SELFSUSTAINED CROSS-BORDER CUSTOMIZED CYBERPHYSICAL SYSTEM EXPERIMENTS FOR CAPACITY BUILDING AMONG EUROPEAN STAKEHOLDERS

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First Periodic Report on Smart4ALL Ecosystem Activities

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The Abstract

This deliverable identifies the main activities and presents the most important results that were achieved under WP3- Ecosystem Building and Community Engagement in the first year of the SMART4ALL project. The *Periodic Report on Smart4ALL Ecosystem Activities* represents a breakdown of all respective tasks and sub-tasks that were undertaken from all project partners in order to build the SMART4ALL ecosystem consisting of various (new and existing) Innovation Hubs. Following the specific objectives of this work package related to creation of suitable conditions to engage SMART4ALL related stakeholders, connection with other DIHs and relevant centers and accelerators launched under SAE initiatives and education about the value creation potential of SMART4ALL, this deliverable not only describes and points out on activities and indicators achieved, but it also gives recommendations for further improvements in next years.

History and Contributors

Ver	Date	Description	Contributors
00	16/11/2020	Document structure	MECOnet
01	04/12/2020	Draft of the deliverable	MECOnet
02	17/12/2020	Draft of the deliverable with partners' input	ALL
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Executive Summary

The First Periodic Report on SMART4ALL Ecosystem Activities is a deliverable of the SMART4ALL Work Package 3. After the completion of the SMART4ALL Community Engagement Plan and Model (Deliverable 3.1), this document is the first to provide information and indications of the results achieved in the first year of the SMART4ALL project.

The structure of this First Periodic Report on SMART4ALL Ecosystem Activities is as follows:

•   The first section of the Report refers to the introductory information and presents the structure of this document.

•   The following nine sections are presented in accordance with the respective WP3 tasks. They include general information about tasks, undertaken activities during the first year of the project and some projections for the next period of the project.

•   The final section of the document contains the analysis of information collected from project partners that were involved in WP3 activities. The results obtained from the analysis show the current state of SMART4ALL ecosystem, community engagement and suggested measures for its further improvements.

Abbreviations and acronyms:

CLEC	Customized Low Energy Computing
CPS	Cyberphysical System
IoT	Internet of Things
DIH	Digital Innovation Hub
SEE	South Eastern Europe
SAE	Smart Anything Everywhere
PAE	Pathfinder Application Experiments
SME	Small and Medium-Sized Enterprises
KTE	Knowledge Transfer Experiments
FTTE	Focused Technology Transfer Experiments
CTTE	Cross domain Technology Transfer Experiments
MaaS	Marketplace as a Service
DTTF	Digitized Transport Task Force
DAgTF	Digitized Agriculture Task Force
DETF	Digitized Environment Task Force
DATF	Digitized Anything Task Force
STF	SMEs Task Force
EC	European Commission
GA	General Assembly
GDPR	General Data Policy Regulations
KPI	Key Performance Indicator
NGO	Non-Governmental Organization
WBC	Western Balkan Countries

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1. INTRODUCTION

1.1. Purpose and Scope

The purpose of the First Periodic Report on Smart4ALL Ecosystem Activities is to present the progress accomplished in relation with the WP3- Ecosystem Building and Community Engagement of the SMART4ALL project. This is the second deliverable of the WP3, the first being the „SMART4ALL Community Engagement Strategy and Model" which was completed in September 2020.

The target of the first deliverable- Community Engagement Strategy and Model explained how to encourage external institutions, active in the fields of digital economy and ecosystems, to join a SMAR4ALL project. The purpose of this deliverable is to present how this community engagement strategy has been implemented.

However, considering that this report is the first one in series of periodic reports, it must also ascertain to what extent the actions undertaken by the project partners have been in accordance with the general project objectives outlined in the Grant Agreement. This is especially important because the period covered in this Report includes the first 8 months of the project during which no official Community Engagement Strategy of the Project has been formulated.

This Report comprises of nine sections that corresponds to the nine specific tasks of WP3 package:

1. T3.1: Network Management and Coordination
2. T3.2: Connection and Collaboration with SAE initiatives
3. T3.3: Connection and Collaboration with EU DIHs
4. T3.4: Building the Local Community Ecosystems
5. T3.5: DIHs Setup & Growth
6. T3.6: SME Outreach
7. T3.7: Helpdesk and Education
8. T3.8: Brokerage & Consortium Building Support
9. T3.9: Community Evolution

The above nine tasks can be divided into two groups – the ones which deal mainly with community engagement (tasks 2,3,6,7) and the ones related to community building (tasks 1,4,5,7,9), while T3.8 belongs to both categories.

The Report presents these tasks in numerical order, bringing attention to their similarities or intertwinement at the appropriate places. More specifically:

- The first task will focus on the strategy which was outlined in the Community Engagement Strategy and Model of the Smart4ALL project and the general aspects of WP3.
- The second and the third tasks will outline the measures which have been undertaken by project partners in relation with engagement of the respective SAE Initiatives and European DIHs
- The fourth and fifth task will outline the measures which have been undertaken in order to build the SMART4ALL community, with the fourth task focusing primarily on the measures *of local significance* which were taken by the project partners in relation to their respective location, country or region. The fifth task will outline the general SMART4ALL community building efforts, i.e. the way in which all these local efforts translate and connect into one broader, international, effort which is SMART4ALL, outlining the internal mechanism and logic of the SMART4ALL DIHs.
- The sixth task is concerned with the engagement of the SME.
- The seventh task presents the helpdesk and education efforts that performed by the SMART4ALL partners, both of local and international level.
- The eighth task presents the efforts taken by our partners in relation with developing a brokerage web between the industry and applicants within each of the SMART4ALL Vectors (Transport, Agriculture, Environment, Anything) and is accordingly broken into four separate subtasks. The ninth task is concerned with the evaluation of the aforementioned tasks and their alignment with the Community Engagement Strategy and overall Grant Agreement.

2. NETWORK MANAGEMENT AND COORDINATION

SMART4ALL project is promoting digitalization and its practical implementation in the various fields across Europe with special emphasis on South Eastern Europe. The designated manner through which this goal should be achieved is by building Digital Innovation Hubs (DIHs) which will serve as a place to link all the actors involved in this process (those who create it, and those who can profit from it). The main target of SMART4ALL community engagement strategy is to build these DIHs, so they can "provide access to technical expertise and experimentation setting up a "test before (they) invest" scenario. The DIHs would also provide innovation services, such as financing advice, training and skills development that are needed for a successful digital transformation. Among the project's partners, MECOnet has been designated as the main responsible for leading the WP3 package.

Task 3.1. is concerned with the general management of the WP3 package and its aim is to align and outline the efforts to be undertaken by the project partners. Towards this direction MECOnet is helped by the University of Peloponnese and the AVN Group.

As a task leader, together with UoP and AVN, MECOnet has created The Community Engagement Strategy in September 2020 and it has identified specific local ecosystem centers and initiatives. Since this is one of the SMART4ALL project's most important tasks being active for the whole duration of the project, we dedicated this year to the connection of the local ecosystems with the SMART4ALL DIH formulating the basis for many other activities in different work packages.

Figure 1: Networking of SMART4ALL-DIHs

The SMART4ALL-DIHs, as defined by the Community Engagement Strategy is established through the following the "step by step" process:

- Initial phase,

- Development phase.
- Commercialization phase, and
- Sustainability phase,

During the Initial phase, SMART4ALL DIHs would work as a unit of the SMART4ALL project. The partner responsible for its operation during this phase would be MECOnet who (in cooperation with other project partners) will coordinate all the activities regarding DIHs. . In this initial phase, the SMART4ALL DIHs will function as a cloud network.

The Commercialization phase would start after the end of the SMART4ALL project. The intention will be to establish a SMART4ALL DIH as independent startup or an NGO, the founder of which will be all partners of the Consortium or rather those who express an interest in continuing cooperation.

During the **sustainability phase** the SMART4ALL DIHs will aim at establishing a stable business. The **development phase** will be focused on the growth of the SMART4ALL DIHs and the connection to similar DIHs worldwide.

The project is currently in the *Initial* phase of the Community Ecosystem building and engagement. During this phase, all of the project partners have been assigned a set of duties they need to perform in their own communities – which consist of identifing the local ecosystem actors along the lines of the „*Breakdown of SMART4ALL ecosystem"spreadsheet* we have provided them with. Based on this, we received a lot of information which is presented in Section 10 – Community Evolution. According to this information, we can determine our future course of action concerning the project activities. Thanks to these efforts, we concluded that two issues need to be addressed – the setup of the local SMART4ALL DIHs and the definition of what we can offer to external partners.

Of course, additional steps in dealing with these, and other issues will be taken in the following years. We will create an initial survey with all the interested parties (which is step 3) in order to help us with further development of SMART4ALL external partners database. This database will be ulitmately integrated in the SMART4ALL webiste in order to achieve the best possible results in mapping out the regional ecosystem actors, and thus, developing the overall SMART4ALL ecosystem (Task 3.4-6.).

In parallel, we shall also complete the steps 4 and 5 (see figure 2), which are directed in defining potential ways to reach out external partners and establish further communication with them. With this in mind, MECOnet will lead the activities aimed towards coordinating and providing project partners with initial data and forms to reaching-out to the communities. In this respect, MECOnet will:

- develop a calendar according to which it will be sending information to project partners in order to engage them with the local ecosystem actors in a consisted manner.

- provide them with ideas, examples, and best practices in reaching out their local ecosystem actors in an effective way . This includes providing live demonstrations and consultations to project partners.

All these efforts will be supplemented by a list of conferences on which SMART4ALL partners will participate in order to promote the project and engage the releavant community.

The final step is to maximize the feedback capability of the project's efforts, in order to gain information from project partners. That would enable MEConet to make further efforts in a manner to fit to the designated project principles (step 5). The gathered information will be analyzed in order to valorize its potential and practical value. Therefore, MEConet will have to define the relevant metrics (step 6) which will later help to define a long-term project sustainability strategy and future cooperation with project's external partners (step 7).
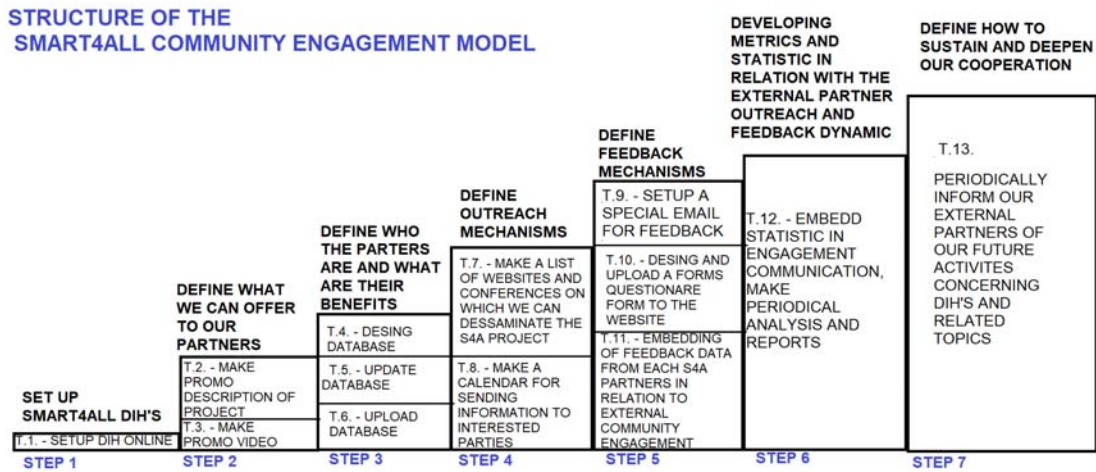
Figure 2: Structure of the SMART4ALL Community Engagement Model

SMART4ALL must also take into consideration the ratio of geographical and industrial representation, which means that all the verticals need to be distributed accordingly. Up to 18th of December 2020, a total of 286 entities from SMART4ALL DIH were interested in in the following verticals:

1. Digitized Agriculture- 44,
2. Digitized Transport- 34,
3. Digitized Environment- 52 and
4. Digitized Anything- 156.
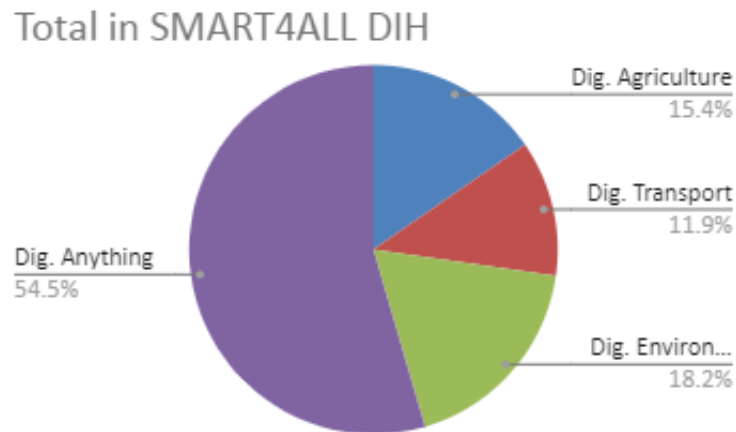
Figure 3: Distribution of verticals in SMART4ALL DIH

It is important that all the countries involved in the project – especially SEE, must be exploited.

During the first year of the project, specific efforts have been made by all of the partners.

Significant effort has been made by the Greek partners UoP, PSP and AVN as well. This joint effort was not directed only to Greece but a wider adoption policy was followed. These efforts have been achieved through bilateral and personal communication with key local players, SMEs, Universities etc. Co-organization of three successful webinars (mentioned below) significantly enhancing SMART4ALL engaged partners in Greece, but it has also helped the SEE project partners to mobilize some new entities in SMART4ALL DIH.

All partners were very active in announcing project events, especially webinars related to specific Calls for Proposals and those in local languages on their websites and social media channels.

The first webinar was organized on 24th of June 2020 with the aim to further mobilize the local ecosystems in South and Eastern Europe and inform about SMART4ALL funding opportunities through the SMART4ALL Open Calls. Due to an excessive interest, a second webinar was organized on 1st of July 2020. Both webinars were organized with great success by FTN and were overbooked twice resulting in more than 200 new registrations for the SMART4ALL DIH network. The third webinar was organized on 2nd of December 2020, focusing on the latest Open Call for Cross-Domain Technology Transfer Experiments. Similarly to the previous two webinars, the partner organizing and moderating the event was FTN.

Apart from the webinars, SMART4ALL network expansion strategy also included the organization of various local events presenting and promoting SMART4ALL objectives e.g., participation at local and international Summer Schools. This year SMART4ALL summer school was postponed due to COVID-19, but we expect it in 2021.

All above mentioned activities have produced great results especially by taking into account the constraints caused by COVID-19 pandemic. On 18th of December, SMART4ALL network was composed of 217 entities, namely: SMEs (115), bigger companies (20), Digital Innovation Hubs (10), NGOs (3), Research Institutes (13), Universities (53) and Venture Capitals (3).
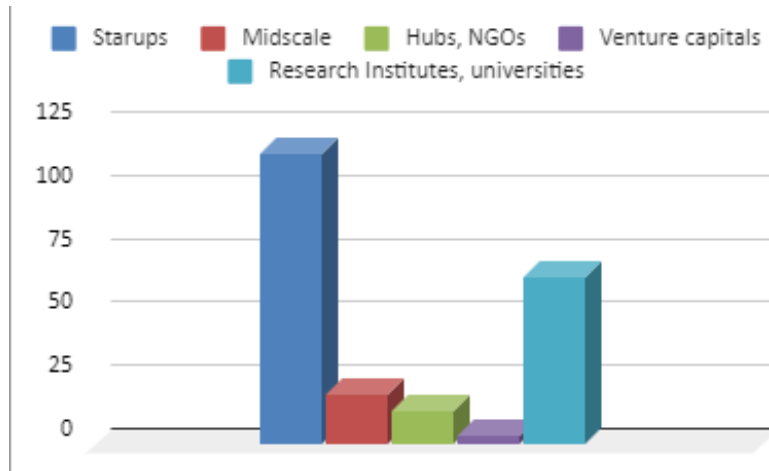
Figure 4: The structure of SMART4ALL community external partners

It is important to note that SMART4ALL DIH will facilitate the matchmaking between the potential partners in the context of the SMART4ALL open call proposal preparations and more than that. Furthermore, it will ensure the continuous provision of novel services, tools, and assets for the SMART4ALL Marketplace as a service platform. Additionally, as the network expands so will the influence of SMART4ALL to South-East Europe which is of cornerstone importance for the project. Finally, it will significantly increase the possibility of SMART4ALL DIH to form synergies and collaborations with other DIHs.

3. CONNECTION AND COLLABORATION WITH SAE INITIATIVES

Smart Anything Everywhere (SAE) is the European Commission initiative that aims to ensure that any industry in Europe – big or small, wherever is based and in whichever sector – can fully benefit from digital innovations to upgrade its products, improve its processes and adapt its business models to the digital era.

The SAE Initiative is based on Digitising European Industry initiative (DEI)and Digital Innovation Hubs (DIHs) are one of its key elements. It is prevised that DIHs support facilities that help companies – notably SMEs, start-ups and mid-caps – to become more competitive through the adoption of latest digital technologies. The DIHs act as a one-stop-shop, providing their customers with:

- access to digital technologies and competences,
- infrastructure to test digital innovations,
- training to develop digital skills,
- financing advice,
- market intelligence and
- networking opportunities.

The SAE Initiative aligns different projects (so-called Innovation Actions) in various technology areas such as: cyber-physical and embedded systems, customized low energy computing powering cyber-physical systems and the Internet of Things, flexible and wearable electronics/organic large area electronics and widening Digital Innovation Hubs. In that line SMART4ALL project targeted as very important an organization at least 4 joint activities/events with existing SAE Initiatives.

Coordination and Support Action (CSA) that is a part of SAE Initiative are also important for SMART4ALL DIH because it supports the existing and new DIHs into forming a coherent pan-European network of hubs with a total funding of approximately €26 million. Special focus is on reinforcing the role of the DIHs in offering all innovation services that companies need. Not only testing and experimentation, but also skills development and access to finance. Furthermore, collaboration with nationally/regionally funded DIHs is highly encouraged to be able to cover the whole of Europe.

As part of this, SMART4ALL project aimed to attent specific meetings lead by the SAE CSA Projects (physical or via teleconferences) in order to prepare a collaboration plan with the existing SAE Initiatives. Initially, joint events, workshops, webinars or any other kind of activities that would help to further promotion of SAE Initiative around Europe were planned, but considering the COVID-19 pandemic most of the activities moved from phisical to online event . Also, some of them were postponed for the next year.

SMART4ALL project partners that are appointed as task leader and task participants were very active this year and despite all constraints that were evident this year, they have contributed to the

SMART4ALL network expansion by close monitoring and active participation at all workshops and remote conferences in relation to SAE workshops. Moreover, information about SMART4ALL project are available on SAE website:
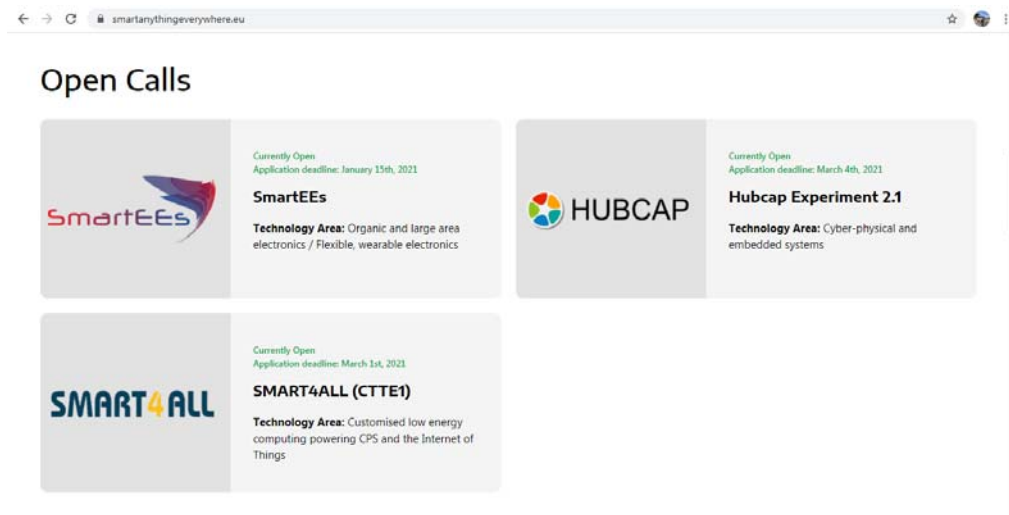
In the first year of the project, SMART4ALL performed the following activities as part of Task 3.2:

- Continuous presence in all SAE conferences and internal discussions with emphasis on:
    - Joint Outreach and Dissemination strategy,
    - Open Calls assessment,
    - AEs mapping,
    - Sustainability Common Strategy Planning and
    - Marketplace.
- Participation in EFECS 2020 as part of high profile DIH IA actions (https://efecs.eu/),
- Collaboration on promoting and advertising SMART4ALL actions through DIHNET (https://dihnet.eu/), HUBCAP (https://www.hubcap.eu/), Inno-HUB13 (https://innohub13.de/) , MECOnet (http://www.meconet.me/SMART4ALL) and other IA communication channels,
- Organization of SMART4ALL workshop at HiPEAC (https://www.hipeac.net/) inviting a wide range of prestigious speakers and representative of DIH key player,
- Collaboration with AfriLabs DIH (https://www.afrilabs.com/) on promoting SMART4ALL actions even outside Europe,
- Invitation to participate at FED4SAE (https://fed4sae.eu/) final event.

3.1. Collaboration on promoting and advertising SMART4ALL actions

The first year of the project was very successful in terms on promoting and advertising the SMART4ALL actions at the various events and social media channels of other similar EU funded projects.

Thanks to the efforts of FundingBox, SMART4ALL project became an integral part of **DIHNET.EU** project website which supports the collaboration among Digital Innovation Hub Networks across Europe. This is important because this DIHNET.EU project enables the coordination of European, national and regional initiates directly supporting the digital transformation and Digital Innovation Hubs (DIHs). The project aims to create a sustainable pan-European network of networks with a focus on regional DIHs.

Currently, there is a vast number of networking activities related to DIHs in Europe. Many of these initiatives have limited connection between each other, especially if the target technologies are different. The DIHNET.EU project supports all these networks and initiatives by creating a coordination mechanism, creating synergies and addressing common issues. More specifically, DIHNET.EU contributes by:

- Enhancing the collaboration between the different stakeholders from the European DIH Community with a wide range of services, information and tools that will help DIHs to communicate, align, collaborate and synchronize activities.
- Developing a clear overview of the DIHs related services provided in Europe and align them.
- Upgrading the DIH Catalogue by identifying/triggering activities in the DIH Community in accordance with regional, national and EU policies.
- Creating a strategy to reinforce the specialization of these services, as well as supporting its uptake by relevant DIHs and DIH networks.
- Creating a vision and strategy on a self-sustaining business model for this network of DIHs, and to make this operational.
- Creating an online community to foster interaction among hubs, information exchange and peer-learning.

In the DIHNET.EU website page related to open calls from EU projects on Digital Innovation Hubs all information about the SMART4ALL calls for proposals information are available. The screenshoot of that webpage is available in the next figure.

Figure 6: Screenshoot of SMART4ALL open and forthcoming calls on DIHNET.EU website

SMART4ALL has also made a connection with **HUBCAP**, an exclusive network of Digital Innovation Hubs that intends to bring new microelectronics-enabled products, processes, and business models to the market. HUBCAP provides access to funding opportunities, cutting-edge tech and business support services. Its network of Digital Innovation Hubs (DIHs) gives SMEs an easy entry route to Model-Based Design (MBD) for Cyber-Physical Systems (CPSs). The network offers a comprehensive set of digital innovation services, including supporting businesses to experiment, find investments and business opportunities, and access skills and training.

The **Innovation Hub 13** is the interface between science, business and the public in the region along the A13. As translators, intermediaries and networkers, Innovation Hub 13 supports an interdisciplinary exchange of knowledge, technologies and solutions in the areas of digital integration, lightweight construction and life sciences. Its goal is to bring different actors to the same table in order to jointly drive the further development of the region. The Innovation Hub 13 is a project of the Technical University of Wildau and the Brandenburg Technical University of Cottbus-Senftenberg to promote knowledge and technology transfer between universities, companies and the public. Since the start of the project in 2018, it has been pursuing the goal of strengthening the region along the A13. In addition to research and teaching, both universities are actively committed to the "third mission".

Collaboration with **AfriLabs DIH**, a network organization of 202 innovation centers in 46 African countries is one step forward on promoting SMART4ALL actions even outside Europe. AfriLabs DIH supports entrepreneurship and innovation in addressing the continent's humanitarian and sustainable challenges.

The **FED4SAE** innovation action (IA) aims to boost and sustain the digitization of the European industry by strengthening competitiveness in Cyber Physical Systems and embedded system markets. FED4SAE is part of this strategy, targeting a large network of 'small' companies (startups, small/medium enterprises and midcaps), including both technology specialists and low-tech companies. These companies can request solutions for specific use cases, which FED4SAE's industrial and advanced platforms will provide. This will include solutions comprising one of several components, such as sensors, data fusion/processing technology and actuators. These components make up cyber-physical systems, which link the physical and digital worlds. The main goals of this innovation action are related to enabling both tech and non-tech innovative third parties (startups, SMEs, midcaps) from any sector to build new products and services with "digital inside", acting as a European added-value one-stop-shop to facilitate innovators-suppliers cross-border partnerships, which will accelerate innovation by providing technical, industrial and innovation management expertise and linking innovators to investors to reach out to further funding opportunities and enable the next steps of the third parties' developments after completing their application experiments. Invitation to SMART4ALL project team to participate at FED4SAE final event is still under discussion, but anyway it represents the good positioning of SMART4ALL project in European DIHs community.

3.2 Participation in SAE events

Due to COVID-19 pandemic, it was very challenging to organize or to attend any physical meetings and events. However, SMART4ALL team has participated in high profile DIH IA actions that were organized online. The quality of those events and presented topics was not reduced by new circumstances and participation on those events led to increased awareness of SMART4ALL project.

Organization of SMART4ALL Session at HiPEAC is of the greatest importance for SMART4ALL project because HiPEAC is inviting a wide range of prestigious speakers and representative of DIH key players. On October 15th 2020, Prof. Nikolaos Voros (UoP) presented during the Smart Anything Anywhere-Vision, Opportunities and Success Stories session at this year's virtual HiPEAC Computing Systems Week. Prof. Voros (UoP) talked about the opportunities offered by SMART4ALL for building a network of Digital Innovation Hubs in Southern, Eastern and Central Europe. The session was attended by 38 participants, mainly coming from industry and academia.

Prof. Nikolaos Voros (UoP) participated in **World Manufacturing Foundation Side Event "Digitalization of Manufacturing"** on November 12th. He has presented SMART4ALL during the Smart Anything Everywhere special event "Digitalization of Manufacturing: Building the ecosystem for a smart and sustainable future" held within the framework of the World Manufacturing Week 2020 (https://worldmanufacturing.org/activities/forum-2020).

The event attracted approximately 300 attendees from all over Europe and beyond. The visitors, mainly SMEs and industry sector showed a great interest in the project and had a lot of questions for the speakers. The title of the presentation was "SMART4ALL: An extensive network of Digital Innovation Hubs for boosting technology and business development in South, Eastern and Central Europe".

The World Manufacturing Week took place from 9 to 12 November and included a number of events co-organized with manufacturing companies, institutions, and associations partnering with the World Manufacturing Foundation. The focus was on technical and application aspects related to new technologies and on specific sector-based perspectives.

SMART4ALL participated in the **virtual booth hosted by Smart Anything Everywhere (SAE)** Initiative for all aligned projects at the European Forum for Electronic Components and Systems-**EFECS2020**. EFECS 2020 gave participants a unique opportunity to engage with the leaders and enablers of Europe's Digital Economy and attracted visitors from all over Europe. The event took place on November 25th and the SMART4ALL project was represented by Prof. Christos Antonopoulos (UoP). On the booth a poster was displayed explaining the SMART4ALL mission. Interested parties had the opportunity to virtually visit the booth, ask questions and have a live discussion about funding opportunities offered by SMART4ALL innovation action.

3.3 Plan for the Second year of the SMART4ALL project

The fast development of digital technologies make it difficult for SMEs to adopt and integrate them into their processes. Under the Digitising European Industry initiative, DIHs have been designed as tools to support businesses, in particular SMEs and non-technological industries in their digital transformation.

Following that, in the next year SMART4ALL DIH will aim to go beyond technology transfer via PAE to its entities and it will enhance relevant support and mentoring in ethics, intellectual propreties, business and technology development issues.

Connection of SAE initiative with SMART4ALL project could enable the presence of large industrial players in SAE that are interested in helping SMEs and mid-caps from SMART4ALL DIH in establishing a customer relationship with larger and more proficient companies that are willing to invest and boost their business. The existing SMART4ALL marketplace will be also further enriched with new services. Furthermore, the DIHs should attract investors to support business development of SMEs and midcap actors in successful application experiments.

In that terms, SMART4ALL will devote activities to maintain an established collaboration with DIH and IA activities. It will form new synergies in order to continue and further intensify the SMART4ALL presence in SAE activities by organizing more events in joint collaboration with

SAE initiatives. Establishing SMART4ALL as a key participant at HiPEAC conferences will be one of the greatest successes related to SAE Initiative because HiPEAC is well known by inviting a wide range of prestigious speakers and representatives of DIH key players.

SMART4ALL team is already working on organization of SMART4ALL Workshop at HiPEAC 2021 that will take place on January 19th 2021. The project will be presented on the second day of the conference via a workshop "SMART4ALL: Capacity Building among European Stakeholders". This workshop will be consisted of nine presentations with keynote speakers. Organizers of the workshop are: Georgios Keramidas - Aristotle University of Thessaloniki, Stephan Wong - TU Delft, Nikolaos Voros - University of Peloponnese, Christos Antonopoulos - University of Peloponnese, and Michael Huebner - Brandenburg University of Technology.

4. CONNECTION AND COLLABORATION WITH EU DIHs

The importance of connecting and collaborating with EU DIHs is already explained. Similarly to the connection with SAE Initiatives, in T3.3, the SMART4ALL project aims to establish strategic connections with existing DIHs, mainly by synchronizing their DIH activities and establishing common roadmaps with them. Participation in joint events, workshops, webinars or any other kind of activities that would help to further promote the SAE Initiative around Europe was set as one of the main priorities for this task. According to that, SMART4ALL project is prevised to organize at least 4 joint activities/events with existing SAE DIHs.

Together with UOP and MRG, UPV as a task leader succeeded to organize a **special session on Digital Innovation Hubs for Digitizing European Industry PRO-VE event**. This session is originally planned to be organized physically on September 14th, but due COVID-19, it was postponed to November 23th.

The main objective of this session was to establish a connection between different DIHs and Strength European DIH network and especially those funded under calls in H2020-DT-2018-2020 like:

- DT-ICT-01-2019 Smart Anything Everywhere.

- DT-ICT-02-2018 Robotics Digital Innovation Hubs.

- DT-ICT-06-2018 Coordination and Support Activities for DIH Network.

The organization of this session in PRO-VE event has been a cooperation between SMART4ALL DIH represented by UPV team and DIH4CPS represented by Jose Ferreira of UNINOVA. UPV was the partner representing the project with a presentation titled: "Developing Digital Capabilities for SMEs: SMART4ALL's Cross-border Experiments for Emerging Technology Development and Adoption" given by Anna K. Lopez-Hernandez and J. Francisco Blanes Noguera.

The session focused on developing Digital Capabilities for SMEs and SMART4ALL was introduced as one of the Digital Innovation Hubs presenting the opportunities it has to offer for Digitizing European Industry. The activity of developing a network of Digital Innovation Hubs (DIH), is one of the most important pillars of the Digitizing European Industry effort.

The presentation of SMART4ALL DIH in this session was focused on Developing Digital Capabilities for SMEs: SMART4ALL's Cross-border Experiments for Emerging Technology Development and Adoption.

Other presentations in this session were as follows:

- Cobotic Assembly Lie Design problem with Ergonomics.

- Analysis of Manufacturing Platforms in the context of Zero-Defect Process Establishment.
- Towards a Reference Model for Configuring Services Portfolio of Digital Innovation Hubs: The ETBSD Model.

Polytechnic University of Valencia has also participated in **VI Conference of Applications industrial of the investigation virtually** on November 26th with a presentation "SMART4ALL An extensive network of Digital Innovation Hubs for boosting technology and business development in South, Eastern and Central Europe" and the financing opportunities at SMART4ALL were discussed.

Activities of UoP have been already explained in the previous chapter. In order to skip the overlapping of the same information, we will just state UoP's activities from this year. UoP has been active in communicating with several EU (and not only) DIHs to promote SMART4ALL activities and funding opportunities. Indicative examples include:

- TETRAMax,
- DIHNET.EU,
- Innovation Hub 13,
- Inndromeda,
- HUBCAP,
- ReBrain Western Greece,
- AfriLabs and
- MECO'2020.

UoP has also participated in MECO'2020 and SAE conference with respect to various key issues related to DIH promotion and growth.

MECO is an International Scientific Forum aimed to present and discuss the leading achievements in the modeling, analysis, design, validation and application of embedded computing systems, as well as, end to end computer systems with applications and related fields. MECO is one of the most referenced conferences in Embedded Computing, Cyber-physical Systems and Internet of Things. Moreover, MECO covers some other fields related to computing and electrical engineering. The event was organized on June 8th -11th, 2020 in Budva, Montenegro and could be also attended online. Main audience included scientists, engineers, academia, SMEs mainly from South and Eastern Europe.

SMART4ALL participated with a keynote presentation of Nikolaos Voros (UoP): „SMART4ALL an extensive network of Digital Innovation Hubs for boosting technology and business development in South, Eastern and Central Europe" and the presentation of Antonio Montalvo (FundingBox) "SMART4ALL - Self-sustained customized cyber physical system experiments for capacity building among European stakeholders".

The presentations took place virtually via Zoom meeting. There was a lot of interaction from the audience (27 visitors) who showed interest in SMART4ALL funding opportunities.
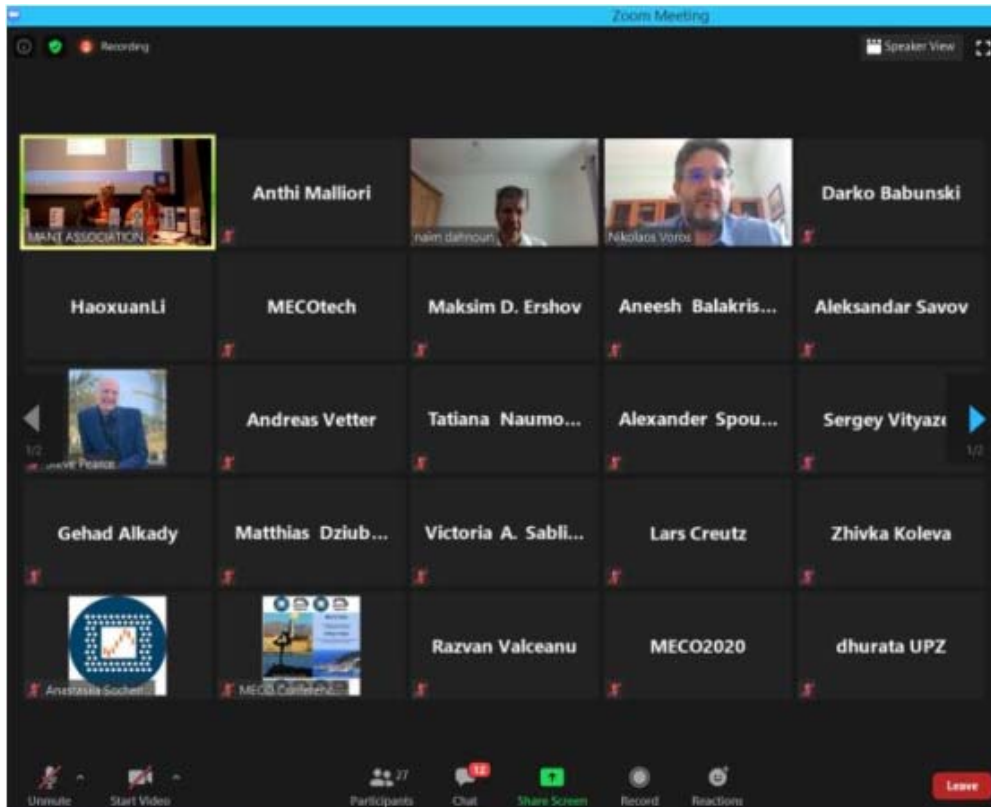
Figure 7: Participation of SMART4ALL at the 9th Mediterranean Conference on Embedded Computing (MECO'2020)

Project partners from Albania and Kosovo have also given a great contribution to SMART4ALL connection with other DIHs and interested third parties. Together with Nikolaos Voros (UoP) they have participated in **National Workshop of Albanian Beneficiaries in H2020**.

The SMART4ALL project was invited at the National Workshop of Albanian Beneficiaries in H2020 Sharing Best Practices and Lessons Learned. The workshop took place on December 3rd and aimed to present the Participation of Albanian Beneficiaries in EU Research Framework Programme Horizon 2020 for the period 2014-2020; Opportunities to exchange and share good practices on the implementation and financial management of Horizon 2020 projects and lessons learned for the next perspective for 2021-2027," Horizon Europe". On behalf of the consortium, the coordinator of SMART4ALL, Prof. Nikolaos Voros, and Prof. Betim Cico, the Balkan representative of the project, presented the thematic priorities of SMART4ALL and the funding opportunities it offers for consortia of South and Eastern Europe. Participants were also informed about the upcoming training seminars both in English and

Albanian language about the open call details that are currently open. Participants, mainly from academia and industry, were very interested in the project, which was further invited to be presented in the Smart Innovation Hub for Albanian companies.

To sum up and by taking into account the well-known health situation in the world, we believe that in the first year of the project all partners succeeded to fulfill the goals set for this task and they succeeded to present SMART4ALL project to EU DIHs and other interested third parties in the most suitable and convenient manner.

In the next year, continuation and intensifying of relative efforts towards more concrete join actions will be enough to continue this task at the same good level. For example, at the beginning of the year, at January 19th 2021, SMART4ALL will participate in HiPEAC 2021 (https://www.hipeac.net/2021/budapest/#/program/?q=smart) with a special whole day workshop named "SMART4ALL: Capacity Building among European Stakeholders". In 8 sessions, 14 speakers and 2 keynote speakers will present different aspects of SMART4ALL project.

5. BUILDING THE LOCAL COMMUNITY ECOSYSTEMS

Building of the local ecosystem by all project partners is one of the most important aspects of the project, because it enables SMART4ALL DIH entities to apply for PAE grants and to connect with other interested parties (institutions, academia, SMEs, venture capitals, NGOs, GOs etc.).

The execution of community engagement strategy regarding the local community ecosystem requires all project partners to be involved and to use their local, regional and national ecosystems in order to reach a large number of third parties.

In the first year of the SMART4ALL project, all project partners were very active in this task and they succeeded to communicate the project vision to third parties by:

- attending different promotional events and webinars,
- sharing project dissemination materials and events invitations on SMART4ALL partners' social media channels,
- posting project related news and invitations to SMART4ALL events on websites and social media channels of out-of-consortium partners,
- presentation of SMART4ALL project to close associates, academic and business partners out-of-consortium,
- direct communication on different locally organized events and physical meetings with research institutions, academia, SMEs, other DIH in partners' counties and regions.

It is necessary to emphasize that all partners have devoted tremendous efforts and that they have established connections with third parties interested in joining SMART4ALL DIH, but some of those parties have not officially joined DIH yet.

For example, one of the winners of the first KTE are "VerLab," a company from Bosnia, and University of Montenegro. MECOnet team has introduced to the applicants the SMART4ALL project and helped them to write and submit a competitive proposal (ranked first in the KTE evaluation process). The said KTE applicants, even if they are informed about SMART4ALL , but they have not yet officially became a part of SMART4ALL DIH.

Apart from the above case, there are many similar cases. MECOnet organizes regular WP3 meetings with project partners on monthly basis. This will help to follow the right course of actions to intensify third parties involvement in DIH and to resolve any problems that might occur during that process.

Below, we will point out some of the major achievements that the SMART4ALL project partners made in the first year of the project.

PSP was the leading partner towards building a strong ecosystem in Greece including collaborative partners (mainly SMEs) and local authorities in Western Greece. As a result, the SMART4ALL project presented in 3 events (2 physical and 1 online) in July, 2020. More specifically, PSP participated in the following events:

- Participation in 8th Regional Growth Conference (RGC) at Achaia Clauss Winery in Patras, Greece on July 2nd - 4th, 2020 with a SMART4ALL booth during the event.
- Participation in the Knowledge transfer webinar regarding the smart cities in the context of Interreg V-A Greece Italy Pit Stop project (Patras, Greece) on July 23rd & 24th, 2020 with a presentation on SMART4ALL funding opportunities.
- Participation in the Transnational Workshop of ESMARTCITY Interreg MED Programme in the Transnational Workshop of ESMARTCITY Interreg MED Programme (online) on July 6th&7th, 2020 along with UOP.

The SMART4ALL press releases (translated in Greek) regarding the open calls were forwarded through PSP Network to regional SMEs and media. In more detail, it was sent to 70 SMEs and Mid-Cups, 10 HUBS and to more than 200 regional media, higher education centers and public authorities in Greece for further dissemination through their websites with an estimated reach of 1,000 people total in general public. Moreover, we invited them to the three webinars that organized by MECOnet, to which they had a great response and then participated in the open calls that followed with great success.

In addition, the webinar announcements were sent to PSP contacts in Bosnia and Herzegovina (ZEDA, RAIS), Bulgaria (Technical University of Varna), Slovenia (SCIENTIFIC RESEARCH CENTRE BISTRA PTUJ), Albania (Albanian Development Fund).

UoP has been very active in engaging the Greek ecosystem in SMART4ALL activities as indicated by the dissemination efforts and the high volume of submitted proposals to SMART4ALL open calls. UoP played central role in promoting the DIH concerns at local lever by playing key role at formulating and supporting creation of the "Rebrain Western Greece DIH".

In order to reach institutions interested in the SMART4ALL Project, AMPER S&C has regularly updated both Twitter and LinkedIn accounts during the past months with information related to the project. In that case, on July 2020 AMPER S&C IOT S.L release a press note on its social network (Twitter and LinkedIn). Their social network has nearly 600 followers, that includes researchers, consultancy companies, regional institutions such as Generalitat de Catalunya (Catalonia Council), research institutes and Universities mostly located in Spain. They also encourage partners to also publish this note press on their social networks. Regular contribution to the project can be seen following the links:

- Twitter: https://twitter.com/sensingcontrol

- Linkedin: https://www.linkedin.com/company/sensing-&-control-systems-s-l-/?originalSubdomain=es

With the objective of reaching Spanish companies, AMPER S&C have translated some of the announces into Spanish and have sent them directly by mail to different companies in the sector, research centres and institutions. Up to now AMPER S&C have included 15 SMEs, 10 mid cups, 5 large enterprises and 15 academic institutions.

With the aim to broaden local ecosystem, S&C is planning to organize a Webinar event in Spanish language next year.

FoundingBox was also active on dissemination activities on their website and social media channels. It has published press releases related to specific PAE on the regular basis. During the first year of the project over 300 users per month visited the SMART4ALL community and open calls pages on the FundingBox platform per month, from the following countries: Spain (15%), Germany (15%), Greece (14%), Italy (5%), Slovenia (4%), Poland (3%), Czech Republic (3%), UK (3%), Montenegro (3%), France (3%). FoundingBox partners from other projects have been introduced with SMART4ALL.

Based on MTU communication with National Agency for Scientific Research and Innovation (NASRI) and AITA- Albanian ICT Association, in the first and second call for project participated more than 50 SMEs and universities. All the data for Albania are in the website of SMART4ALL project. After the first webinar, there have been some applications for the first Call for proposals from Albanian third parties. In the next year more Albanian companies that have expressed an interest for the project will join SMART4ALL DIH.

Fasttrack has been using social media to disseminate and communicate Smart4All activities, mainly the open calls and webinars/events. Their official LinkedIn page has 420 followers and Twitter has 302 followers.

ATB maintains communication with several groups and societies within its ecosystem that represent SMEs, start-ups and companies in agriculture:

- **Bitkom e.V. (Agriculture department):** large interest representation society, representing 2900 companies from the digital sector (all sizes), https://www.bitkom.org/EN
- **German AgriFood Society:** society that represents start-ups in the digitized agriculture sector, https://www.agri-food.de/ (website currently being reconstructed)
- **Platform AgTech Bundesverband Deutsche Startups:** agriculture technology platform in the biggest German start up society that represents 1288 start-ups, SMEs and VCs. https://deutschestartups.org/community/plattformen/agtech-plattform/

ATB is actively looking for connections with research institutes, projects and other H2020 and SAE initiatives e.g. SustInAfrica which is a research project empowering West and North African

smallholder farmers and small- and medium-sized enterprises (SMEs) to facilitate sustainable intensification of African farming systems. ATB is planning to cooperate on WP2: Smart farming technologies for plant production. The overall objective of WP2 is to conceptualise and develop technical tools and solutions to monitor and manage plant performance for sustainable plant production intensification in Africa. In a general sense, they aim to develop a concept for promoting smart, open, and affordable monitoring technologies opting to improve plant production, plant health, water management, and the delivery of ecosystem services. First possibilities of potential overlap and cooperation were discussed in a joint meeting between ATB and WP2 partners of SustInAfrica on 10th of December 2020. https://www.sustinafrica.com/

MECOnet started off their work by presenting the project in various local and regional newspapers and of course in the prestigious MECO conference. After that, on 28.08.2020, MECOnet held additional dissemination on the EUROMICRO conference. On 17th of November it has organized the first SMART4ALL webinar on local language. Around 100 companies, institutions, NGOs, startups, academics and individuals were introduced with SMART4ALL project during those three webinars. MECOnet is regularly posting and sharing information related to SMART4ALL project on its website, social media channels and affiliate websites and channels.

TalTech has been actively distributing SMART4ALL related information through two main distribution channels. The first one is Estonian Association of Information Technology and Telecommunications (officially abbreviated as ITL), which is a non-profit association uniting information and communication technology (ICT) companies and organizations. The combined turnover of the members of ITL is more than 67% of the total turnover of the Estonian ICT sector. The second one is Estonian Electronics Industries Association is a voluntary non-profit organization, whose primary objective is to promote cooperation between member companies, schools and public sector to increase competitiveness of Estonian electronics industry. Information about SMART4ALL Calls for proposals and events have been distributed on regular basis through their newsletters and mailing lists.

During the first year of the project SEEU has been actively using the networks of all its collaborative partners, mainly SMEs, to reach the highest project visibility and it has been sharing with all of them the promotional and other materials related with Calls for proposals. The important activities raised from SMART4ALL project, containing all the relevant details, support and contact information have been also shared.

In the previous period, Marseco has been involved in raising awareness of the project and encouraging companies and researchers from North Macedonia to apply for the Open Calls. Initially, it was planned to organize satellite events, together with SEEU, but due to the COVID crisis, organizing such events became quite a challenge. Therefore, Marseco altered its strategy by organizing smaller meetings with our business partners and other contacts from the community. Many times these meetings were organized in one-to-one format. Among the workshops Marseco

organized, were the ones that helped interested SMEs to apply for the SMART4ALL CTTE calls, in which three of their partners applied.

Regarding the regional ecosystems, UPZ has organized the first webinar in November 20th 2020. Organizing team at UPZ, successfully organized this event in Albanian language titled "Dita Informuese për projektin Smart4All" (https://uni-prizren.com/sq/ngjarje/2119/). As per national ecosystem UPZ has participated in each event that was organized from SMART4ALL community.

RED PITAYA has been recently active in researching potential ecosystem partners in Slovenia, making calls and presenting the SMART4ALL activities. It has researched the Slovenian market and came up with a list of potential companies that would be interested in joining SMART4ALL project. RED PITAYA sent several emails to their database comprising of industry and academia members and worked on building the ecosystem on a regional level. Mapping the local ecosystem has been done as part of WP3. For the purpose of making this Report, RED PITAYA has enclosed the mailings which have been sent to their database, the landing page, project related webpage (https://go.redpitaya.com/join-smart4all-and-get-funding-for-your-project), social media posts and a list of potential partners in Slovenia.

PUT has been in active collaboration and communication with Poznań Supercomputing and Networking Center from Poznan and Polan and Aptiv Co. from Kracow. Polan and Aptiv Co. is well-known in the field of innovative active safety technologies that will be used in advanced driver assistance systems (ADAS) to improve the quality of the image generated by data compression tools. Beside above mentioned collaboration, PUT has been making personal contacts with interested third parties and it has organized the Signal Processing algorithms, architectures, arrangements and applications Virtual Conference (SPA 2020) (https://zueps41p.cse.put.poznan.pl/?w=1162) on September 24th, 2020.

During the conference, Prof. Georgios Keramidas presented SMART4ALL toolbox for boosting technology and business development in South, Eastern and Central Europe. The event was organized in Poznan, Poland and virtually attended and within the objectives was to give a tutorial for SMART4ALL awareness. The tutorial was attended by 45 participants, mainly coming from industry and academia with many questions mainly coming from industry about the CTTEs.

5.1 Plans for the next period

The wider geographical area in which the SMART4ALL plans to implement its activities is South Eastern European (SEE) countries region. In the following table we have indicated countries are assumed to be a part of SEE with the number of officially joined entities in SMART4ALL DIH ecosystem.

South Eastern European (SEE) countries			
SEE-Non EU countries		**SEE-EU countries**	
Albania	32	Bulgaria	2
Bosnia and Herzegovina	1	Croatia	1
Kosovo	2	Greece	92
Moldova	1	Romania	3
Montenegro	1	Slovenia	1
North Macedonia	5		
Serbia	11		
Turkey	1		

Table 1: Current number of entities included in SMART4ALL DIH from SEE countries

This data, despite being not a completely accurate portrayal of the numbers (considering that many actors from SEE non-EU countries did not register in the database) is important due to above mentioned difference in average digitization state in EU and non-EU countries. Considering the center of the SMART4ALL efforts, as well as its center will be in Greece, it is natural that the highest number of entities joined from this country. However, it is also very important to note the high number of entities from Albania, Serbia and Republic of North Macedonia, as well as the other countries, whose small size adds value to every member joined.

This result is very satisfying, considering that the numbers are bound to go only up in the following years. Our unofficial data has it that even more people are already part of the SMART4ALL DIH, so MECOnet states that 12 people alone from Montenegro are part of the HUB, but are not yet officially registered. These numbers are quite positive, considering the fact that the overall number of entities which are related to digitization in these countries is low to begin with.

During the following years, as has already been agreed upon with the partners, additional efforts will be made in order to integrate the unregistered members as well as to broaden the scope of the community as it is. This will especially be accomplished with the future experiment calls as well as with the mobility, but also most importantly by the success stories of the already integrated partners.

The best way to wrap up this task is to conclude that next years will bring a crystallization and a further development of the SMART4ALL DIH community in SEE countries, which will be proven in the future reports.

6. DIHs SETUP & GROWTH

As a general strategy in this task we will follow the benefits-driven principle. It means that each participant will have benefits of internal DIH associated to its institution and then based on scalable principles benefits from the common cooperation, in first plan regional and then SEE and worldwide. There are multiple benefits from the members of SMART4ALL hubs:

1. **Benefits for direct users of SMART4ALL hub**. It is considered that direct users of SMART4ALL projects will have the following benefits from DIH:
   - Benefits from the SMART4ALL project as is specified by project proposal and project plan. It is expected that each participant of SMART4ALL consortium will improve their own capacities (on personal and institutional levels) in field of smart systems from SMART4ALL verticals. First they will be familiar with principles of Industry 4.0 and Industry 5.0, digital economy, and then with low power cyber physical systems and their applications in specific fields. It is expected that after the completion of the SMART4ALL project the institutions that participated in it will position themselves as leading companies/institutions in field of smart system in their working environment. This is especially important for companies that weren't fully digitized up to now and those that originate from less developed geographical and economical areas of Europe (SEE, Balkan counties, less developed EU member countries).
   - Improving its networking within SMART4ALL consortium. It means that each participant in SMART4ALL project will maintain fruitful business and cooperation relation with other partners of SMART4ALL project. The networking will include the following segments: transfer of know-how, improving educational and research capabilities via mobility and others forms of cooperation, gaining joint project from different schemes in future and many others.
   - Direct benefits from internal experiments, since the partners within SMART4ALL can develop further products within internal experiments. The positive example is MECOnet company from Montenegro that has been actively working during first year of the project on following smart products:
     - General purpose IoT device for energy consumption monitoring, http://www.meconet.me/IoT-ThingSpeak,
     - SMART-MES- Telemetry (IoT) station of general purpose, http://www.meconet.me/SmartSystems,
     - Syntrofos, the COVID-19 hand held monitor of vital signs, http://www.meconet.me/MedWearables.
   - Developing common projects in the future. The SMART4ALL partners can develop own projects in future. Those projects can be hardware, software, education, research, events and others defined by portfolio of both companies.

2. **Benefits for external users.** There are many benefits that DIH members can have out of SMART4ALL consortium. The most important can be summarized in the following:

- Direct benefits from 3 types of Pathfinder Application Experiments (PAEs): Knowledge Transfer Experiments (KTE), Focused Technology Transfer Experiments (FTTEs), Cross-domain Technology Transfer Experiments (CTTEs),
- Indirect benefits from KTEs, FTTEs and CTTEs,
- Benefits from established cooperation with partners from SMART4ALL consortium partners and partners out of consortium,
- Benefits in gaining further joint projects,
- Benefits in finding a new market for its own services and products,
- Benefits in becoming visible for wider community in field of interest, as example each company involved in SMART4ALL DIH will be visible for more than 1000s members of this and other SAE DIHs.
- Benefits from possibility to work as outsourcing and insourcing, since the company or institution will be well known to the wider community.
- Benefits from Vertical Application Experiments of other users.
- Benefits of the wider society in terms of research, education and technology development.

For example, KTEs and FTTEs experiments are very appropriate for Slovenia, Croatia, Hungary, Bulgaria, Romania, Turkey and some of the EU partners within SMART4ALL, because they can transfer specific technologies from Industry 4.0 and Industry 5.0 to other countries. For other countries they are of crucial interest in order to acquire specific knowledge and skills, as example in Kosovo and Montenegro, where they will be able to improve competences in ecommerce and digital health. Each local partner of SMART4ALL project should survey its country needs in the subject competences and propose priorities for the above experiments.

6.1 Management of DIH

To engage SMART4ALL Community as much as possible, it's not enough to have a good dissemination. The engaging campaign is about getting people eager to join SMART4ALL project. It is about making them feel like members, not just by-passers. The engagement campaign has been started immediately after project beginning. The engagement strategy should be based on "achieving sustainability by engagement".

SMART4ALL ecosystem will have two main pillars:

1. The SMART4ALL Network (already explained) and

2. SMART4ALL Marketplace.

The first version of SMART4ALL Marketplace will be announced soon and it will be presented during the first review. The discussion regarding potential marketplace artefacts (conferences, local funding opportunities, papers, training courses, tools, etc.) is part of WP5: Technology enablement & SMART4ALL Marketplace, led by BTU.

Both networking and access to marketplace will be offered also via matchmaking services which in planned for the second version that will offer matchmaking (in companies & artefact's) through the means of our network.

During the first year of SMART4ALL, WP3 has done great job in ecosystem building with almost 220 members from SEE which have joined our network. You can see our current network in https://smart4all-project.eu/network.

The management will be based on the following procedures, summarized in the next figure.
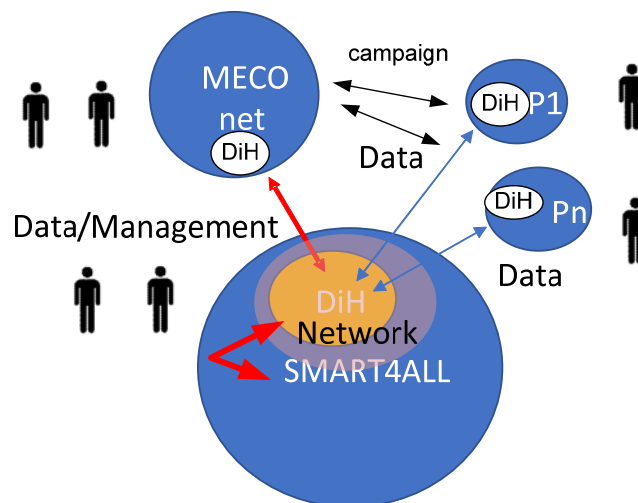
Figure 8 : The principle of the DiH management

6.2 Local action of each partner

Each partner should establish an internal plan within its institution or country by December 31 2020. In the initial phase it can be SMART4ALL DIH by a cloud platform, even 1 web page. The information internally collected should consist the following fields:

1. Institutions (academic, companies, civic sector, governmental, NGOs etc.),
2. Events and initiatives (conferences, congresses, etc.),

3. Scientific or technical publications (electronics and hard printed in proceedings and journals),
4. Other publications (technical articles, magazines, web, off-line, on-line),
5. Products,
6. Academic or research organizations or groups (academic or research programmes, groups etc.),
7. Web pages (web pages by country interested for SMART4ALL),
8. Social groups (facebook, tweeter, other social media channels),
9. Anything related to SMART4ALLthat is not mentioned above.

The above information can be within Content Management System (CMS) with background database with possibility to export adequate lists in some of spreadsheet formats as Excel that will be later used for database on overall projects. The classification and search should be allowed. Internal DIHs will recruit partners in its neighborhood and sub-region and introduce them about SMART4ALL and how to become a member and benefit from SMART4ALL community.

An example data base is the following: http://www.meconet.me/SMART4ALL#DiH_Data

6.3 Collecting data for SMART4ALL DiH

The central data about local digital communities should be stored and be visible by SMART4ALL network and SMART4ALL marketplace.

By zooming in https://smart4all-project.eu/network, the actual members joined from each local ecosystem can be seen. For example zooming in in Albania area you can see 29 companies from Albania, 7 from Kosovo etc. With successive zoom in, you can have access to the actual details of the companies/institutes. You can also use the filters on the right top corner of the map to filter the selected area according to SMART4ALL pillars.

In order to better control the members joining our network, we need one single point of entrance, which is https://smart4all-project.eu/network. Interested companies can visit the specific page and follow the alternatives offered for joining (also explained in the attached slide). This is very important because by using our site, the interested companies/institutes, before joining our network, are also asked to agree on GDPR related questions and on our Privacy Policy (https://smart4all-project.eu/privacy-policy) and Terms of Service (https://smart4all-project.eu/terms-of-service). In this way we, as consortium, are legally covered.

Our contacts with local ecosystems reveal that it is necessary to introduce the partners and interested to follow the proposed process. Once applying for joining SMART4ALL network it

might take a while (10 - 15 days at most) before appearing on the network. This is due to the quality checks UoP is making before officially adding a company or an institute in our network.

6.4 Catalogue and tools and methods for scale up

To design, build and maintain the SMART4ALL catalogue of services we need first to establish the network and marketplace and then to extract main features that will be offered by SMART4ALL catalogue of services and to extract strategic interest of SMART4ALL for each Region or Sub-Region. Catalogue of services and sustainability strategy on micro and macro level will define the tools and methods for SMART4ALL operation and scale up.

UoP has been quite active in developing and supporting the key services, tools, infrastructures that will ensure SMART4ALL Setup and Growth, which includes:

- Marketplace design and infrastructure development,
- Matchmaking Services, Helpdesk Services,
- Promoting the SMART4ALL website the central information and contact point, developing a state-of-the-art data center offering cutting edge computation and communication resource to all engaged partners.

ATB has contributed significantly with activities related to the definition of DIH services using best-practices fostered by other DIHs. The DAgTF, lead by ATB was working on propositions of services, business models in close cooperation with WP4, Praxi and FastTrack. DAgTF has also proposed the first draft of the value chain and it has been successfully establishing channels between third party service providers and end users.
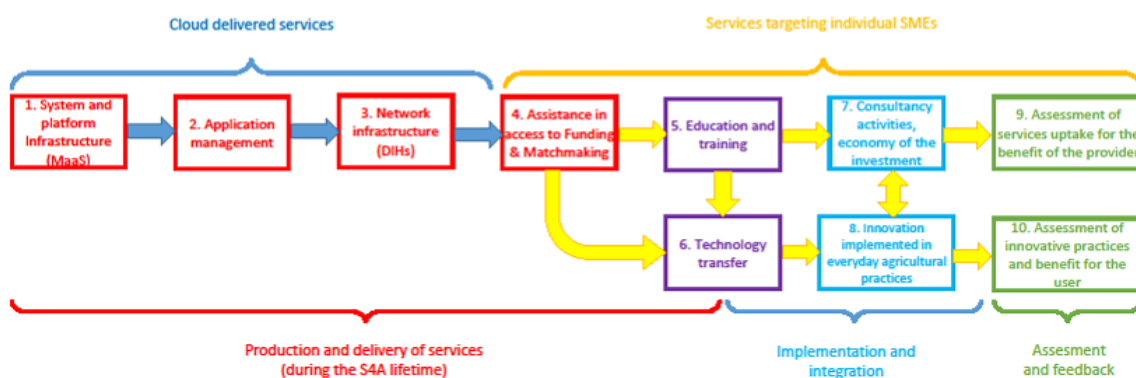

Figure 9: Position the services across the value chain by DAgTF

7. SME OUTREACH

The SME outreach aims to maximize the participation of SMEs in the SMART4ALL grants (KTEs, CTTEs, FTTEs) by utilizing a large database of European SMEs that are related to ICT. Those SMEs are potential SMART4ALL applicants and in most of the cases they are represented in EEN- Enterprise Europe Network.

The Enterprise Europe Network helps businesses to innovate and grow on an international scale. It is the world's largest support network for small and medium-sized enterprises (SMEs) with international ambitions. The Network is active in more than 60 countries worldwide. It brings together 3,000 experts from more than 600 member organizations, all renowned for their excellence in business support.

Member organizations include: technology poles, innovation support organizations, universities and research institutes, regional development organizations, and chambers of commerce and industry.

For FORTH/PRAXI, the project's partner that is part of the EEN, the main task is to present SMART4ALL project in at least four EEN events where targeted discussions are expected to occur.

This year due to the COVID-19 pandemic, FORTH/PRAXI didn't have an opportunity to present SMART4ALL project in EEN events that were prevised for 2020. They have planned presence on some EEN events and meetings in 2021, hopefully without any constraints that were evident during the first year of the project.

Despite that, SMART4ALL project team succeeded to present its activities and funding possibilities. On August 11th 2020, Prof. Nikolaos Voros (UOP) and Prof. Michael Huebner (BTU) presented at Enterprise Europe Network(https://een.ec.europa.eu) the funding opportunities offered by SMART4ALL and the forthcoming Open Calls. The Meet & Apply event was devoted to SMART4ALL and it was attended by 40 participants, mainly coming from SMEs in Central and Eastern Europe. The SMART4ALL presentation was followed by a pitching event, during which the SMART4ALL Matchmaking & Partner Search Service (https://matchmaking.smart4all-project.eu) was also introduced. The SMART4ALL Meet & Apply was organized by Berlin Partner for Business and Technology (https://www.berlin-partner.de/en).

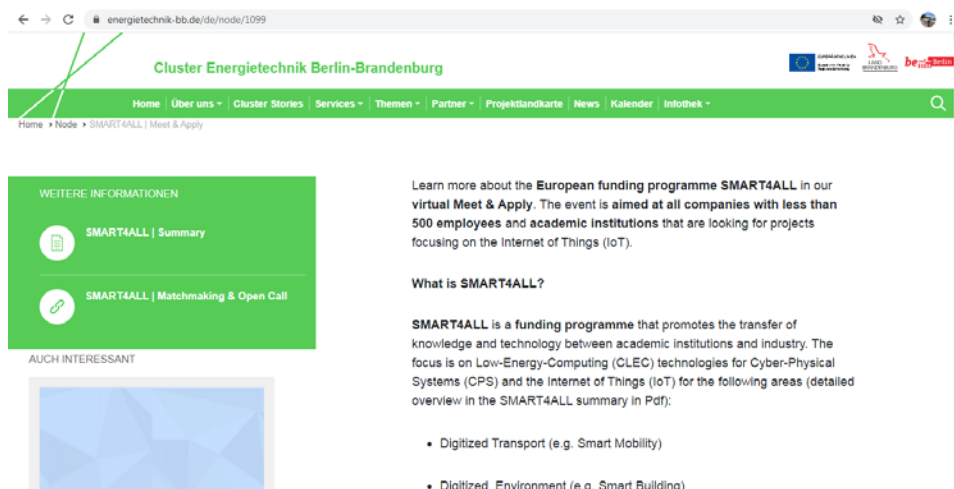*Figure 10: Presentation of SMART4ALL project Enterprise Europe Network*

Figure 11: Annunciation of SMART4ALL presentation on EEN

During the first year of the project FundingBox has undertaken a vast range of activities that were related to the maximizing the participation of SMEs in the PAEs. They can be grouped as follows:

- Communication of the SMART4ALL project and open calls on the platform,
- Communication of the SMART4ALL project and open calls on social media, and newsletter,
- Communication of the SMART4ALL project and open calls in other relevant communities on FundingBox Spaces,
- Implementation and management of the Open Calls helpdesk to help guide applicants in the open calls.

All above mentioned activities helped SMART4ALL project to fulfill the objective of the SME outreach by maximizing the participation of SMEs in the SMART4ALL grants.

8. HELPDESK AND EDUCATION

The helpdesk and education activities in SMART4ALL project have the goal to provide the ecosystem with all the relevant answers related to KTE, FTE and CTTE experiments (during and after the proposal preparation phase). Due to the fact that the SMART4ALL prime target is to build a specific DIH by first penetrating the local ecosystems through series of activities, central role among which play the application experiments and grants. The point of this penetration is to detect and map out a series of local ecosystem actors who would be, through a series of specific tasks linked into a network which would present the SMART4ALL DIHs. Help and education to potentially interested third parties is of crucial importance considering that depending of the quality of this tasks' execution depends the overall number, diversity and quality of the actors which will become a part of the SMARTALL project.

The goal of this task is, as previously defined to offer a kind of "personalized assistant" to applications to submit high quality proposals, either by online chats, teleconferences, emails, or even physical meetings. One webinar per call presenting the open calls objectives and procedures, as well as a creation of a FAQ section will be included in the SMART4ALL website so as to support first-order problem solving. So the rationale is that a contact point shall be established through which interested third-parties can familiarize themselves with the specifics of the SMART4ALL Experiments. This can be done both through personal contacts with appointed persons as well as through some digital FAQs and other sort of platforms. Therefore, this task determines that all the parties will have an obligation towards creating such platforms through which potential applicants can familiarize themselves with all the specifics of the projects, as well as receive the help and advices so their application would most likely be accepted.

MECOnet is a lead partner of helpdesk and education, but participation of all project partners during the whole lifetime of the project is essential. In general, considering the objective context of this year, many things have been accomplished. Almost all of the surveyed partners set up some offered Helpdesk services, most of them through personal and direct contact with interested parties, and others through online FAQs.

It is important to outline that in addition to the general SMART4ALL project website helpdesk, this task is concerned with the creation of various local helpdesks which can better target people and their need.

Naslovna stranica podrške   Baza znanja   Otvoriti novi tiket   Proveriti status tiketa

Pretražite našu bazu znanja   **Pretraga**

Otvoriti novi tiket

Proveriti status tiketa

Welcome to SMART4ALL Helpdesk

In order to streamline support requests and better serve you, we utilize a support ticket system. Every support request is assigned a unique ticket number which you can use to track the progress and responses online. For your reference we provide complete archives and history of all your support requests. **Anyone with a valid e-mail address can create a ticket without the need of "signing in" to the SMART4ALL Helpdesk system. "Signing in", which offers better ticket progress monitoring, is only allowed to Registered Users** (a request for Registration may be submitted through the SMART4ALL Helpdesk System via the "Open a New Ticket" menu).

Istaknuta Pitanja
Which are the types of experiments ?
What is exactly the concept of Marketplace-as-a-Service (MaaS) ?

Figure 12: SMART4ALL helpdesk

The help which can be provided through online means can concerns two different sort of problems applicants are faced with – the first being the prerequisites and all the "previous questions" which an applicant might have before choosing to apply for the SMART4ALL experiment grants. This helpdesk is allocated at the SMART4ALL FundingBox website and it records quite a lively activity. With the second set of problems being the technical difficulties concerning the matchmaking and Calls for proposals platform, which the applicants potentially face themselves with once they have already applied.
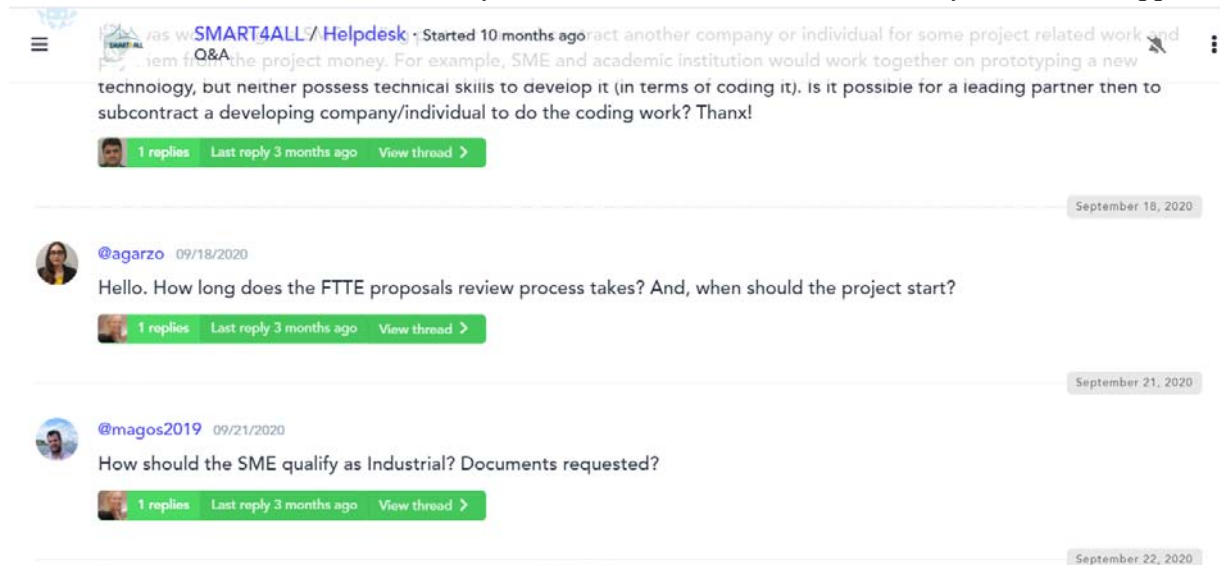

SMART4ALL / Helpdesk · Started 10 months ago ... ract another company or individual for some project related work and ... em from the project money. For example, SME and academic institution would work together on prototyping a new technology, but neither possess technical skills to develop it (in terms of coding it). Is it possible for a leading partner then to subcontract a developing company/individual to do the coding work? Thanx!

1 replies   Last reply 3 months ago   View thread

September 18, 2020

@agarzo 09/18/2020

Hello. How long does the FTTE proposals review process takes? And, when should the project start?

1 replies   Last reply 3 months ago   View thread

September 21, 2020

@magos2019 09/21/2020

How should the SME qualify as Industrial? Documents requested?

1 replies   Last reply 3 months ago   View thread

September 22, 2020

Figure 13: SMART4ALL FundingBox helpdesk

However, in addition to these two successful helpdesk activities, this task motivated every partner to set up a local helpdesk helping in penetrating to the specific local ecosystem and invite the highest possible number of the SMART4ALL ecosystem actors, educating them and providing them with sufficient information for a successful SMART4ALL experiments.

Most of the SMART4ALL partners have already set up some sort of the helpdesk. A general trend has been recognized in which most of the help was done in person or through direct live or web interactions with the parties involved. Such efforts have been reported by various companies and it is especially noteworthy that many of the companies set up helpdesks on their own initiatives, even though no objective demand for help has been registered from the site of applicants.

Some of the companies used the matchmaking platform as a medium through which they offered help during the proposal preparation phase, while others simply held informal meetings through which they inspired local ecosystem actors to enroll for the upcoming experiments. Most of the companies, actually, resorted to this sort of help, considering the circumstances caused by the Pandemic as well as the novelty of the project.

Generally speaking, most of the companies' partners set up helpdesks which provided potential applicants with help regarding applications, mostly in form of a personal assistance, which was either conducted through specialized persons which were set up as contact points for the specific community, ad hoc meetings or through phone or web-calls.

The establishment of a web presentation containing the FAQs and general tips is a good practice which should be continued by other partners – especially when such presentation is made in the local language so it provides with the best penetrating potential into the local ecosystems. Establishment of such pages would be a good first step for all the interested parties to familiarize themselves with the project and its calls through some steady information in their own language, which would motivate them to participate in the SMART4ALL experiments.

Thank you for your interest in the First SMART4ALL Open Calls and welcome to our section for guides and documents. Hopefully, this section will help you solve your doubts about the application and submission procedure of our 1st open call. Below you will find the Guide for Applicants and FAQs.

Please, before applying, read carefully the documents below, which include all the necessary information on the application process and evaluation criteria.

CTTE Guide for Applicants   CTTE FAQ   Application Form - Word

Figure 14: FAQ presentation at the FundingBox website

Most of the project partners have organized webinars directed to promoting SMART4ALL project and its Calls for proposals. Some project partners, especially those with the same native language opt out to join existing local webinars.

A good practice indicator in this field is structuring the webinars in such a manner that they imply two-way communication – which can be achieved either through live or web-surveys (Slido, for example). The importance of structuring the webinars in a manner which would provide the parties with a feedback is significant, considering that this information can greatly aid the SMART4ALL consortia in following the community needs, evolution and overall shaping of the SMART4ALL ecosystems. We thus recommend all the partners to have this in mind, and to implement such practice both in web presentations and future live presentations.

Figure 15: Agendas for local webinars directed to familiarizing potential partners with the SMART4ALL project

In future we expect more FAQs to be created in local languages. Those FAQs need to be composed of actual questions posed by DIH members and moreover it's necessary to regularly update them.

It would also be good if the FAQ sections were established in all the local languages on the web presentations of the local partner's helpdesks, as was previously described. All the FAQs and helpdesks should also pay special attention to lecturing the applicants on the importance of registering within the SMART4ALL Community considering the importance such actions have for the mapping and development of our community.

The importance of Helpdesks and their communication with partners is also critical. Each partner should continue to follow their best practices within their local communities so that the project's outreach will be maximized.

The results of this year are a good basis on which we can build upon, the following years the focus could be on joint efforts of various partners and WPs in relation to filling the needs of the people who need to be familiarized with the project, mostly through a targeted outreach strategy and better formulation of answers and internal mechanism of the project. However, we can conclude that the efforts have been met, especially when we see the number of SMEs which registered and expressed interest in the SMART4ALL project in the SEE countries which, because of the non-existent previous infrastructure, had to resort almost exclusively to informal means of communications and personal meetings and helps.

9. BROKERAGE & CONSORTIUM BUILDING SUPPORT

Brokerage and consortium building, as previously defined, falls under the category of the tasks which include both ecosystem building and outreach. As the task title suggests, this task is directed towards brokerage and consortium building. Brokerage activities imply the intermediary role which is to be played by the specific partners in order to link interested external parties with other external parties capable of providing them with expertise and knowledge needed to accomplish their specific application in related to S4A, foremost through the matchmaking application (https://matchmaking.smart4all-project.eu/). Most of these activities are related to the matchmaking platform which serves as a medium through which external parties are linked with relevant organizations.

However, this work implies the necessary component of consortium building. Relevant task leaders must still carry on a lot of background work which is directed in mapping out relevant technology and expertise providers, rating and classifying their expertise, and later linking the relevant applications with the party they deem to be most fitting with.

Considering that this sort of brokerage and consortium building activities imply a lot of sector-specific knowledge, this task required a specific categorization of duties, therefore – it has been broken down within four separate sub-tasks, in accordance with the relevant thematic sub-groups, which are themselves shaped in relation to the four SMART4ALL vectors – them being Digitized Transport, Environment, Agriculture and Anything. Therefore, a specific sub-task, with its specific leaders and partners has been proposed.

Sub-Task 3.8.1: … in Digitized Transport:	Sub-Task 3.8.3: … in Digitized Environment

➢ Partners involved:
  • **Deutsches Zentrum fur Luft und Raumfahrt** (lead), TALTECH, Politehnika Pozanska
➢ Sub-objective: set up *Digitized Transport Task Force (DTTF)*.
	➢ Partners involved:
	  • **Sensing&Control Systems** (lead), Epistimoniko Parko Patron, Metropolitan Uni. Tirana (part.)
	➢ Sub-objective: set up *Digitized Environment Task Force (DETF)*.

Sub-Task 3.8.2: … in Digitized Agriculture	Sub-Task 3.8.4: … in Digitized Anything

➢ Partners involved:
  • **Leibniz Institut fur Agratechnik und Biooekonomie** (lead), Rezos, Novi Sad Uni. (participants)
➢ Sub-objective – set up *Digitzed Agriculture Task Force(DAgTF)*.
	➢ Partners involved:
	  • **Budapest M.E.** (lead), Uni. Ukshini Hoti, Marg., Uni. Politechnica Valencia (participants)
	➢ Sub-objective -set up *Digitized Anything Task Force (DATF)*.

Figure 16: Structure of Sub-task 8.3.

All these sub-tasks (T3.8.1. – T3.8.4.) follow the same logic . Each task force leaders must implement the brokerage activities within the specific sector, through the setting up a respective Task Force, through joined efforts of which, a brokerage network shall be set up linking the project with interested third parties, specifically investors and applicants. The point of each of the Task

Force is to seek third party applications with high impact potential, and bring them together with complementary expertise they ought to scout as well, all in order to offer brokerage support and maximize the participation of SMEs and mid-caps in the open calls.

9.1 Brokerage & Consortium Building Support in Digitized Transport

This subtask is concerned with the establishment of brokerage activities between the third party applicants within the matchmaking platform and the Transport Industry, as well as building the overall consortium which would be integrated within the SMART4ALL ecosystem. Transport is an essential part of the SMART4ALL Ecosystem and digitization activities surrounding it. Digitization in transport is especially important for the SEE countries considering they usually lack behind in these sectors. The initial project projections were that the innovation potential in digital transformation for all modes of transportation is enormous, with the semi-autonomous vehicles market volume being estimated to be 10.5 Million Units in 2017 and projected to reach 27.7 Million Units by 2022. The autonomous vehicles market was estimated to be 0.5 Million Units in 2025 and was projected to reach 6.9 Million Units by 2030. With the commercial drone market being expected to skyrocket to 20 billion € annually by 2022 with an impressive Compound Annual Growth Rate (CAGR) of 30% with 500.000 units of professional UAVs, 25% of them in Europe.

Considering the cutting edge character of this field, partners from digitally more developed countries have been picked to lead this subtask, with its head being the DLZ with the participation of TALTECH and ATB.

However, the initial projections were derailed because of the unforeseen circumstances caused by the COVID19 pandemic which hit the transport industry, especially the airplane industry; according to projections almost 50% of the air transport companies are going to bankrupt in 2021. Regular flights were cancelled, the overall transport industry has been put in an extraordinary state, it was the worst year since World War Two for aviation and transport industry. Due to these reasons, possibilities for cooperation with the transport have been greatly hardened.

Therefore, the brokerage activities, as well as the interest for specific transport applications, despite the increased objective need for digitized solutions in these fields - have been greatly affected by this meltdown of the industry which in turn resulted in a limited scope of activities which could be done. However, despite of that ATB established connection with some German transport associations and transportation institutes. Similar efforts have been made by TALTECH which made a breakthrough with the leading Estonian ITS Cluster managed by Estonian Electronic Industries Association. ATB therefore reported that it aims to create baseline for SMART4ALL

presentation in SMEs and associations and that could help them in application and matchmaking, once the things in transport industry start to normalize.
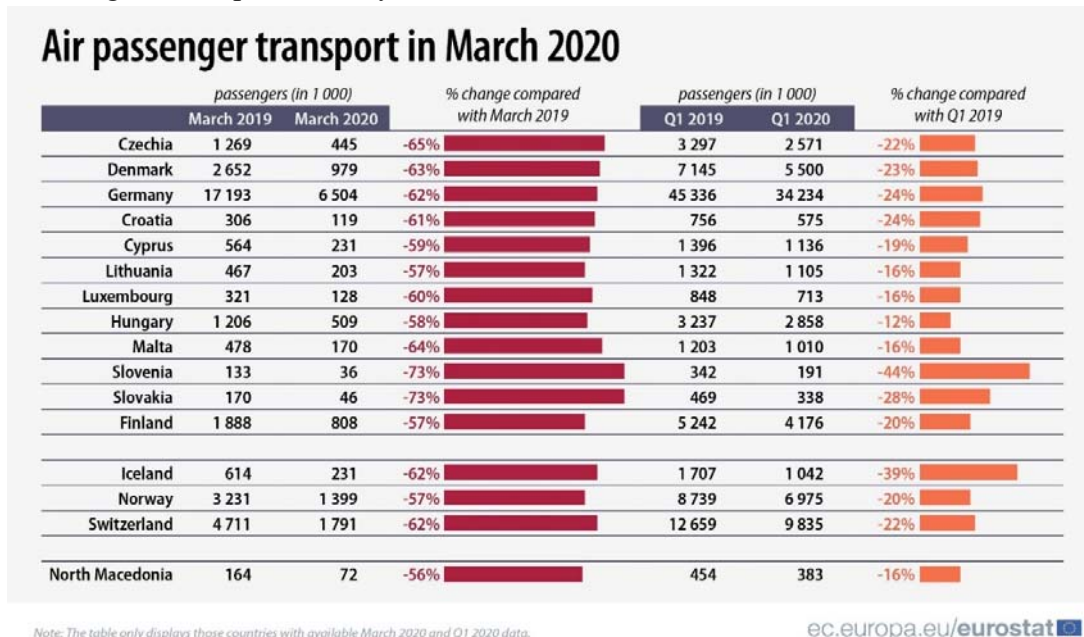
Figure 17: Air passenger transport in 2020– compared to March 2019

PUT reported cooperation with Aptiv Innovative technologies in the field of active safety that will be used in advanced driver assistance systems (ADAS) especially for increasing the quality of the image generated by data compression tools. On 27th September 2020 participation in the Automated and Intelligent Vehicles workshop, IEEE Poland Section, Vehicular Technology Chapter and Robotics and Automation Chapter has been reported, which itself is a noteworthy accomplishment considering it goes in line with the detected areas of interest which are themselves defined as smart transport and semi-autonomous vehicles.

9.2 Brokerage & Consortium Building Support in Digitized Agriculture

This task is headed with the opportunity to valorize all the potential in the field of agriculture, especially in relation with the Environment task considering they share the same goal to battle the climate change. The latter is is greatly affected by the outdated farming techniques and developing intelligent farms which will follow the Industry 4.0 paradigm of producing customized products as efficiently as with mass-production, but in environmentally friendlier manner. In a way which they are linked with IoT, cloud computing, and digital economy; not only by exploiting collective data and knowledge to improve agricultural decision making, but also by contributing to this collective data and knowledge. This approach required a vast number of multimodal device able to deliver high computing capacity and low energy.

As all the other subtasks within this task, this one also includes the obligation of building a specific Taskforce, which is in this case Digital Agriculture Taskforce (DAgTF).

The task leader (ATB) outlined the facts that they have already drafted specific guidelines as to how to best determine the applications with the highest impact potential, as well established a mechanism for handling matchmaking requests, successfully matching several applications and having advertised the matchmaking platform in social media, websites and in direct contact. Their current activities are directed towards further developing the Digital Agriculture Taskforce and improving its metrics. With the future activities being directed towards further development of the matchmaking tool and its advertisement especially within SEE so a greater number of ecosystems would join the SMART4ALL network. The representative from the TFN pointed out that additional measures should be taken in order to best reach the external parties interested in agriculture, who are, in principle, digitally illiterate, rendering the conventional outreach measures of the project ineffective in relation with them, which demands from us for some innovative and adjusted measures in order to reach this target groups. Such measures will be developed within the next year in cooperation with WP2 leaders and other project partners, in relation to who the overlapping jurisdictions need better be crystalized.

To sum up, the partners expressed that the amount of teamwork and internal coordination within this particular sub-task has been high, but also expressed their wish for closer coordination with other regional leaders in order for them to acquire the best possible insight in other countries ecosystems, measure will be dealt with in accordance with the other subtasks of this WP.

The partners presented the following figures:

status	basic_info.aceronim	basic_info.title	legal.partner1.name	legal.partner1.type	legal.partner1.city	legal.
Draft	MISF	Multi-ion smart fertilizer management	CleanGrow UK Ltd	Industrial SME/Sligtly b	Wolverhampton	United
Submitted	FarmCloud	A scalable digitized agriculture platform based on low energy IoT	Mnogo Ltd	Industrial SME/Sligtly b	Leucosia	Cypru
Submitted	IAPS	Intelligent Agri Perception Solution	AMBIMETRICS S.L. (AMBI)	Industrial SME/Sligtly b	CASTELLON DE LA PLA	Spain
Submitted	Smart4Food	Smart fruit crop protection through early pest detection using AI	PULVERIZADORES FEDE SL	Industrial SME/Sligtly b	Cheste	Spain
Submitted	iOREGANO	Precision agriculture solution for smart, safe and quality oregano farming	Hippocratic Essentials P.C.	Industrial SME/Sligtly b	Larissa	Greec
Submitted	SunNos	Intelligent Aerial Farming Pest Control targeting the Mediterranean Fruit-Fly on Olive Trees	IONOS S.M.P.C.	Industrial SME/Sligtly b	Heraklion	Greec
Submitted	ForAgri5G	WiForAgri-5G! Smart Agriculture low-power IoT / Edge-Computing experiment	Primo Principio s.c.a.r.l.	Industrial SME/Sligtly b	Alghero	Italy
Submitted	AgroUAS	Developing an autonomous, low-energy UAS solution for precision agriculture	DRONINT	Industrial SME/Sligtly b	Nicosia	Cypru
Submitted	Areo	Combining AR, EO&AI to transform in-field data presentation & collection for agricultural monitoring	Geocledian GmbH	Industrial SME/Sligtly b	Landshut	Germa
Draft	SunNos	Intelligent Aerial Farming Pest Control targeting the Mediterranean Fruit-Fly on Olive Trees	IONOS	Industrial SME/Sligtly b	Hellas	Greec
Submitted	Foodscan	Advanced low cost NIR sensor for smart farming and agrifood	SENSEEN	Industrial SME/Sligtly b	Sophia Antipolis	Franc
Submitted		Using smart farming tools for pest control in Albania - Greece borders agricultural zone.	Agricultural University of At	University / Research C	Athens	Greec
Submitted	WeedTect R	Integrated unit for WEED Detection and Control	Ortelio Ltd	System Integrator and/	Coventry	Unite
Submitted	AgroTrust	AgroTrust: Trusted farming data and touch-free product passports	IOTA Foundation	System Integrator and/	Berlin	Germa
Submitted	APIARY	Advanced Precision ApicultuRe sYstem	TERRA SPATIUM SA	Industrial SME/Sligtly b	Koropi	Greec
Submitted	SOCRA_OT	CarbonEye: Soil Organic Carbon Remote Assessment for Olive Trees	SmartCloudFarming GmbH	Industrial SME/Sligtly b	Berlin	Germa
Submitted	ML4S	Machine Learning for Soil Sensing	Waveform j.d.o.o.	University / Research C	Split	Croati
Submitted	AGROTEC	AGROTEC – Autonomous, multipurpose, AI-based robotic platform for crop protection	"RPC "Robotec", LLC	Industrial SME/Sligtly b	Kyiv	Ukrai
Submitted	roboSpec	ROBOTIC AUTOMATION SYSTEM for MEASUREMENT of SOIL ORGANIC CARBON for SOIL HEALTH & FOOD SECURITY	HAEMUS HOBBIES Ltd	Industrial SME/Sligtly b	SOFIA	Bulga
Draft	LEADS4Plant	Low Energy AI Based Plant Stress Detection System	University of Maribor	University / Research C	Kranj	Slover
Submitted	SMOC2	Smart monitoring of the crops condition	ADVANCED OPTICAL TECH	Industrial SME/Sligtly b	BILBAO	Spain
Submitted		"Using drones for apple pest control in Albania"	Mediterranean Agronomic I	University / Research C	Bari	Italy
Submitted	AERIALS	UAVs, IoT and AI aspired Revalorization and Holistic Quality Control Management of Agricultural Wast	AGROKYKLOSI L.P.	Industrial SME/Sligtly b	Patras	Greec

Figure 18: Matched applications

Guidelines for Impact Assessment of Potential Applicants		
category	description	notes
Applicant's history	Does the SME/company have previous succesfull applications for e.g. H2020 funding?	One idea is to specifically look for companies that were involved in earlier H2020 calls
company size	Is the company startup or an SME (or slightly bigger company)	
innovation level of idea	Does the proposed product/service/toolbox already exit in the same or a similar way?	
maturity of business plan	Does the company/SME have a business model and plan for the new technology/service	
matching S4ALL goals	Does the experiment match the Smart4ALL thematic areas?	this could be defined in more detail with regard to the S4ALL goals, if necessary
matching (geographic) focus area of S4ALL	Is the company from one of the prioritized countries?	
transferability of project idea	Is the project idea transferable to other regions/markets?	

Figure 19: Guidelines for impact assessments of potential applicants

9.3 Brokerage & Consortium Building Support in Digitized Environment

Digitization of environment is one of the top tasks of the EC – since it is inline with its strategic goals aimed towards the elimination of fossil fuels and the increasing production and consumption of renewable energy sources. This task is also in relation with the environmental rationalization of urban surfaces, considering that currently in EU, buildings are responsible for approximately 40% of energy consumption and 36% of CO_2 emissions. About 35% of the EU's buildings are over 50 years old and almost 75% of the building stock is energy inefficient, while only 0.4-1.2% (depending on the country) of the building stock is renovated each year. Smart infrastructure has the potential to reduce significantly the cost imposed on municipal budgets by the unnecessary continuous maintenance and upgrading requirements of public and critical infrastructure systems requiring novel approach that can take advantage of devices and products offering high computing capacity and low energy.

All the above measures concern the health and well-being of building and infrastructure users. Smartification of infrastructures and buildings will promote the wellbeing of citizens. One of the project's proposed benefits is developing the IoT solutions in this domain which would process a lot of information yet run on low energy, the infrastructure which should interact with very large

number of devices and gateways with different protocols, manage different type of data, event processing, data analysis and data visualization. Especially in the context of circular economy where the main challenge is the optimal use of resources and minimization of wastes, IoT solutions and products would be a game changer.

Therefore, this tasks aims to connect both ecosystem actors dealing with the environmental solutions as well as the carriers of high technological knowledge. The leader of this subtask is S&C, with the participation of PSP and MTU, as all other tasks, this subtask too has the objective of building the respective Task Force, in this example - Digitized Environment Task Force (DETF). As in all other tasks, this one also revolves around the SMART4ALL matchmaking platform which is the medium through which integration of knowledge and technology carriers can be made.

The leader of this task force, Sensing & Control Systems presented the activities they performed and the results they have achieved through this specific table:

ACTIVITIES PERFORMED	RESULTS ACHIEVED
Identify areas of high impact. Next step is to identify third party applications inside these thematic areas.	3 areas of high impact were identified: telemedicine, energy management and water management and quality monitoring.
Solving matchmaking & partner search requests in order to connect candidates with complementary expertise.	We have attended with the collaboration of PSP and MTU 18 tickets about connecting candidates for an open call (KTE, FTTE)
Identify value chain for applications of high impact inside the Digitized Environment taskforce, which allows us to identify main players and main industries involved in some solutions.	We have developed 2 value chain diagrams (telemedicine and energy management) (water management is in progress) which has allowed us to identify key players and technologies.

Table 2: Activities of S&C performed and results achieved

MTU has further commented that "During all the one-year period the coordinators of the project have been fully supportive. On December 3rd, prof. Nikolaos Voros hold a presentation in the "Sharing Best Practices from Albanian Beneficiaries of H2020" activity.

The results achieved in this field are in line with the projected results of this year's project effort considering they are foremost directed towards the recognition of the terrain on which the project partners can further act upon, thereby the fields of high interest have been detected as well as a good sense of the possibilities to be performed during the following years has been reached, which

is proven by the activities at in matchmaking processes and the development of value chain diagrams which serve the purpose of better identifying future actors.

9.4 Brokerage & Consortium Building Support in Digitized Anything

This subtask is headed by BME with the help of UPZ, MARG and UPV. As in other subtasks, this one is underpinned with the construction of the relevant TASK force in this concrete case – the Digitized Anything Task Force (DATF). We use tools for on-line commerce and financial services, and manage official tasks with local and governmental authorities.

Digitalized anything offers the expansion of these capabilities by introducing new devices, new technical solutions or by connecting already existing systems in a new way, and helps us to proceed to the direction of a more advanced society, where the sustainable development is always in our focus. The point is to provide interested parties the best technical solutions and help in order for them to realize their projects within the area of Digital Anything. Therefore, the main interest of this subtask is on the Internal Application Experiments (PAE) which have only started to be implemented in this year from the partners.

BME reported that Digitized Anything Task Force meeting was held on 12/01/2020 and that they started identifying key DATF areas and considering technical-legal, ethical and other issues of specific areas, however, due to justified circumstances, additional work could be undertaken only after the seventh month of the year but a lot of work was put into the matchmaking processes which demonstrated a high responsibility rate of the partners considering that all the tickets submitted to DATF have been handled on time.

Moreover, they succeeded to participate in some Digitized Anything events, but there weren't a lot of those events because of COVID-19 situation, and that these ecosystem should be task specific, but task forces can push SMART4ALL to task forces' specific events. BME mentioned that this task suffers from the fact that "Digitized Anything" is too board of a term which requires further definition, considering it includes everything that is not Transport, Environment and Agriculture. Such a further clarification of the jurisdiction of this subtask can only be better defined during the following years, in contrast to the other three subtasks, which are all, in a their own specific light, overlapping.

BME reported that it will further work on the improvement of Matchmaking in depth and quality and helping ecosystem in finding local players in fields of governmental and non-governmental organizations.

UPZ also reported participation in the overall organization of this event, including the initial meeting and all the subsequent activities.

Figure 20: Distribution of submitted applications by type of vertical
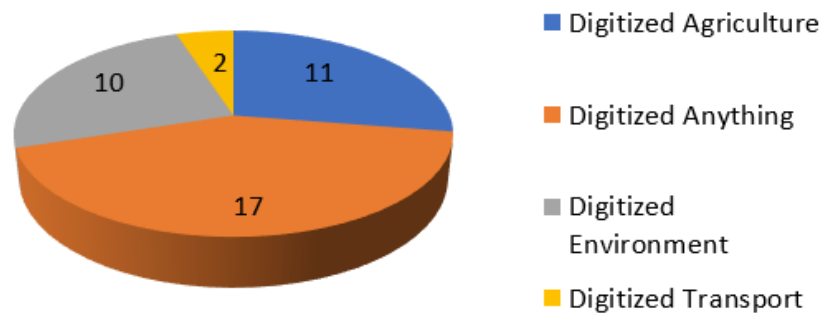
The outstanding contribution and work on this field is proven by the fact that the biggest number of application submitted for matchmaking, i.e. around 40% of them, have been generated from the field of Digital Anything, and have all been processed in due time. During the next years the continuation of this work as well as its additional deepening is expected.

10. COMMUNITY EVOLUTION

The aim of this task is to recapitulate the efforts of all the previous task and provide a general overview of their efforts and their alignment with the projected project objectives. The leader of this task is MECOnet, considering it is also the leader of the whole WP3 package. However, this task includes the cooperation of all the other project partners, considering that the review community evolution by itself implies the feedback from all those involved in the community at the level of project partners, and even beyond.

The evolution of SMART4ALL community can only be deemed successful if it follows the objectives of the project. The future development of SMART4ALL community must follow the project objectives related to the development of DIHs in SEE countries. In respect to the geographical representation of the parties concerned SMART4ALL should be recognized as a project that helps DIHs development in this part of Europe.

Other objectives derive from the first one – and they are concerned with the inner quality of the community, which must in itself be representative and oriented towards covering the target areas, foremost in connecting the adequate number of startups, midscale companies and large enterprises with the adequate number of investors and academia, which can provide them with respective financial and know-how background as to achieving their proposed technological solutions.

However, these technological solutions must themselves be developed in an equal manner through the following four thematic areas – Agriculture, Transport, Environment and Anything, which all need to be represented in an adequate manner in order to diversify the impact areas in the best way possible.

Achievement Indicators:

1.	SMEs in SMART4ALL Consortium: 10 (40%)
2.	SMEs, startups, and mid-caps participating in open calls: 50%
3.	SMART4ALL Consortium budget allocated to SMEs: 31.7%
4.	SMART4ALL total budget allocated to SMEs/start-ups: >55% (including the budget for PAE Open Calls)
5.	SMEs, startups, and mid-caps participating in open calls from South and Eastern European counties: >50%
6.	Industrial partners participating in open calls: 60%
7.	SMEs, startups, and mid-caps participating in granted PAEs: 60%
8.	SMEs, startups, and mid-caps participating in granted PAEs from South and Eastern European countries: 40%
9.	Industrial beneficiaries participating in granted PAEs: 65%
10.	SMEs, startups, and mid-caps reached: 1500 (by the end of the project)
11.	SMEs, startups, and mid-caps in SMART4ALL DIH: 100 (by the end of the project)
12.	Digital skills growth: organization of at least 1 summer school and/or workshop per year
13.	Digital skills growth: organization of at least 4 technology training oriented open courses

Figure 21: Achievements as defined by the project proposal

This task was initially projected to start at the 6th month of the project, which was also the date the Community Engagement Strategy was to be published. Therefore, the role of this task is to tract the factual implementation of the SMART4ALL Community Engagement Strategy proposed in deliverable 3.1. We have outlined the measures proposed in the Community Engagement Strategy in the section which dealt with the task 3.1. Therefore, we now have the specific goal of evaluating the representation of the SMART4ALL project efforts in terms of countries, thematic areas and overall review of the aforementioned activities outlined in the previous tasks.

"The goal of this task is to monitor and assess all the SMART4ALL community engagement activities (results of previous WP3 tasks). The assessment will be done in terms of thematic areas, number of countries and regions and geographic coverage. The results of the assessment will be compared against the community engagement strategy developed in Task 3.1. The output of this task will be fed to WP8 for further analysis"

The MECOnet team has developed a "SMART4ALL Community Breakdown" spreadsheet that aimed to collect the following data from the project partners: the number and structure of SMEs, investors and academic institutions involved through the project efforts, their country of origin and thematic area (SMART4ALL verticals) they are interested in.

Breakdown of SMART4ALL ecosystem										
Partner	**Number of SMEs included**			**Number of investors included**	**Number of academic institutions included**	**Origin of ecosystem parties**		**Thematic area**			
	Starups	Midscale	Large enterprises			Country	Region	Dig. Agriculture	Dig. Transport	Dig. Environment	Dig. Anything

Figure22: "SMART4ALL Community Breakdown" spreadsheet

This spreadsheet has been distributed to project partners, but just half of them has filled it.

Breakdown of SMART4ALL ecosystem											
Partner	**Number of SMEs included**			**Number of investors included**	**Number of academic institutions included**	**Origin of ecosystem parties**		**Thematic area**			
	Starups	Midscale	Large enterprises			Country	Region	Dig. Agriculture	Dig. Transport	Dig. Environment	Dig. Anything
4 PSP		70			5	Greece	South-East	3	1	5	61
5 S&C		10	5	0	15	Spain	South E		3	12	
6 TUD											
7 FBA						Spain (15%), Germany (15%), Greece (14%), Italy (5%), Slovenia (4%), Poland (3%), Czech					
8 MTU		65		0	8	Albania	WBC	2		1	
14 AVN	10				10						
15 MCN	19	3	2	0	4	MNE, SRB, BIH	WBC	4	2	3	20
17 TALTECH		72	24	0	3	Estonia					
18 SEEU		6	2	0	2	NMK	NMK	0	0	0	21
19 MARSECO		6	0	0	0	NMK, Kosov	WBC	0	3	0	5
20 UPZ		2	2	0	6	Kosovo, Alb	WBC	0	2	1	18
23 RP		15	5	10	5	Slovenia		0	0	0	20
25 UPV	4	2	1	0	0	Spain	South-East	0	4	2	1
Total:	33	251	41	20	20			9	15	24	146

Figure 23: Data collected by SMART4ALL project partners

However, this data cannot be fully regarded as representative due to the following reasons. Firstly, it does not conclude the data of all the partners but rather only 11 of them. The second reason is that all project partners might not uniformly interpreted the meaning of "startups", "large enterprises" and especially "midscale" – which are, by our approximation, somewhat off the realistic side of things.

The other set of data is one which is generated through the official SMART4ALL website, which includes all the registered entities within the SMART4ALL project. We deem this data to be much more complete and accurate, albeit it also suffers from the fact that not all the ecosystem actors went through the registration process on the official SMART4ALL site. According to the official SMART4ALL data – the current state of affairs is the following:

Members per application domain		Members per type of members		Members per geographical area	
Digitized Agriculture	44	SMEs	115	South Europe	147
Digitized Transport	34	Mid cups	20	Eastern Europe	32
Digitized Environment	52	DIHs	10	Central Europe	29
		NGOs	3	EU-13	14
Digitized Anything	156	Research Institutes	13	Non-European	3
		Universities	53		
		Venture Capitals	3		

Table 3: Breakdown of officially included entities in SMART4ALL DIH

However, we must note that this data only includes the members of the ecosystem which have been officially processed through, leaving out many of those which are in fact aware of the SMART4ALL and participate in it within different forms, but for various reasons have not yet been included within the official SMART4ALL data.

These results are especially concerning members per geographical area in accordance with the outlined project goals. First of all, multiple South European area countries have been reached and integrated, but also with the region of Eastern Europe, which is also a region underrepresented in digitization needs. Thus geographically speaking, the community evolution is on a good track – and we can conclude that we did a relatively good job in mapping out the community of the SEE and it's linking.

We believe that this data would've been even more in favor of our cause if it completed all those ecosystem actors which have failed to officially register in the SMART4ALL database, but are long since parts of its ecosystem. There is no doubt that these partners will officially register in the following years and thus provide us with even better ratio of the project.

A number of Venture Capitals and other investors will rise once the internal mechanism of the project becomes clearer, more of a "done-product" become available and easier to promote. Once that is done, more interest from Venture Capitals will be reached, considering they are directed towards investing in relatively secure and defined endeavors.

Therefore, we can conclude that during this first year we have completed the mapping out of the ecosystem reality of Europe, and as we have felt its pulse we will focus our efforts in a more directed way. What is important is that a good number of SMEs, DIHs and Bigger Businesses has been reached out to and integrated, and we also believe that the numbers, if the registration had been performed consistently, would've been even better.

The problem concerning the uneven representation of all the four vectors has its logical explanations, considering that Digital Anything has the highest coverage. Therefore, it is evident that most of the technology solutions will fall under this category. On the other hand, the number of the applications in other fields have been impacted by objective reasons – the transport industry for the reasons we presented in the subtask 8.1, as well as the agriculture industry, which requires specific forms of community engagement and outreach in order to reach the potentially interested parties, which are often outsiders to the ways of digitization, especially in the SEE which is our area of focus.

However, the need to better coordinate the efforts of the partners has been recognized. Especially within the partners working on the task 8, who are dealing with the consortium building and brokerage. Therefore, as UoP has purposed, a number of contact-point persons will be set up for each of the regions SMART4ALL deals with. Thanks to this, a much better coordination and information will be reached, as well as a better overview of the specificities of various different regional ecosystems.

We also recognized the importance which personal recommendation and field-work played in ensuring the further evolution of our community, considering the fact that, on the grounds of a pool conducted during one of the MECOnet local disseminations – results had it that most of the people who came did so thanks to some unconventional ways of recommendation. Therefore, a more focused and specific set of actions will be undertaken in the future, which is possible now once the general framework has been successfully set up.
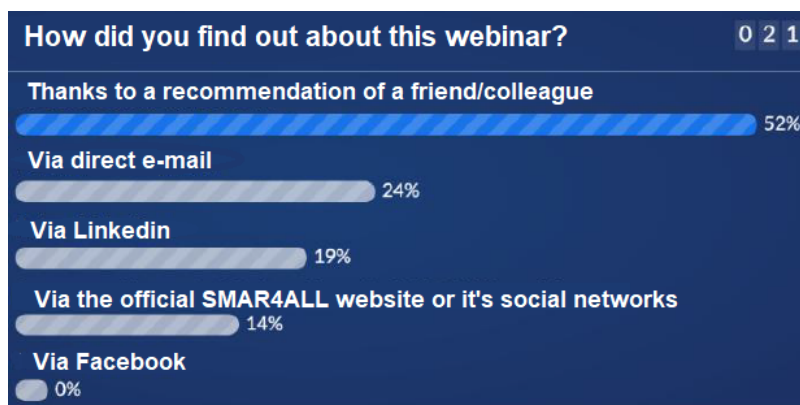
Figure 24: Manners of reaching feedback fromS4A

Generally speaking, the evolution of the SMART4ALL community can only be perceived as satisfying for the first year of the project, considering the outline and the important steps have been made, especially in the period of the COVID19 Pandemic which made all the efforts objectively difficult, limiting most of the project activities to those which can be conducted online, which without a doubt limited the visibility of the project. An effective outreach strategy has been performed.

Better insight in the achievements concerning Community Evolution can be reached through the individual reports of the partners involved.

In collaboration with other relative WPs, UoP has monitored the impact of SMART4ALL community engagement activities, communication channels, service and tools. This has been done through:

- Communication channels statistics analysis (presented at dissemination reports),
- Analysis of matchmaking services statistics (presented at D8.1),
- Analysis of questioner circulated among the matchmaking participants (presented at D8.1) and
- Analysis of Open Calls participation and proposals preparation statistics.

For the next year, based on lessons learned, UoP will focus on optimizing SMART4ALL procedures and activities to enhance the SMART4ALL community evolution.

S&C has published around 20 notes in 2020. Some of them were translated to Spanish language and all of them were published on S&C LinkedIn and Twitter pages which have nearly 600 followers consisted of researchers, consultancy companies, regional institutions such as Generalitat de Catalunya (Catalonia Council) and research institutes and universities mostly located in Spain.

FBA hasn't precise data, so it has provided estimations. It is notably that over 300 users per month have visited the SMART4ALL community and open calls pages on the FundingBox platform per

month, from the following countries: Spain (15%), Germany (15%), Greece (14%), Italy (5%), Slovenia (4%), Poland (3%), Czech Republic (3%), UK (3%), Montenegro (3%), France (3%).

Regarding MTU, the engagement of the community has been mainly toward the open Calls for proposals. It had continuous communication with the companies to promote and monitor their participation in SMART4ALL project.

Fasttrack's main ecosystem actions are related to investor network. It has included the number of investors (venture capitals, corporate VCs, family offices, equity firms, investment funds, technology transfer). Fasttrack hasn't provided the distributed number of the investors by thematic area, as most of them have investment criteria that applies to more than one thematic area, and others are sector agnostic (interest in all thematic areas).

The main focus of TALTECH has been on Estonian ecosystem, however some information has been also distributed towards Finland and other Baltic States.

For SEEU there were two key dissemination elements, the KTE and FTTE main calls also the matchmaking service, winners' information of the KTE call and reminders. SEEU disseminated mainly through official websites, social media and via email with proper translation English, Albanian and Macedonian language attached to the sent info-email. SEEU also organized close meetings between interested companies for the calls and was used as opportunity for dissemination. CST used online and offline channels such as face-to-face meetings and remote meetings (via Google Meet and Zoom). MARSECO has limited connections to companies from North Macedonia and just a single company from Kosovo. This needs to change in the future and it has the capacity (people and resources) to support countries in the region with their activities.

Slovenian ecosystem is well-covered with funding opportunities for technological companies and academic parties already make it harder for REDPITAYA to promote SMART4ALL project. REDPITAYA finds that geographic coverage is well allocated and the thematic areas are covered by an adequate number of partners.

Generally, further measures for guiding community evolution will be proposed on the WP3 Assembly which will take place by the end of January 2021. We will outline the course of action that needs to be taken during registration and coordination of ecosystem actors. The project partners have already been familiarized with the tempo of work which will start starting next year, in which much stronger coordination and shared effort will be expected. Every month and a half, a meeting will be held by MECOnet in order to collect all the reports and info concerning the evolution of the ecosystem. More expedite information will open the way to quicker reactions if the case has it that things need to be better adjusted to the proclaimed project goals.

11.   CONCLUSION

Based on the review of the aforementioned tasks, we can conclude that the first reporting period of the SMART4ALL project ended up with an overall positive rating and an evidence that this rate will keep working in the favor of the project. During this year, we objectively accomplished even more than our initial projections, especially if we take into account the COVID19 pandemic. We successfully shifted to online communication and dissemination policy and have succeeded into creating a strong ecosystem presence and community.

This year was regardless of the specific circumstances that were very challenging for all those in the project which had to familiarize themselves with the project internal management mechanism (matchmaking, repository, community spaces, reports etc.) and carry on the additional work. However, we can conclude that this internal part was successfully completed thanks to the efforts of all the partners involved, especially the ones concerned with overall management of the project.

Considering the fact that when the project started, many partners had the initial difficulty to recognize the specific differences between WP2 and WP3 package, efforts were made in order to distinguish some activities that are usually considered as overlapping. Therefore in the next period it is essential to continue with activities related to connection of SMART4ALL project with other DIHs, SAE initiatives and European Enterprise Network but to distinguish those activities from classic promotion of the project.

Therefore, we shaped a specific set of actions which have and will be undertaken under this specific WP – foremost with the feedback mechanisms, matchmaking applications and better focused outreach strategies towards specific groups of ecosystem actors, especially in the fields of agriculture, environment and other fields which are not necessarily high-tech by their nature. Therefore, in the future we will outline strategies which will be user-specific, this will hopefully be made possible by more favorable travel circumstances which will enable the partners to perform field work and surveys of the project.

The network of helpdesks has been also set-up. These helpdesks have functioned well during the calls for proposals phases and they have played a significant role in ending up with good proposal applications. In the next period, helpdesks will be supplemented by specific contact points which will be appointed for every region. They will serve as regional coordinators and they will work under the instructions of the assembly and leading project partners. SMART4ALL will in cooperation with contact points formulate global/European strategies in accordance with the Community Engagement and Building Strategy which these regional contact points will later further implement within their respective areas.

The coordination of WP3 activities for the next year will be explained in detail on the WP3 GA meeting which will take place on 28th of January. It is planned that after this meeting, MECOnet

will organize periodical meetings on monthly basis in order to review the implementation of WP3 activities and coordinate involved project partners.

As we said before, the success of the SMART4ALL ecosystem is determined by its quantity and its quality of the ecosystem actors. The quantity is proven by the sheer number of the actors involved, while the quality goes to classify them per type of members. So, we must at the same time take care of both of these categories, the letter of which (quality) – breaks into three specific categories – members by type of members, members by geographical area, and members by area of interested, or, in other words, their alignment with the SMART4ALL vectors (Transport, Agriculture, Environment, Anything).

We can conclude that the quantity of SMART4ALL ecosystem for the first year is without a doubt in accordance with the project objectives. As we previously proved, the initial projection was to reach 1500 SMEs and to integrate at least 100 SMEs in the project. SMART4ALL DIH has already integrated more than 100 SMEs so there is no doubt that we succeeded in filling these specific objective. On the other hand, as for their specific quality, we have already noted that their quality is also in accordance with the project's aim. As we stated in *Table 3*, most of DIHs members come from the SEE region and the DIH has a relatively adjusted ratio of academia, idea-holders and venture capitals. Considering SMART4ALL verticals, most of entities are interested in Digitized Anything and all of us will need to do some extra effort to include more entities that have specific knowledge in Digitized Transport, Digitized Agriculture and Digitized Environment.

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