
Workshop Structure

Title: *From Research Questions to Collaborative Pathways in Digitalised Infrastructure Monitoring*

Date: 21 January 2026 – Ljubljana, Slovenia

Format: One-day interactive workshop (09:00–18:00)

Description

This one-day interactive workshop aims to integrate the Doctoral Candidates (DCs) into the project's research ecosystem by fostering dialogue, collaboration, and alignment with industrial and end-user needs. Through an industrial panel, DCs will gain insights into real-world priorities and refine their research pitches accordingly. The morning session ensures that all DCs present their work and potential contributions to three cross-cutting themes, each of them related to data collection, data analysis & processing, and decision making. In the afternoon, DCs engage with academic and industry experts in a thematic World Café, and then collaborate in focused roundtables to draft concrete "Collaboration Notes" outlining shared research questions, methods, and next steps. The day concludes with a Reverse Panel, where seniors respond to questions posed by DCs, and a wrap-up session where each participant reflects on key takeaways and future actions.

Preparatory Work (“Homework” for DCs)

Each DC is asked to come prepared with:

1. **Mini Research Pitch (1–2 slides, 3 minutes):**

- Research question / hypothesis
- Method/tool/approach
- One key challenge

2. **Collaboration Idea (integrated in the pitch):**

- DCs will be provided in advance with 3 cross -WP collaboration topics:

1. Integrated digital twins and BIM platforms for intelligent and circular bridge lifecycle management (PLATFORM, CIRCULAR, CORROSION, D-BIM)

- **Collaboration Goal:** *Create a unified digital twin framework that continuously updates with real-world data and supports predictive decision-making for bridge integrity*

2. AI-enhanced monitoring for multi-modal sensing, data fusion, and real-time prediction for bridge infrastructure (SATELLITE, DRONES, ROBOTS, VISUAL)

- **Collaboration Goal:** *Develop a pipeline from AI-driven visual data collection to actionable decision support for maintenance prioritization*

3. Cybersecure IoT and probabilistic risk-informed frameworks for multi-hazard bridge decision support (CROWD, EDGE, CYBER, VALUE)

- **Collaboration Goal:** *Establish a secure, scalable monitoring infrastructure that feeds into risk-based decision models for bridge asset management*

In their pitch, each DC will briefly state how their research could connect to one of these themes and what collaboration they envision

3. Questions for Seniors:

- Each DC brings at least one question to place in a “Question Box” after the Thematic World Café. The DCs will have the chance to refine or come up with new questions. The questions will be placed in the Question Box after the Thematic World Café and will be answered during the feedback session at the end.

Morning Sessions

09:00 – 09:15 | Opening & Welcome

- Workshop host and coordinator introduce objectives and norms: not thesis supervision, but joint research development and integration

09:15 – 10:45 | Panel Session

- Panel format with moderators: each expert gives a 15-min input, followed by a 45-minute discussion
- 3 invited experts with expertise on the collaboration topics
- Purpose: Their speech should present problems faced by industry in the domain of bridge integrity management, clarify priorities, expectations, and alignment opportunities for the DCs' research – real case-studies

1st Presentation: Integrated digital twins and BIM platforms for intelligent and circular bridge lifecycle management, Israel Alejandro Hernández González, CEMOSA, Researcher

2nd Presentation: AI-supported condition assessment and monitoring of transport infrastructure, Irina Stipanovic, University of Twente & Infra Plan Consulting, Assist. Professor and Managing Director

3rd Presentation: Managing Data, Trust, and Risk in BIM and AI Platforms, Igor Osmokrovic, Bexel Consulting, Chief Operating Officer

10:45 – 11:00 | Coffee Break

11:00 – 11:30 | Pitch Re-organisation

- DCs individually or in small groups adjust their pitches based on insights from the panel session

11:30 – 13:00 | Pitch Session (All DCs, Plenary)

- All 12 DCs present their 3-minute research + collaboration pitch (max 2 slides)
- No interruptions
- Feedback is given at the end of the session about the pitching

13:00 – 14:00 | Lunch

Afternoon Sessions

14:00 – 15:30 | Thematic World Café

- Interactive session where DCs are grouped based on their topic. Discussion with consortium members, each co-moderated by an industrial partner and a senior researcher. The aim is to foster cross-DC collaboration
 - Questions raised during the morning pitch session
 - Explore collaboration between them
- The consortium members are separated into three groups
- Each table delivers 3 key insights/questions, at least, which are included in the Collaboration Note prepared by the DCs after this session
- The moderators ask the DCs to refine or come up with two questions to put in the Question Box and discuss during the feedback session at the end

15:30 – 15:45 | Coffee Break

15:45 – 16:30 | Group Roundtables – Drafting Collaboration Notes

- Collection of Thematic World Café notes compiled into final WS output. These notes will include research directions, challenges and implications
- Groups draft a 1-page Collaboration Note (structured template) provided in advance

16:30 – 17:30 | Presentation of the Collaboration Ideas and Feedback from the Seniors

- Each table nominates a spokesperson (a DC) who reports the collaboration ideas (5-min)
- The seniors provide feedback/insights and answer questions from the Box

17:30 | Closing & Wrap-up

Brief Agenda

Time	Session	Room
09:00 – 09:15	Opening & Welcome Anžlin and Limongelli	Hall 5N-AB (5th floor)
09:15 – 10:45	Panel Session – Priorities, expectations, and alignment opportunities for the DCs' research Chair: Loli	Hall 5N-AB (5th floor)
10:45 – 11:00	Coffee Break	
11:00 – 11:30	Pitch Re-organisation (individual refinement based on panel insights)	Hall 5N-AB (5th floor)
11:30 – 13:00	Pitch Session – All DCs (2 min each, questions at the end of all pitches) Chair: Loli	Hall 5N-AB (5th floor)
13:00 – 14:00	Lunch	
14:00 – 15:30	Thematic World Café (thematic tables for the DCs and consortium members)	Digital Twins Hall 5N-AB (5th floor) Moderators: Anzlin and Holst DCs: DC7, DC12, DC14, DC16
		AI-supported Monitoring Conference Room 5N (5th floor) Moderators: Leander and Stipanovic DCs: DC2, DC3, DC6, DC11
		Risk management and Cyber-security Conference Room 6N (6th floor) Moderators: Rago and Osmokrovic DCs: DC1, DC5, DC9, DC15
15:30 – 15:45	Coffee Break	
15:45 – 16:45	Group Roundtables – Drafting Collaboration Notes	Same as before
16:45 – 17:30	Presentation of the Collaboration Ideas and Feedback from the Seniors Chair: Loli	Hall 5N-AB (5th floor)
17:30 – 18:00	Closing & Wrap-up Chair: Limongelli & Loli	Hall 5N-AB (5th floor)