SOFIE - Secure Open Federation for Internet Everywhere

779984

DELIVERABLE D6.6

Updated Consolidated Communication and Dissemination Plan

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Author(s)	Liis Livin (GT), Dmitrij Lagutin (AALTO), George Polyzos (AUEB), Mikael Jaatinen (LMF), Petri Laari (LMF), Mirjam Kert (GT), Priit Anton (GT).
Responsible person	Liis Livin (Guardtime), liis.livin@guardtime.com
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Summary of changes compared to previous version

Version	Major changes
1.10	In the updated version of deliverable "D6.6 - Updated Consolidated Communication and Dissemination Plan" the project's target audiences and activities related to them are specified. The main changes are: 1) An added paragraph to Chapter 2 "Strategy for Dissemination and Communication" to clarify that exploitation has two (interrelated) roots in the project: academic and commercial. 2) A new and more detailed table (see Table 1) about target audiences under Chapter 2.2. 3) An elaborated table (see Table 2) about SOFIE communication and dissemination activities under Chapter 3. 4) An added table (see Table 3) under Chapter 3 to present the timeframe of communication activities throughout the project. 5) An added Chapter 3.4 about "Business outreach" with the accompanying sub-chapter 3.4.1 "Pilot-specific outreach to industry" to better reflect on the activities targeted to disseminate and exploit commercial components. 6) A slightly updated version of former Table 3 (now Table 4) under Chapter 4 about KPIs where social media followers were reduced to 500 of total. 7) Updated content under Chapter 5 that communicates the measures of standardisation. In addition, some minor chances were made throughout the deliverable's text to facilitate the coherence of the primary changes listed above.

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1. Introduction

The SOFIE project work package 6 (WP6) runs during the whole project and consists of communication and dissemination activities as well as exploitation, business planning, and standardization. The core purpose of WP6 is to support the impact of information and communication technologies applied to three distinct domains: energy, food industry, and gaming. This plan describes the activities thus far and outlines the purpose and direction of future efforts.

The aims of SOFIE communication activities are to ensure that the project's results reach the appropriate target audiences in varied sectors in industries, academia and governmental bodies. Additionally, it aims at informing distinct audiences of the possibilities of the IoT federation approach on data management.

SOFIE will actively participate in standardisation in its research areas. It will disseminate results through specialist venues: scientific journals, conferences, and developer communities, but also through the web, social media and workshops. This document continues on the definition and regulatory work initiated in the Grant Agreement regarding the SOFIE project's general dissemination and communication activities, channels and target audiences.

In conclusion, this document describes the updated communication and dissemination strategy of SOFIE and is central to all activities that will be implemented towards relevant stakeholders and interested parties. The document outlines specific activities undertaken during the first 12 months of the project as well as plans for the upcoming months and any changes in the original plan.

2. Strategy for Dissemination and Communication

The main purpose of the SOFIE communication and dissemination strategy is to maximise the impact created by the project. The strategy stems from the higher-level communication and dissemination goals listed below:

- Raising general awareness about the project and its output.
- Supporting the engagement of stakeholders for participation in the work of WP2-WP5.
- Gathering feedback from stakeholders that can be incorporated in SOFIE's scientific and development activities.
- Attracting users from targeted sectors to start using SOFIE's results.
- Ensuring high transparency and accessibility of the project output.

Communication and dissemination activities aim to address both in-project and outreach communication needs. To support those activities, clear communication messages have been formulated. Also, highly accessible and transparent communication materials are compiled that can serve different audiences. Multiple different communication channels are utilised to reach the relevant stakeholders.

As SOFIE is a research and innovation project it takes two paths in exploitation: 1) dissemination and exploitation of academic results and 2) dissemination and exploitation of commercial components, acknowledging that the academic results produced provide essential input to commercial exploitation. Those SOFIE components that prove to be commercially exploitable will be exploited through the project's pilots and their exploitation will be executed with the help of Business Canvas Model (see Chapter 3.4).

The SOFIE project communicates with factual, structured content and concrete demos. In the Updated Consolidated Communication and Dissemination Plan the project key messages have been refined and the target audiences have become more concrete. The main strategy of communication and dissemination activities has remained the same as defined in "D6.4 - Initial Communication and Dissemination plan".

2.1 Key messages

The primary message of the project:

SOFIE will establish an essential framework for the smooth uptake of IoT technologies. During the project we will fill the present technological gap by developing a trailblazing blockchain driven federated platform, which will enable new data exchange paths between the highly fragmented IoT systems and legacy silos.

Project description to be used in external communication:

Problem description:

Big Data has been defined as the "black gold" of the 21st century. It is one of the key elements that make industries grow. The problem is that in many existing sectors (energy, logistics, insurance, machine manufacturing etc.) architecture and systems design does not support the massive use of big data and exchange of information. Legacy systems have been built as stand-alone solutions and their data silos are preventing the use of new opportunities on the market.

What we DO:

SOFIE addresses this problem directly by creating the means to exchange data not only between the data silos of legacy systems (SCADA, CRM, etc.), but also at a larger scale, between different Internet of Things (IoT) systems, in this way enabling new business models

to prosper. Bringing down the barriers of data exchange and fostering trust between parties owning different IoT systems, while keeping the overhead of integration as low as possible, is SOFIE's way to contribute to the next generation digital market and industry matchmaking.

How this changes the world:

By enabling seamless data exchange through a federated approach and the use of flexible adapters between IoT systems, the benefits created from one industry to another are endless. Creating an ecosystem where energy consumption, all kinds of production, the myriad devices with micro-controllers, and human activities are combined, for example, to provide a more efficient and flexible energy service, is one example. Tracking/controlling every food product and its environment from the farmland to the grocery store, to improve efficiency and ensure high quality, is another example. Matching these supply chains and services with customer behaviour and demand/response from other IoT systems creates the possibility to offer services at a higher level.

From the longer-term point of view, *creating industry-specific and wider markets for data exchange and data reuse allows the society as a whole to streamline its operations, increasing efficiency, and decreasing materials use. The integrated digital ledgers also allow the digital market platforms to experiment with new forms of compensation, new value structures, such as reputation, and new ownership models, including data commons and perhaps data unions. These, together with the ongoing restructuring of the energy industry from a centralised, capital intensive one into a decentralised one that requires lower investment, are likely to bring fundamental changes into the way the whole economy works.*

How we do it:

SOFIE addresses the fragmentation of IoT through federation rather than integration. Virtually any IoT platform can join the federation by creating an adapter. Data remains in the respective IoT platforms and is usable by all the applications within the limits set by the applicable security and privacy policies. SOFIE exercises security and privacy by design, utilising DLTs where applicable. The user shall retain control over their data, even after the data have been stored in the Cloud or Fog in an EU GDPR (or other regulations) compliant manner.

SOFIE selects existing components, develops new ones, and collects them into an IoT federation framework for creating administratively decentralised, open, and secure IoT business platforms from existing IoT platforms. The practicality of the approach is demonstrated by using it in four pilots in three different sectors: food chain data, gaming, and energy market.

2.2 Target Audience

Efficient and impactful dissemination and communication will ensure the exploitation of SOFIE's results and facilitate their extended use in other contexts and projects. SOFIE's engagement with target group communities will allow the project to gather feedback which it will incorporate in its scientific and development activities.

The main audience for communication and dissemination are as follows: 1. academic community, 2. (potential) industrial partners for exploiting the commercial components of SOFIE, 3. policy makers and 4. general public.

Communication and dissemination activities connected to industry are closely related to SOFIE's pilots and thus targeted specifically to the energy, food and mobile gaming sectors. Table 1 below gives a comprehensive overview of the main target groups for SOFIE. It highlights the aims for the target groups and indicates the main communication channels used to reach the groups.

Table 1. SOFIE Target groups, dissemination goals and communication channels.

Name of target group	Group description/ specification	Aim	Communication channels
Academic community	Scientific community focusing on blockchain, ledger technologies and IoT systems and related fields.	Involve in SOFIE project content discussion. Disseminate results to use and build on SOFIE results in future academic works and other research projects that might grow out of components and knowledge developed in SOFIE.	Academic publications, journals, GitHub, conferences, workshops, seminars, social media.
Industry	1) energy sector: a) DSOs/TSOs providing access control of energy consumption data, b) retailers offering flexibility services to end-users. 2) food supply sector: a) producers' associations, b) transporters (fresh fruits and vegetables), c) retailers. 3) mobile gaming sector: a) game developers, b) gaming community.	Engage the industry in the research by informing them of the issues addressed by the project and invite them to use/implement exploitable components of SOFIE.	Existing business relationships, online and offline meetings, conferences, seminars and workshops, social media.
Policy makers	Involve in discussion, disseminate results to use and build on SOFIE results for future policy making.	Involve in discussion, disseminate results to use and build on SOFIE results for future policy making.	Policy reports, meetings, conferences/workshops, webpage, social media
General Public	People interested in blockchain, IoT systems and their applications on various fields.	Create general support and awareness of the advantages SOFIE provides and to invite external contributors to the SOFIE platform. Also, engage the public in a debate on decentralized IoT systems.	Webpage, social media, newsletter.

2.3 Visual Identity

A visual identity for SOFIE was created at the beginning of the project. This visual identity is to be used in all the dissemination outputs, such as the project website, deliverables, presentations, leaflets, etc.

2.3.1 Colours

The primary colour codes used in visualizing SOFIE are #36bba5 for web and #01b4bc for print materials. The approach to design is simple and clean, using neutral and soft colours.

2.3.2 Typography

The typeface for SOFIE is Barlow and its variations (Barlow Strong, Barlow Medium, Barlow Light etc.). Barlow is a slightly rounded, low contrast, grotesk font superfamily designed by Jeremy Tribby. It is used both for web and print materials in SOFIE project.

2.3.3 Logo

The SOFIE logo combines IoT with the circle O around SOFIE and stopping at the I. As SOFIE stands for Secure Open Federation of Internet Everywhere, the circle in the logo is left open to symbolise the notion of openness of the SOFIE federation. The logo can be downloaded from the SOFIE website: https://www.sofie-iot.eu/assets/sofie-logo.svg.

The standard logo is the full colour version. This version should be used whenever possible. Ideally the logo should be used on white backgrounds only. Using the logo on a coloured background is possible if there is no alternative, but it has to be a very light background.

2.3.4 Applications of the Visual Identity

Figure 1. The SOFIE Logo

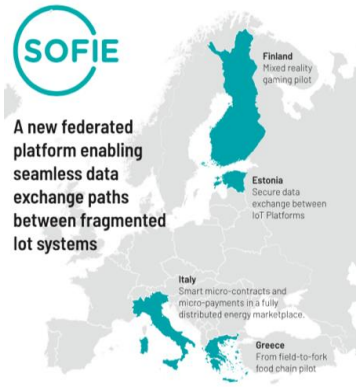

Figure 2. The SOFIE leaflet

3. Communication and Dissemination Activities

Dissemination and communication activities in the SOFIE project are focused on innovative and engaging ways to share results with diverse academic and non-academic audiences on the local and European levels.

To reach out to relevant target groups, SOFIE continues to utilize online and offline communication channels. The project's representatives participate in various communication activities in order to build bridges to its target audiences and disseminate the results of the project. The project continues to use the existing networks of participants to increase the project's visibility and impact, and to gather valuable feedback. The tables (see Table 2 and Table 3) below provide a comprehensive overview of the communication and dissemination activities and the timeframe for their implementation.

Table 2. SOFIE communication and dissemination activities

Activity	Target Group	Amount/ Regularity	Responsible Partner	Contributing partner(s)
Publishing in peer-reviewed journals	Academic community, policy makers	Regularly throughout the project. 14 publications in total.	Aalto University, AUEB	All partners
Releasing open source code at GitHub	General public, academic community	Source code releases started from October 2018. Source code for the second version of SOFIE framework will be released in September 2019. Additional releases of SOFIE framework are planning for April 2020 and December 2020	Aalto University	
Creating and updating SOFIE website	General public, all SOFIE target groups.	Launching M3, further developed and regularly updated afterwards until M36, maintained 5 years following the end of the project. 12000 visitors of the page by the end (31.12.2020).	Guardtime	All partners
Launching and upholding SOFIE Twitter profile	General public, all SOFIE target groups	Created M1, updated regularly throughout the project. 500 followers by M36.	Guardtime	All partners
Launching and upholding SOFIE	Scientific community and business community	Created M14, regular updates every month.	Guardtime	All partners

LinkedIn profile				
Participating at exhibits to promote the project	Academic community, industry, policy makers	6 exhibitions	Guardtime	All partners
Organizing SOFIE workshops	Academic community, industry, policy makers	Three workshops, initial time planned: M22 (first), M29 (second), M34 (third). Minimum of 15 external participants per workshop.	Guardtime	Organization of workshops shared by WP and/or pilot leads as relevant based on workshop focus.
Writing and publishing blog posts	General public	First year 7 posts, second and third years 12 posts, in total 31 posts on SOFIE website.	Guardtime	All partners
Presenting SOFIE at conferences, seminar, webinars	All target groups (depending on the event)	35 presentations	All partners	
Creating, updating and distributing promotional materials	All target groups (depending on the material)	Flyer, roll-up, use-case one-pagers, video, slide-deck, business card, etc.	Guardtime	All partners
Compiling and sending out SOFIE Newsletter	General public	First one sent out M18, after that in every after four months.	Guardtime	
Initiating cooperation with other project/initiatives relevant to SOFIE goals	Industry, policy makers	4 meetings or joint journal publications per year. 12 projects (meeting attendance and joint publications) in total.	All partners	
Business meetings and networking	Energy data exchange pilot: DSO/TSO: Tennet, Energinet, Elering, Enel, Fingrid, Hellas, ESO, EDP, 50 Hertz.	Number of existing and future meetings, both physical and teleconferences: M1-12 = 9 M13-24 = 11 M24-36 = 14	Guardtime	

	Associations: Entso-E, Eurelectric, “Tarkvõrk” committee. Policy makers: EU DGCONNECT, DG ENER, Bridge.			
	Energy flexibility marketplace pilot: 1) DSO/TSO, 2) policy makers, 3) related associations.	Number of meetings: M1-12 = 2 M13-24 = 4 M25-36= 5	Engineering	
	Food supply chain pilot: 1) 7Grapes (producers’ organization), 2) Barba Stathis SA (food company), 3) Supermarket Sklavenitis (retailer).	Meetings: 1) 7Grapes: planned for February 2019, June 2019, and at least three meetings in 2020. All meetings will take place in Kiato. 2) At least one meeting is planned for the second semester in 2020. 3) At least one meeting is planned for the second semester in 2020.	Synelixis	
	Mobile gaming pilot: 1) Rovio’s game development and business unit 2) Gaming and wider development community	Number of existing and future meetings and networking: M1-12 = 1 M13-24 = 7 M24-36 = 3	Rovio	

Table 3. Timetable for communication and dissemination activities.

Activity	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18
Publishing in peer-reviewed journals			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Releasing open source code at GitHub									x									
Creating and updating SOFIE website			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Launching and upholding SOFIE Twitter profile	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Launching and upholding SOFIE LinkedIn profile														x	x	x	x	x
Participating at exhibits to promote the project											x	x						x
Organizing SOFIE workshops																		
Writing and publishing blog posts					x	x	x	x	x	x	x	x	x	x	x	x	x	x
Presenting SOFIE at conferences, seminar, webinars			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Creating, updating and distributing promotional materials					x	x	x						x					x
Compiling and sending out SOFIE Newsletter																		x

Initiating cooperation with other project/initiatives relevant to SOFIE goals					x							x						
Business meetings and networking – Energy data pilot		x	x	x					x	x	x	x	x	x	x	x	x	
Business meetings and networking – Energy flexibility pilot															x		x	
Business meetings and networking – Food chain pilot														x				x
Business meetings and networking – Gaming pilot											x					x	x	x

Activity	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36
Publishing in peer-reviewed journals	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Releasing open source code at GitHub			x							x								x
Creating and updating SOFIE website	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Launching and upholding SOFIE Twitter profile	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Launching and upholding SOFIE LinkedIn profile	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Participating at exhibits to promote the project				x								x				x	x	

Organizing SOFIE workshops								x			x							
Writing and publishing blog posts	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Presenting SOFIE at conferences, seminar, webinars	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Creating, updating and distributing promotional materials				x				x	x									
Compiling and sending out SOFIE Newsletter				x				x				x				x		x
Initiating cooperation with other project/initiatives relevant to SOFIE goals		x	x			x			x					x	x			
Business meetings and networking – Energy data pilot			x	x	x	x	x	x	x	x	x				x	x	x	x
Business meetings and networking – Energy flexibility pilot				x		x				x	x				x	x	x	
Business meetings and networking – Food chain pilot									x				x	x		x	x	
Business meetings and networking – Gaming pilot		x	x	x	x										x	x	x	

3.1 Sofie Project Website

The SOFIE website is the project's key dissemination tool and the main source of information about the project, especially for the wider IoT community and the general public. It is available at https://www.sofie-iot.eu.

The site contains several sections: general information about the project, news items, contact information and publicly available publications and project deliverables. The website is regularly updated to assure that visitors get coherent and timely information about the project as it develops. The visitor numbers of the webpage keep growing having approximately 300-450 visitors per month.

The website is updated monthly with blog posts. This allows the project followers to gain further insight into the project theory and the development of different use cases. Each partner contributes at least one post per year.

Figure 2. SOFIE Website

3.2 Social Media

As set out in the original plan, Twitter and LinkedIn profiles were created at the outset of the project. The profile pages have unified design elements, e.g. SOFIE logo.

- Twitter (@EU_Sofie), https://twitter.com/EU_Sofie
- LinkedIn, https://www.linkedin.com/company/sofie-project

Social media accounts help to enlarge the project's followers and reach wide and targeted audiences in a fast and efficient manner. The Twitter account is being used for sharing short messages, making announcements and retweeting relevant messages. Twitter is also being used to target relevant industries which the SOFIE project aims to involve. LinkedIn is used for networking with other professionals.

The number of social media followers is increasing over time and the reach/impressions on these mediums are in correlation with other communication activities, e.g. when SOFIE is exhibited at an event the number of followers increases and the reach of the messages posted on the social media increases as well.

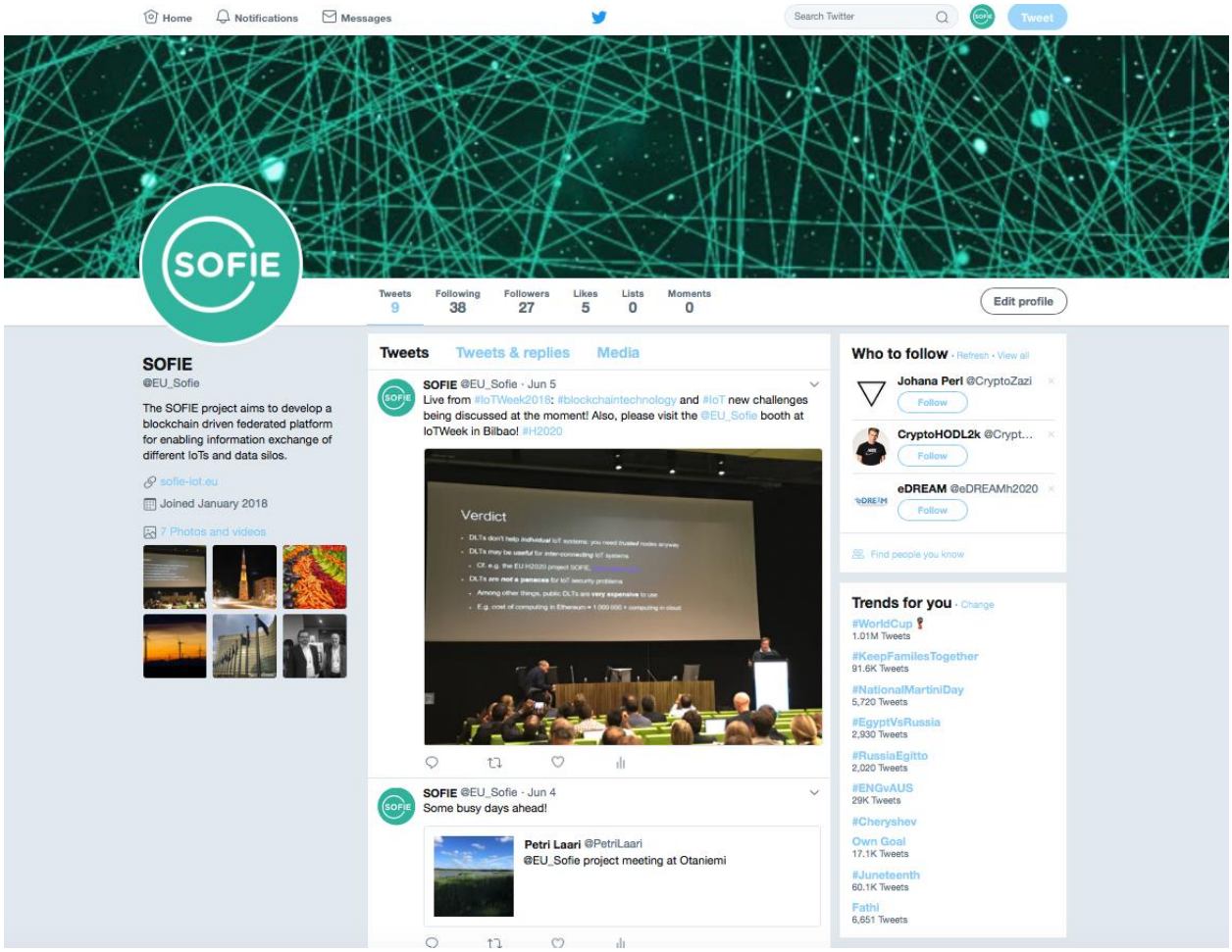

Figure 3. SOFIE Twitter page

3.3 Scientific Publications and Presentations

In order to generate visibility for SOFIE in the scientific community and to receive feedback, active participation in academic dissemination channels is important. Such dissemination includes submission of scientific articles to key peer-reviewed conferences and journals, and

submission of demonstration and tutorial proposals on the SOFIE approach and technologies in the main conferences in the field.

Relevant conferences and journals include: International Journal of Internet of Things, Internet of Things (Elsevier), ACM Transactions on Internet of Things, IEEE Access, IEEE WF-IoT, IEEE INFOCOM Workshop on Cryptocurrencies and Blockchains for Distributed Systems (CryBlock), IEEE ICC, IEEE GLOBECOM, ISOC NDSS, NDSS Symposium's workshop on Decentralized IoT Systems and Security (DISS), International Symposium on Security and Privacy on Internet of Things, and The Global IoT Summit (GioTS).

The project's goal is to publish at least 14 scientific articles during the lifetime of the project. Most publications will come in the latter half of the project when the project results will be more mature. The consortium has established the basic publication processes and rules, which have been documented in the "D1.1 – Quality Plan" deliverable. The academic partners have an extensive track record of publishing their results in high-level venues and will lead this activity. Industrial partners will also contribute to the scientific publications.

3.3.1 Open Data Publishing

The main objective of open data publishing is to ensure open access to a scientific publication at the time that publication is presented in a conference or published in a journal. In cases where this is not possible (for example due to an embargo period imposed by the publisher) open access will be provided within six months following publication. Open data related to the pilots will be published according to the schedule described in the deliverable Data Management Plan (D6.5). This includes scientific publications under green open access model, relevant data related to scientific publications, and data related to SOFIE pilots.

For scientific publications, the Lead Author is responsible for preparing a version of the manuscript for open access publication, respecting the requirements of both the ultimate publication venue as well as the open access repository used. Only recognized open access repositories indexed by major services such as Google Scholar will be used. A link to the open access version will be submitted to the SOFIE Website Administrator by the Lead Author, once the paper in question is available in the open access repository. The Lead Author is also responsible for publishing relevant datasets related to the publication.

For open data related to the pilots, the process is described in more detail in D6.5. Each pilot has a responsible partner, which will also be responsible for open data publishing.

3.4 Business Outreach

The following Chapter describes the primary method and process how industry outreach will be executed in the project.

3.4.1 Business Model Canvas (BMC) and it's process description

The Business Model Canvas (BMC) is a strategic management template for developing new or documenting existing business models. It is a visual chart with elements describing a product's value proposition, infrastructure, customers, and finances[1]. The BMC is used as a tool to develop and implement the exploitation strategy for SOFIE's pilots. It helps to framework and present the benefits for the stakeholders and shows the market trends. It brings out the enabling technologies and also provides an overview of market trends, plus the output that the project provides for the pilot.

Models will be created for each SOFIE pilot - energy data exchange (GT), energy flexibility marketplace (Engineering), food supply chain (Synelixis) and the mobile gaming pilot (Rovio) -

[1] https://en.wikipedia.org/wiki/Business_Model_Canvas

as pilots are the driving forces to bringing the commercially exploitable elements of SOFIE to the market.

These four Models will be presented in D6.7 and their life circle will evolve throughout the project, ending with the finalization in D6.10 “Business planning” where components pushed to market will have crystalized. The Models will be adjusted in correlation to developments in supporting communication and dissemination activates as well in sync with the steps taken in technical development work packages. The figure below illustrates the planned progression of the BMCs.

The first version of the Model (BCM V1) will be compiled and presented in the updated version of D6.7, the Model will improve over time. Then it will be renewed and presented in D6.8 as the second version of the Model (BCM V2). The final version of BMC is a refined Model that serves as a framework for launching components to the market (through D6.9 and D6.10). This process scenario applies for each of the four Models developed separately for every pilot case.

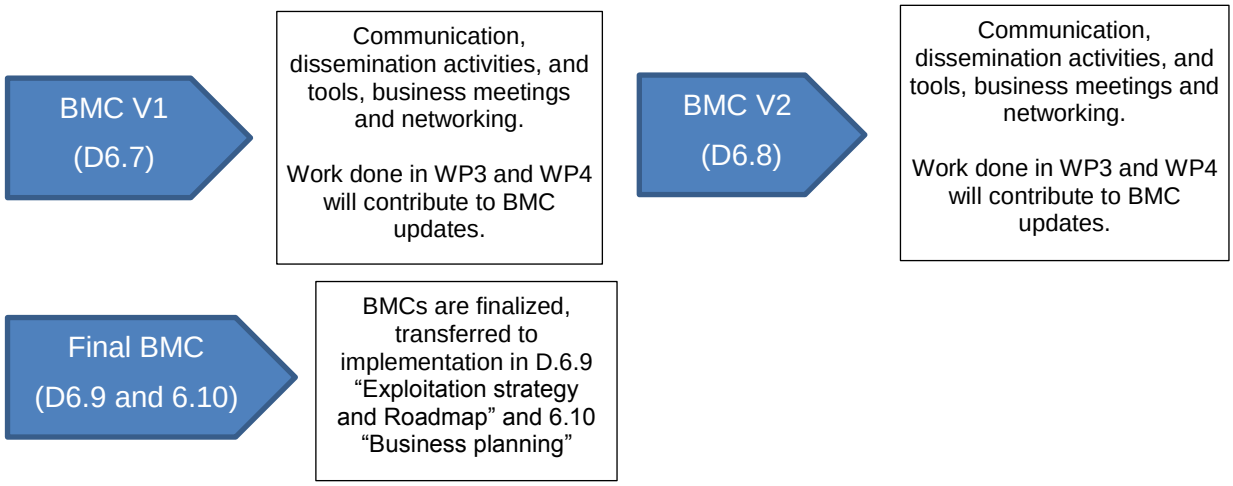

Figure 4. The life circle of pilots’ Business Model Canvases.

3.4.2 Pilot specific outreach to industry

Energy data exchange pilot (Guardtime):

The primary agenda is to focus on “gate keepers” of the field of energy data and to validate the business use-case in concern of solving the access, access control, audit trail and trust issues when complying to the Green energy package, GDPR and free energy market.

During M0-M18 two specific countries Estonia and Denmark were addressed with DSOs and TSOs involved. Also, the industry requirements and standards that affect the future development were in focus. These were addressed through various workshops organized by EU DG Grow, EU DGCONNECT, DG ENER, Entso-e and others.

During M18-M36 the aim is to be more present with DSO-TSO digital infrastructure development and align/consult with the requirements that are being asked from future integrations and developments in national energy grid and data access level. Additional interest group from the retailers’ balance managers’ side is also taken into focus to fill the missing link of the energy data request side where a retailer (offering the flexibility service) initiates the data owners’ request to exchange data.

The aim by the end of M36 is to have a clear plan of how to follow up with the customer specific solution development that will result as a commercial service provided by Guardtime to the energy sector.

Energy flexibility marketplace pilot (Engineering):

The strategy is following a two-step process. In the first part, Engineering, as tool provider and technical developer, collected and took into account feedback from ASM Terni and Emotion, as main users, to design the tools based on internal objectives and experience. In parallel, an internal knowledge transfer process towards the dedicated business unit has been started.

In the second phase, pilot partners aim to involve entities out of the Consortium that could adopt SOFIE solution for federating existing platforms. In this respect, other public utilities and technological providers will be involved in an Open Day to be held in Terni at the National level, in which Engineering, ASM Terni and Emotion will engage new potential customers in the region as well as in the country. DSOs/TSOs will be also involved participating to dedicated workshop and events such as EU workshop by invitation in flexibility coordination among TSO-DSO-aggregators (Feb 2020), EU workshop by invitation in Consumer Centered Energy System (Jan 2020), participation in EU BRIDGE working group for Data Management, participation to Innogrid 2020 (May 2020, Bruxelles).

Food Supply Chain pilot (Synelixis):

During M0-M18, “7 grapes – Pegasus Coop”, a sustainable producers organization, producers association and warehouse was contracted by SYN to become the end user of the FSC pilot with main responsibilities to transfer knowledge and consulting about processes, workflow and business operations used in the supply chain of grapes, to drive elicitation of end-user requirements and to validate FSC pilot platform. As an early adopter of the SOFIE FSC solution, 7 Grapes has also expressed great interest to keep using pilot technology in its operational environment well beyond the project end. At the same time, the challenge, the vision and the business message of the FSC pilot were communicated by both SYN and OPT through their communication media and business networking.

In M18-M36, the aim is to disseminate and communicate further the FSC solution to extend the group of interested companies and stakeholders in both the domains of technology and agri-food business. Moreover, platform demos will be announced in targeted international workshops and expo events to contact potential stakeholders and customers, networking events will be organized to strengthen relationships and create prospects with key industrial partners who are already customers of pilot members. To this end, initial contacts with the Barba Stathis food company and retailer Sklavenitis, both leading companies in the Greek food market, have been made by OPT and the plan is to demonstrate the FSC final pilot platform and services during the last period of the project after having completed testing and evaluation activities**.**

Mobile Gaming Pilot (Rovio):

The main aim of the mobile gaming pilot is to identify and understand use cases for DLTs and IoT in gaming and test the business opportunity. The work was started by listing by listing down multiple use-cases of DLT and IoT in mobile gaming.

In 2018, Rovio held an internal hackathon where a first DLT based prototype was designed. During M13-24 Rovio plans to have a session with GoFore company where IoT beacons are used for proximity-based location applications. Additionally, Rovio has planned several web meetings with AWS team for this period to discuss the use of Amazon managed blockchain for the SOFIE mobile gaming pilot. Discussion with Dapperlabs about their new FLOW blockchain for the mobile games are also in the plans.

During M25-36 Rovio aims to have discussions with game companies and is open for collaboration on our mobile gaming pilot. Participation at conferences and hackathons to promote the mobile gaming pilot are also in the plans for in 2020.

3.5 Business events and presentations,

SOFIE consortium members have a strong presence in their industry circles. Exploitable results of the project will be presented at applicable business venues and general IoT and distributed ledger technology events. The aim of this is to keep the relevant industry circles updated about the aims and progress of the SOFIE project.

Presentations are made throughout the project when suitable opportunities arise. The events that are of interest to SOFIE are for example: CONSENSUS, Blockchain Week, Global IoT Day Events, IoT Built Environment & Smart City, Nordic IoT Hackathon, IoT Startup Soiree, IoT World Forum (IoTWF), Mobile World Congress, CEBIT, M2M & Connected Objects Show, M2M World Congress, IoT Privacy Summit, IoT Expo, Internet of Things Developers Conference.

3.6 Policy Events and Presentations

The project's results will be disseminated at the relevant European fora, such as the cybersecurity public-private partnership hosted by the European Organisation for Cyber Security, as well as other relevant public private partnerships and industry forums related to IoT such as the European Alliance of Internet of Things Innovation (AIOTI) and the IoT European Research Cluster (IERC).

The objective of such dissemination is providing input towards common activities and receiving feedback, offering advice and guidance, and receiving information related to standards, policy/regulatory activities, national or international initiatives**.**

The policy presentations will mostly take place in the second half of the project, when the project outcomes are more mature.

A slide deck for policy presentations will be prepared in the second half of the project. Various policy recommendations will be discussed internally within the consortium and then will be proposed to various public-private partnership organisations.

3.7 Liaison Establishment with Other Projects

We aim to collaborate with external projects, aiming to strengthen the impact of all the collaborating projects. This is an ongoing activity, with the goal to collaborate at least with 5 projects. SOFIE is a member of the EC IoT security cluster where we are constantly looking for joint activities with other projects. The consortium members are constantly informed when new collaboration options arise, and it is internally decided which of these are taken. We aim to work together with projects on IoT interoperability and privacy, more general security and privacy research projects.

3.8 Informational Materials

SOFIE has several information materials that intend to promote the project. They are used as tools to communicate the project's key messages and reach out to target audiences.

- The SOFIE promotional flyer is a double-sided sheet that was created in March 2018 (https://www.sofie-iot.eu/results/project-deliverables) and gives a general overview of the project and introduces the role of consortium partners.
- SOFIE also has a roll-up that can be used at conferences by all the partners with the same aim as the flyer.
- A commercial SOFIE slide deck will be drawn up by the WP6 leader in the first quarter of 2019. This may be used for introducing the project to various business audiences by all consortium members.

- A policy SOFIE slide deck will be drawn up by the WP6 leader in the first quarter of 2019 to be used to approach key players on governmental landscape and communicate the role of SOFIE results on related policy issues/visions.

As the project has progressed an updated version with the project results will be created in mid 2019.

- In addition, more specific one-pagers will be created for the pilots to serve as a tool to reach our interested industry partners to present them with a general overview of what each pilot has to offer.
- A short introductory video of SOFIE will be prepared in order to give an overview of the project and the problem that it is solving. The video is mainly targeted to general audience and is used as communication and marketing tool to support dissemination activities. The video will be available on the website as well as in YouTube and Vimeo. The video will be produced in the first quarter of 2019.

3.9 Newsletter

Starting in 2019, the SOFIE newsletter will be sent out quarterly. It gives an overview of the deliverables, publications and other relevant events that have occurred during this time period. Everybody can sign up for the newsletter on the SOFIE website: https://www.sofie-iot.eu. The newsletter will provide a compact overview of the project and it is a good way to summarize the project to its followers.

3.10 Workshops and other Events

The SOFIE consortium members actively participate in external events relevant to the field of IoT. Participation in the events and workshops ensures the involvement of relevant stakeholders and also raises their awareness of the project.

The SOFIE consortium will engage with the different stakeholders of the different use case communities by collaborating in organizing 3 workshops.

The project will organize three workshops:

- Workshop 1 is dedicated to disseminating SOFIE's research results in the second half of the project. The workshop is planned for the first half of 2020 and it will aim to disseminate SOFIE's scientific results.
- Workshop 2 is dedicated to presenting and demonstrating SOFIE's use cases to specific target audiences and to gather relevant feedback. This will also occur in the second half of the project. This workshop is planned for October 2019.
- Workshop 3 is dedicated to SOFIE's exploitation activities and will involve expert interviews and focus groups. This workshop is planned for the final year of the project.

4. Monitoring and Evaluation

The results of the communication and dissemination strategy are constantly being monitored in order to assess its effectiveness and progresses, as well as to formulate changes to requirements where necessary. In D6.6 the KPIs for communication activities are adjusted to better reflect the communication and dissemination activities.

Table 4. SOFIE's KPIs for communication

KPI	Actual 2018	Planned 2019	Planned 2020	Total
Publications in peer-reviewed journals and conferences	6	4	4	14
Website visitors	1931	5000	5000	12,000 visitors
Events attended representing the project	10 conferences 2 exhibitions	13 conferences 2 exhibitions	12 conferences 2 exhibitions	35 Conferences 6 exhibitions
Workshops of the project	0	1	2	3 project workshops 15 external participants per workshop
Business events and communication	6	15	20	41 (including communication with end users)
Blog posts	7	12	12	31
Followers on social media	87	200	200	500
Liaison and organization of cluster activities	4	4	4	12 projects (meeting attendance and joint publications)
News items on website	3	6	8	17
Mentions of SOFIE in other websites/news items	2	10	10	22

5. Measures of Standardisation

IoT related standardisation suffers from a fragmentation similar to that of the field in general, with tens of competing standardisation organisations and well over a hundred different standards. As is often the case, proper end-to-end security and privacy remain areas with the least amount of interoperability. In SOFIE, we have identified W3C Web of Things (WoT), the various IETF/IRTF groups, oneM2M, and ETSI M2M as the main forum of interest, in addition to the EU initiated AIOTI (European Alliance of IoT Innovation) and IoT Large Scale Pilots (LSPs). ENG is a founding member of AIOTI, while Synelixis is already active member in WG 06 “Smart Farming and Food Security”. The SOFIE project intends to actively contribute to the standardisation processes.

Measuring the standardisation contribution is not trivial. The amount of contributions does not show the real value of the contributions. Many of the mechanisms that we are using in SOFIE are already being standardized. One of the primary goals in SOFIE is to identify how this project can contribute to ongoing standardisation work in the best possible way, considering the fragmentation, the specific standardisation bodies where partners are active and the pace at which different standards are evolving. The main concepts in SOFIE that may influence future standardisation are related to:

- Open, secure federation for decentralized IoT
- The use of Interledger in various use cases, by leveraging on research done in this project as well as concrete results and experiences from SOFIE pilots
- Security and privacy aspects for Interledger

The preliminary planned standardisation activities along with the responsible partner are shown in the table below.

Table 5. SOFIE standardisation activities

Activity	Responsible Partners	Area of contribution
W3C	AALTO, LMF	Active contributions in security and privacy to WoT IG and WG Participating to the Blockchain and Interledger CGs
IETF/IRTF	LMF, AALTO, SYN	Continue co-chairing the IoT directorate and T2TRG Continuing contributions to IRTF T2TRG and IETF CoRE WG Active contribution to any future IoT security & privacy work
AIOTI	ENG, SYN	ENG is a founding member of AIOTI SYN will contribute to WG 06 Smart Farming and Food Security ENG will contribute to the WG12 Smart Energy
ETSI M2M / one M2M.	LMF	Protocols/APIs/standard objects based on oneM2M architecture.

ETSI ISG PDL		Security and privacy aspects. Interoperability, including test and conformance specifications Permissioned adaptations of SOFIE architecture and principles
ISO	AALTO	ISO TC307, contributions to SG3 security and privacy

5.1 Presentations to standardization bodies/groups

In February 2018, George Polyzos from AUEB participated in an IRTF pre-standardisation workshop on Decentralized Internet Infrastructure (DINRG, https://trac.ietf.org/trac/dinrg/wiki) and presented SOFIE's ideas on a secure, open, decentralized IoT. The meeting's outcome was that Internet decentralization is a timely topic of interest to the community and thus further meetings of the DINRG were planned.

6. Conclusion

The SOFIE project will make a significant contribution to improving information exchange in secure manner between different IoT clusters and data silos by developing a blockchain driven federated platform. SOFIE will demonstrate the wide applicability of the approach through four pilots. The SOFIE consortium is aware of the significance of dissemination and communications tasks since there is a need to demonstrate the technical solutions which the SOFIE project can offer.

It is crucial to build awareness, social and business acceptance through a number of communication and participatory measures. Therefore, all partners are committed to maximising the potential impact of the outputs of the SOFIE project in terms of its dissemination to relevant stakeholders including society, industry, technology providers, regulatory bodies, etc., and thus all will be an active part of the dissemination activities proposed. The support of the EC will be recognised in all the publications resulting from the project.

SOFIE's "Communication, Dissemination and Exploitation" work package (WP6) has been designed to cope with dissemination and exploitation issues to ensure the use and deep impact of project results across Europe. The work package will also produce the following deliverables during the project:

D6.7 (January 2019) - Initial Report on Communication, Dissemination and Exploitation. Achievements of communication, dissemination, and exploitation during the reporting period. This deliverable will be updated in December 2020.

D6.8 (January 2020) - Interim Report on Communication, Dissemination and Exploitation. Achievements of communication, dissemination, and exploitation during the reporting period.

D6.9 (December 2020) - Exploitation strategy and roadmap. Report includes the main aspects of projects exploitation during the duration of the project and beyond.

D6.10 (December 2020) - Business planning. Outlines the main business plans for the three use cases as well as for the general platform for potential other uses.

D6.11 (December 2020) - Final Report on Communication, Dissemination and Exploitation. Achievements of communication, dissemination, and exploitation during the reporting period.