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5G HEalth AquacultuRe and Transport validation trials

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Abstract	This deliverable shortly summarises the public 5G-HEART Final Event held in Oulu, Finland on 17 November 2022.
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¹ R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

OTHER: Software, technical diagram, etc.



EXECUTIVE SUMMARY

This deliverable shortly summarises the public 5G-HEART Final Event held in Oulu, Finland on 17 November 2022. The 5G-HEART Final Event presented technical results and key findings from the 5G trials conducted during the project by demonstrating and introducing over 20 specific use case scenarios from healthcare, transport and aquaculture vertical industries.

An overview of the event agenda and presentations given at the event's main stage as well as at the use case specific booths is provided. In addition to the presentation overviews, the demonstrations held at the booths are summarised for the project's three target verticals.



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ABBREVIATIONS

CoCa	Cooperative collision avoidance
E2E	End-to-end
HD	High-definition
KPI	Key performance indicator
OTA	Over-the-air
TeSo	Tele-operated support



1 INTRODUCTION

This deliverable shortly summarises the public 5G-HEART Final Event held in Oulu, Finland on 17 November 2022. The following sections include an overview of the event agenda and presentations given at the event's main stage as well as at the use case specific booths. In addition to the presentation overviews, the demonstrations held at the booths are summarised for the project's three target verticals.

Many dissemination and demonstration materials utilised during the final event day can also be found from the 5G-HEART website² in electronic format. At least the 5G-HEART Key Results booklet and trial videos have been made available online.

² <https://5gheart.org/>



2 FINAL EVENT AGENDA

This section provides high-level details on the 5G-HEART Final Event agenda, presentations and demonstrations. The overall agenda for the final event day was divided into vertical specific sessions as show below.

Public 5G-HEART Final Event – Agenda

Date: Thursday 17 November 2022

Time: 09:00 – 17:30 EET

Place: VTT, Kaitoväylä 1, 90571 Oulu, FINLAND

09:00-09:15	Welcome, practical information and introduction to 5G-HEART
09:15-10:15	Healthcare vertical trials overview and main stage presentations
10:15-10:30	<i>Break</i>
10:30-12:00	Healthcare booth demonstrations
12:00-13:00	<i>Lunch</i>
13:00-14:00	Transport vertical trials overview and main stage presentations
14:00-14:15	<i>Break</i>
14:15-15:45	Transport booth demonstrations
15:45-16:00	<i>Break</i>
16:00-16:45	Aquaculture vertical trials overview and main stage presentations
16:45-17:15	Aquaculture booth demonstrations

The invitation and registration link to the public 5G-HEART Final Event [1] was distributed towards other 5G PPP / 6G IA projects through the liaison mailing lists. In addition, the invitation was distributed towards the national 5G trialling ecosystems in Finland and local research, telecom, healthcare, automotive and food production ecosystems in the Oulu area. The total amount participants visiting the different sessions during the final event day was approximately 60 (including the project personnel).

The 5G-HEART Key Results booklet [2] was published before the final event day and was distributed as a handout to the event participants.

2.1 Main stage presentations

Each vertical specific session during the public 5G-HEART Final Event started with a main stage presentation providing an overview of the trialling efforts carried out throughout the project as well as highlighting specific vertical use case trial results presented also in more detail at the final event booths. Table 1 lists the main stage presentations and their high-level content provided to the audience.

Table 1: Main stage presentations

Title	Contents	Related booth presentations
Healthcare use cases and trials	Introduction to 5G-HEART healthcare activities, key scenarios where 5G is part of the solution and business aspects	H1A, H1B, H1C, H1D and H2A
Transport use cases and trials	Introduction to 5G-HEART transport activities and highlights from the core trials scenarios	T2S1, T2S2, T2S3, T2S4, T3S1, T4S1, T4S2, T4S4, T4S5, T4S6 and T4S7
Aquaculture use cases and trials	Introduction to 5G-HEART aquaculture activities, key enablers, pain points and highlights from the Greek/Norwegian trials	Greek aquaculture trials, Norwegian aquaculture trials, aquaculture site surveillance and key performance indicator (KPI) measurements



2.2 Booth presentations

In addition to the main stage presentations, a number of booth presentations were set up at the event venue. The participants of the event were able to visit the booths during the second half of each vertical specific session and discuss with the research teams presenting the demonstrations and trial results at the booths. More information on the contents of the booths are presented in section 3.



3 FINAL EVENT DEMONSTRATIONS

This section summarises the use case demonstrations presented at the 5G-HEART Final Event booths. The booths included live demonstrations and demonstration videos as well as slide and poster presentations from each vertical. Majority of the demonstration videos shown at the booths are available also at the 5G-HEART project website [3].

3.1 Healthcare demonstrations

Table 2 provides an overview of the healthcare vertical booths and their contents at the 5G-HEART Final Event.

Table 2: Healthcare vertical booths

Title	Contents
H1A – Educational surgery	Live demonstration and poster
H1B – Remote ultrasound	Live demonstration, slide presentation and poster
H1C – Paramedic support	Demonstration video, slide presentation and poster
H1D – Critical health event	Live demonstration and slide presentation
H2A – Automatic pill camera anomaly detection	Demonstration video and poster

3.2 Transport demonstrations

Table 3 provides an overview of the transport vertical booths and their contents at the 5G-HEART Final Event.

Table 3: Transport vertical booths

Title	Contents
T2S1 – Smart junctions and network assisted & cooperative collision avoidance (CoCa) – Trial track	Demonstration video, slide presentation and poster
T2S2 - Smart junctions and network assisted & cooperative collision avoidance (CoCa) – Simulation track	Poster
T2S3 – Quality of service (QoS) for advanced driving	Demonstration video, slide presentation and poster
T2S4 – Human tachograph	Live demonstration, demonstration video and poster
T3S1 – Tele-operated support (TeSo)	Demonstration video and poster
T4S1 – Vehicle prognostics; T4S2 – Over-the-air (OTA) updates	Poster
T4S4 – Location based advertising; T4S6 – Vehicle sourced high-definition (HD) mapping; T4S7 – Environmental services	Demonstration video and poster
T4S5 – End-to-end (E2E) slicing	Poster

3.3 Aquaculture demonstrations

Table 4 provides an overview of the aquaculture vertical booths and their contents at the 5G-HEART Final Event.

Table 4. Aquaculture vertical booths

Booth title	Contents
Greek aquaculture trials	Live demonstration, demonstration video and poster
Norwegian aquaculture trials	Demonstration video and poster
Aquaculture site surveillance; KPI measurements	Live demonstration and poster



4 CONCLUSION

This deliverable provided a short overview of the public 5G-HEART Final Event held in Oulu, Finland on 17 November 2022. The different sections of the document included an overview of the event agenda and presentations given during the event. In addition, the demonstrations held at the booths were summarised for the project's three target verticals.



REFERENCES

- [1] 5G-HEART Final Event – 5G-HEART. (2022). <https://5gheart.org/5g-heart-final-event/> (accessed: 28.11.2022)
- [2] Key Results Booklet – 5G-HEART. (2022). <https://5gheart.org/dissemination/key-results-booklet/> (accessed: 28.11.2022)
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