

COVID-19 CASE STUDY #1 – WP14

On 3rd August 2020, the FINE-2 Project Coordinator, Thales, organised its first virtual “hackathon” event as part of its activities in Work Packages 15, Advanced Business Services - Prototype Development. This Work Package focuses on delivering innovations within Cross-Cutting Activity Work Area 4.2, Integrated and Intelligent Mobility (WA4.2, I2M).

AN AGILE INNOVATION VEHICLE

Maciej Karbowski, Innovation Product Manager at Thales said: “Our objective within FINE-2 is to integrate disconnected systems across the transport industry to advance traffic management operations.”

In Work Package 15, Thales has designed an agile and iterative approach to conduct its research and innovation activities, one where potential I2M end-users are consulted and engaged early and throughout the project to delve deep into the ‘problem’ and ‘solution’ spaces. In practice, this would be executed in a number of hackathons, which would produce a series of prototypes of increasing maturity. Documentation highlighting the approaches taken, the key learnings identified and specifications of outputs would be captured as the Work Package Deliverables.

As many Shift2Rail Partners face ongoing restrictions in travel and in making face-to-face contact with colleagues as a result of the COVID-19 pandemic, a traditional hackathon format where participants would congregate in a common physical location was not possible. Instead, the Thales team, including personnel from its Design Centre identified a large selection of online collaboration tools, including various video-conferencing, agile development environments and virtual white boards, and designed the format of the virtual hackathon to make the best use of these tools.

For this specific hackathon, Transport for Greater Manchester (TfGM) agreed to participate as ‘end-users’, to help detail ‘pain points’ and qualify ideas in the development of a proof of concept for a low-cost, portable multi-modal transport control centre. Within the theme of I2M, and leveraging the complexity of the TfGM transportation network, this included exploring how common geospatial representations of road, mainline rail, tram and bus networks can help identify better ways to intelligently manage such modes in an integrated manner. In total, the team had just one week to understand the challenge and build a prototype.

COLLABORATIVE HACKATHON APPROACH - VIRTUALISED

For those not familiar, a hackathon is a time-boxed event involving a multidisciplinary team working with customers and users, and with limited distraction, with the goal of producing a tangible output.

The team used the Hackathon approach to deliver two objectives: moving to an agile way of working and towards a user-centric approach.

Maciej said: “This collaborative approach has enabled us to build mutual trust and receive almost instant feedback, ensuring that the ideas we progressed and built truly address the toughest challenges of TfGM and similar authorities.”

The virtual hackathon began on 3rd August with a presentation from the customer, TfGM outlining their day-to-day control centre operations and their main challenges.

The Thales team then had five days to identify the problem areas and build a prototype. Each day began with a short ‘stand-up’ session with the wider FINE-2 team.

Then around noon, the team, which included members from various Thales sites (London, Manchester, and Reading) as well as the customer site in Manchester, got together with the customer for an opportunity to ask questions and gain feedback on their ideas and prototypes.

Maciej said: "The virtual nature of the event was certainly a challenge with all meetings taking place over Jabber or WebEx but it was also an enabler. We used virtual white board tools (Miro) which helped us communicate effectively and organise our work."

The event concluded on 13th August with a finale where the team presented their work and received feedback from a diverse jury including TfGM and colleagues from Thales. Overall, both TfGM and Thales were very happy with the outcome and the team used the session to collect ideas for further new features to and provide customer insight for further work within FINE-2.

Despite the setbacks experienced at the beginning of the year as a result of the COVID-19 Pandemic, this hackathon truly shows how teams within FINE-2 and Shift2Rail have adapted their ways of working and are still capable of delivering positive outcomes from the research and innovation programme.