Panacea
People-centric cybersecurity in healthcare

Project Title	Protection and privAcy of hospital and health iNfrastructures with smArt Cyber sEcurity and cyber threat toolkit for dAta and people
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D8.2 Communication and dissemination: strategy and achievements, 1st version

Work Package	WP8: Dissemination, Communication and Exploitation
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Disclaimer

Executive Summary

The digital era is creating numerous new opportunities for the economy and society. But at the same time, it introduces and challenges, such as a fast-evolving and complex cyber risk landscape, where cyber-incidents and cyber-attacks cause the loss of billions of euros every year. The EU has adopted a wide-range of measures to shield the Digital Single and protect critical infrastructures like healthcare facilities.

PANACEA is a Research and Innovation Action (www.panacearesearch.eu) that delivers a complete cybersecurity toolkit providing a holistic approach for Health Care Institutions. The research goals of PANACEA are made up of a combination of technical (software platforms for dynamic risk assessment, secure information sharing & security-by-design) and non-technical (procedures, governance models, people behaviour tools) elements. Cyber security, privacy and trust are the foundations of a prosperous Digital Single Market.

The scope of the document is to define the strategy and plan the main activities for communication and dissemination of the project results, with the aim of supporting stakeholder engagement and therefore development of the "PANACEA community". It sets out the overall goals for exploitation, which is specifically addressed in Task 8.4 and its outputs.

This document presents the 1st version (of a total of 3) of the plan for communication and dissemination in PANACEA, and is part of the activities carried out in **WP8 – Dissemination, Communication and Exploitation**. Thus, this "living" document will be updated as the project evolves across its lifespan, ensuring the communication plan, stakeholder engagement and dissemination of results is suitably targeted and well-timed. This flexible approach particularly applies to the mapping of the PANACEA offer (technical and non-technical solutions) and targeted stakeholders.

The communication and engagement strategy relies heavily on defining a core set of PANACEA differentiators and refining them over time. Another essential ingredient of the strategy is understanding the practices and information needs of the diverse set of stakeholders targeted. The strategy must therefore go beyond a simple mapping exercise to profiling stakeholders and ensuring PANACEA is geared towards highly effective communication campaigns. To this end, the communication and dissemination plan describes the main mechanisms and channels that PANACEA uses for stakeholder engagement and communications, intensifying actions for the dissemination of results, especially in phases 2 and 3.

This 1st version of the plan covers the period from January 2019 to May 2020, setting the stage (strategy, methodology and metrics for impact measurement) for future updates. As such, it also provides the first report on how PANACEA is securing impacts by tracking achievements, also summarising the achievements of the first 5 months of the project (January through May 2019).

Finally, some preliminary conclusions complete the document, highlighting the good collaboration registered so far among all project partners to commit to a shared communication and engagement plan. This is key to ensuring that the plans are underpinned by an all-partners, synchronised effort, to maximise impact given the available resources.

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1. Introduction

1.1 Purpose and Scope

The purpose of this document is to define strategy and plans for the first phase of PANACEA communication and dissemination, coordinated through PANACEA **WP8 – Dissemination, Communication and Exploitation**. The ultimate goal is to support stakeholder engagement and therefore development of the "PANACEA community".

This Plan zooms in on PANACEA innovations, in terms of technological and non-technological solutions and the targeted stakeholder groups and defines the main mechanisms for stakeholder engagement. The communication strategy drills down on the diverse communication channels used to reach and share insights and updates from PANACEA. These mechanisms and channels are the essential stepping stones for effective dissemination and exploitation of PANACEA, working towards a sustainable offer through wide uptake of results.

Iterative versions of the Plan are conceived as a living document involving all PANACEA partners, each bringing to the communication and engagement strategy their specific know-how and inputs. More specifically, two further versions of this strategic document will be produced in the course of the project life. Each of these versions covers the communication and dissemination activities across the following phases on PANACEA. The first three phases are mostly dedicated to research and technical development, while the 4th one cuts right across and beyond the PANACEA funding lifecycle as it is crucial for successful exploitation:

1. Setting the operational and research context (January 2019 - May 2020; M1-17).
2. Design and integration (August 2019 – December 2020; M8-24).
3. Verification and validation (June 2020 – November 2021; M18-35),
4. Securing impact (January 2019 – December 2021; M1-36).

1.2 Relationship to WP8 Activities and Deliverables

This plan is the first of three plans, each evolving over time to reflect the maturity of the project's outputs and exploitable assets: D8.2 – "Communication and Dissemination Strategy and Achievements, 1st version", covering the period from January 2019 (M1) to May 2020 (M17).

Future iterations of the Plan are:

- **D8.3 – "Communication and Dissemination Strategy and Achievements, Intermediate version"**, covering the period from June 2020 to April 2021 and expected in Month 18 (June 2020).
- **D8.4 – "Communication and Dissemination Strategy and Achievements, Final version"**, due in June 2021, summing up the main impacts in the final phase of the project (June 2021 through December 2021) alongside the strategic actions supporting exploitation and go-to-market, also after project completion.

The Plans are mostly executed through:

- **Task 8.2 – End-users and Stakeholders Engagement** started in January 2019, and running for the entire project duration, i.e. until December 2021), where a key output in setting up and managing the stakeholder community, to get user requirements, feedback on scenario scoping and use case definition as a foundational step towards business and exploitation strategy.
- **Task 8.3 – Dissemination and Communication** (started in January 2019, and running for the entire project duration, i.e. until December 2021), which coordinates the overall strategy and plan. Key outputs are the foundational stones for PANACEA communication impacts, spanning the design, development and evolution of the web platform, community building through social media and professional networks, workshops and webinars.

Other relevant activities include:

- **Task 8.1 –** PANACEA **Observatory for Security Framework in Health** (started in January 2019, and running for the entire project duration, i.e. until December 2021), contributes an important part of the PANACEA content strategy. A key output of this task is an analysis instrumental to correctly framing the PANACEA vision and key messages to both the healthcare and cybersecurity

communities, documented *in D8.1:* PANACEA *Security Framework for Hospitals and care centres* (December 2021).

- **Task 8.4 – Exploitation and Sustainability** (starting in June 2019, and running until December 2021), to define the commercial intentions and governance models of PANACEA, documented in *Exploitation plan and sustainability path, preliminary version* (December 2020) and *final version with partner agreements* (December 2021). A key initial action of this task will create a differential value proposition around improved security of health and care services, data and infrastructure; less risk of data privacy breaches caused by cyber-attacks, and increased patient trust and safety.

1.3 Structure of the document

The rest of this document is structured as follows:

Section 2: Describes "what" to communicate and disseminate and "when" and "to whom" to communicate and disseminate the main PANACEA results.

Section 3: Deals with the stakeholder groups and the concept of Stakeholder Platform, as well as the opportunities brought by the Open Call.

Section 4: Sets out the PANACEA strategy for communication, dissemination and stakeholder engagement listing the main communication and dissemination channels, such as the web platform, events, social media and professional networks.

Section 5: Lays out the Communication and Dissemination plan itself for the period M5-M18 together with KPIs and expected impact for each activity.

Section 6: Describes the performance monitoring activities that will be continuously carried out during the PANACEA lifetime.

Section 7: Details the communication, dissemination and stakeholder engagement activities carried out in the first 5 months of the project.

Section 8: Shows the Roadmap of major actions within the Plan along the project lifecycle

Section 9 reports the main Conclusions and **Section 10** the References cited in the document.

2. Glossary of Acronyms

Item	Description
7HRC	Seventh Health Region-Crete, a healthcare end-user partner in PANACEA.
Communication Plan	The plan for communication activities of project results
Community	The heterogenous group of people that PANACEA addresses as part of its communication and dissemination activities.
Content Strategy	The strategy followed to communicate and disseminate content related to project results
CUREX	Secure and private health data exchange, Horizon 2020 peer project
Cybersecurity (holistic approach)	Driving real improvements in cyber defence by improving human practices, technologies and processes. Holistic refers to combining these elements together to ensure a more effective approach to cyber resilience and compliance with EU and sector-specific regulation.
Dissemination Plan	The plan for dissemination activities of project results
DOA	Description of Action of the PANACEA project
ECSO	European Cyber Security Organisation
Editorial Plan	The internal process to collect, edit, schedule and publish content on the PANACEA research results
ESP	End-user and Stakeholder Platform, a multi-stakeholder group coordinated in PANACEA WP8 to reinforce stakeholder engagement.
EU Cybersecurity Act	A permanent mandate for ENISA and a framework for European cyber-security certification - EU cybersecurity Certification Framework.
ENISA mandated under EU Act	European Union Agency for Network and Information Security. Europe's foremost centre for cyber-security expertise, working closely with EU countries and the private sector to advise on and help resolve critical problems of the day.
EU cybersecurity Certification Framework under EU Act	The framework covers digital products, processes, and services valid throughout the Union. The framework focuses on risk-based certification schemes, with a transparent governance framework and market-oriented approach with strong emphasis on globally applicable standards.
FPG	Gemelli University Hospital, a healthcare end-user partner in PANACEA.
GA	PANACEA Consortium Grant Agreement
GDPR	General Data Protection Regulation. Effective from May 2018, the GDPR provides new rules to give citizens more control over their personal data. Compliance as an important competitive edge, especially in the short term.
HSE	South-South-West Hospital Group of the Health Service Executive, a healthcare end-user partner in PANACEA
IP	Intellectual Property
NIS Directive	Cornerstone legislation with measures to boost the overall levels of cybersecurity and preparedness in Europe. The Directive defines legal and technical requirements for critical infrastructures while fostering a culture of security across within them as vital sectors of the EU economy and society, including healthcare.
NIST	National Institute of Standards and Technology
PAC	Project Advisory Committee of the PANACEA project
SDOs	Standards Developing Organisations. PANACEA is monitoring relevant
SEO	Search Engine Optimisation
SMART	specific, measurable, achievable, relevant, and time-bound
Secure Hospital	Training on cyber security in healthcare, Horizon 2020 peer project
Sphinx	Solving the Riddle of Cyber-Security protection in Healthcare IT ecosystem, Horizon 2020 peer project

Item	Description
Stakeholders	The various groups of people interested in PANACEA's value proposition. PANACEA addresses them with targeted actions, depending on the specificity of the group.

Table 1 - Glossary of Acronyms

3. PANACEA Solutions and Stakeholder Community

3.1 Framing PANACEA as a people-centric approach to cybersecurity

PANACEA will deliver a "Solution Toolkit" technical and non-technical tools which help users to assess and reduce the vulnerability to cyberattacks of their "system in scope", including:
- Healthcare providers (single Hospital, Group of Hospitals, Healthcare region)
- Medical Devices along their lifecycle

Furthermore, PANACEA will deliver a "Delivery Toolkit" aimed at facilitating the adoption of the tools of the "Solution Toolkit" in the target organizations (Healthcare providers, Medical Devices manufacturers).

3.2 PANACEA Technical Solutions

Technical solution resulting from the PANACEA project include four tools:
- Dynamic Risk Management Platform
  - Multidimensional threat modelling, dynamic risk assessment with business impact dynamic computation, technical and organisational response for complex infrastructure.
- Secure Information Sharing Platform.
  - Healthcare information secure sharing, cross-border and multitenant. Shared persistency possibly based on private blockchain.
- Secure Design Support Platform
  - Risk assessment over system/software in development to embed security from the beginning of system/medical device engineering life-cycle.
- Identity Management Platform
  - A digital signature technique leveraging on digital IDs, enabling non-repudiation capabilities and integrated within the other technical tools.
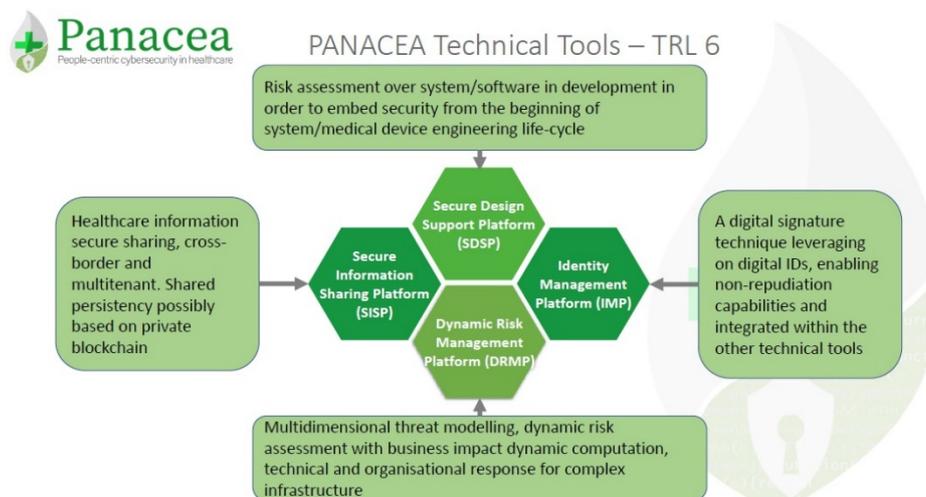

Figure 1 - PANACEA Technical Tools

3.3 PANACEA Non-Technical Solutions

Non-Technical solutions include three tools:
- Training & education, including
  - Packages for Initial and refresher learning interventions.
  - Performance support systems (e.g. support mechanisms in the workplace which routinely remind and guide on cybersecurity threats and processes).
  - Phishing simulations, and activities to increase awareness of phishing attacks.
- Resilience governance, including
  - Cyber-risk management organization (roles and processes).
  - Insurance schemes.
  - Communication plans.
  - Security risk management plans.
  - Standard operating procedures.
  - Technical procedures (e.g. for device eradication, account block).
- Measures for Secure behaviours nudging, aimed at influencing the behaviours of healthcare staff and patients and other staff involved in the medical device lifecycle in situations such as password sharing, clicking on links on e-mail; interventions are additional to training and education, and may include incentives, involvement of leadership as influencer, guidelines for designing computer interface

3.4 PANACEA Delivery tools

The Delivery Toolkit includes two tools:
- ROI evaluation methodology to evaluate the Return on Investment of cybersecurity interventions, considering monetary and non-monetary benefits and the socio-technical context specific to the adopting healthcare organization, and meant to be used
  - when deciding whether to adopt the PANACEA Solution Toolkit (or a subset of it) or not,
  - to prioritise remediation actions.
- Implementation guidelines to adopt the solution toolkit, considering the socio-technical context specific to the adopting healthcare organisation.

Source: 1st PANACEA Webinar
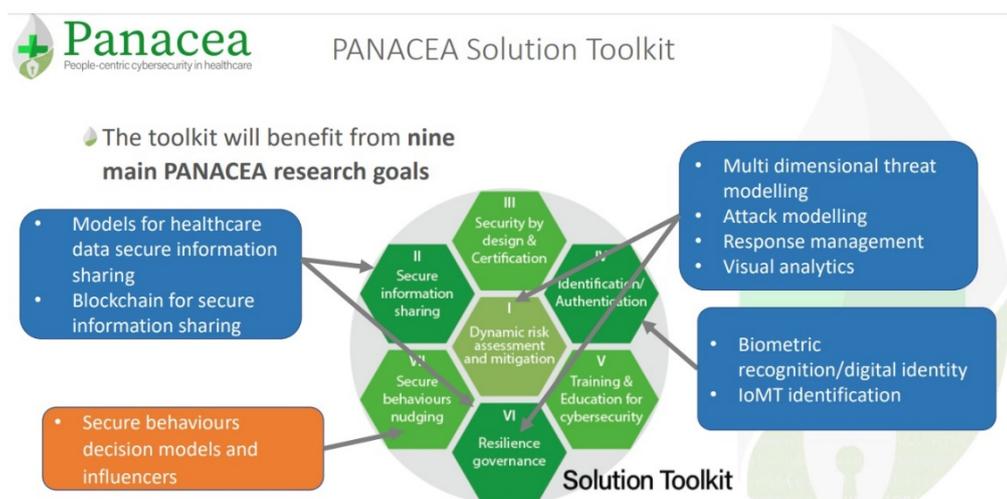
Figure 2: PANACEA Solution Toolkit

3.5 Open Calls

PANACEA's sustainable impact will be secured by enrolling during the project other device providers to build meaningful use-cases, using a pre-allocated budget (€200.000).

This will be done through the promotion of one or more dedicated Open Calls which are currently being discussed for future set up and management by the Consortium.

Once the Open Calls mechanism will be clearly defined and agreed upon the Consortium, a specific timeline for the Open Call promotional campaigns will be created and inserted in the overall roadmap of activities (see section 7).

Specific steps for the Open Calls promotional campaigns include:

- Creation of the dedicated web pages and application forms.
- Creation of dedicated banner with distinctive branding.
- Promotional and Social Media Campaign definition (SMART-based) with start and end dates.
    - Pre-announcement one week before the Open Call is officially launched.
    - Regular posts on Twitter and LinkedIn, using technology hashtags and variety of handles, including press and media channels/associations.
    - Posts on consolidated networks: LinkedIn; selected Twitter accounts and website news pieces.
    - Posts on relevant LinkedIn groups.
    - Outreach to external initiatives and standards organisations to encourage promotion of the open call to their stakeholders.
    - Outreach to stakeholders to encourage interest in the Open Calls and promotion to stakeholders.
    - Monitoring of the impacts achieved.
- Production and circulation of press releases.
- Promotion through project and 3rd-party events during the campaign lifecycle.
- Reporting of overall impacts: submissions; visibility; coverage etc.

4. Stakeholder Groups

The eight stakeholder groups are depicted in the figure below.
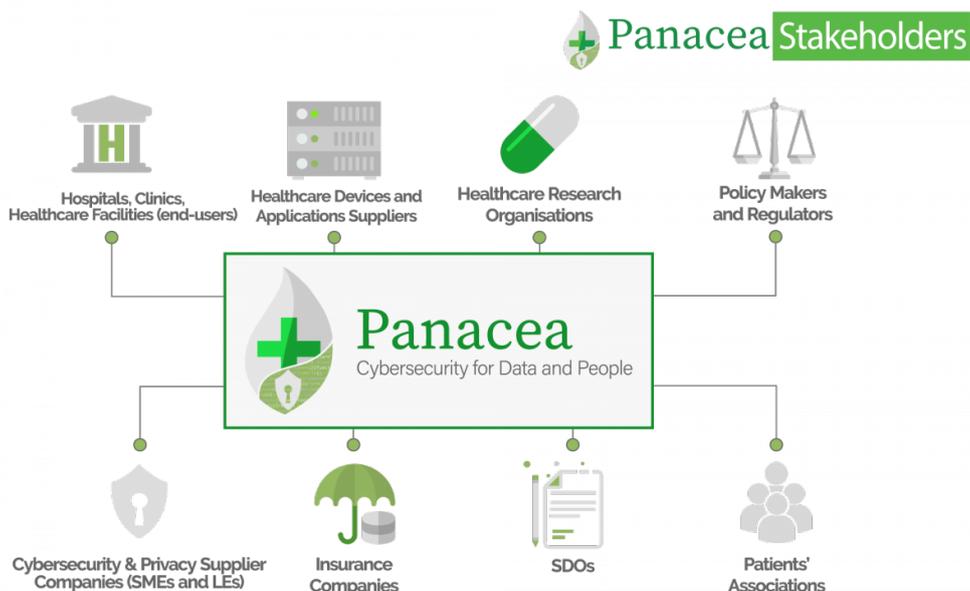
Figure 3 - PANACEA Stakeholders

1. **Hospitals, clinics, healthcare facilities**, including end-users in PANACEA, e.g. 7HRC, FPG, HSE[1] as important early adopters and therefore a basis for the exploitation strategy. This category includes single hospitals, groups of hospitals and regional healthcare organisations, enabling PANACEA to scale up its offer. PANACEA will play a key role in raising awareness of the need for both technological advances and behavioural changes in healthcare as crucial for protecting this critical infrastructure, staff and patients.

2. **Suppliers of healthcare devices and applications**. PANACEA is bringing in experts of medical device integration and data communications for clinical information systems. PANACEA will thus increase awareness of the importance of having widely adopted standards for medical devices and data privacy issues stemming from unencrypted data in proprietary protocols that are poorly designed and unsafe.

3. **Healthcare research organisations**, contributing to and keeping abreast of technological advances in cybersecurity and privacy in healthcare and how it fits in the EU ecosystem. PANACEA will contribute new knowledge and IP as key components of dissemination of results, also beyond the project by identifying new opportunities for collaborative research and innovation.

4. **Policy makers and regulators**. PANACEA is aligned with the European Cyber Security policy goals as a key enabler of the Digital Single Market, both in terms of the project's technical goals and in terms of pursuing a culture based on best practices, from both a human and process perspective to help build a cyber-security culture within the health care sector. PANACEA will also contribute to the "All policies for a healthy Europe" priority, connecting and informing this multi-stakeholder initiative, which calls for Europe to be part of a transformation in policy thinking and action.

5. **Suppliers of cybersecurity and privacy solutions**. According to the European Cyber Security Organisation (ECSO), there are over 60,000 cyber-security companies in the EU, with Europe occupying 18 of the top 20 places in the global National Cybersecurity Index, a ranking of countries based on their preparedness to prevent cyber threats and manage cyber incidents. PANACEA can tap into a small portion of these companies to help drive a more resilient healthcare industry, thereby creating a culture of security across this vital sector for the economy and society.

6. **Insurance companies**. PANACEA will provide the ability to detect, analyse and react to the incidents, thus reducing the cyber risk exposure and better representing the residual risk in the insurance market. On this basis, PANACEA will contribute in acquisition of knowledge about healthcare vulnerability and cyber risk exposure in order to offer tailor-made insurance solutions.

7. **Standards development organisations**. PANACEA will build strong links with all relevant groups working on standards for healthcare, medical devices, applications and services. PANACEA will draw on its connections with 3GPP (e.g. critical medical applications), ETSI healthcare standards, the Connecta Alliance, and IEEE to analyse, monitor and potentially contribute to on-going standardisation.

8. **Patient associations**. PANACEA will work towards a strong community connection with these associations as key to raising awareness of security and privacy issues, and innovations that help build trust. To this end, PANACEA also targets the most relevant associations for engagement.

PANACEA has diverse mechanisms for engaging with the eight targeted stakeholder groups, all of which make up the "PANACEA community" and benefit from PANACEA results. The ultimate goal of recruiting prospective buyers of PANACEA user-friendly solutions. Selected stakeholders of the PANACEA community also play a key role in supporting PANACEA through questionnaires, workshops and other face-to-face interactions. They make up the PANACEA End-user and Stakeholder Platform (ESP). The ESP brings together representatives from the main stakeholder groups targeted, spanning healthcare providers and health information system providers, providers of medical devices and applications, patient and professional associations, standards organisations and regulators, cyber security providers, healthcare research centres, and more broadly policy makers. The ESP also includes the members of the Project Advisory Committee (PAC).

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[1] PANACEA Consortium Partners are included in the relevant Stakeholder Group; however, strategies and plans described in this document refer to the non-Consortium stakeholders.

5. PANACEA Strategy for Communication, Dissemination and Stakeholder Engagement

5.1 Strategic Goals

To ensure coordinated, regular communication of PANACEA's results providing opportunity of visibility to all stakeholders, the following strategic elements have been established, in good agreement with the provisions of the GA.

5.1.1 Dissemination and Exploitation Goals

To achieve its exploitation goals, PANACEA pursues three complementary paths step by step. Although exploitation is dealt with specifically as part of Task 8.4 and will find its first formal deliverable in M24 (D8.5), the PANACEA Consortium is well aware of its intertwined role with communication and dissemination, which are therefore planned and executed bearing that in mind.

Be that as it may, here some passages from the Grant Agreement /1/ are reported concerning exploitation, which will be kept in mind during communication and dissemination:

1. A **joint exploitation** taking into account the added value of each PANACEA result
   Each PANACEA result will be properly analysed in terms of Market Readiness and Technology Readiness level through regularly assessed value proposition and business model canvases coupled with marketing campaigns (level of commercial traction) and customer tracking (from closed, use case validation to identification of paying customers).
2. **Exploitation plans of the individual project partners** aligned with the organisation's business and research strategy and aimed at improving business portfolios, institutional research programmes and educational services.
3. **Exploitation of use cases** used to validate the developments and innovations. The use cases serve as early showcases of the end-user benefits and will gradually mature in terms of technology and market readiness levels as part of the PANACEA go-to-market strategy with effective marketing campaigns and live streaming of hands-on workshops.

The strategic goal for PANACEA is to establish a viable route to market through the production of a Joint Business and Exploitation Plan which will be defined in D8.5 Exploitation plan and sustainability path, preliminary version and further refined in D8.6 Exploitation plan and sustainability path: Final version including exploitation agreement signed by Partners.

5.2 Branding

PANACEA's brand image, amply discussed and agreed during proposal preparation, was confirmed at project kick-off.
The PANACEA logo and its payoff **"People-centric cybersecurity in healthcare"** are consistently developed in the project's website.

Figure 4 – Logo and payoff

In the early phases of the project, the templates for documents, the head letter and the presentation templates have all been developed and shared among partners, for future usage.

To further support brand recognition and making the project more recognisable, for community development, it was agreed to push, as much as possible, the project's URL **"panacearesearch.eu"** also as a way to identify the project itself. This is consistently reflected also on the website and on the collaterals developed so far.

5.3 Communication Channels and Toolkit

A professional and dynamically evolving Communication Tool Kit will cover the dissemination and exploitation of PANACEA's results.
PANACEA will produce various communication formats tailored to the different stakeholder groups. These formats include fliers, videos, webinars, advertising banners, infographics and factsheets to capture trends, newsletters, slide decks, brochures, press releases, etc.

PANACEA will use various communication channels leveraging on the project partner networks and will produce a set of tailored communication formats targeting different stakeholder groups. The consortium can count on extensive expertise and experience in creating a communication kit with diverse formats and extend the strong network by reaching out to a broad range of stakeholders, media, professional and social channels.
The main channels that will be utilised in PANACEA are:

- Website
- Social media and Professional Networks
- Promotional material
- Videos
- Press Releases and Announcements
- Events (physical and virtual, e.g. webinars)
- Traditional media
- Other channels

WP8 will ensure that all necessary elements are carefully and strategically coordinated so both communication and dissemination can move seamlessly across stakeholder groups and across national borders.
The following sections give a short description of each channel and how it relates to the PANACEA strategy.

5.3.1 Website

The project website (available at https://panacearesearch.eu/) is the **central channel of the communication and engagement strategy**.

The website, first launched in M3 of the project, is GDPR compliant and is updated on a regular basis. The website is developed with the Drupal Content Management System (CMS) and is managed by Trust-IT.

The website contains a **slider** that gives prominence to upcoming events, webinars, use cases and the PANACEA's newsletter (Figure 5).

Figure 5 – Slider

The website's **top bar** contains the following drop-down menus, which are extended once the user hovers over the menu with the mouse.

- **About**: general overview of the project containing information about what the project is, who the partners are, what are the objectives of the project and what stakeholders it is thought for. The "objectives" submenu is organized in an accordion, so that the user can have a general idea of the project's objectives and if interested can click to read the details. This is done in order to give to the page a cleaner look.
  The Stakeholders page contains a direct link for users that want to register to the website as Stakeholders.
- **Media**: Leveraging the press & media partner networks as well as the communications expert's copywriting skills the project will produce compelling messages, and will be distributing press releases on major announcements and achievements: this section contains anything related to the project's communication, such as Press Releases, News and Events, Videos, Newsletters, the Marketing Kit and finally the links to any Press article (currently nine, online or on newspapers) where the project has been mentioned. The marketing kit contains the downloadable promotional material and info-graphics of the project. Operational activities for each Marketing campaign will be further evaluated on a case-by-case basis
- **Webinars**: Every time a webinar is organized, a news piece is created and inserted in the webinars page, where the user can find information concerning the agenda and speakers – prior to the event – and also download the slides and look at the webinar registration after the event.
- **Lookout Watch**: The Lookout Watch page responds to one of the project's milestones (MS10 – Activation of the observatory (on project website)), which deadline was in M3 together with the launch of the project. The objective of the Observatory – or Lookout Watch – is to maintain a focused watch on the relevant news concerning the state-of-the-art of cybersecurity in the healthcare domain.
- **Use Cases**: This page presents the three project's use cases and the different perspectives that they bring to PANACEA.
- **Innovations**: PANACEA will finally result in a Solution Toolkit and a Delivery Toolkit. These results are introduced in this section to give a hint of what the final outcome of the project will be.

The **central section** of the website contains six boxes that give prominence to specific and strategic areas of the website Figure 6:
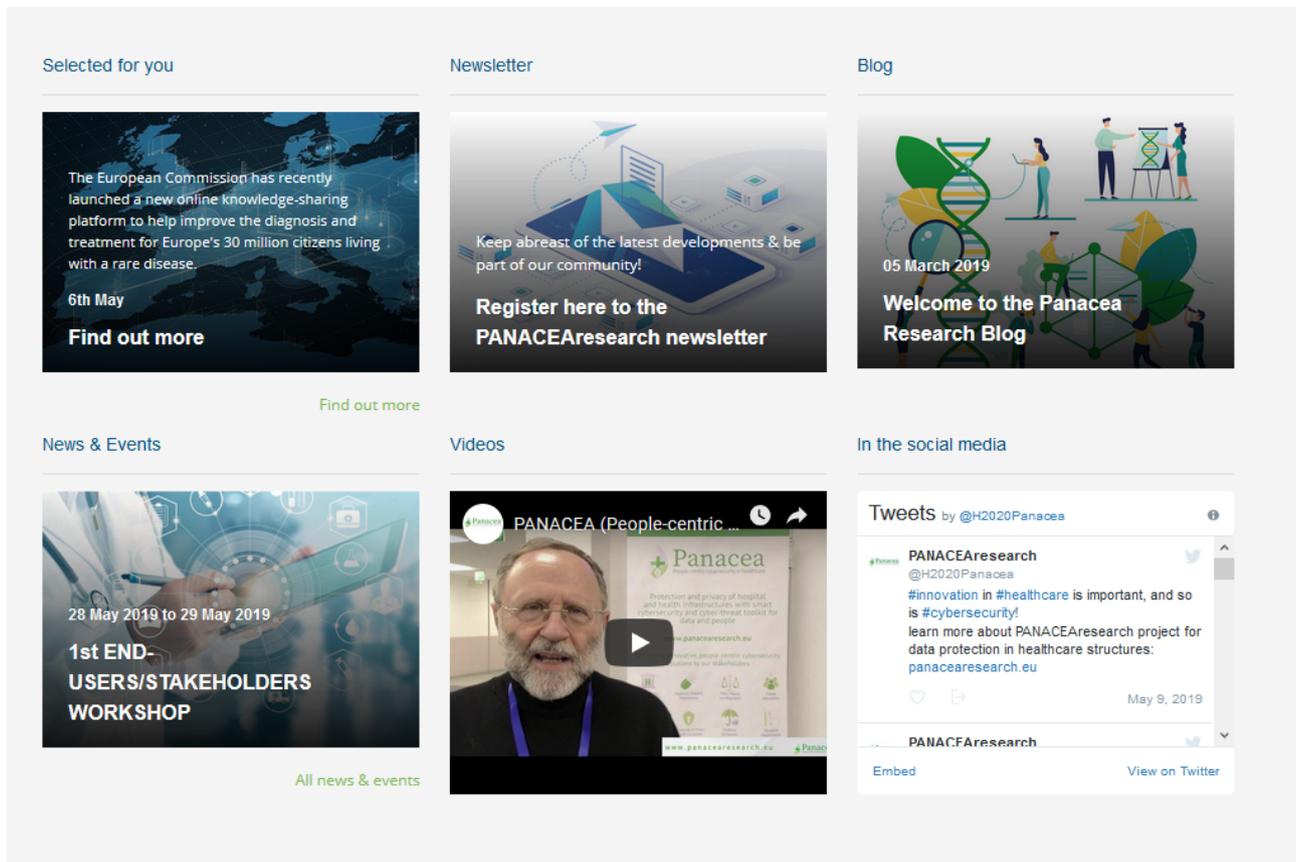

Figure 6 - Screen from panacearesearch.eu

1. Lookout watch box – containing the most recent article published in the Lookout Watch.
2. Newsletter box – containing the link for the registration to the newsletter – GDPR compliant.
3. **The Blog box** – this box allows access to the website blog, where people can connect, converse and contribute by sharing their experience and best-practices.
4. News & Events box – this box gives prominence to upcoming events, making them visible even if the user doesn't go directly in the event page in order to look at them.
5. Videos box – with direct link to the PANACEA YouTube channel.
6. Tweets – direct link and preview of the Twitter account and latest Tweets published.

The figure below depicts an indicative snapshot of the Lookout Watch section of the PANACEA web section.

Figure 7 - PANACEA Lookout Watch

Finally, the section "**In the Spotlight**" gathers together articles from different sections of the website to give a homogeneous vision of the contents. This section is followed by the two sections dedicated, respectively, to the **Stakeholders** and a **Partners** (this one in the form of a slider).
The **header** contains the link to the "contact us" section, to the registration page and the social media channels.
The **footer** contains the project's copyright information with the links to Privacy Policy, Terms of Use and social media channels.

A note on SEO (Search Engine Optimisation): The website will be maintained, also from the content point of view, keeping in mind the best practices in terms of SEO. Metatag, keywords and other traditional means of SEO are nowadays not sufficient for optimal positioning with the main search engines, and the PANACEA Communication Team will take care of this. Among the other monitoring activities, Trust-IT, as WP8 leader, will run tests and keep the Partners informed.

5.3.2 Social Media and Professional Networks

Social media is a core element of PANACEA communication, especially to follow ongoing developments and to connect to different stakeholders. PANACEA makes use of Social Media channels and professional networks in order to build a stronger and highly engaged PANACEA community.

PANACEA will be using three different social media, namely:

- **Twitter** will be mainly used to provide brief real-time updates and news and to promote event activities.
- **LinkedIn** will be mainly used to bring on board new relevant stakeholders, send target messages and to create and follow discussion groups. A key advantage is not only the ability to identify professionals and organisations across sectors and technologies but also the possibility to measure the connection distance across diverse networks, e.g. 1st-degree vs. 2nd degree connections; 2nd-3rd degree and plan recruitment campaigns accordingly.
- **YouTube** is used to upload and store webinars, videos and other audio-visual material.

Social media and professional networks will be combined also with the use of traditional media as relevant to boost visibility and outreach to targeted groups.

5.3.3 Promotional Material

PANACEA will produce a set of promotional materials to distribute, with the aim to effectively promote the PANACEA results and solutions as well as the Initiative as a whole. This will cover the coordination and production of PANACEA branding and material and visual presentations, targeting specific stakeholder groups. This includes all categories of PANACEA communication and dissemination material (flyers, pop-up banners, booklets, etc.) as well as event or milestone graphic packages (event badges, giveaways, etc.).

Fliers, pop-up banners and booklets will be used to communicate objectives and disseminate results. Partner-specific material can be produced for each partner to promote the initiative within their organisations and at specific partner events as well as through their networks and channels, also in line with their organisational mission.

5.3.4 Videos

The promotion of the project will also be carried out by means of promotional videos. This will represent an ulterior, powerful lever for community development.

The first one of the two videos to be created during the project's lifetime, was produced during the project's Kick Off Meeting in Rome, in January 2019 and it's called "PANACEA (People-centric cybersecurity in healthcare) Kick Off Meeting – 21-22.01.2019 – Rome".

All the project's partners were interviewed during the Kick Off meeting, with questions related to different aspects of the project, in order to give an overview as complete as possible.

"*PANACEA provides a holistic approach to cybersecurity placing the user in the centre*" – *Vangelis Sakkalis (FORTH)*

"*We have to build a people-centric, user-friendly system for cyber-awareness*" – *Sabina Magalini (UCSC)*

The video interviews were then selected and composed into a two-minute video in order to present PANACEA with the words of the project's partners and in the most simply and understandable way as possible.
The video (see Figure 8) was distributed through the website, the YouTube Channel and the Social Media channels and has obtained 159 visualisations as of 21.05.2019.

Figure 8 - video Snapshot

The speakers appearing in the video are the following:

- Matteo Merialdo - RHEA
- Matthias Pocs – STELAR
- Lynne Coventry – UNAN
- Sabina Magalini – UCSC
- Vangelis Sakkalis – FORTH
- Silvia Bonomi – UROME
- Hanene Maupas – IDEMIA
- Pasquale Mari – FPG
- Paolo Lombardi – Trust-IT

As per project's DOA, a second video will be released during the project's lifetime, with a more practical approach, demonstrating how the Solution and Delivery toolkits work and who they benefit.

These are the two major videos, however the material of the interviews produced during the Kick-off meeting can be re-used for a set of video pills, dedicated to the promotion of webinar, to posts on social media etc.

5.3.5 Press Releases and Announcements

PANACEA will carry out large-scale promotional campaigns for end-user recruitment and outcomes, with dedicated press releases, newsletters and personalised invites to relevant community members across diverse networks. The activities on the various social media channels will also be supported by press releases, such as the one published in the Media – Press Releases section of the website. While the simple posts with text and visual are meant to have an immediate impact in terms of creating interest, press releases deliver great results also for targeting the specialised journalists and other multipliers.

The fact of publishing the press release on social platforms such as LinkedIn, populated by a lot of SMEs and potential stakeholders, is a great advantage as it allows interested readers to find out more by even just having a short look at the article.

An effective press release campaign offers the chance to underline the attributes of PANACEA to anyone who gains interest by reading about it in the shorter posts, and it also involves important SEO benefits, thereby increasing traffic to the website. Search Engine Optimisation is a key strategic element of the PANACEA communications aimed at ensuring a content-rich approach for the website to increase visibility potential and reach the targets set over the project's lifecycle.

5.4 Population of the Lookout Watch

PANACEA Lookout Watch, part of the website and published at www.panacearesearch.eu/watch, serves as the central news repository hosting dedicated to the healthcare and cybersecurity relevant news, focusing on state-of-the-art research, recent policy news and updates. Existing models and emerging technologies will be brought to the attention of the various stakeholders here. It is expected to be a point of reference serving all related projects, stakeholders and the greater user community.
An overview of the folder hierarchy, container description and indicative examples reflecting a current snapshot of the observatory follows next:

1) **Market Research Reports**

Hosting market research reports and industry analysis on products, markets, companies, industries, and countries worldwide, related our topic of interest.
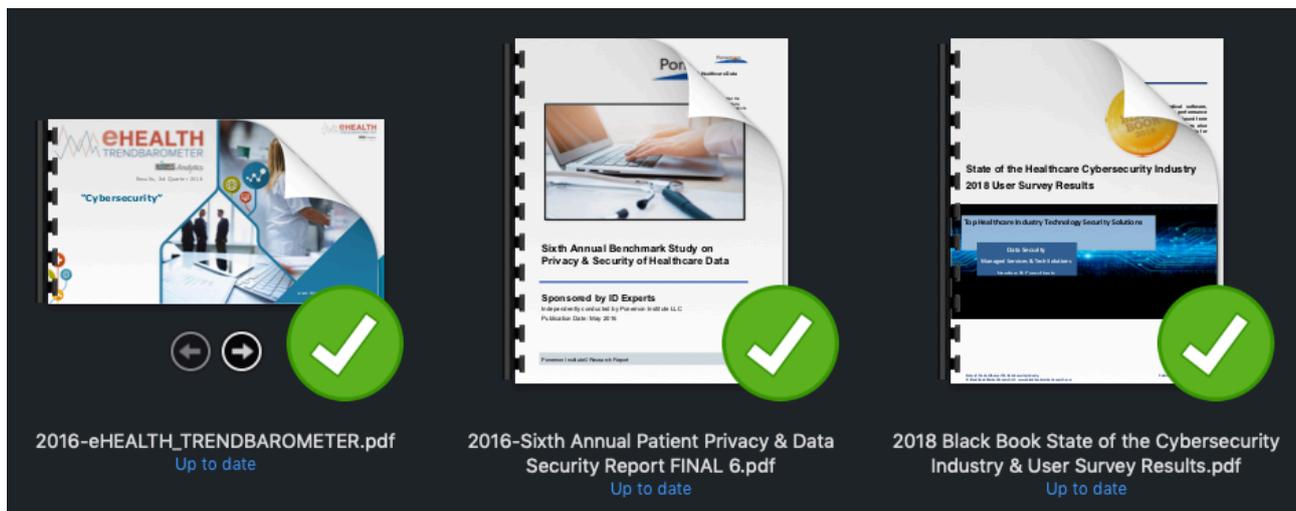

Figure 9 Sample 1 of Health & Cyber security related Insights

2) **Regulations – Acts – Policy**

Providing information on Regulations, Directives and other National, EU or International legislative acts.
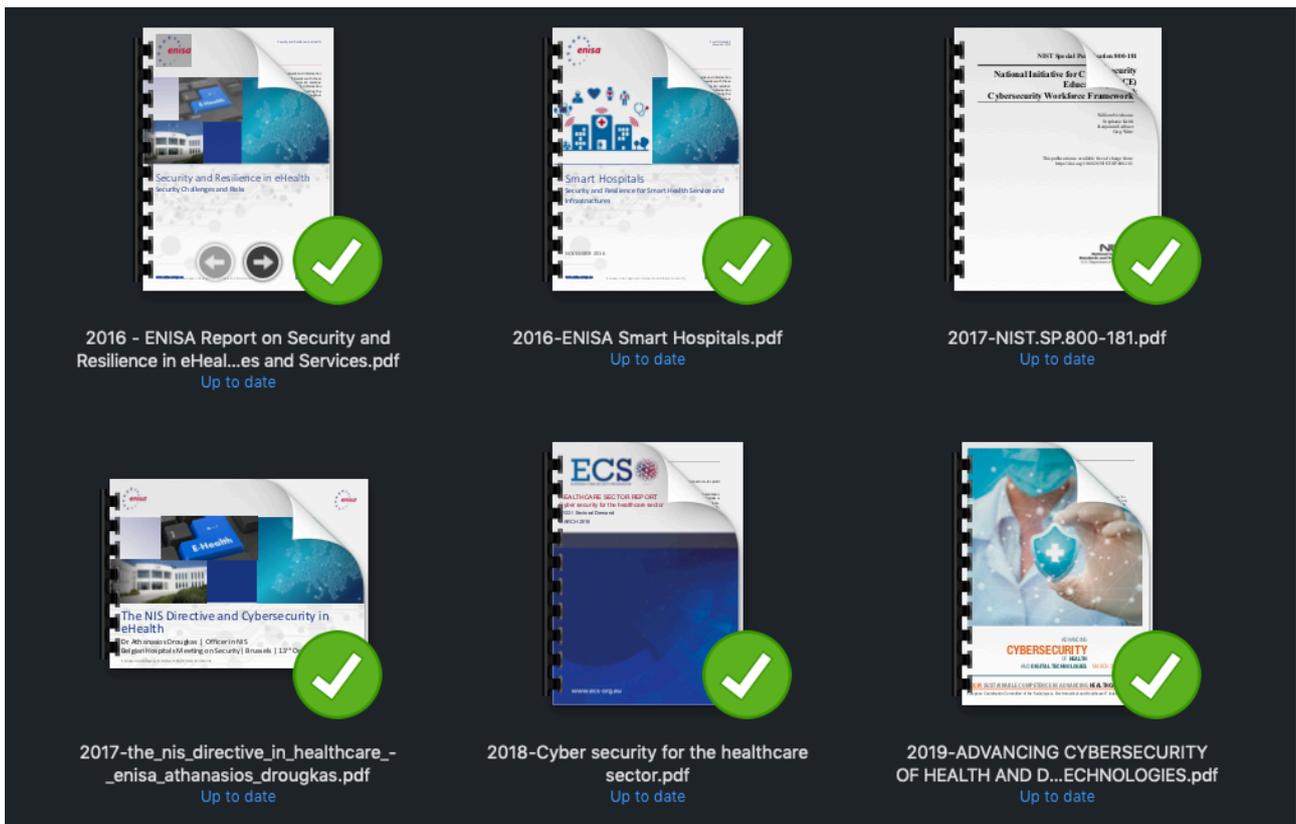
Figure 10 Sample 2 Cyber and Health Insights

3) Research Papers

Hosting substantial pieces of state-of-the-art academic independent research into topics of interest.

Figure 11 Sample 3 Cyber and Health Insights

4) Review Papers

Presenting selected review articles or papers summarising and highlighting existing research work in an attempt to explain the current state of understanding on the topic.
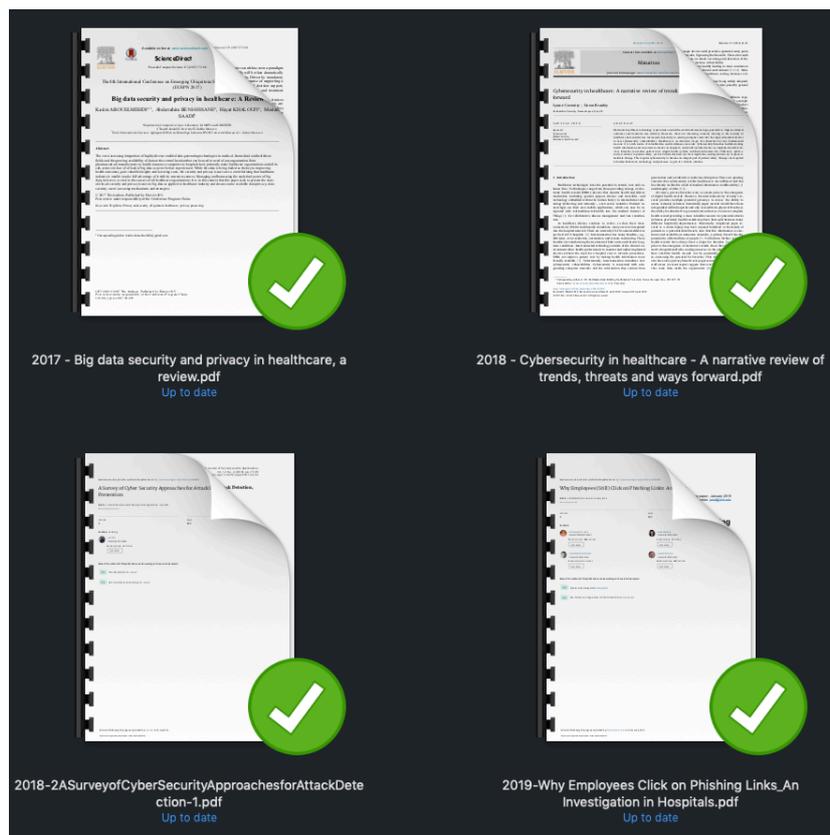
Figure 12 Sample 4 Cyber and Health Insights

5) Related Projects

PANACEA will work with the most relevant projects on both healthcare and cybersecurity to zoom in on common challenges, requirements, and insights. Such insights will come from PANACEA workshops and any joint workshops and webinars that take place over the projects' lifecycles.

5.5 SMART-based approach

SMART is a term used by marketing and communications teams to define the targets of a time-bound promotional campaign, be that the production and launch of a press release, an event, webinar or other major promotional activity. **Time-bound** refers to the fact that each campaign has a clear start and end date. The other key words in the SMART acronym are: **specific** (the campaign focuses on a specific message to a defined group of stakeholders); **measurable** (the campaign has a set of indicators to help gauge impacts, e.g. a minimum number of targeted channels, Tweets, etc.); **achievable** (e.g. targets are realistic and do-able within the time allocated); **relevant** (e.g. focused channels, messages etc.).
The PANACEA communication strategy includes SMART campaigns for specific activities planned alongside the KPI-driven approach. For example, SMART campaigns are used for communication activities such as press releases and event promotion, in which case we have the event promotion and teasers as one time-bound activity and a second time-bound campaign for visibility on the main takeaways and next steps. SMART campaigns can also be used around stakeholder recruitment, e.g. targeting specific groups during a 3ʳᵈ-party event/webinar, say on medical devices, benefitting from the LinkedIn matching algorithm. Moreover, experience has demonstrated, amongst many things, that the most important dissemination recommendations and actions should be Realistic, Implementable, Achievable and Measurable.

Starting line: M1 (January 2019) sees the launch of the PANACEA dissemination and exploitation strategy in conjunction with the project launch. This early start ensures the consortium carries out regular activities on its

value proposition and stakeholder profiling while extending the current community and increasing awareness and visibility.

To ensure effective dissemination and exploitation, the PANACEA communications plan will combine templates and guidelines for technical partners with a SMART communications kit, including a SEO-based web platform, light-reading content, videos, a clearly defined stakeholder engagement plan and demos showing PANACEA in action.

In M4 (April 2019), after the launch of the website, the first PANACEA's webinar presented the project and its opportunities for collaboration.

Section 7.4.3 includes a sample of impacts achieved from the SMART-based campaigns already carried out by PANACEA.

5.6 Content Strategy

The communication and dissemination plan will concentrate its efforts around production of original content and producing engaging, stimulating and impactful content for different stakeholders. Content is essential to SEO, as mentioned in section 5.3.1.

The editorial plan[2] will include the regular publication of web articles spanning:

- Regular updates on PANACEA' results and progress.
- Highlights and insights of the healthcare cybersecurity domain coming from the partners' expertise.
- Best practices, standards, case studies and practical tools in order to contribute to improve the overall cybersecurity culture in healthcare sector.
- Insights on cyber security frameworks in healthcare at European level (analysis of current policies, gap analysis, main risks scenarios)

PANACEA content strategy will be originated from the overall work and results of the projects, therefore WP8 will ensure to maintain a direct coordination with all of the more technological WPs to produce easy-to-read articles, digests, and news pieces for the PANACEA community.

PANACEA content strategy will also ensure to tailor different messages to the different target groups based on their specific levels of knowledge and IT security expertise, thus managing their expectations effectively. A continuous monitoring of the landscape, IT and business media, reports etc. will be made through desk research and will be made publicly available in the PANACEA Lookout Watch.

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[2] The internal process to collect, edit, schedule and publish content on the PANACEA research results

6. Plan for Communication, Dissemination & Stakeholder Engagement and Targeted Impacts

Throughout the 36-month duration of the project, PANACEA will define and regularly update its communication strategy which will be used to:

- create an engaged PANACEA community of stakeholders.
- put emphasis on project results and progresses.
- facilitate the uptake of PANACEA solutions with demos and how-to videos.
- overall supporting the PANACEA exploitation strategy.

The various stakeholder groups defined in Section 4 will be targeted through diverse engagement activities and campaigns aimed at awareness raising and recruiting new adopters. All activities will be specifically tailored to the stakeholder categories and updated to reflect project status. Messages will highlight the benefits of PANACEA, clearly communicated in easily digestible formats and wording, tailored to decision makers that are not necessarily tech-savvy. For example, light content will feature on the PANACEA web platform, in its blogs, social media, as well as lighter versions of project newsletters, fliers etc.

All PANACEA partners have effort to contribute to stakeholder engagement on a continuous basis as part of the project's communication plan. Having an effective communication plan is key to paving the way to dissemination and exploitation of results, to which all partners have committed according to availability dates and beyond the project lifecycle.

6.1 Communication & dissemination plan

PANACEA will carry out a series of **specific communication and dissemination activities** that can be summarised as follows:

1. Content-rich articles for publication on PANACEA website;
2. Newsletter creation;
3. Promotional graphic material production and distribution;
4. Dissemination of scientific and technical publications;
5. Video production and distribution;
6. Press release production and distribution;
7. Social media presence;
8. Participation to third-party events;
9. Organisation of webinars;
10. Organisation of End-user workshops;
11. Open Calls specific promotional campaign (ad hoc activities).

6.1.1 Content-rich articles for publication on PANACEA website

The PANACEA website will be constantly animated with content-rich and easy to digest articles aimed at animating the community of cybersecurity in healthcare players.
Regular updates on the content's website will be performed monthly with a SEO-driven approach to help increasing the visibility of the website on search engines.

Communication Activity	Action	KPI
Content-rich articles	Identify, curate and publish new content on a	YR1: min 2/month YR2: min 3/month

regular basis.	YR3: min 4/month

Table 2 - Content-rich articles frequency and expected impact

6.1.2 Newsletter creation

Informative newsletters will be regularly produced and delivered to PANACEA stakeholders with the aim of promoting the project's activities and give regular updates on the PANACEA progress.
Specific newsletters will be created and distributed to promote major PANACEA achievements such as the Open Calls and the PANACEA solutions release.

Communication Activity	Action	KPI
Newsletter creation	Produce and circulate monthly newsletter based on stakeholder targets.	YR1: min 6 YR2: min 8 YR3: min 10

Table 3 - Newsletter frequency and expected impact

6.1.3 Promotional graphic material production and distribution

A clear and common branding will be adopted in all online content and printed material. Fliers, pop-up banners and booklets will be produced to communicate objectives and disseminate results. Partner-specific material can be produced for each partner to promote the initiative within their institutes and at specific partner events as well as through their networks and channels, also in line with their organisational mission.

Communication Activity	Action	KPI
Promotional graphic material production and distribution	Design produce and circulate material for stakeholders and events.	YR1: min 1 for major IT audiences YR2: min 1 for healthcare audiences YR3: min 2 for healthcare audiences

Table 4 - Graphic material frequency and expected impact

6.1.4 Dissemination of scientific and technical publications

Being a Research and Innovation Action, PANACEA will adequately give visibility to its scientific and technical publications, which will also be presented at events.

6.1.5 Video production and distribution

PANACEA will produce two specific videos related to the PANACEA Solution and Delivery toolkit. The videos will form the basis for a specific go-to-market vision of the PANACEA toolkits, clearly explaining how the toolkit works, who it benefits, its major results and challenges achieved and the benefits for the end-users and will be used for marketing and outreach purposes.

Communication Activity	Action	KPI
Video production and distribution	Design produce and circulate Videos for the PANACEA toolkits.	YR3: 2 videos

Table 5 - Video frequency and expected impact

6.1.6 Press release production and distribution

Press Releases will be delivered in conjunction with the main project achievements to ensure timely communication of the progress of the project. In support of PANACEA awareness raising and visibility a selection of press and media channels will be targeted. Web-based ICT and Technology Media are used as

primary sources by ICT professionals (e.g., Computer Weekly, TechTarget, IT Pro Portal, etc), including broader technology watch (CORDIS news, EUObserver etc.), as well as National and non-specialised press.

Communication Activity	Action	KPI
Press release production and distribution	Production and distribution related to major project announcements and achievements	Min. 6 over 36 months

Table 6 - Press release frequency and expected impact

6.1.7 Social media presence

Social media activities will include active contributions to specific Social Media such as Twitter, LinkedIn and YouTube and contributions to discussion groups and specialised forums, direct messaging while leveraging current connections within the consortium with the aim to build a loyal support base.

Indeed, PANACEA already built its community on a network covering stakeholders from cybersecurity, privacy and data protection, alongside healthcare facilities and associations.

The contractualised, target KPIs for social media presence are indicated in the table below, with the aim of ensuring PANACEA's visibility through the social media channels that can provide the best returns for this type of project.

Communication Activity	Action	KPI
Presence on Twitter	Tweets	30 tweets per month
Presence on LinkedIn	Posts	20 updates per month

Table 7 – KPIs on social media presence

6.1.8 Participation in third-party events

Third-party events will be used to display targeted presentations and promotional material will be generated for focused and effective communication, dissemination and engagement outcomes

PANACEA will target events specifically related to cybersecurity in healthcare topics, disciplines and new trends across EU member states and associated countries.

Communication Activity	Action	KPI
Participation to third-party events	Increase PANACEA's visibility and attracting new community members.	Ensure PANACEA visibility at over 50 third-party events.

Table 8 - Third-party events frequency and expected impact

An initial set of third-party events planning is reported in the table below.

Event	Date	Location
EEMA Annual Conference 2019: Empowering Business Through Digital Transformation	18-19/06/2019	London - UK
HIMSS & Health 2.0 European Conference	11-13/06/2019	Helsinki - Finland
Paris Cyber Week 2019	05-06/06/2019	Paris - France
ISH Conference	26-30/06/2019	Bucharest - Hungary
Cyberwatching.eu Concertation Meeting	04/06/2019	Brussels, Belgium
European Research and Innovation Days	24-26/10/2019	Brussels, Belgium
User Centred Design (UXD) Healthcare	11-12/09/2019	Frankfurt, Germany
The 17th World Congress of Medical and Health Informatics	25-30/08/2019	Lyon, France
Healthcare Excellence Through Technology 2019	01-02/10/2019	London, UK

Italian Healthcare Venture Forum	16/10/2019	Rome, Italy

Table 9 - Future events planning

6.1.9 Organisation of End-user workshops

PANACEA will organise a total of 4 workshops including:

- **3 End-user workshops** carried out in latter part of 2019, one in 2020 and the third event in 2021. The first one of these events has already taken place in Rome on 28-29 May 2019
- **1 PANACEA Showcased Final Event** incorporating the additional end-users from the Open Call; organised in M35 of the project.

The 3 End-user workshops will have direct involvement of operational staff and patients, will be conducted at FPG, 7HRC and HSE, implementing the first stage of the SCENE methodology (Scenario elicitation) to capture poor security behaviours within healthcare organisations and understand more about the context for these behaviours.

6.1.10 Organisation of Webinars

4 webinars will be organised during the project's lifetime to ensure cost-effective outreach, awareness raising and community member recruitment.
PANACEA will also seek for synergies with related projects (such as Cyberwatching.eu and CYBERWISER.eu) to further promote its work in third-party webinars.

Communication Activity	Action	KPI
Organization of Webinars	Ensure cost-effective outreach, awareness raising and community member recruitment.	1 Zooming in on overview of what PANACEA's assets in 2019. 3 webinars concentrate on the individual 3 pilots, (3 in 2019). 1 Final webinar on end-achievements to coincide with the final event from the Open call (1 in 2020).

Table 10 - Webinar frequency and expected impact

6.1.11 Open Calls specific promotional campaign

Dedicated promotional campaigns will be set up in order to recruit organisations into the Open Call and identifying leads as potential customers to ensure post-project sustainability.
The campaigns will be performed leveraging on press releases, social media, promotional material, participation to commercial conferences and trade fairs etc.

Communication Activity	Action	KPI
Open Calls specific promotional campaign	Provide a dedicated SMART-based campaign strategy and circulation plan.	Min. 1 PR; 1 flier; 1 save-the-date flier. Support from min. 2 media partners and 5 EU/national synergies.

Table 11 - Open Calls promotional campaign frequency and expected impact

6.2 Stakeholders Engagement Plan

The PANACEA Stakeholder Engagement Plan aims to providing a framework to engage stakeholders and to work with them to address the PANACEA project challenges, such as developing and validating:

1. Tools for dynamic risk assessment and mitigation.
2. Tools for Secure Information Sharing.
3. Tools for System Security-by-design and certification.
4. Tools for identification and authentication.
5. An educational package for cybersecurity in the health sector.
6. Tools for resilience governance.
7. Tools for secure behaviours nudging.
8. Implementation Guidelines for cybersecurity solutions adoption
9. A Security-ROI methodology
10. Engaging a representative community of stakeholders and identify a sustainability path for the PANACEA vision

PANACEA aims not only to deliver a toolkit, but also to develop a representative community of stakeholders, representing all stakeholder groups that are relevant to the project, thereby contributing also in a field-tested way to move towards a people-centric model of cybersecurity in healthcare. A sustainability path for PANACEA will be designed and market feedback will be gathered directly from end-users.

As stated, the End-Users and Stakeholder Platform (ESP) will consist of organisations representing the stakeholders: Healthcare providers, Medical devices & applications providers, Health information system providers, Research organisations, Policy makers and regulators, Standard Developing Organisations, Cybersecurity solution providers, Insurance companies, Patients' associations. Some organisations have already been identified during the proposal phase. However, other will be enrolled during the project, according to the needs. They will be identified on the base of their representativeness and willingness to contribute to the "end user driven" innovation process embedded in PANACEA project. The Platform –transversal to the project's WPs – represents a mechanism aimed at supporting PANACEA relevant activities.

FPG (project coordinator) will act as the Stakeholder Platform Manager that will:

- define platform mechanisms and working guidelines;
- enrol new members;
- regularly maintain the SP members updated;
- act as a hub for receiving specific requests/feedback from partners, managing the stakeholder contact lists, and
- involve the right partners to satisfy the needs of the project

Furthermore, FPG with the collaboration of all consortium members will establish and maintain relationships with existing networks and knowledge communities, in order to

- expand the "stakeholder pool" supporting PANACEA,
- leverage the content the "pool" can bring,
- create a destination for the dissemination activities.

FPG will also manage the organisational aspects of the physical and virtual meetings/workshops involving the stakeholders and will support specific communication activities to ensure relevant and varied participation from the stakeholders to the open calls.

Below we outline the main phases of our Stakeholder Engagement Process and Plan, already started since project inception.

A. **Selection of stakeholders**
   Aim: Collect referenced documents, electronic reports and journal papers from key institutions in Europe (not limited to the participant's countries in the Project). Select and engage stakeholders.
   Deliberative Process

Methods: Literature review, Desktop searches, semi structured interviews, use of PANACEA website and social media. Creation of a Stakeholder Forum Database. Surveys and feedback after social events and participating workshops. Identification of potential stakeholder in the relationship networks of the Consortium partners (Stakeholder mapping), statistical analysis and quota sampling. Invitation letters. Promote PANACEA's open call.

B. Deliberative process
Aim: To promote useful dialogue and deliberation among participants with the intent of identifying technically, environmentally, socially and economically acceptable mitigation strategies
Methods: Develop a detailed timeline for engagement for stakeholder meetings, Evaluation and feedback via electronic questionnaires and through the website and participate in think tank workshops based on the 3 use scenarios in respect to the project aforementioned challenges

C. Questionnaire surveys and Interviews
Aim: To collect data eliciting stakeholder opinions and attitudes regarding where the key issues lie between synergizing, define PANACEA extended scenario set and identifying gaps
Methods: Sign-up surveys and webinars, on site meetings and workshops, promotional questionnaire and online questionnaires.

D. Outreach activities – maintaining an open dialogue
Aim: Facilitate communication among stakeholders for the whole project.
Methods: Website, Twitter, Facebook, LinkedIn, video / media, banners, leaflets, brochure, newsletter, conference presentations, journal papers, workshop & special sessions at relevant conferences, press releases, news articles/magazines.

The goal of this task is to acquire feedback on scenarios scoping and use cases definition, business and exploitation strategy on the opportunities offered by each Stakeholder for communication, dissemination and exploitation.

6.2.1 Expected Impacts

Throughout the project, and according to the specific technical and non-technical targets of the project, the PANACEA Team will pursue engagement end-users external to the consortium (End-User and Stakeholder Platform) to collect feedbacks on the progressive release and to validate the appropriateness of the project concept. For this task the main **measurable results are to** engage a community of 3000+ members, representing all 8 stakeholder groups.

7. Monitoring of the Impact created

PANACEA will set up a Monitoring Service tailored to its communication strategy to measure the impact achieved through communication activities. Trust-IT will set up a shared dashboard that will visually render all the data from our communications and online activities for a continuous and easy monitoring of KPIs.

An example of the dashboard is reported in the figure below.

Figure 13 - Example of monitoring dashboard to measure impact

7.1 Activities and Achievements so far

From the very beginning of the project, PANACEA has carried out continuous communications, setting up the website (www.PANACEAresearch.eu) and social networks, creating collaterals and creating media campaigns on the project launch. This section provides some details on those activities carried out in the first 5 months of the project.

7.1.1 Launch of the PANACEA website at www.panacearesearch.eu

During M1, a first iteration of the project's website has been developed consisting of a simple overview of the project showing the Consortium, the objectives and the main stakeholders of the project as well as a contact form.

Figure 14 - PANACEA website first iteration

A second iteration of the website (release 2.0) was launched in M4 consisting in a design-oriented, fully-responsive platform based on Drupal, a powerful open source platform that allows creating flexible content, integrating new website features easily and developing an innovative and efficient user experience. The version that was launched in April 2019 is depicted in the following figure.
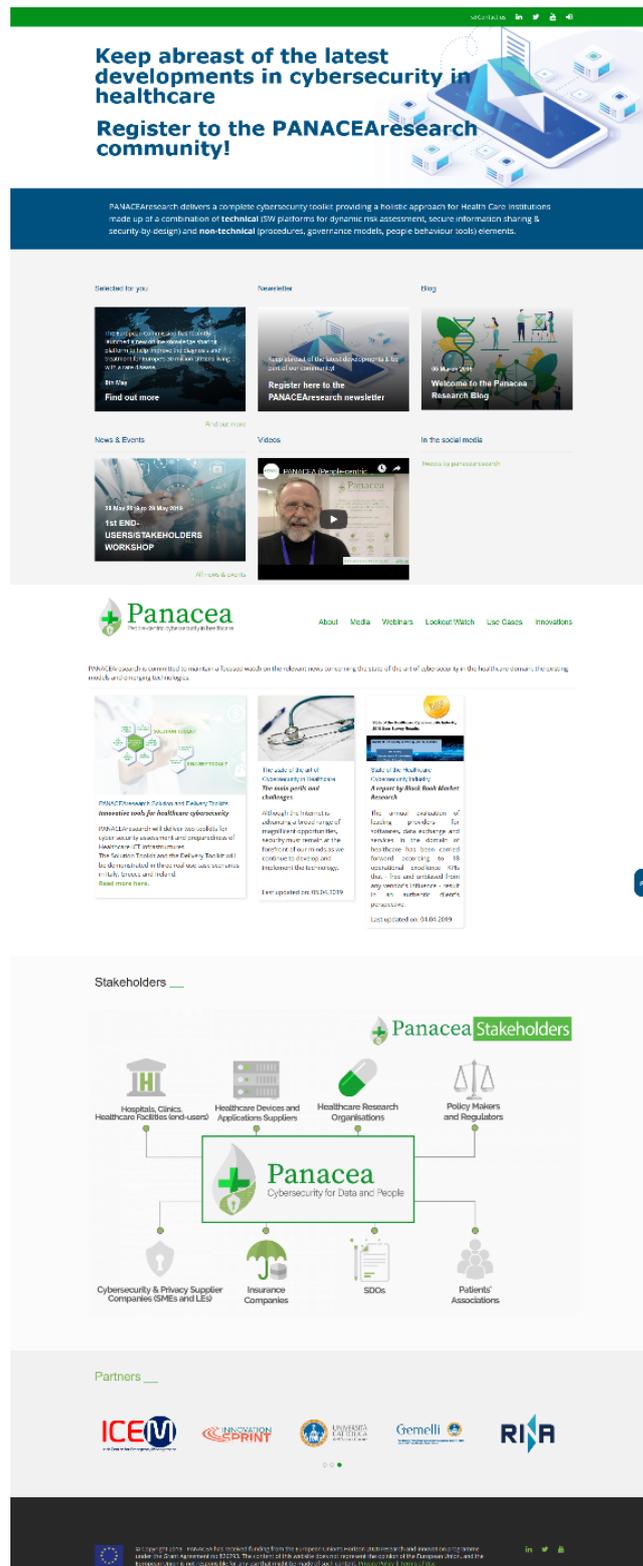
Figure 15 - PANACEA website (release 2.0, online in M4).

In version 2.0 we added browsable sections to cover communication and dissemination aspects as well as more interactive aspects such as the Lookout Watch in which users, upon registration, can write contributions and exchange thoughts about cybersecurity in healthcare.

The website will be an interactive meeting point and a key element, during the lifecycle of the project, and beyond, to raise awareness around cybersecurity and to gather interest and develop opportunities for different stakeholders in this field.

7.1.2 Collaterals

A roll-up banner and a flyer (see the figure below) were designed and published in M2 and used to provide a general overview of the project at different events.

Figure 16 - PANACEA Roll-up Banner and Flyer

A Press Release on the launch of the project has been produced in M2 to be distributed to specific Press & Media Channels and slightly tweaked to be disseminated through social media.

Figure 17 - PANACEA Press Release published on CORDIS

7.2 The PANACEA Community of Stakeholders

As a starting point PANACEA started building its community mainly through:

- website registration
- social media activities
- webinars registration
- workshops registration

where has collected various contacts from different audiences related to the PANACEA initiative.

The figure below presents an example of different contacts that spontaneously joined PANACEA:

Figure 18 - Examples of PANACEA Community members

Main achievements from M1 (January 2019) as of M5 May 2019

Total Website registration: 34

Total Twitter Followers: 44

Tweets sent: 30

Total LinkedIn Connections: 505

LinkedIn posts/articles: 20

YouTube videos uploaded: 1

Total Webinars registration: 38

Total Workshops registration: 66

The number of PANACEA community members will be further incremented thanks to:

- partner efforts
- web platform registration
- social networks
- participation to events
- organisation of events
- synergies and strategic collaborations

The ESP, stakeholder platform, is still under construction and will be enriched with new contacts over the lifetime of PANACEA. A specific and shared process to build it has been followed:

- It has been asked to each partner to identify a list of stakeholders, among their closest contacts, potentially interested in participating in the Platform.
- Project partners and project coordinators of projects similar to PANACEA have been identified and invited to participate in the Platform.

The table below outlines the experts within PANACEA ESP with a sample of members within its professional network, where LinkedIn is used to recruit community members and engage with stakeholders.

Healthcare facilities: hospitals, clinics and other points of care	**PANACEA experts**: Dr. Richard Amlot (Public Health England): Health care governance expert: Dr. Simon Woodworth (University College Cork, Ireland): Clinical Information System expert.
Healthcare device and application suppliers	**PANACEA experts**: Dr. Gabriele Unterberger (Software Centric Srl, Italy): Medical Device Integration, Exploitation of innovative solutions expert.
Patient and professional associations	Italian patient association; ECHAlliance (40 members from patient associations).
Standards development organisations and Regulators	**PANACEA experts**: Prof. George Cybenko (Thayer School of Engineering, USA): IEEE Security & Privacy Close links with: 3GPP, ETSI CYBER + ET, IEEE (Security and Privacy), protocols, NIST framework, Connecta Guidelines etc.: compliance with internationally applicable standards and protocols, interoperability, data sharing across borders.
Research centres for healthcare and cyber security, including	**PANACEA experts**: Dr. Michael Cooke (National University of Ireland Maynooth): Human factors and human-machine interaction expert
PANACEA Professional Network (sample of stakeholders within the PANACEA community):	**Healthcare**: Italian national healthcare service (Naples); Barcelona Hospital Clinic; World Health Organisation (WHO); Helios private healthcare provider, Granada University Hospital. **Multipliers** A key **multiplier** is the European Connected Health Alliance (ECHAlliance), which has an extensive base of hospitals and other healthcare facilities, over 40 patients' associations, among other priority stakeholders. Other multipliers include Ticbiomed (digital healthcare association); Barcelona Health Hub (healthcare-related start-ups) Dutch Health Information Movement; HIMSS (VP International) and the Connecta Health Alliance. **Peer Projects**: H2020 peer and support projects: SPHINX; CUREX; SecureHospitals, ECHO, CYBERWISER.eu, cyberwatching.eu, SPARTA, Cybersec4Europe, CONCORDIA, SpeechXRays. **Cybersecurity** ENISA; ECSO; Centre for Cybersecurity at the World Economic Forum; cyberwatching.eu (CSA coordinated by Trust-IT); partner networks on data protection, privacy, IT and network security: 0ver 15000 contacts

Table 12 - Current PANACEA Community Development

7.2.1 1st PANACEA Webinar

The PANACEA webinar series is designed to raise awareness of cybersecurity and privacy issues and is a key engagement mechanism for expanding the reach of our community, disseminate project results and progress, and gain visibility in the cybersecurity healthcare domain.

The first PANACEA webinar was held on 18/04/2019. The first webinar focussed on how the project will improve security of Healthcare services, data & infrastructures, reducing data privacy breach and increasing patient trust & safety through its innovative toolkit. Several ways of engaging with PANACEA such as the End-users Stakeholder Platform and the opportunities of Open Calls were presented.

The first webinar was supported by a dedicated communication campaign involving webinar announcement and distribution, social media activities and one-on-one invitations, which resulted in 38 participants coming from a wide range of industry such as Education, Consulting, Healthcare Software, Hospital and Legal.
The campaign also leveraged on key elements such as partner's effort and synergies with related projects such as Cyberwatching.eu and AEGIS.
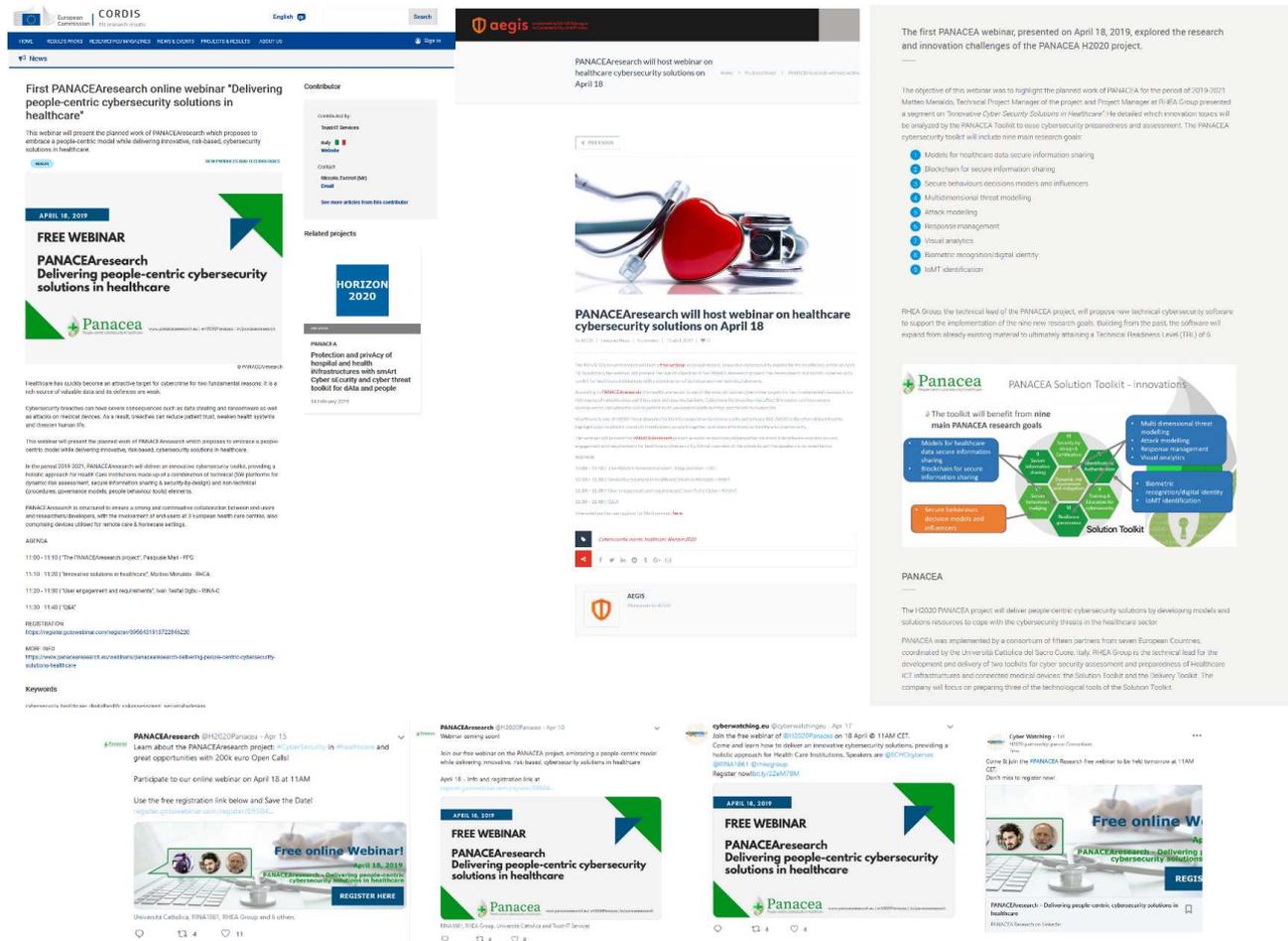
Figure 19 - PANACEA First webinar campaign example

7.2.2 1st PANACEA End-Users/Stakeholders Workshop

At the moment of writing this deliverable, PANACEA has already organised its first end-user stakeholder workshop. The workshop took place in Rome on 28-29 of May, hosted by FPG.
The intent of the workshop has been:

- Sharing R&D H2020 projects knowledge and the very first findings to the community.
- Discussing together about cybersecurity needs in healthcare ecosystem and identifying relevant use cases for users' requirements elicitation and tools validation.

The first part of the event was dedicated to front presentations made by PANACEA coordination, by an ENISA representative[3] and the coordinators of other R&D H2020 projects[4] sharing approaches, methodologies and

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[3] The ENISA representative connected in videoconference and delivered a presentation on the "evolving regulatory landscape for cybersecurity in eHealth" and on "ENISA's on-going activities in eHealth".

[4] PANACEA coordinator invited other H2020 projects to attend the Workshop; three of them accepted and attended: CUREX, SECUREHOSPITALS and SPHYNX.

first results in matter of assessing and reducing cyber risks in hospitals and care centres. Here, an overview of the first PANACEA result will be presented related to "Models of health services and of medical devices lifecycle for cybersecurity".

A second part of the event consisted in three parallel workshop sessions in order to guide the participants in the provision of needs and requirements, which were collected according to the project methodology.
A third part consisted in a plenary discussion on a set of scenarios attack.

This first workshops gathered 18 non-Consortium, participants coming from diverse backgrounds and experiences such as Hospital officers, Medical device users and producers, specialised IT security teams as well as managerial and non-technical profiles.

7.2.3 Impacts of PANACEA SMART Campaigns to date

The table below reports on the impacts achieved so far by PANACEA in terms of SMART campaigns performed to date.

Campaign type	Timeline	Channel(s) used	Core message	Impacts
Project launch & 1st video	**Start – End Date: 21.01 – 22.02 2019**	LinkedIn	A new partnership for a people-centric approach to cybersecurity in healthcare	614 views
		YouTube	People-centric cybersecurity in healthcare – Kick Off Meeting	172 views
		Twitter	Launch of the consortium	26 Interactions
Press release for project launch	**Start – End Date: 21.01 – 01.03 2019**	Press & Media	ICT is pervasively present in healthcare with complexities and interdependencies on the rise for all hospitals and clinics across Europe. And this is where cybersecurity comes into play	Not available
Promotion of website launch and Observatory	**Start – End Date: 01.03 – 15.04 2019**	LinkedIn	Check out the project's website and contribute to the blog	248 views
		Twitter	Check out the project's website and contribute to the blog	32 Interactions
Promotion of event in Heraklion, Crete	**Start – End Date: 19.03 – 28.03 2019**	Twitter	PANACEA team meeting in Greece to design models for healthcare in cybersecurity	137 Interactions
Promotion of 1st webinar	**Start – End Date: 10.04**	LinkedIn	Webinar promotion and agenda	83 views

	– 20.04 2019			
		YouTube	Webinar registration	57 views
		Twitter	Webinar promotion	190 views
Promotion of 1st workshop: live posts during the event	**Start – End Date: 21.01 – 01.03 2019**	LinkedIn	Multi-stakeholder approach to cybersecurity in healthcare	367 views
		LinkedIn	Zooming in on the diverse stakeholder roles for medical devices; IT security teams;	430 views
		LinkedIn	Early steps towards peer project collaboration	326 views
		LinkedIn	Sharing message of parallel project	53 views
		Twitter	Stakeholders contributions to End-User & Stakeholder workshop	21 Interactions
		Twitter	Medical device producers, IT teams and non-technical/managerial representatives at work to gather requirements for PANACEA toolkits	109 Interactions
		Twitter	Outcome of discussions	13 Interactions
		Twitter	Promotion of parallel projects	82 Interactions
Insights from experts of the platform	**Start – End Date: 22.01.2019 – End of project**	LinkedIn	Insights from research advisory board member Gabriele Unterberger	201 views
	Overall impacts up to 31.05.2019			**3168 views**

Table 13 - Impacts of SMART Campaigns
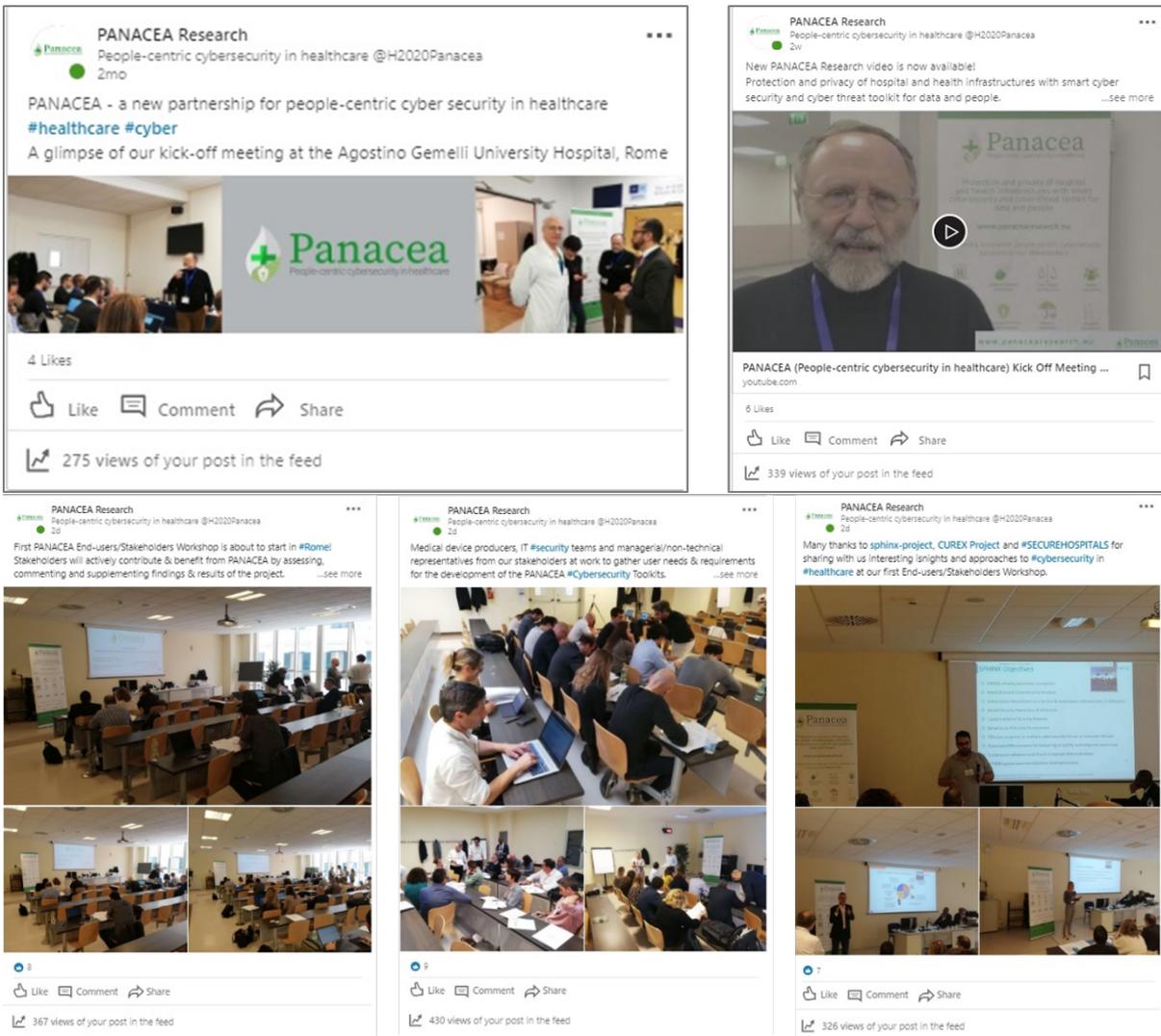
Figure 20 - Sample of Impacts on PANACEA LinkedIn

8. Roadmap and Next Steps

Any communication and dissemination plan should follow a regular roadmap with identified actions that may be tracked, monitored against the main KPIs of WP8. The following table provides a first draft roadmap from month 5 to month 18, while a new version of the roadmap will be produced in D8.3 Communication and dissemination: strategy and achievements, intermediate version.

The roadmap is a month-by month plan that integrates all the activities of the PANACEA plan for Communication, Stakeholder Engagement, Events and Promotion of the Open Calls. The roadmap is designed as a living document that can be easily adapted and updated over time to reflect new priorities identified, such as the Open Call campaigns, as well as workshop timings and stakeholder focus, necessary to maximise impacts. Thus, PANACEA has a flexible approach to core activities coordinated through WP8.

	YR 1	YR 2	YR 3	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
Content publication	14	36	48	2	2	2	2	2	2	2	3	3	3	3	3
Newsletter	6	8	10	1		1		2		2	1		1		1
Graphic material	1	1	2				1								
Video			2												1
Press release			6				1							1	
End-user workshop	1	1	1												1
Final event			1												
Webinar	1	3	1										1		
Third-party event participation			50	1	1		2	2	2	1	1	2	2	2	2
Tweets to be done	360	360	360	30	30	30	30	30	30	30	30	30	30	30	30
LinkedIn update/article	240	240	240	20	20	20	20	20	20	20	20	20	20	20	20
Open calls promotional campaign															

Table 14 - PANACEA M5-M18 Roadmap

9. Conclusions

The 1st version of PANACEA's Communication and Dissemination strategy has been developed and agreed-upon among all Partners involved in WP8 activities. The plan is commensurate to the resources expected to be spent in these activities by all partners and targets the goals as per the Grant Agreement /1/.

The contractual KPIs will be closely monitored, to ensure the expected goals concerning building of the PANACEA community and ensuring adequate engagement of the various stakeholder Groups involved.

The document defines all strategic goals, including branding, and defines its communication channels and levers, namely:

- Website (www.panacearesearch.eu);
- Social Media and professional networks;
- Communication toolkit;
- Communication toolkit;
- Promotional material;
- Videos;
- Press releases and announcements.

The macro-activities envisaged by this plan are:

1. Content-rich articles for publication on PANACEA website.

2. Newsletter creation.

3. Promotional graphic material production and distribution.

4. Scientific and technical publications.

5. Video production and distribution.

6. Press release production and distribution.

7. Social media presence.

8. Participation to third-party events.

9. Organisation of webinars.

10. Organisation of End-user workshops.

11. Open Calls specific promotional campaign (ad hoc activities).

Two further iterations of this document are planned, D8.3 (June 2020) and D8.4 (June 2021), aimed at updating the plans and reporting on impacts achieved.