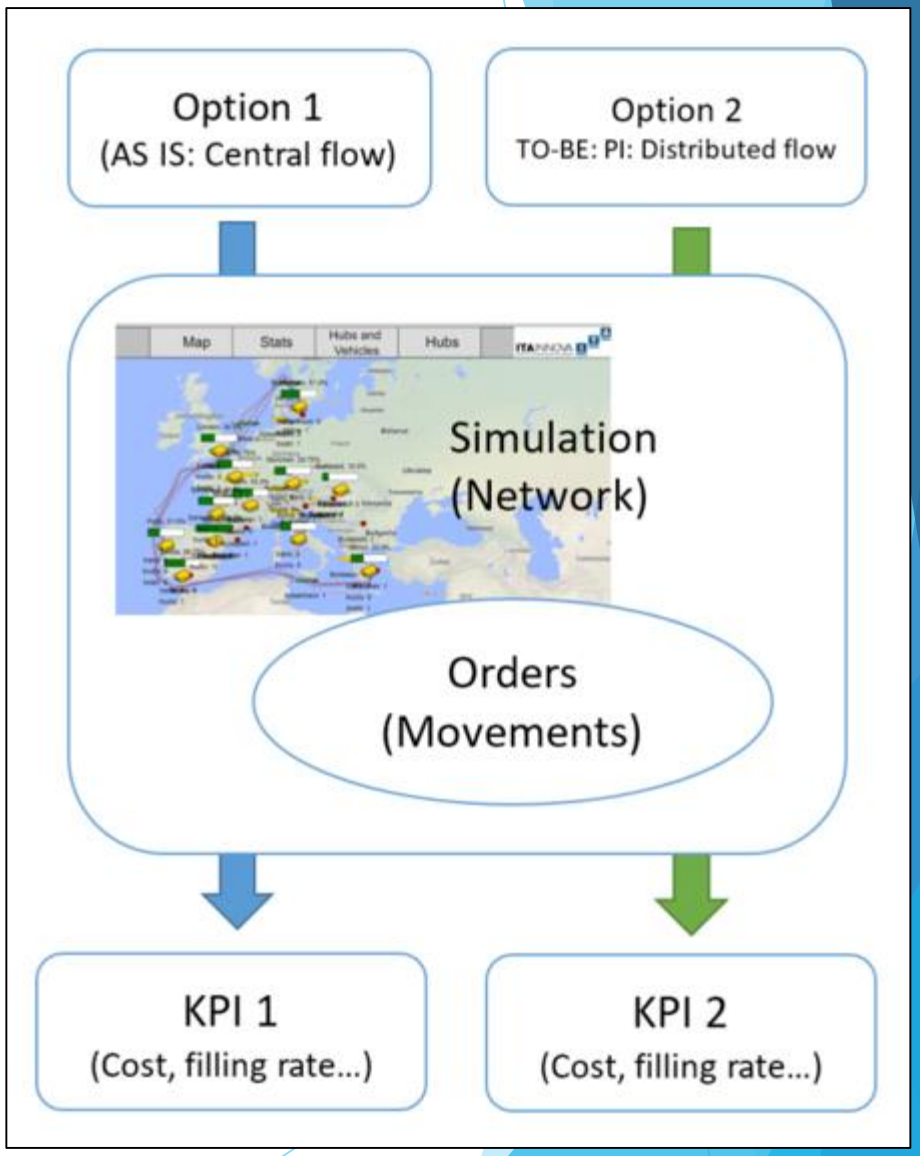
GPICS three-level structure of HUBS



ICONET Simulation framework

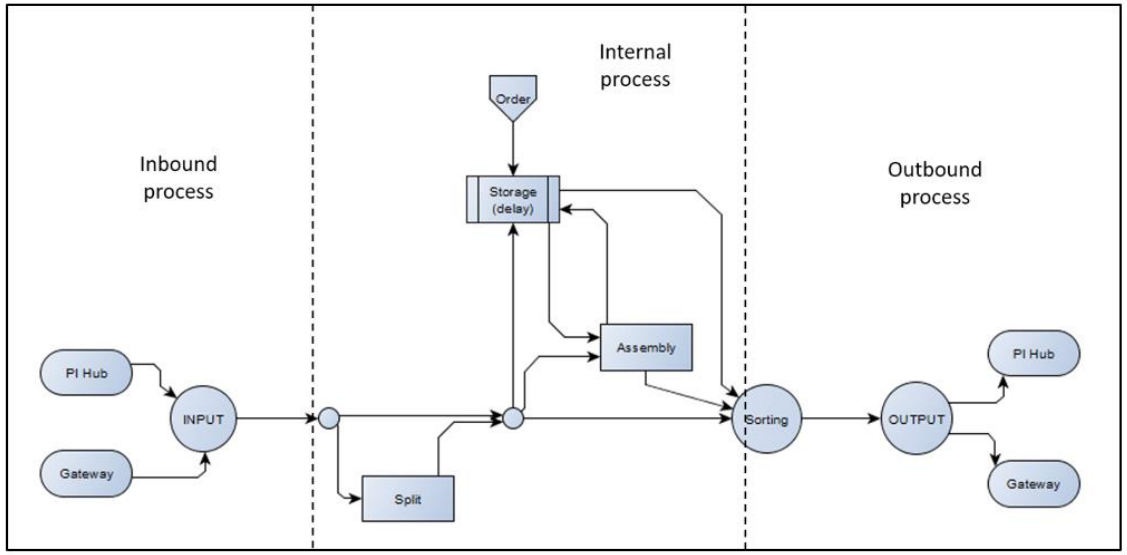
Simulation framework

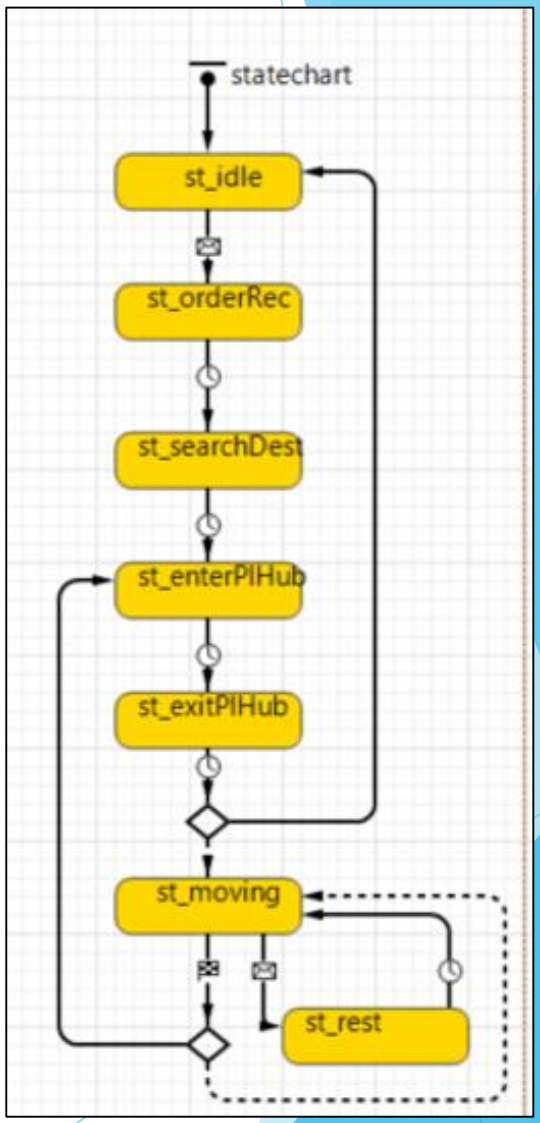
- The main objective of this simulation is to represent the PI network.
- PI modeling is done through agents:
  - vehicles, containers, people in different roles…
- The simulation model is dynamic (evolves over time)
- Scenarios:
  - Set of orders, with different PI options.
  - Simulation model measures the KPI



Simulation framework

- Simulation model: Contains the code for representing the behavior from the main elements in the PI
- The simulation contains also the network configuration for the scenario.





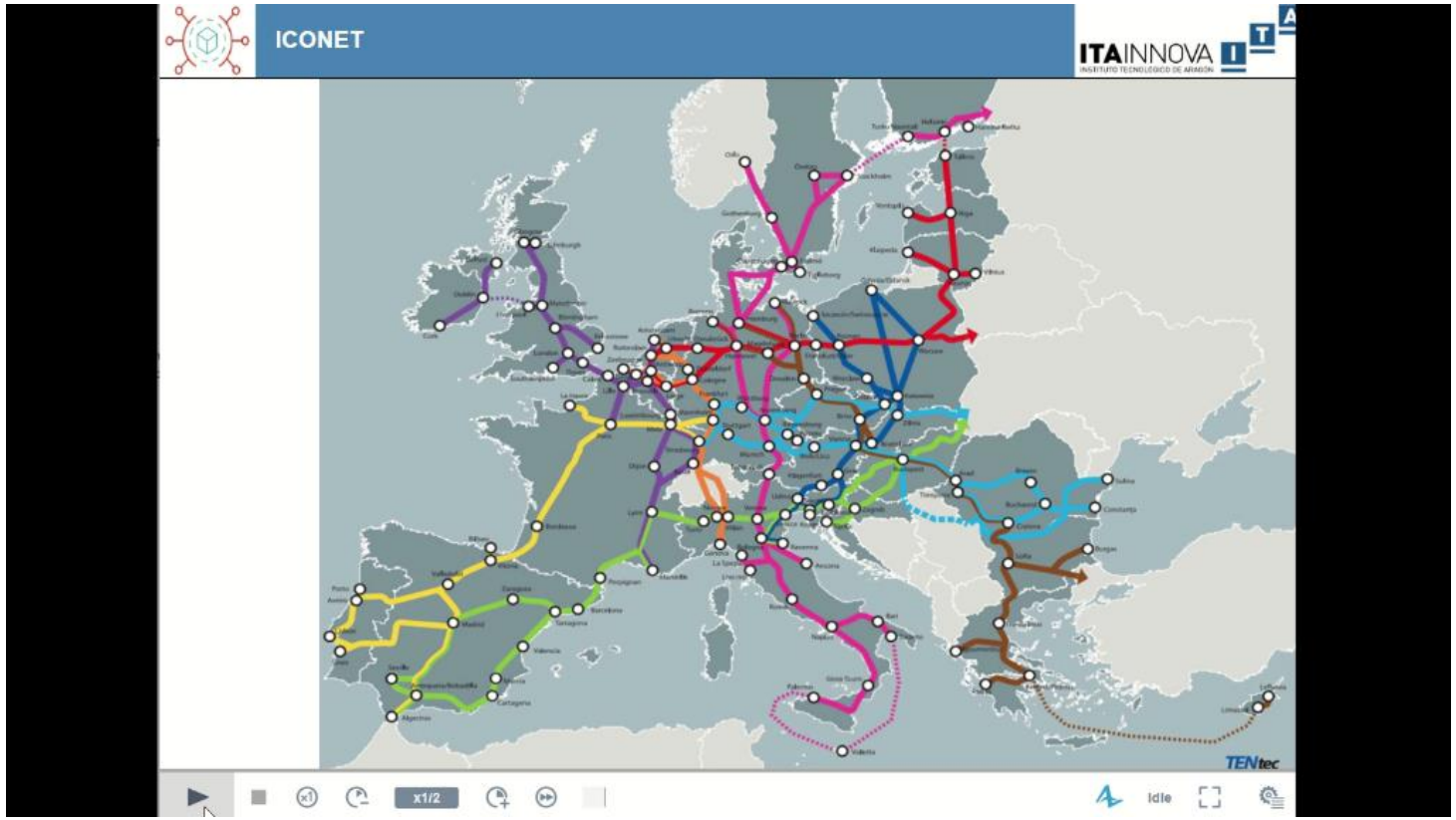
GPICS simulation

- Video1: General view, Node zoom
- Video2: Transport Zoom
- Video3: Living Lab – Sonae Network

(Not included due to high size in mb.)

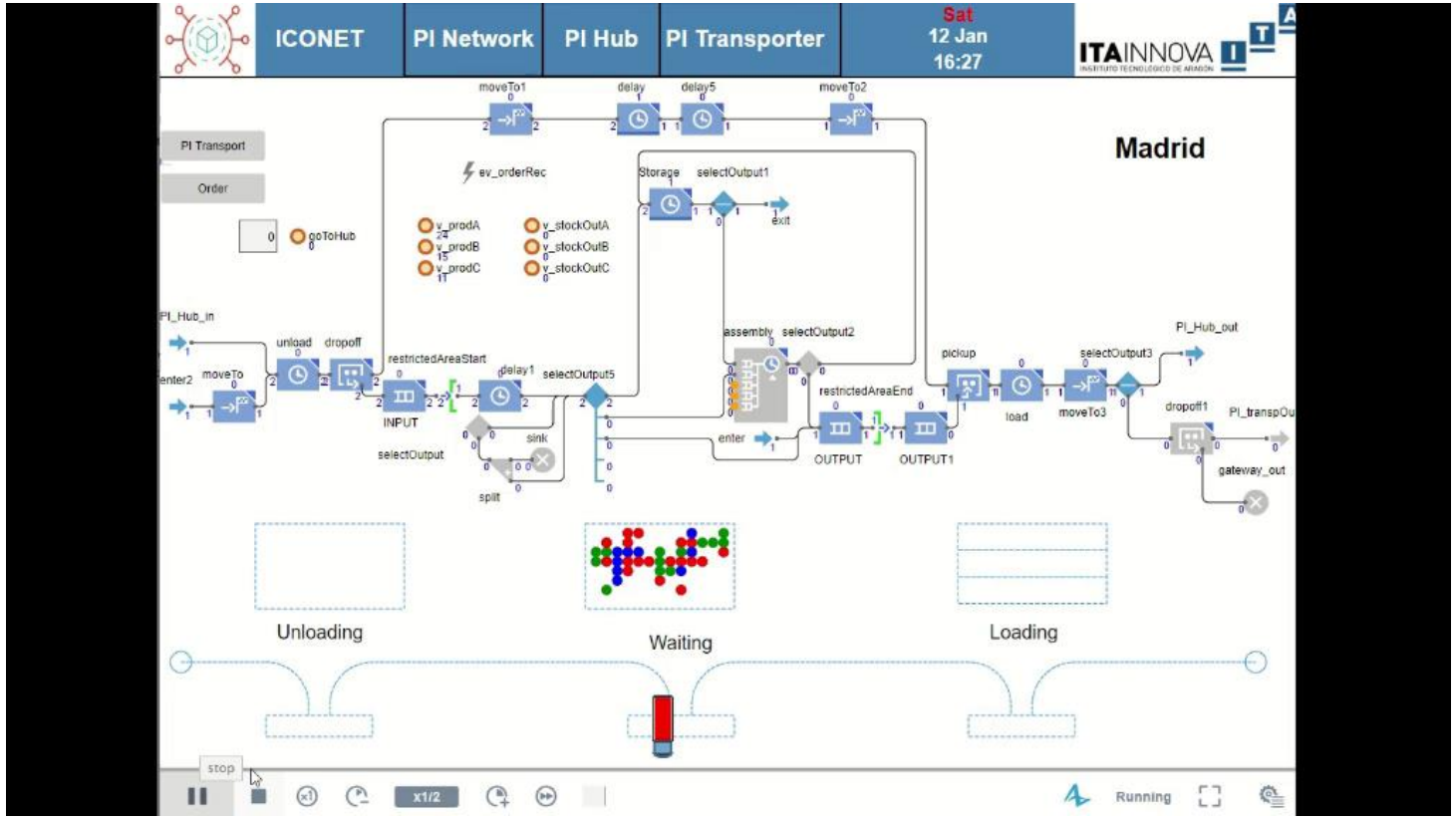
GPICS simulation

- Simulation 1: General network, Node zoom



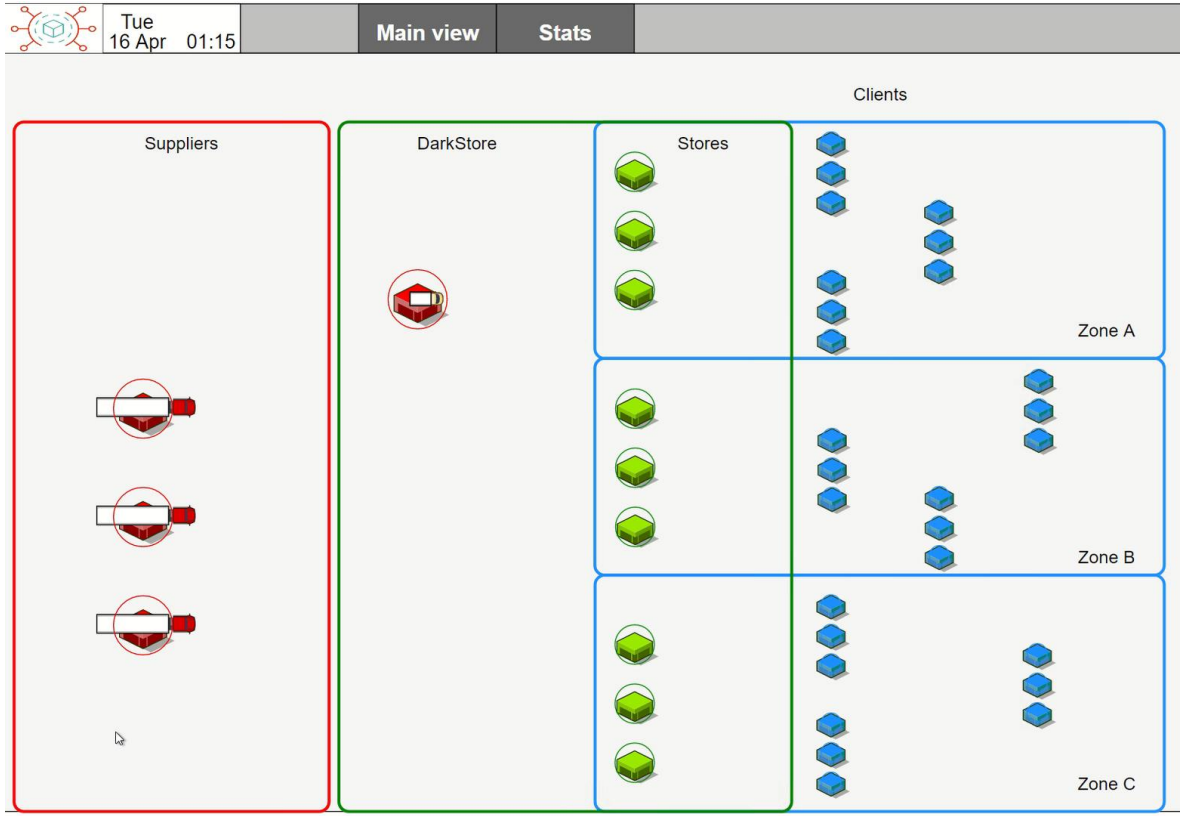
GPICS simulation

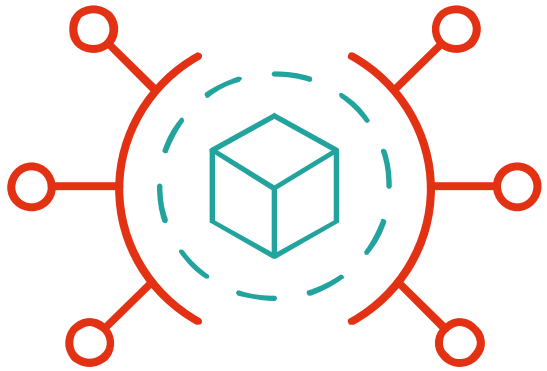
- Simulation 2: Inside node and transport



GPICS simulation

- Simulation 3: Living Lab example, eCommerce distribution Network





INTERACTIVE WORKSHOP: PI Service design session

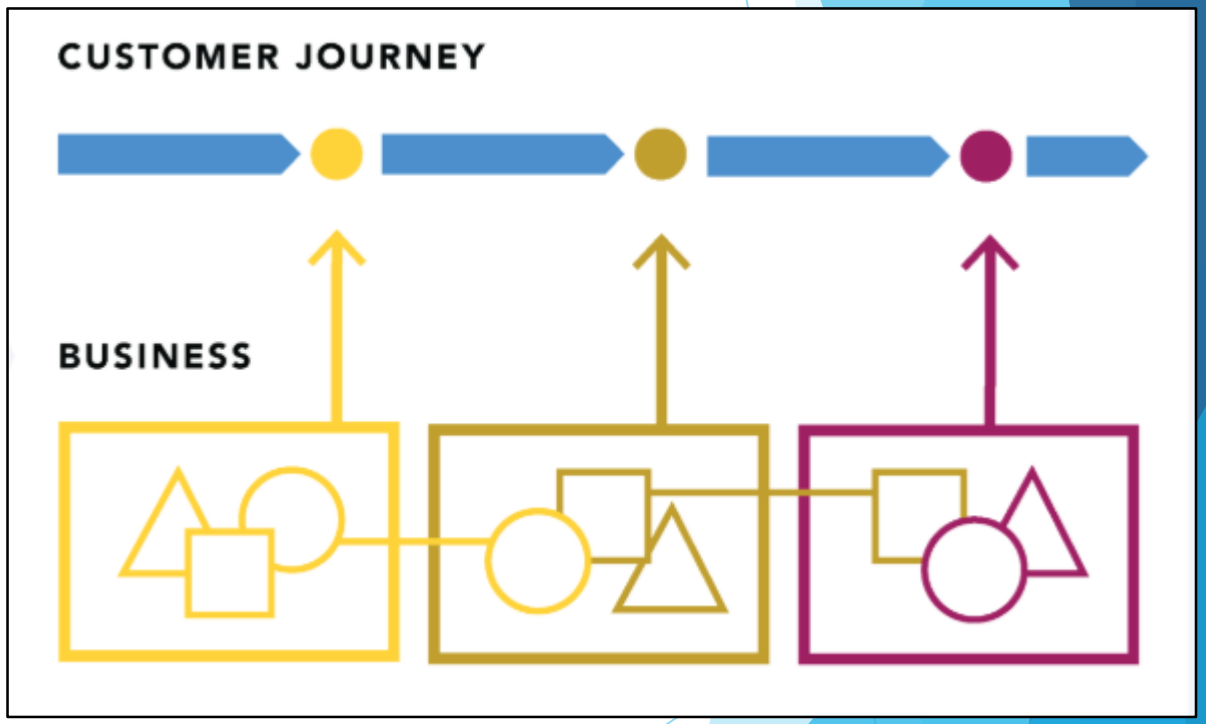
Imagine how the interaction with the PI would be.

Interactive workshop

- CUSTOMER JOURNEY MAP

"A customer journey map is a visualisation of all experiences a customer has with a certain product or service over time"

"The customer journey map is an oriented graph that describes the journey of a user by representing the different touchpoints that characterize his interaction with the service."

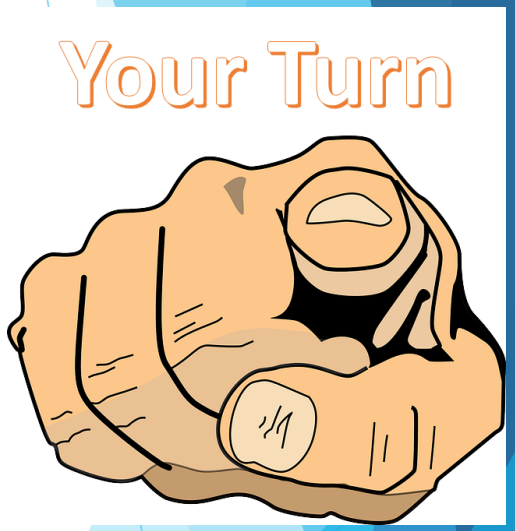


Interactive workshop

- Example customer journey

Interactive workshop

- Now we are going to design the customer journey map together:
- Steps:
  - Make groups
  - Assign the roles (Sender, Receiver, Transport (LSP), Coordinator)
  - Fill the form: (2 options)
    - Paper Form.
    - Online Form: http://bit.ly/iconet10



Lets start our Physical Internet Services Journey!

Physical Internet Service in 10 steps:

PREPARATION

1. Register at PI (digital, physical identification)
2. Register PI Available Infrastructure (network, nodes..)
3. Register Transport /Storage Capacity

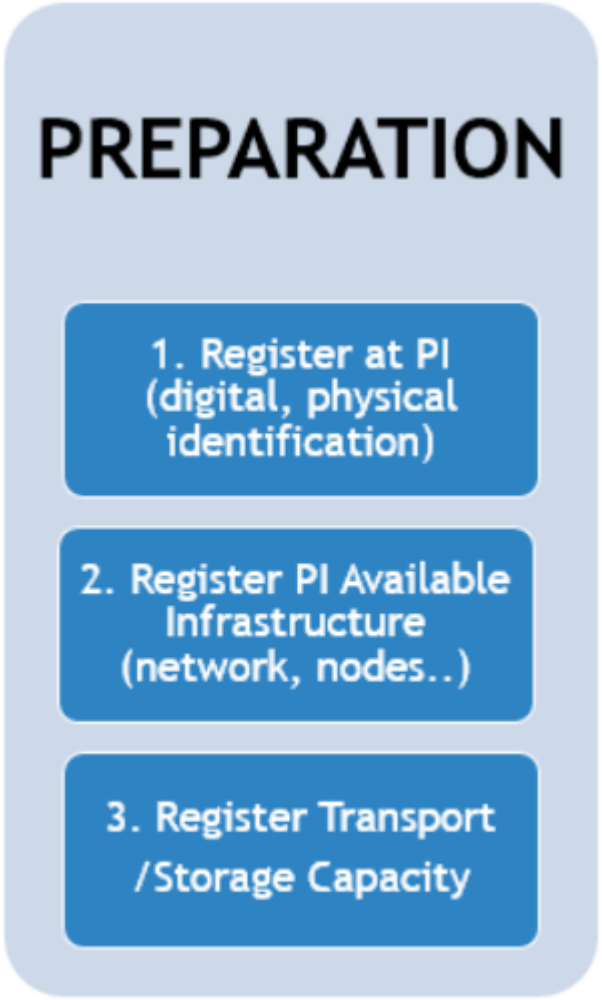
EXECUTION

4. Plan PI Execution
5. Initiate Transport Execution
6. Monitor Transport execution
7. Complete Delivery

POST-EXECUTION

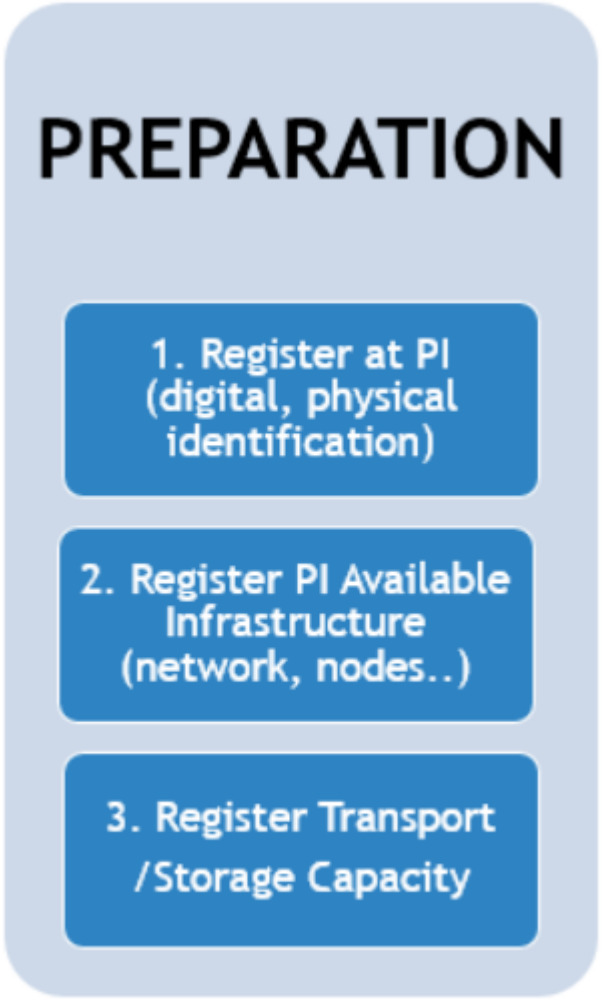
8. Financial Management
9. Process Management
10. Returns

Physical Internet Service in 10 steps:



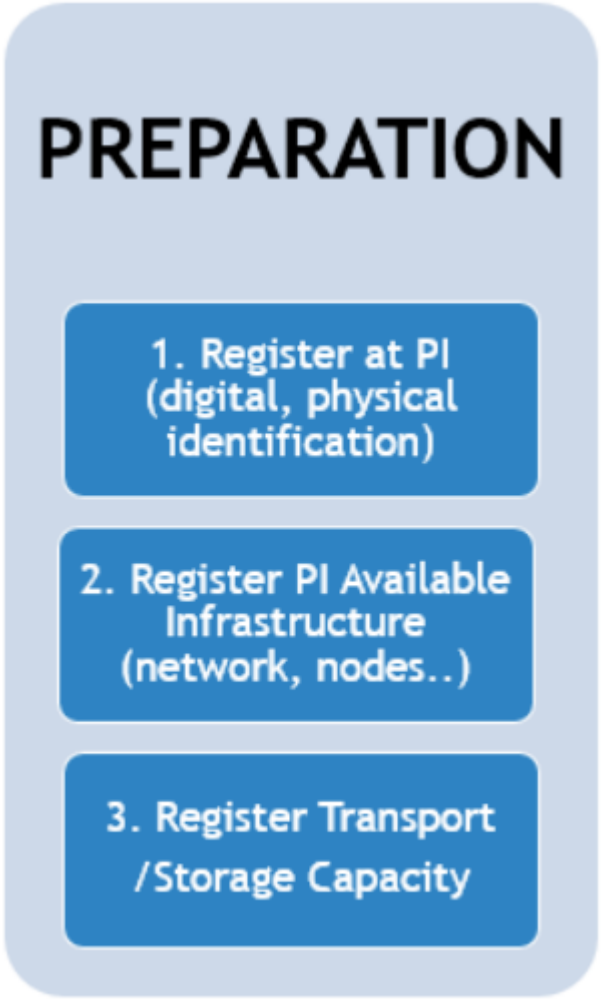
- Step1: Register at PI
  - Digital identity
  - Physical address
  - Payment options

Physical Internet Service in 10 steps:



- Step2: Register PI Infrastructure
  - Who can access infrastructure data
  - Declare IoT services
  - Define the network

Physical Internet Service in 10 steps:



- Step3: Register Transport/Storage Capacity
  - Capacity units ?
  - Price, discounts (same tariff 1 pallet than 30 pallet…)

Physical Internet Service in 10 steps:

- Step4: Plan PI Execution
  - Identify Owner, Sender, Receiver
  - Register the order
  - Check resource availability
  - Prices
  - Lead times

Physical Internet Service in 10 steps:

- Step 5: Initiate Transport Execution
  - Labeling
  - Container
  - Initial Payment

Physical Internet Service in 10 steps:

- Step 6: Monitor Transport Execution
  - Current position of the container
  - Updated ETA (Estimated time of arrival)

Physical Internet Service in 10 steps:

- Step 7: Complete Delivery
  - Proof of delivery
  - Quality control

Physical Internet Service in 10 steps:

- Step 8: Financial Management
  - Payment options
  - Invoicing
  - Revenue/cost sharing

Physical Internet Service in 10 steps:

POST-EXECUTION

8. Financial Management

9. Process Management

10. Returns

- Step 9: Process Management
  - Feedback loop
  - Complains
  - Service valoration

Physical Internet Service in 10 steps:

- Step 10: Returns
  - Return validation (Gatekeeping)
  - Who pays?

Wrap up, conclusions

Contact Details

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