

Introduction

On September 17, 2026 the MAGPIE and PIONEERS projects together organise a one-day conference highlighting the results of both projects and initiating the path to further exploitation of these results.

During this conference there will be two sets of parallel sessions focussing on different themes. IN this document the plan for the workshop of theme 1 is described. The objective of the workshop is to have an interactive session with the audience, much more than merely presenting the results. The session will therefore only have limited room for presentations from each project followed by the interaction with the audience, session details are given below.

This document is a living document that keeps record of the decisions made on the programme and to be used as basis for the session on September 17.

Theme background

Theme title: Competitiveness, Innovation and Digitalisation.

Ports are no longer just physical gateways — they are becoming nodes in a complex digital infrastructure that connects shipping lines, logistics operators, energy systems, and urban environments. The pressure to digitalise is real, the tools are increasingly available, and the business case is broadly understood.

Yet the gap between digital ambition and digital reality in the port sector remains stubbornly wide.

The core sensitivity this session addresses is not technological — it is systemic. Digitalisation in ports does not fail because the technology doesn't work. It fails because the ecosystem around it doesn't. Data sits in silos. Infrastructure investment cycles don't align. Competitive instincts block the collaboration that innovation requires. And the benefits of digitalisation are rarely distributed evenly across the chain.

This session draws on findings from the MAGPIE and PIONEERS projects to explore where that gap is widest — and who in the ecosystem holds the key to closing it.

Speakers

First session: (13:30-14:30)

- MAGPIE: Zenaida Mourao (INESCTEC)
- PIONEERS: Javier Garrido (POB)

Second session: (14:50-15:50)

- MAGPIE: Jerome Besancenot (HAROPA Port)
- PIONEERS: Birger Schrevens (IMEC)

Session details

To achieve an interactive session we want to reduce the number of one-way presentations and stimulate discussions in groups.

Section	Time	What happens	Speaker
The provocation	5 min	Short introduction. Present one sharp, counterintuitive finding from either project — not an overview. End with the uncomfortable truth as provocation for the discussion.	Maarten Flikkema

Evidence from the field	15 min	Each speaker presents one finding only — framed as: "Here's what we expected to find. Here's what we actually found." The gap between expectation and reality is where the interest lives.	Speakers session 1 and session 2
Scenario stress test and group discussion	15 min	Audience splits into groups of 5–6. Each group gets a scenario card (see below).	
Live vote (merged with next agenda item)	5 min	Using mentimeter some votes and questions will be asked. Each group submits their answer. Results appear on screen. Say nothing — let the distribution land first.	Audience
Speakers react to the outcome of the live vote	15 min	Lead with the most surprising outcome of mentimeter. Push speakers to disagree with each other and/or the room to have a short lively discussion.	Speakers session 1 and session 2
The open wound	5 min	Close by naming the one problem the session surfaced that neither project has solved.	Maarten Flikkema

During the scenario stress test we will give groups different (hypothetical) scenario cards which they can discuss. Scenario card options (to be discussed):

1. **The Data Sovereignty Trap:** A port community system holds rich operational data. Ports want to share it to attract innovation. Terminal operators see it as a competitive asset. Researchers need it to produce useful work. Regulators want access for compliance. Nobody agrees on governance. → Your group: who should own port data, and what would you sacrifice to get access to it?
2. **The Infrastructure Timing Problem:** A port is ready to go electric. The grid isn't. The grid operator is waiting for confirmed demand before investing. The energy companies need regulatory certainty first. The port can't commit without infrastructure. Everyone is rational. Nothing moves. → Your group: who breaks the deadlock, and what does it cost them?
3. **The Innovation Graveyard:** Three pilots ran in this port in the last four years — one on Port Digital Twin, one on autonomous sailing, one on emissions monitoring. All three produced good results. None of them scaled. → Your group: what killed them — and was it the technology, the business model, or the ecosystem?
4. **The Competitiveness Paradox:** Port A digitalises aggressively and shares data openly with its logistics chain. It becomes more efficient but loses negotiating leverage. Port B stays closed, moves slower, but keeps control. In ten years, which port is more competitive — and by whose definition? → Your group: what does competitiveness actually mean when the whole chain has to win together?

Following the discussion we want to collect feedback without having to give each group time to present (this will take too long). Hence we will ask several questions through mentimeter (to be discussed):

1. In one word: what is the biggest barrier to digitalisation and innovation in your scenario?
2. Who holds the most power to unblock the situation in your scenario? (only one answer possible)
 - a. The port authority
 - b. The technology provider
 - c. The regulator
 - d. The data owner
 - e. The data integrator
 - f. No single actor — it requires coalition
3. In your scenario, the core problem is:
 - a. Purely technical ◀—▶ Purely governance (human/organisational/regulatory)
4. What would actually move the needle in your scenario? (only one answer possible)
 - a. A regulatory push
 - b. A financial incentive



- c. A trusted data sharing framework
 - d. A successful reference case somewhere else
 - e. More research and evidence
5. What's the one thing your group agreed nobody wants to say out loud?

Requirements

- Mentimeter poll
- Screen
- Flipovers + pens
- Scenario cards

Learning Lab 1 – Session 1

Xxx

Maarten Flikkema presenting:

Innovation competition and digitalization all together that is question

Is data and digitalization the only way for innovation – how can we unlock it?

Zenaida:

- Identifying missing step between today's ports and tomorrow's in terms of green and digital transformation – that was the goal
- Focus is the evidence from the field
- Full digital twin of the port to enable decision for the port ecosystem
- The tools that are built, three digital tools – 24 to 48 hour operational time spanning decisions. Energy matching tool, greenhouse gas emissions tool, smart green logistics tool
- Tools are built but the physical but also non-physical infrastructure must be built to make use of these tools

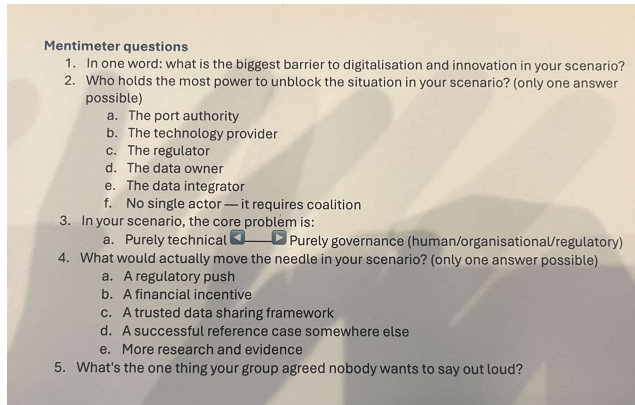
Javier – innovation manager

- Objective of Barcelona, transfer of the digital twin from Barcelona to Antwerp, transferability is very important
- Port contexts can change a lot, and data can be very port specific, IT architectures can change a lot, it is very hard to transfer digital twins. IT language barrier
- Success was to develop use cases inside digital twin for emission calculations for vessels real time – coming, handling, leaving Barcelona
- Tracking vessels. Artificial intelligence to detect the movements of vessels in the ports, to enrich the AIS data plus the data that Barcelona has on the port, this system combines and enriches two existing systems. Good vessels, scaling upto other parts of the port, it is for now dine in a pilot area
- 5 million passengers, also big passenger transportation that makes Barcelona a bit different than other full industrial ports. They need to satisfy the cruise operators as well.

Four scenarios: are being presented to the break-up groups to discuss one of these scenarios

- There are breakdown groups for discussion
- Four scenarios are being discussed





- Privacy of the data for the business strategies, business secrets, operations, and data of the clients. The biggest mistrust is to governance but also for keeping the business strategy as a secret
- Who holds the power, by far the majority said no single actor almost 70%. 10% for regulator and 15% for the data owner, Javier agrees acknowledging the role for the regulator and the data owner. Only one vote for the port authority
- The same question is asked people across different scenarios – if the core problem in the scenario is technical or governance. Majority of the people think that it is governance, Javier agrees, technology is there, it is about the people taking the decision and governing the direction of the technological, innovational implementations.
- Next question, who would need to move the needle. Zenaida says a successful use cases would move the needle in away to encourage other parties to engage more, be a role model, showing actual concrete benefits, could be inspiration. The answers are more mixed for this question a lot of people opted for the trusted data sharing framework. Javier thinks that defining a trusted data sharing framework is difficult. Mention of courage in the crowd. Very important.
- Last question. Cybersecurity is mentioned. No time for further discussion. Time is over.

Learning Lab 1 – Session 2

Maarten with a similar opening

Imec speaker, birger schrevens

- At the start of the project, the difficult part was thought to be the user interface. But later they learned that the user wanted to solve its problem and also the methodologies existed- the issue was with the data to build the things around. Many companies had to be onboard for the system to work together so a lot of time spent for gathering these stakeholders to acquire data. It was said to be difficult part of the Pioneers project. A trusted environment is learned to be crucial for the case.

Jerome from HAROPA port

- HAROPA worked for a comprehensive for digital twin – also they deployed the port community system, predictive model, for vessel arrival, JIT module. The expectation of the project was to require a full visibility of the port operations.
- Port is trying to digitalize, but the barrier is not the port technology. Port has a lot of technology, and has capital to invest, new processes are needed to change the way of working to make use of the existing initiatives. But more engagements are needed, to transform the processes along with what technology enables

Same scenarios, same discussions but different people, different groups.

- Gen Ai could make the project very different, birger talks about it, it is hard to make sure that it makes good support decision in the port, doing interactions with multiple decision-makers and actually understanding the behavior of them in a digital twin environment
- Haropa says a lot of improvement with AI but not with agentic AI yet. With deep-learning, have their own AI model to predict the vessel arrivals- over the last 2-3 year they achieved big improvements, before it was 10 hour error margin now it is down to 1-2 hours. They have decided to invest to have their own inhouse AI architecture to make all these calculations and MAGPIE opened the gate way for it
- Question one is very similar to the first group. Every one thinks that over 80% no single actor is dominant.
- Everybody thinks it is governance as well
- Similar results people think that it is still the a trusted data sharing framework but also fragmented results, a regulatory push is important, a bit also financial incentive
- Scaling of the solutions is the most difficult part of it at the moment
- Elephant in the room is what: return on investments need to be presented to the business owners, yes everything is promising but we need to spend the money now and get it – so money and profit are the elephants in the room given the AI skepticism and also older school stakeholders to be convinced to fund such long horizon changes with less ROIs

Thema Summary
