ITEA-2019-19008
Inno4Health

Stimulate continuous monitoring in personal and physical health

Deliverable D6.3: Initial dissemination and standardisation plan

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Dissemination level		
PU	Public	✔
PP	Restricted to other programme participants (including the Commission Service	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (excluding the Commission Services)	

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Table of Contents

1 Executive summary

The document describes the plan for using and disseminating the knowledge in the context of the Inno4Health project. The second part of this deliverable is how to bring our contributions to standards to the wider audience. This, through various means including internal and external communication channels, the distribution of dissemination material and participation in dissemination and standardisation activities.

More specifically, the document includes the Inno4Health dissemination strategy, describing the target audience active in digital twins for predictive maintenance and smart services. and the means for communicating with them. Furthermore, the planned and performed dissemination activities are presented, including the participation in conferences and other relevant events and the publications in scientific journals.

2 Introduction

Dissemination is an important element of the Inno4Health project. It will be carefully planned and implemented in order to spread awareness about this ITEA3 labelled project to a wide audience, including its end-users. This will help guarantee an optimal exploitation of the project results and the long-term sustainability of the Inno4Health vision. For this reason, the Inno4Health participants have formulated an initial dissemination plan that describes the objectives and foreseen channels for the dissemination of the knowledge generated by the project.

This plan is following the Inno4Health full project proposal CR#3 (ITEA-2019-19008), the Inno4Health Project Consortium Agreement, and the ITEA Rules and Regulations[1]. This plan will be revised as the need arises and on Month 36 of the project a final report on the dissemination activities will be published.

Table 1: List of Inno4Health Participants

No	Partners	Country
1	Philips Research	NL
2	PSV	NL
3	Maxima Medical Center	NL
4	IMEC	NL
5	Thunderbyte	NL
6	Sportbizz	NL
7	TUE	NL
8	TNO	NL
9	Turkcell	TR
10	Karel Electronic	TR
11	SRDC	TR
12	Teknasyon	TR
13	ForteArge	TR
14	Lithuanian Sports University	LT
15	Kaunas University of Technology	LT
16	Lipse	LT
17	Optitecha	LT
18	XCO	CA
19	Rideshark	CA
20	Kinduct	CA
21	ISEP-Gecad	PT
22	University of Porto Faculty of Medicine	PT

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[1] Htt23ps://itea4.org/community/publication/overview/category-3.html

24	WiseWareSolutions	PT
25	Beia	RO
26	Grigore University	RO

3 Dissemination rules

3.1 Presentation and publication guidelines

All Partners will actively contribute to the publication policy, both at own initiative and upon request of other partners, work package leaders and the project managers.

When another partner is mentioned in a publication, written permission shall be requested from this specific partner. If a partner wishes to publish information generated in the Inno4Health project the approval of all partners has to be requested:

- This request shall be made preferably per e-mail,
- Responses should be sent within 10 days,
- Without a response, permission is automatically granted after 10 days,
- In case of non-unanimous reactions, the PM will take the final decision,
- A copy has to be sent of the final publication to the project office for central archiving.
- The document will be published on the website until written indication is given that this is not allowed (e.g. due copyright rules from journals). In this case only the reference will be added.

3.2 Graphic identity

This section describes the features that contribute to giving a common graphic identity to all dissemination activities allowing for a better visibility and recognition of the project.

3.2.1 Layout and templates
Common/similar *layouts* are used for Inno4Health dissemination materials. ***Templates*** for project meeting minutes, deliverables and PowerPoint presentations were made available at the end of Month 2 of the project by the project coordinator, Philips.

3.2.2 Logos
In addition to the Inno4Health project logo the ITEA3 logo should be used when possible (both are shown on the frontpage of this document).

3.3 Compulsory acknowledgements

Any partner in the Inno4Health project will in their dissemination activities clearly acknowledge the ITEA3 Program with reference to the project "Inno4Health" and the grant number 19008.

Preferred reference:

> *"This work was labelled by ITEA3 and funded by local authorities under grant agreement*
> *"ITEA-2019-19008-Inno4Health"*
> +include link to the project website

4 Dissemination strategy

4.1 Means of communication

For dissemination to be effective, multiple communication channels are used to be able to effectively reach the desired target audiences. In this section an overview of the dissemination strategy and results over the M1-M18 period (see **Error! Reference source not found.** in section 4.2) will be given while in the remainder of this deliverable a more detailed account will be presented.

One focus of dissemination will be on scientific publications and to address the academic research community. Publications within the area of interest of the project include both technology-oriented journals and conferences. Results to be published will naturally tend to fall into one of the two categories, with some overlap between the two where for instance conference proceedings are published as journal paper.

4.2 Target groups

As mentioned, the communication and dissemination approach of Inno4Health is implemented at different levels. It is based on solid project-level sharing of knowledge and communication patterns and it extends gradually to different target-user groups, from the Inno4Health network to the general lay public. This approach is illustrated in Figure 1.
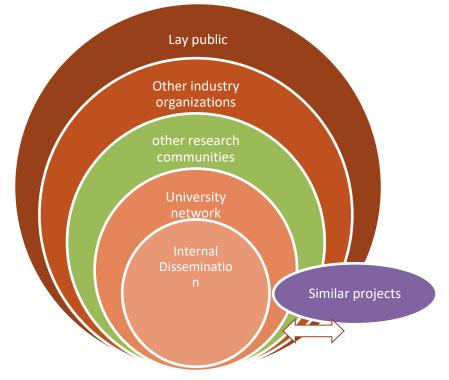
Figure 1: Inno4Health dissemination strategy

Several important target audiences for dissemination activities have been identified; these include academic researchers, manufacturers, maintenance providers, service providers as well as the public audience. Different dissemination products are expected to appeal differently to each of these categories, and therefore it is necessary to be aware of what the focus of dissemination is expected to be during the different stages of the project, and how the results to be disseminated are to be best tailored to their target audience.

4.3 Timing

Concerning the timing of our dissemination strategy, three distinct phases of implementation can be identified (Figure 2). Year 1 is considered to be the first 18 Months of Inno4Health (out of a total of 36 Months). Note, an extension is possible because of a significant delay in the beginning of the project
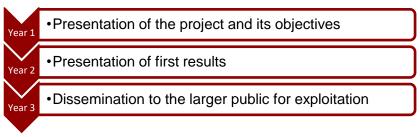
Year 1 • Presentation of the project and its objectives

Year 2 • Presentation of first results

Year 3 • Dissemination to the larger public for exploitation

Figure 2: Focus of dissemination activities shifts over time.

Early on, there will be a focus on on building general awareness among industry and the general public, including potential customers, generating interest by communicating application scenarios that appeal to a broad audience. As the project progresses, the focus will also encompass the predictive maintenance, smart services and tools that are being developed.

4.4 Internal dissemination

Continuous and effective internal communication is key to the success of international projects such as Inno4Health. For this reason, internal dissemination is considered an essential part of the dissemination strategy, in particular because partners joined to learn from each-other. Internal communication enables:

- Keeping track of project-related decisions and action points.
- Clearly communicating the role and responsibility of each project participants
- Communicating on WP and demonstrator progress.
- Disseminating the right level of information to project participants.
- Monitoring the defined KPI's
- Identifying problems and provide solutions.

4.4.1 Project meetings

As detailed in the Inno4Health FPP CR#3, there are several types of project meetings:

- General Assembly meetings taking place at least three times a year,
- Regular project management team meetings,
- Regular work package meetings,
- Technical workshops,
- Additional telephone when needed for day-to-day coordination of the project.

At the time of writing this document so far 3 General Assembly meetings[2] have been organized. **Error! Reference source not found.**The General assembly meetings serve to update each other on project results, and to align the activities for the next period.

4.4.2 Project Kick-off

4.4.3 General assembly meetings

GA Meeting October 2021, Portugal

The third GA Meeting was the first in person meeting, and it was held in Portugal, on October 19 & October 20, 2021, hosted by Oporto-ISEP. To get to known each other in a better way, a social event was organised by the host.

Figure 3: A social event at time of the kick off meeting in a wine cellar in Porto.

GA Meeting May - June 2022, Turkey

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[2] Due to lack of national funding the first two assemblies were incomplete.

The fourth GA meeting was held in Istanbul, on May 31 and June 1 2022, hosted by Karel Electrinics.

Figure 4: Our General assembly meeting in Istanbul at Karel Electronics premises.

4.4.4 WP workshops

In addition to the general assembly, many smaller workshops were held (see Figure 1),

Figure 1 Impression from several WP workshops

Dry run at MMC premises

4.4.5 ITEA Review meeting

In the meantime, we have had our first review meeting. Here presented the board members the status of the project so far and gave some demonstrations about the use cases so far.
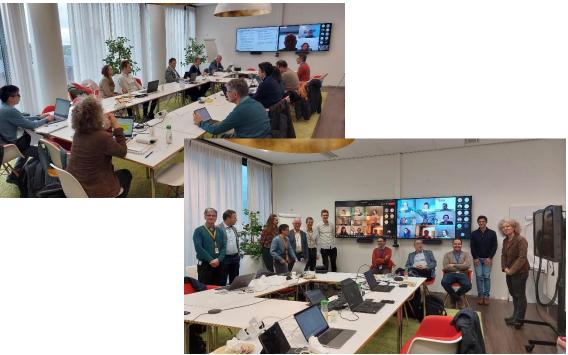

Figure 2:Pictures taken from our 1st review meeting in a hybrid session

4.4.6 Management teleconferences (Teams)

An important means of communication and information sharing within the project are the monthly management teleconference meetings. These meetings are conducted every first Monday of the month. The work package and demonstrator leaders that are located at the High-Tech Campus in Eindhoven can meet in person, while the other work package leaders dial in. Prior to the meeting. the work package leaders of the work packages containing the demonstrators contact the demonstrator leaders for an update on the progress, which is then reported during the MT teleconference. very Meeting minutes are made available on the file sharing system (Fig. 7)

4.5 File sharing system

We use a password protected file sharing system is installed that is hosted by Philips Research. The file sharing system is used to store the presentations used during the general assembly workshops, to archive the board meeting minutes, and to store documents like templates etc.
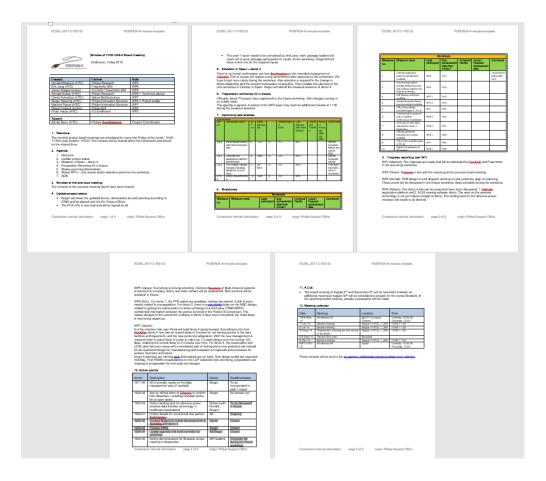
Figure 7: Minutes of our monthly board meetings, keeping track of our progress, problems, deliverables, milestones etc.

4.6 External dissemination

Much of the effort is aimed at 'external communication' to promote the project and disseminate results. The major external dissemination objectives are to:

- Effectively use these communication channels to present the Inno4Health project's results.
- Establish links and encourage synergies with similar projects and initiatives.
- Provide the foundation of a comprehensive exploitation strategy.

4.6.1 External dissemination tools

External dissemination designates actions aiming at ensuring the visibility and awareness of the results outside the Consortium borders, i.e., in the scientific community, in academic institutions, in other research organizations, or among the lay public. These tools include:

- Member presentations / webinars
- Scientific papers
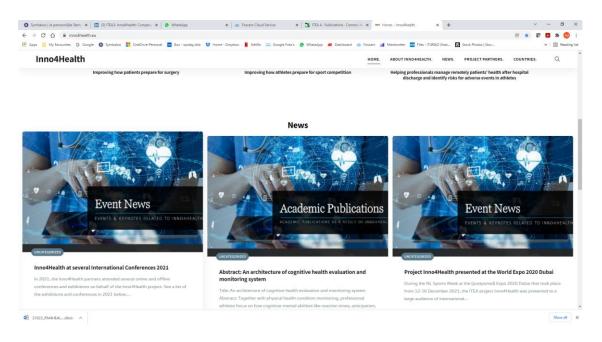
- White papers / thought leadership articles

4.6.2 Project Public Website

The Inno4Health public website presents general project information, participant information, downloadable publications and deliverables. Furthermore, it informs viewers about previous and forthcoming events and activities of the project as well as of other relevant projects and collaborations. Additional features can be added as needed.

Sportbizz initially designed and will maintain the website of Inno4Health. The website will be updated on a continual basis by the WP6 leader and will be responsible for the website content until end of the project. Other Inno4Health participants' contributions will be requested throughout the project.

Link to the Inno4Health public website:
https://inno4health.eu/ provided by consortium members and hosted by Sportbizz
https://itea4.org/project/inno4health.html provided by ITEA

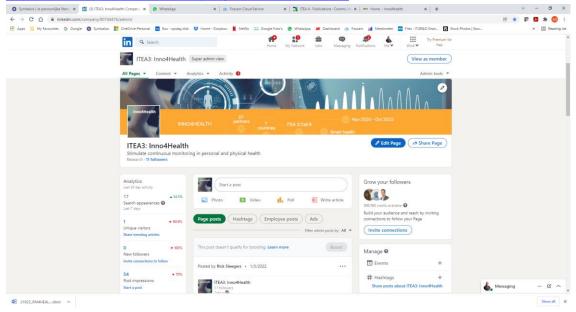### 4.6.3 Press releases and social media

Press releases will be organized on an ad hoc base to disseminate special milestones and/or project results. Very often media coverage cannot be orchestrated but "happens" as a result of related dissemination activity.

Social media gives more control over dissemination timing. Sportbizz has established and will maintain a LinkedIn account for Inno4Health.

https://www.linkedin.com/company/80744476/admin/

4.6.4 Publications and presentations

Inno4Health project results will be submitted for publication in scientific journals, conferences, and workshops. The submission of papers jointly written by project participants is encouraged.

Given the diversity of use cases and tools being addressed in Inno4Health, a wide variety of national and international journals, conferences and workshops can be targeted to disseminate Inno4Health results. The selection of a certain dissemination platforms will, apart from the topic, also depend on the timing. Not all conferences are held every year, and also the timing within the year may vary.

Journals targeted by Inno4Health include:
- ACS Applied Materials and Interfaces
- Applied Materials Today
- Applied Soft Computing
- European Journal of Operations Research
- IEEE Computer Society
- IEEE Industrial Applications
- IEEE Industrial Informatics
- IEEE Sensors Journal
- Industry 4.0
- Information Fusion
- International Journal of Advanced Manufacturing Technology
- International Journal of Data Science and Analytics
- JMIR Formative Research
- JMIR mHealth and uHealth

- Journal of Manufacturing Technology Management
- Journal of Medical Internet Research
- Journal of Manufacturing Technology Management
- Operations Research
- Manufacturing and Service Operations Management
- Mechanical Systems and Signal Processing
- Reliability Engineering and System Safety
- Baltic journal of modern computing

Conferences:
- Bio-electric wearables 2021
- BNAIC/BENELEARN The reference AI & ML conference for Belgium, Netherlands & Luxemburg
- Brightlands Rolduc Polymer Conference, 2021 (https://polymerdays.brightlands.com/)
- Data Science Summit
- ESC Preventive Cardiology Congress
- ELIS Innovation Summit, 2021 (https://elisinnovationhub.com/summit/)
- E-MRS spring, 2021
- European Alliance Summit
- European Safety and Reliability Conference (ESREL)
- European Supply Chain Forum
- Expo 2020 Dubai, 2021
- FEPSAC 2022 (https://fepsac2022.eu/)
- Flex, 2021
- Health E | Moore for Medical, 2022 (https://www.health-lighthouse.eu/symposium)
- HealthTech Sensor Innovations, 2021
- IDTechEx Europe, 2021
- IDTechEx Show USA 2021
- IEEE International Conference on Wearable and Implantable Body Sensor Networks (BSN 2021)
- IEEE MEMS Conference
- IEEE NEMS Conference
- IEEE Sensors Conference
- IMA International Conference on Modelling in Industrial Maintenance and Reliability (MIMAR)
- International Conference in Manufacturing Research(ICMR)
- International Conference on Product-Focused Software Process Improvement (PROFES)
- International Conference on Software Engineering (ICSE)
- International Conference on Sustainable Design and Manufacturing (KES International)
- International Symposium on Empirical Software Engineering and Measurement (ESEM)
- LOPEC, 2021
- Medica 2021
- Medical Wearables, 2021

- MedTech Japan, 2021
- Probabilistic Safety Assessment and Management Conference (PSAM)
- Production and Operations Management Society Conference (POMS)
- Reliability and Maintainability Symposium
- Soccerex Connected, 2021
- Soccerex Americas, 2022
- The association of European Operational Research Societies Conferences (EURO Conferences)
- The Institute for Operations Research and the Management Sciences Conference (INFORMS)
- Toelichting samenwerking Brainport Development, PSV Eindhoven & TU/e, 2022
- VR Days Europe
- Wearable Expo, 2021
- Wear-it, 2021
- 15th Baltic Sport Science Conference 2022
- 54th annual conference of the Sport Psychology, Münster, 2022
- Data Analysis Methods for Software Systems annual conference, Lithuania

4.6.5 Alignment with other European Projects

Inno4Health builds on the results of the previous ITEA3 projects E-watch and Nano4sports. Close contacts are maintained with the ITEA3 Careware project which focusses on 24/7 monitoring in real time and offline technology.

4.6.6 Education and Innovation

Educating young scientists and involving them in innovation is an important aspect of the Inno4Health project. Inno4Health is actively involved in graduation assignments for M.Sc. and Ph.D. students which (partially) take place at industrial partner premises.

Several partners also employ company internal means to educate colleagues in the activities and results of the Inno4Health project.

4.6.7 Outreach

The 14th of July 2022 a first business outreach event takes place on the HTC in Eindhoven (Workplace Vitality Hub). Organisation is the Vitalty research group of TUE. At this outreach event the intermediate results of Inno4Health will be demonstrated. This in combination with TNO, IMEC and Philips the used sensors will be showed and demonstrated on ECG analysis.

Besides that, in collaboration with PSV, some aspects of the PSV use case (like sensor box) will be demonstrated as well.

At the end of the project a final outreach event will be organized, showing all demonstrators and prototype for the wider audience.

4.7 Education

Educating young people and bringing them into contact with an industrial consortium is an important aspect of the Inno4Health dissemination as well as exploitation plan[3]. The following education activities can be discerned:

- **Direct participation of PhD and Postdoc students in the project**
  Most of the academic partners as well as the RTOs connected to Inno4Health have hired PhD students or Postdocs to carry out their contribution to Inno4Health. Table 2 lists the PhD students so far hired and the organizations they are connected to.
  The students are encouraged to participate in the general workshops. It gives them the opportunity to visit other institutes and companies, and to experience the difference between industrial and academic research and development.

- **Courses and curriculum material**
  The technologies and solutions that are being developed are attractive illustration material to liven up courses and curriculum material.

Table 2 PhD and Postdoc students that are financed from and work on the Inno4Health project.

#	Name student	Stationary	PhD/Postdoc
1	Daan Jansen	Maastricht University	Bsc
2	Lonneke Fruytier	Maxima Medical Centre	Medical doctor, Msc
3	Lieke Diederen	TU Eindhoven	MSc
4	Willem Wilke	TU Eindhoven	MSc
5	Lynn van der Zwan	TU Eindhoven	MSc
6	Rosa van Tuijn	TU Eindhoven	MSc
7	Sven van Hoof	TU Eindhoven	MSc
8	Wouter Meeuwis	TU Eindhoven	MSc
9	Zun Wang	TU Eindhoven	MSc
10	Tessa van Abkoude	TU Eindhoven	MSc
11	dr. Dimitra Dritsa	TU Eindhoven	PhD
12	Julio Botelho de Souza	ISEP	Postdoc
13	Ana Isabel Vieira	ISEP	PhD
14	Elvinas Brasevičus	Lithuanian sport university	MSc
15	Wessel van der Rest	Thunderbyte	MSc
16	Sara Vieira Escadas	Faculty of Medicine of the University of Porto	MSc

[3] For this reason, this section is identical to the corresponding section in the "Final exploitation plan" deliverable D6.4

17	Daniel Alexandre Relvas Rodrigues	Faculty of Medicine of the University of Porto	MSc
18	Cristiana Almeida Rocha	Student of Material Science and Technology	PhD

5 Standardization

Standardization for remote monitoring devices is an important aspect of Inno4Health. Firstly, there are obviously the legislative standards that medical devices and especially sensors, wearables and implantable devices must comply with. in addition, it is the aim of Inno4Health to pave the way towards standardization in manufacturing of, and interfacing with these instruments.

In Inno4Health the following topics are good candidates for further development into standards:

5.1 Setting standards in Inno4Health

In a number of cases the innovations developed by Inno4Health have the potential to be used as reference for setting new standards. All partners will review the consortium technical papers and extract which elements need to be standardised and which need recognition from the relevant EU standards committees.

5.2 Used standards and contributions to it

Some examples below.

Table3 Standards and contributions to it, most relevant for the Inno4Health use cases

Standard	Contributions
Standard for open wireless communication protocols	Development of in-sole sensing platform to allow communications
Bluetooth communication protocols	Patient Tracking System in IoT Ecosystem
Narrow-band IoT communication capabilities	It-Platform
Novel connectivity protocols for seamless data streaming without data loss	Development of our ecosystem, connectivity of future sensors and devices with each other and to the Internet.
Data processing protocols	Setting up protocols for defined use cases
Security and privacy protocols	Following the GDPR rules, agreement has to be made with the target groups

5.3 Compliance with existing standards

Obviously, the demonstrators and products to be developed in Inno4Health need to comply with the existing national and international standards in particular regarding the devices in the use cases and the tools in the integrated tool kit.

Care must be taken that all data, e.g. recorded by a "lifestyle product" like a wearable that allow for health conclusions, are processed under strict security and privacy regulations as well. As the first principles of data security and privacy should be quite similar all over the democratic world, the recommendation would be to obey the major regulations as mentioned below, even if they are not legally binding in the country of the application.

Some of the most important regulations and standards are listed in Table 2 below.

Table 2 Standards most relevant for the Inno4Health use cases

Standard	Description
GDPR	EU General Data Protection Regulation
ISO 27001	Information Security Management
ISO 27799	Information Security Management in Health
HIPAA 1996	US Health Insurance Portability and Accountability Act; standards for electronic health care transactions and security
ISO 31000	Risk Management
ISO 13485:2016	Medical devices - Quality management systems - Requirements for regulatory purposes
IEC60601-1	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
IEC 62304	Medical device software

Apart from this, medical devices have to be approved by national and international regulatory agencies. In Europe this includes the CE Marking for medical devices while in the US the stringent FDA approval is required.

The healthcare OEM's owning the demonstrators in Inno4Health are long standing manufacturers of medical devices. They are all very aware and familiar with the regulations concerning the manufacturing of these devices and all have extensive experience in the procedures and steps required to get devices approved by the regulatory agencies.

6 Conclusions

The Inno4Health project is well on its way, use cases are on track. The second year will be used to define the demonstrators and the way to show it at the wider audience.

The standardisation activity has progressed well, and Inno4Health is connected to the national and international standardisation bodies. The challenge will be how the benefits of the project will be included in the upcoming AI/ML related standards. We will continue our participation in the ISO/IEC JTC1 SC42 Artificial Intelligence standardization committee and its working groups. As relevant project results are available, we will contribute those to the standardization groups. Similarly, we will inform the Inno4Health project about the standardization activities of the standardization committee.