

SC1-PHE-CORONAVIRUS-2B

# ENVISION

Intelligent plug-and-play digital tool for real-time surveillance of COVID-19 patients  
and smart decision-making in Intensive Care Units

Project No. 101015930

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Activities in the outreach plan are subject to change as new opportunities of collaboration may occur or the planned activities should not have the desired impact.



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### **Abstract**

Within only six months, over 7.4 million people have been diagnosed with SARS-CoV-2. In the most severely hit countries, more than 10% of infected patients have received treatment in Intensive Care Units (ICUs). Insufficient data and limited knowledge on the disease as well as the lack of tools to support the intensivist in making accurate, timely and informed decisions has led to high mortality rates.

Continuous surveillance, the collection and intelligent analysis of data from many sources, including ventilators and electrical impedance tomography, would allow intensivists to decide on the best suitable treatment to accelerate the recovery of the often comorbid COVID-19 patients, while reducing the burden on clinical staff and healthcare costs. This information would also increase our understanding of the yet unknown course of disease, supporting other stakeholders in the quest for new therapies.

In ENVISION, our multidisciplinary public-private consortium will advance an innovative digital tool, Sandman.MD, a real-time and plug-and-play monitoring app, to an intelligent decision-support system for monitoring, prediction and treatment of COVID-19 patients in ICUs – the Sandman.IC – reaching Technology Readiness Level 9 and ready for CE marking by the end of the project. The app has been developed by our SME partner app@work and successfully introduced by several hospitals in Germany for use during the perioperative period. Sandman.IC will be integrated into an AI-driven data analytics suite with predictive modelling tools and enhanced with a smart alert functionality. The digital tool will be validated and demonstrated in 13 hospitals across Europe. Our Health Technology Assessment expert partner will demonstrate the economic and societal value of Sandman.IC, while an experienced SME will manage the innovation process in view of an immediate market uptake. The rollout will be supported by the European Society of Anaesthesiology and Intensive Care (ESAIC).

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## Partner short names

AAW	app@work GmbH
accelCH	accelopment Schweiz AG
accelDE	accelopment Deutschland GmbH
CCHT	Spitalul Clinic Judetan De Urgenta Pius Brinzeu Timisoara
CHUC	Centro Hospitalar e Universitario de Coimbra E.P.E.
DPT	Central Hospital of Southern Pest National Institute of Hematology and Infectious Disease
ESAIC	European Society of Anaesthesiology and Intensive Care
GUF	Johann Wolfgang Goethe Universität Frankfurt am Main
ICS-HUB	Institut Catala de la Salut – Bellvitge University Hospital
iDA	Intelligent Data Analytics GmbH & Co. KG
KC	Lietuvos Sveikatos Mokslu Universiteto Ligonine Kauno Klinikos
LMI	Löwenstein Medical Innovation GmbH & Co. KG
SE	Semmelweis Egyetem
TAU	Tampereen Korkeakoulusaatio SR
UCL	University College London
UMCG	Universitair Medisch Centrum Groningen
UMCL	Univerzitetni Klinicni Center Ljubljana
UMCM	Univerzitetni Klinicni Center Maribor
UMFCD	Universitatea de Medicina si Farmacie Carol Davila din Bucuresti
UNIPG	Università degli Studi di Perugia
UNITO	Università degli Studi di Torino

## Abbreviations

AI	Artificial Intelligence
CO	Communication Objective
D	Deliverable
DO	Dissemination Objective
DoA	Description of Action
EC	European Commission
H2020	Horizon 2020
M	Month
MS	Milestone
TRL	Technology Readiness Level
WP	Work Package

## Executive Summary

The purpose of the deliverable is to set up an Outreach Plan outlining the communication and dissemination strategy for the envision project. The deliverable specifies objectives for the different activities planned, the target groups and the tools and channels to be used to reach the targeted audience. Communication measures aim to inform about the ENVISION project as a whole, whereas dissemination measures focus on sharing the results and ensure the use of these results beyond the project. The implementation and impact of the activities will be monitored and evaluated according to indicators identified for each activity. In case of insufficient impact, activities need to be adjusted.

The Outreach Plan is a common route map and guideline for the consortium that is not limited to the activities currently defined. New opportunities for collaboration or ideas for additional activities that will naturally arise during the project lifespan can be included in the Outreach Plan at any stage.

# 1 Introduction

The primary goal is to disseminate the research results generated in the ENVISION project, to raise awareness and provide information on the Sandman.IC diagnostic tool developed, and to pave the way for exploitation of the ENVISION innovations and IP for medium and long term non-commercial and commercial purposes.

Publicly disclosing ENVISION results and outcomes to targeted stakeholders, sharing our knowledge to facilitate discussions on the use of digitalisation in diagnostics, circulating scientific validation results to the scientific community and informing relevant authorities on ENVISION are the main aims of our outreach plan. In order to achieve this, we have planned a broad range of cross-channel and multi-media dissemination activities.

With the help of this deliverable, the ENVISION partners aim to:

- Define and plan the tools with which the planned activities will be carried out.
- Define the channels used for communication outside the project.
- Plan dissemination and communication activities.
- Plan the evaluation of these activities to ensure quality.

## 1.1 Stakeholder involvement and target-group orientation

To ensure that the interests and requirements of external audiences are fully taken into consideration during the delivery of the ENVISION project. Along the whole value chain, we will actively involve representatives of our key target audiences, from the beginning of the project to ensure fulfilment of user requirements (WP2), validation (WP4) and outreach (WP6).

The proposed target-group orientation allows us to define and implement measures that are geared to the specific needs of the different audiences (e.g. intensivists, clinical staff, hospitals, healthcare providers, policymakers, insurances, companies, scientific community, patients and the general public). The project will aim to collect feedback from interested and influential stakeholders and disseminate its results and achievements to them, in order to maximise impact. The target groups are described in detail in section 2.3.

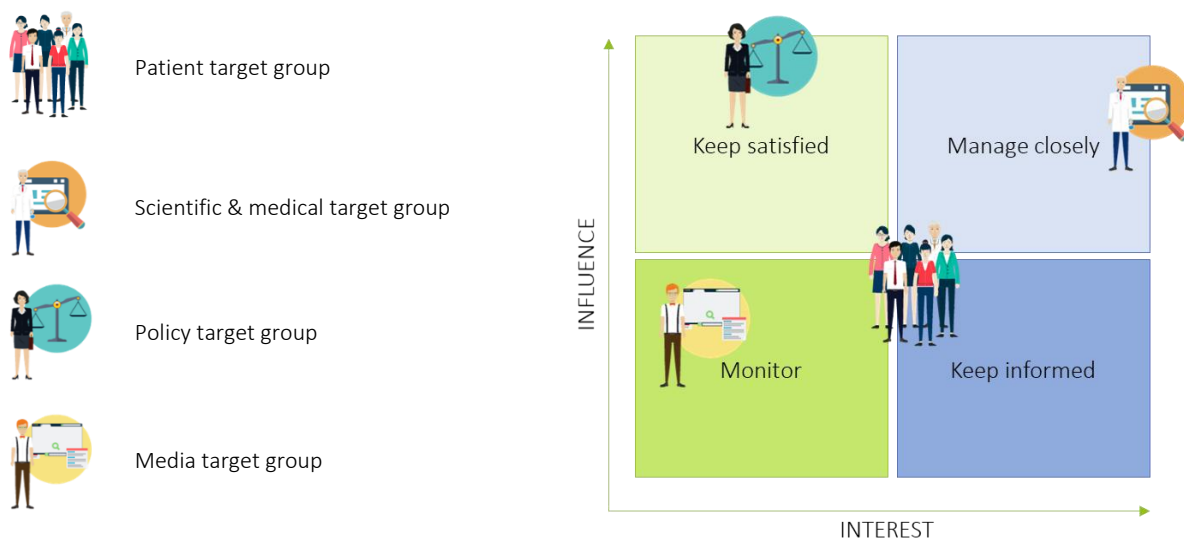


Figure 1. Stakeholder matrix



## 1.2 Open science strategy

In line with the Horizon 2020 rules and current trends in IP management and publication strategies, the ENVISION consortium is committed to open access publishing, following the [Guidelines for open access to publication, data and other research outputs](#) for Horizon 2020 projects working on COVID-19. These guidelines exceed the current open access requirements of H2020 and go beyond the legal obligations of the Grant Agreement. This means all partners agree with the principle that all peer-reviewed research publications relevant to the outbreak are made immediately open access, or freely available at least for the duration of the outbreak and shared with the World Health Organisation (WHO) upon journal submission.

As the associated costs are usually shifted away from readers, and instead to the university or research institute to which the researcher is affiliated, such costs have been accounted for by our research partner institutions. Budget has been allocated accordingly for open access fees. In accordance with the rules of the Grant Agreement, partners are required to give prior notice of any planned publication.

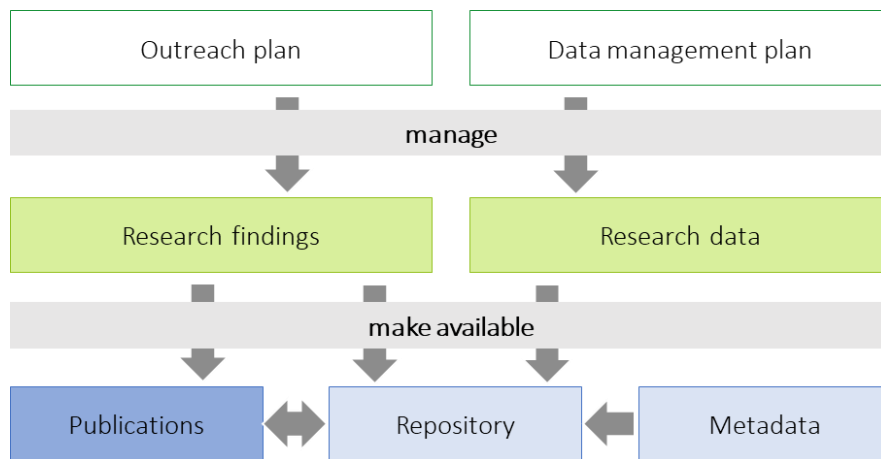


Figure 2. Open science strategy

## 2 Communication and dissemination strategy

The dissemination and communication activities planned in ENVISION are crucial to promote research results and gather awareness of the Sandman.IC among the scientific community, clinicians and healthcare experts, patients, policymakers, potential new collaborators, and society as a whole. They contribute to increasing the impact of the project and are thus aligned with the project's objectives and coordinated by a dedicated Work Package 6. The concepts of communication and dissemination are defined below, as understood in the context of this project and in line with the European Commission's definition of such terms and concepts.<sup>1</sup>



**Dissemination** is defined as the public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results). It aims to transfer results to the ones that can best make use of it and to maximise the impact of research.

*Task 6.1: Disseminate scientific and technological results.*



**Communication** is understood as taking measures for promoting the action itself and its results to a multitude of audiences. The main aims of this communication is the public engagement, i.e. to reach out to society as a whole and some specific audiences and to demonstrate how EU funding contributes to tackling societal challenges.

*Task 6.2: Cross-media communication and outreach*

### 2.1 Objectives

The overarching goal of the project is to deliver an innovative and powerful digital tool at TRL 9 for real-time monitoring of COVID-19 patients and smart decision-making – the Sandman.IC. The objectives of the outreach plan are aligned with the project goal, aiming to support its successful achievement through communication about the project and its endeavours and disseminating its results for maximised uptake and impact. More specifically these are:

#### Communication Objectives (CO):

- CO1:** To raise awareness of the ENVISION project, its consortium, and activities;
- CO2:** To increase visibility of the Sandman.IC
- CO3:** To inform stakeholders about topics related to ENVISION, particularly Artificial Intelligence in the medical field and the impact of COVID-19 on hospitals and intensive care units (ICUs).
- CO4:** To engage with key stakeholders and potential contributors to the project;
- CO5:** To facilitate dissemination activities;

#### Dissemination Objectives (DO):

- DO1:** To share scientific and technological knowledge, data, and results with the scientific and medical community to facilitate future and related research;
- DO2:** To disseminate relevant results to the general public;
- DO3:** To promote and facilitate the uptake of the Sandman.IC;

<sup>1</sup> <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/faq/933>

## 2.2 General approach

The general approach for any outreach activity is a classical communication approach (Figure 1). We have included a feedback and evaluation loop in order to improve our outreach continually over the duration of the project and beyond.

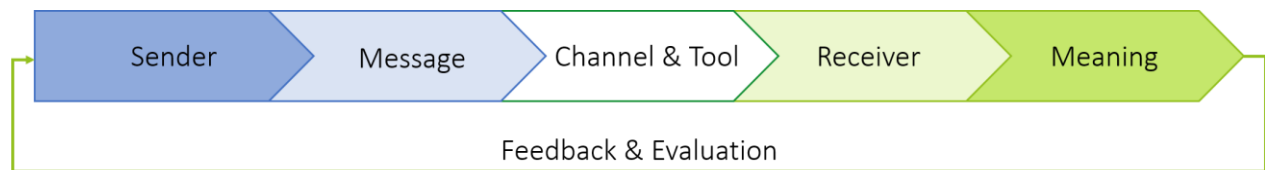


Figure 3: Communication approach

### WHY

The aim and objectives of the communication and dissemination actions are defined in section 1 and section 2.1. The consortium wants to raise awareness, educate, alert, and inform about ENVISION and its results. Behind each communication or dissemination action is the intend to maximise the impact of the project.

To **evaluate**, adapt and improve our strategy, performance metrics are in place for all activities that allows us to receive **feedback** (direct and indirect) from the audience.

### WHO

In general, the **sender** i.e. the source of the message are the ENVISION consortium members; responsibilities will be defined for each action. As leader of WP6 , accelCH will overlook all actions.

The **receiver** of the message is the target audience that consists of specific individuals or groups. Messages target specific receivers (implied audience).

### WHAT

The **message** is dependent on the action and channel, as these vary in formality and target audience. Nevertheless, the consortium has to be aware that the **meaning**, i.e. how the message is perceived, varies depending on the audience that receives the message. Moreover, although a message has an implied audience, other groups will also receive the message of which we as the sender have to be aware of.

### HOW

For each action the appropriate **channel** (e.g. website, presentation, journal, etc.) and **tool** (e.g. newsletter, infographic, video, etc.) will be selected that appears most suitable to deliver the message to the implied audience.

### WHEN

Communication, dissemination and exploitation actions are not restricted to the duration of the project, but can still take place after the end of the project. Dissemination actions will usually take place after outstanding results have been achieved.

**The WHY gives you the WHO gives you the WHAT gives you the HOW gives you the WHEN!**  
Each communication and dissemination action benefits the project and the people involved. There is a rationale behind each action.

## 2.3 Target groups

In order to build an effective outreach plan, the consortium needs to be aware of who it wants to address. A target audience may consist of specific individuals or groups that are of importance to the project's success. Such stakeholders can include potential end users, other scientific or research groups, politicians or people with direct or indirect decision-making power on the political as well as on the corporate level (Kotler & Armstrong, 2004). Project stakeholders are defined as "an individual group, or organization, who may affect, be affected by or perceive itself to be affected by a decision, activity or outcome of a project" (Rose, 2013). Based on the objectives identified in Section 2.1 we have specified the following four groups that are considered as the priority targets of our dissemination activities:

**Patient Target Group:** patients, advocacy groups, general public.



The ENVISION project will extensively collect clinical data of patients in ICUs at our participating hospitals. Together with their families, they are the main subjects and beneficiaries of the findings. The pandemic caused by COVID-19 is a pressing issue to society as a whole. As many members of our society are affected by the virus, either directly as patients or indirectly socially and/or economically, ENVISION is highly relevant to the general public and patient advocacy groups as well.

**Scientific & Medical Target Group:** researchers, clinicians, intensivists and other health care providers.



Members of this group are expected to be core users of the ENVISION scientific results. The stakeholders identified in this group can act as advocates for the project and be multipliers to other stakeholders. It is possible that more hospitals will be recruited throughout the project, thus raising awareness about the project among these stakeholders is of crucial importance.

**Policy Target Group:** policy makers and healthcare regulators.



Policymakers and healthcare regulators are the decision-making powers, which can endorse the use of the ENVISION results and/or impact on budgets for related research. They will also be interested in any organisational, financial, and socio-economic benefits brought by the project.

**Media Target Group:** traditional and social media.



Traditional media are another target group of the project and have a considerable impact on all other target groups, especially on the Patient Target Group. They have the potential to deliver messages to a large audience, locally and internationally. This outreach plan will develop indirect activities targeting them by producing material and content that other target audiences and consortium members can share with them.

Each of these groups requires specific communication and dissemination channels and activities. These will be defined in more detail in the following sections. However, different stakeholders will also require different amount of attention and frequency of communication, depending on their levels of interest and their power to influence the project. To determine how to manage the differently targeted communication and dissemination activities, it is therefore important to prioritise the ENVISION stakeholders and identify the appropriate amount of time and effort that should be dedicated to each of them (Eden & Ackermann, 1998).

## 2.4 Key messages and expectation management

Key messages are the main points of information the consortium needs their audience to hear, understand, and remember. In particular, they should articulate the purpose of the project and what value it brings to the different target groups. All communication and dissemination activities will be developed around five key messages:

1. ENVISION is a H2020 innovation action funded by the European Union.
2. ENVISION is part of the H2020 call topic SC1-PHE-CORONAVIRUS-2B group
3. Hospitals urgently require new technologies and tools that enable intensivists and other ICU employees to monitor, predict and treat COVID-19 patients for better health outcomes while reducing the burden on clinical staff.
4. The overarching aim of ENVISION is to deliver an innovative and powerful digital tool for real-time monitoring of COVID-19 patients and smart decision-making.
5. The tool developed in the ENVISION project will use Artificial Intelligence (AI) to monitor and better predict the course of the disease, and support medical staff in treating patients timely and effectively.

**Expectation management is of high importance to all messages the consortium produces:**

- ENVISION is working on a solution to this challenge but has not yet produced a ready-to-market product.
- The expertise of clinical personnel remains indispensable as the Sandman.IC will not replace but only support intensivists and other healthcare providers.
- The Sandman.IC aims to better predict the course of the disease based on data collected from 13 hospitals in Europe but cannot guarantee or ensure the patient’s convalescence or full recovery.

## 2.5 Related projects

### 2.5.1 SC1-PHE-CORONAVIRUS-2B Group

In response to the *Second call for an Expression of Interest for innovative and rapid health-related approaches to respond to COVID-19 and to deliver quick results for society for a higher level of preparedness of health systems* in June 2020, ENVISION was [one of the 13 projects funded](#) under the call topic on *Medical technologies, Digital tools and Artificial Intelligence (AI) analytics to improve surveillance and care at high Technology Readiness Levels (TRL) – SC1-PHE-CORONAVIRUS-2020-2B*.

With the support of the European Commission (EC), the group shares a common workspace and has monthly meetings to discuss topics relevant to the projects. The EC has set up a [dedicated webpage](#) for the group and further shared dissemination and outreach measures are in planning.

*Table 1. List of projects funded under SC1-PHE-CORONAVIRUS-2020-2B*

Acronym	Title	Project-ID
CleanAir	<a href="#">Lab to Fab development of air decontamination system for protecting health practitioners against COVID19</a>	101016174
CorDial-S	<a href="#">PORTABLE AND FAST SURFACE PLASMON RESONANCE POINT-OF-CARE TEST FOR COVID-19</a>	101016038
COVID-X	<a href="#">COVID eXponential Programme</a>	101016065
COVIRNA	<a href="#">A diagnostic test to improve surveillance and care of COVID-19 patients</a>	101016072

<b>ENVISION</b>	<a href="#">Intelligent plug-and-play digital tool for real-time surveillance of COVID-19 patients and smart decision-making in Intensive Care Units</a>	101015930
<b>ESSENCE</b>	<a href="#">Empathic platform to personally monitor, Stimulate, enrich, and aSsist Elders aNd Children in their Environment</a>	101016112
<b>icovid</b>	<a href="#">AI-based chest CT analysis enabling rapid COVID diagnosis and prognosis</a>	101016131
<b>ICU4Covid</b>	<a href="#">Cyber-Physical Intensive Care Medical System for Covid-19</a>	101016000
<b>INNO4COV-19</b>	<a href="#">Boosting Innovation for COVID-19 Diagnostic, Prevention and Surveillance.</a>	101016203
<b>IRIS-COV</b>	<a href="#">Market Release of a Portable Device for COVID-19 at the Point-of-Care; a Global Diagnostics Approach</a>	101016083
<b>PORSAV</b>	<a href="#">Controlling viral aerosols in COVID-19 and beyond</a>	101015941
<b>PyXy.AI</b>	<a href="#">Telehealth-ready AI-powered multi-parametric system for surveillance of COVID-19 and cardio-pulmonary chronic patients</a>	101016046
<b>VASCOVID</b>	<a href="#">PORTABLE PLATFORM FOR THE ASSESSMENT OF MICROVASCULAR HEALTH IN COVID-19 PATIENTS AT THE INTENSIVE CARE</a>	101016087

### 2.5.2 TEHDAS

In addition to the SC1-PHE-CORONAVIRUS-2B group, ENVISION is a participating stakeholder of the WP4 Project forum of the Joint Action *Towards the European Health Data Space (TEHDAS)*; a project co-funded by the EU's third health programme and 25 participating European countries.

The TEHDAS Joint Action project develops European principles for the use of health data and infrastructure planning. The aim of the WP4 project forum is to identify the relevant initiatives and projects across the EU that TEHDAS needs to build on. European initiatives and projects are invited to join the project forum to share relevant outputs and discuss potential synergies to avoid duplication within the TEHDAS joint action. Through this forum, the different projects and initiatives will also connect to other relevant WPs within TEHDAS where collaboration and synergies are possible. The connection with the different projects will also help TEHDAS achieve interoperable outcomes.

### 3 Tools

ENVISION will make use of a variety of tools to communicate and disseminate its key messages and project results to its targeted stakeholder groups.



Corporate design



Print material



Content material



Audio-visual material

Communication and dissemination tools are intended as the structure and the format through which content is provided and presented to a target group (Seböck, Pfaff, & Cotillon, 2011). Articles in scientific journals and presentations at meetings, events and conferences are the more traditional and commonly used tools to enhance the project's publicity, at least within the research community. In addition to such tools, the consortium can produce a variety of different materials in order to influence its target groups, some examples are (Kotler & Armstrong, 2004, p. 518):

- Corporate design materials (logos, templates)
- Content materials (reports, articles)
- Audio-visual materials (films, slides, podcasts)

Most tools are suitable for all target groups, but care must and will be taken to adapt the content, message and language depending on the target group.

#### 3.1 Corporate design

Coherence and consistency in the visual project design contribute to a uniform and recognisable appearance of the ENVISION project, effective dissemination and communication activities as well as creating a sense of community and membership for the project's members. The ENVISION consortium will adhere to the defined corporate design in all activities. The colours, logo and typography chosen for the project support transporting the message to the respective target groups.

In addition, the consequent use of the corporate design makes the project easily recognizable by stakeholders. Thus, the message can be reinforced and have a greater impact. The following specifications need to be applied by all partners in all presentations, printed and online documents (factsheets, brochures), and publications related to the project:

- Project Logo (minimum width 25 mm)
- EU emblem (minimum height 10 mm)
- Acknowledgement

## Project logo

As a cornerstone of project identification and visualisation, the consortium has developed a project logo. The logo as well as the distinct corporate colours that are derived from this logo create a visual identity for the ENVISION project.



The logo is available in the following formats:

- JPEG, suitable for Word, Excel, PowerPoint or Publisher documents;
- EPS, suitable for professional print applications, e.g. InDesign, Photoshop, Pagemaker;
- PNG, for online use only.



In selected cases, the graphical element may be used independently of the full project logo, for example as favicon (website tab icon).

## Visual identity colours

Colours derived from the ENVISION logo:



CMYK C50 M0 Y100 K0  
RGB R148 G193 B31  
Hex #94c11f



CMYK C85 M10 Y100 K10  
RGB R19 G144 B53  
Hex #139035



CMYK C0 M0 Y0 K60  
RGB R140 G140 B140  
Hex #8c8c8b



CMYK C0 M0 Y0 K10  
RGB R233 G233 B233  
Hex #e9e9e9

Accent colour :



CMYK C0 M0 Y0 K60  
RGB R140 G140 B140  
Hex #8c8c8b

## Typography

The font types used for project communication material is Calibri and Calibri Light



## Templates

Based on the defined logo, design elements and colour guide, templates have been designed to ensure the ENVISION corporate design is consistent throughout the duration of the project (Task 1.2). The following templates are currently available and their use is mandatory for project-related activities:

- Deliverable template
- Meeting agenda template
- Meeting minutes template
- PowerPoint presentation template

A research poster template will also be created and if there is a need for further templates, accelCH will provide solutions suitable for the ENVISION consortium.

## Funding acknowledgement

All project-related public information, be it printed or electronic (presentations, films, posters, flyers, articles, books and all other forms of publications) as well as content on websites should – as far as possible – include the ENVISION logo as well as the EU emblem in a prominent and appropriate position and always acknowledge the EC funding, using the following, according to the Grant Agreement, article 29.4 *Information on EU funding – Obligation and right to use the EU emblem*:



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101015930.

## 3.2 Material

Material for communication and dissemination activities for ENVISION is developed following the guidelines set by the project’s corporate identity outlined above. It will be regularly assessed and updated when necessary. All material will be created in English, the official working language of the project. However, some audiences (hospitals, local press etc.) may need certain information in other languages to ensure full understanding and highest possible impact. In these cases, accelCH will coordinate with local partners to translate the respective documents according to national and local needs. Three main types of material are identified: print material, content material and audio-visual material.

*Table 2. Material (to be) developed for communication and dissemination*

Print material	Content material	Audio-visual material
Factsheet Flyer Booklet Poster Infographic	Press release Newsletter Publication Presentation Project news article Press & media article eLearning material Survey Best-practice guideline	Explainer video Interview Use case animation

## 4 Channels

ENVISION will make use of multiple channels to reach out to all its stakeholders. Each channel has its own strengths and weaknesses, but the complementary use of direct and indirect channels will ensure the project engages with a wide range of individuals through at least one of their preferred channels.

### Direct channels



Face-to-face



Face-to-audience

### Indirect channels



Print media



Display media



Online media

Dissemination channels are the means through which project related content is made available to a target group are called (Sebök, Pfaff, & Cotillon, 2011). Kotler and Armstrong (2004) distinguish two general types of communication channels: direct and indirect. Direct communication channels enable two or more people to directly communicate with each other. These channels are very effective as there is a high degree of individuality in the message and feedback from the communication partner is instantly available. There are several options to engage in direct communication:

- Face-to-face (conversations, meetings)
- Face-to-audience (presentations, speeches)
- Direct written communication (e-mail, chats)

Although indirect channels lack the advantage of receiving immediate feedback through direct contact, they have the capacity to reach large numbers of people at once. Indirect channels include major media and events, such as press conferences, online media and many others. Kotler and Armstrong (2004) present several key media examples, the most important ones are listed below:

- Print media (newspapers, journals)
- Broadcast media (radio, television)
- Display media (posters)
- Online media (websites)

ENVISION will make use of both direct and indirect channels, aiming to make best use of their complementarity and the communication advantages of each. To provide continuity and facilitate access to information, links between the channels will be created. For instance, print media (e.g. flyers and posters) will be downloadable from the project website. This will also guarantee that different tools are used to their best effect and not exclusively through one channel. In addition, the strategy will be to create strong synergies with existing channels in order to access already established groups and networks, benefitting from direct connections to these communities.

The channels that will be used in ENVISION are outlined below.

#### 4.1 Direct

Channel	Medium	Characteristics
<b>Face-to-Face</b>	General Assemblies, Project Steering Committee meetings, teleconference communication, small workshops, technical review meeting with EC	<b>Strengths:</b> very targeted engagement, in depth discussions and input. <b>Weaknesses:</b> high cost in time, potentially low impact.
<b>Face-to-Audience</b>	Presentations, speeches, poster sessions, large workshops, events, international fairs and conferences, seminars.	<b>Strengths:</b> targeted engagement with a specific audience already interested and specialised in the topic, broad impact. <b>Weaknesses:</b> high cost in time and money (if travel and conference costs involved).

#### 4.2 Indirect

Channel	Medium	Characteristics
<b>Print media</b> (mostly also available in online format)	Scientific journals, non-expert journals, general interest magazines	<b>Strengths:</b> targeted engagement with a specific audience already interested and specialised in the topic, broad impact and recognition. <b>Weaknesses:</b> not flexible – difficult to revise content once printed.
<b>Display media</b>	Material displayed on a wall or a panel inside or outside	<b>Strengths:</b> engagement with a wide audience, easily visible, easy to transmit a message and call for action, low cost. <b>Weaknesses:</b> not flexible – difficult to revise content once printed, difficult to know the audience.
<b>Online media</b>	Project website (D6.1), social media, newsletters, webinars, professional publication sites (e.g. CORDIS, research*eu), science publication websites, health publication websites	<b>Strengths:</b> possibility to engage with a wide audience, fast distribution, low cost, possibility to cross-promote content on the different channels. <b>Weaknesses:</b> potentially impersonal, high level of competition, difficult to know audience.

## 5 Planned communication and dissemination activities

Communication and dissemination activities describe all activities related to communication and dissemination including the creation of material used for communication and dissemination.






Identifying key activities and establishing responsibilities facilitates the exchange of information about the project and its results, both internally to the consortium and externally with all the project stakeholders. The ENVISION communication and dissemination activities are mostly led by accelCH and involve contributions from all partners.









The ENVISION communication and dissemination activities and responsibilities derive from the main objectives defined in the DoA for WP6:

- Deliver cross-media communication activities to raise awareness of the importance of health monitoring in the ICU;
- Disseminate the scientific and technological results to the scientific community and health care stakeholders;

as well as the specific communication and dissemination objectives (CO/DO) defined in section 2.1.

Table 3. Overview of planned activities

Planned activities	Objectives (CO/DO)	Lead	KPIs
<b>COMMUNICATION</b>			
 Website - Project news articles - Press & media articles - Surveys	CO1, CO2, CO3, CO5, DO2	accelCH	Number of visitors; number of articles; number of participants
 Social media - Twitter - LinkedIn	CO1, CO4, DO2	accelCH	Number of followers
 Print and online communication materials - Factsheet - Flyer / booklet - Infographic - Poster	CO2, CO4, CO5, DO3	accelCH	Number of downloads/ copies distributed
 Newsletters and press releases	CO1, DO2, DO3	accelCH	Uptake in media
 Audio-visual materials - Interviews - Use case animations - Explainer video	CO1, CO2, CO3	accelCH	Number of views

Planned activities	Objectives (CO/DO)	Lead	KPIs
<b>DISSEMINATION</b>			
 ENVISION sessions	CO3, DO1	GUF	Number of participants
 User focus groups	DO1	ESAIC	Number of participants
 Conference presentations and Peer-reviewed publications	CO2, DO1, DO3	GUF	Number of conferences; number of publications
 eLearning materials	DO1, DO3	ESAIC	Number of views and downloads
 Best practice guidelines for clinicians	CO4, DO1	GUF	Guidelines published
 Final event	DO1, DO2, DO3	ESAIC	Number of participants
 Virtual and live demonstrations	DO3	GUF	Number of participants
 Fairs and exhibitions	DO3	AAW	Number of events

### 5.1 Implementation and dependencies

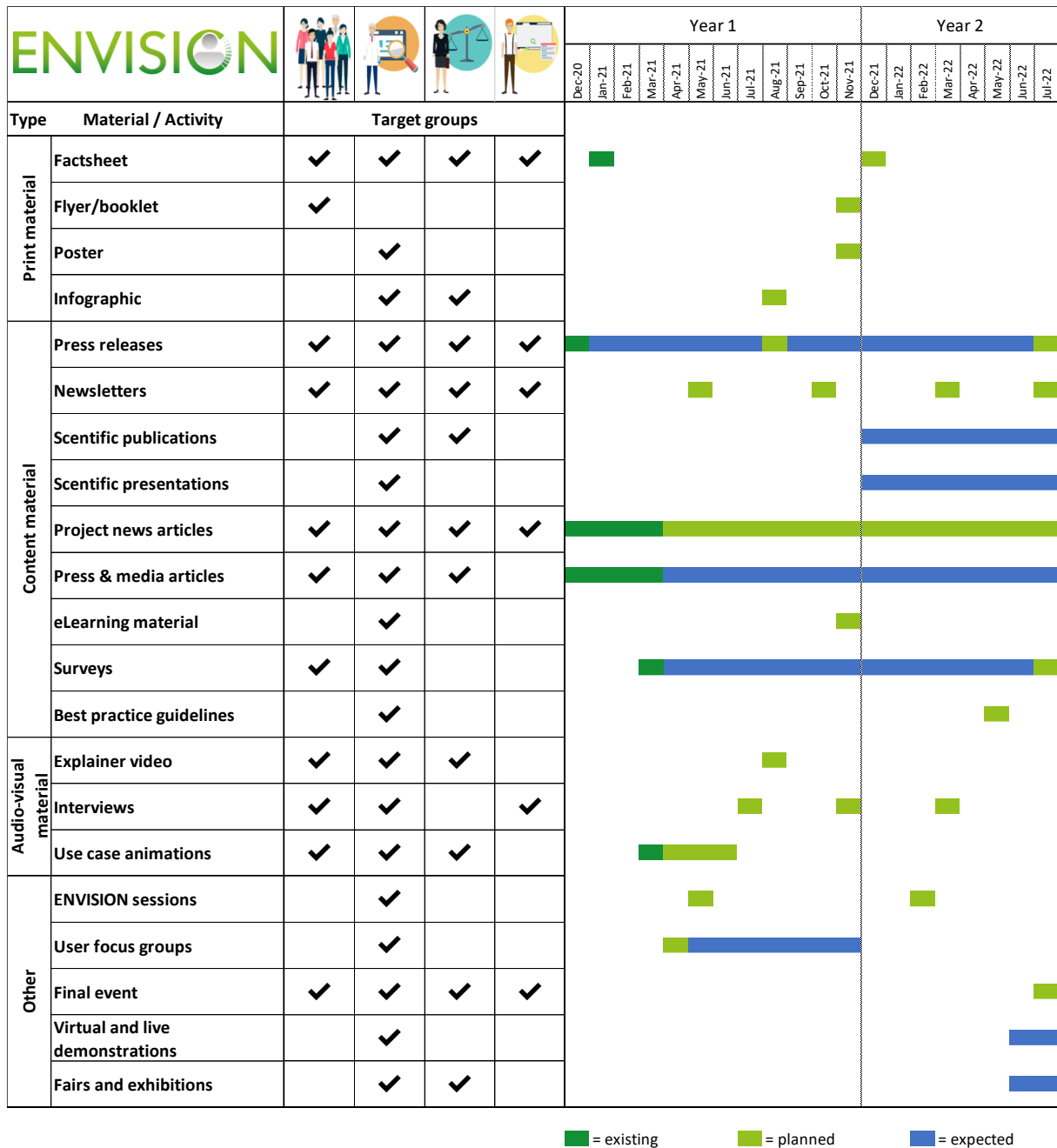


Figure 4. Implementation timeline of communication and dissemination activities

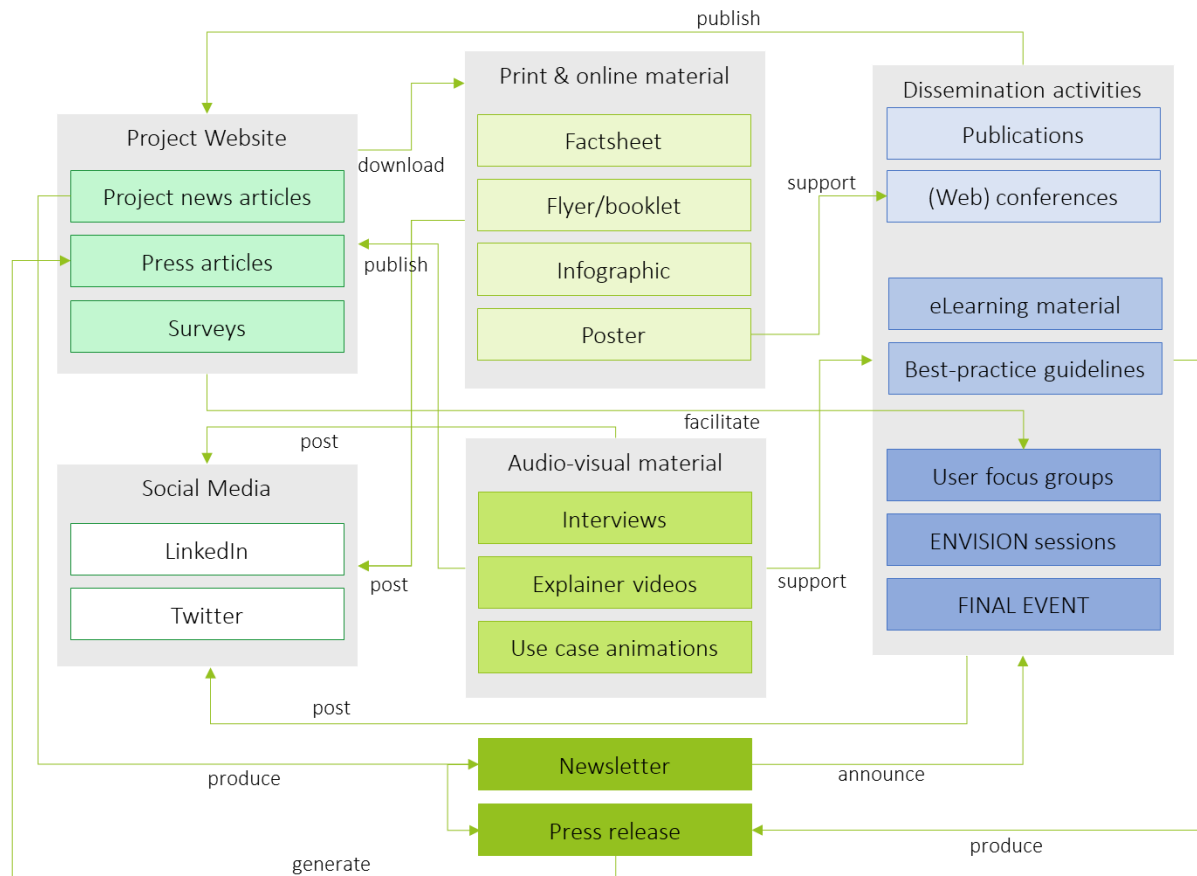


Figure 5. Dependencies of activities

## 5.2 Project Website

The project website – [www.envision-icu.eu](http://www.envision-icu.eu) – will be used to inform all stakeholder groups about the project’s aim and objectives, present the partners, disseminate the project results and outcomes that can be disclosed to the public according to the Intellectual Property Agreement. All public project material and related channels will be available or linked on the project website.

Project website
<p><b>Target group:</b> Researchers, health care providers, industry, policy makers, patients and patient advocacy groups, society</p> <p><b>Impact:</b> Keeping stakeholders updated on project developments, raising general awareness of the project in interest groups</p> <p><b>KPIs:</b> Average 500 users per month</p>

The project website was launched in month (M) 1 of the project and the corresponding and detailed, public deliverable D6.1 *ENVISION website* was submitted in M2 of the project. The main purpose of the ENVISION website is inform the public on this EU funded project, to present the multinational consortium and to serve as a platform for disseminating project results to various stakeholders.

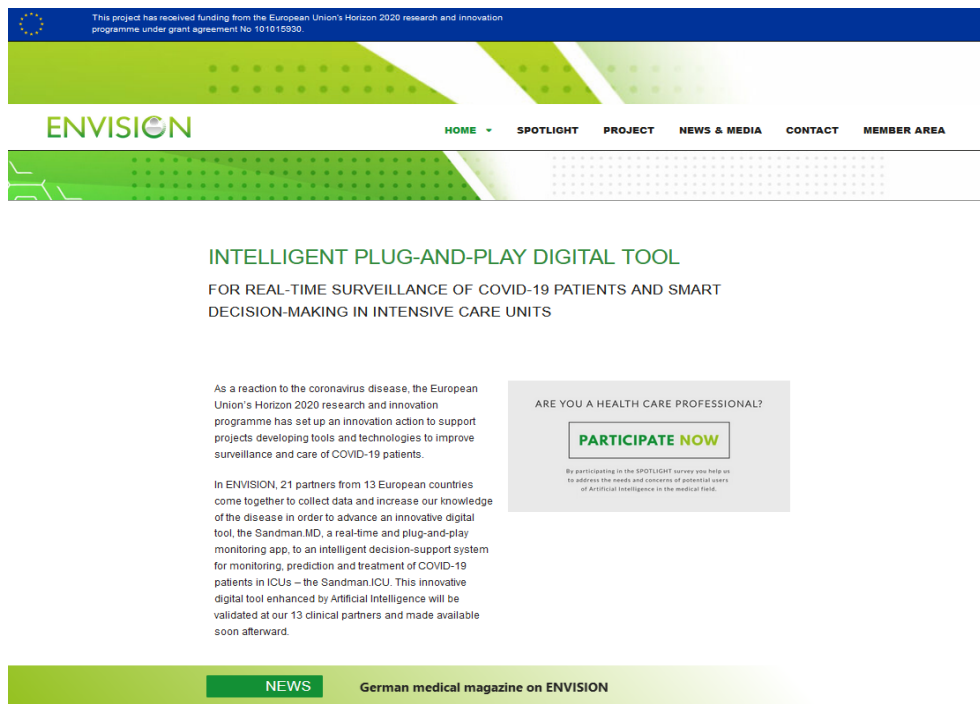


Figure 6. Landing page of the ENVISION website.

**Website structure:** The structure and the web pages are subject to evolve over time and be adapted as the project develops. The EU flag and acknowledgement is displayed at the top of every page, same as the copyright and disclaimer is being displayed at the bottom.

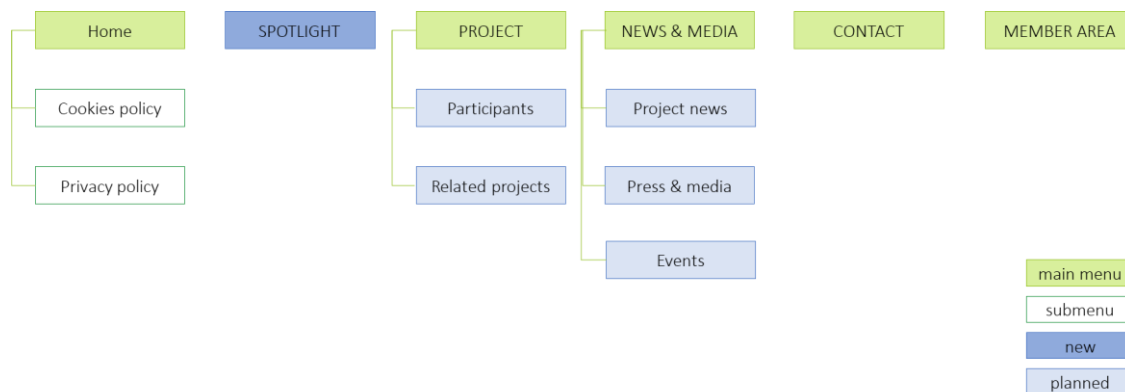


Figure 7. Current and planned structure of the project website.

**Website outlook:** The consortium envisages complementing the website with (audio-) visual material and other features. As the project progresses and yields first results, elements will be incrementally added to the website.

### 5.2.1 Project news articles and press & media articles

The current [News & Media page](#) features news articles, either from press articles on the project or news from the consortium and project results. Whenever there is an update regarding the ENVISION project or news articles that are of interest for the project, a short blog post will be published in on this page. On average, a new blog post will be created every month. Furthermore, any events or publications, in which ENVISION partners are participating or involved, will be announced. As the project evolves and



more news articles become available, the structure of the news & media page will change and separate, dedicated subpages set up to facilitate orientation. The website as a whole is the first source of information about the project. The news articles, presence of the project in press and blogs on relevant topics will reflect the impact of the project, inform about the project’s progress and generate traffic on the project website.

### 5.2.2 Surveys

The website will also serve as a platform to conduct surveys to address concerns of direct and indirect users of our project results and be able to adjust outreach and other measures if necessary.

A first service targeting healthcare professionals is currently being conducted and has been additionally distributed by our partner ESAIC via their internal network.

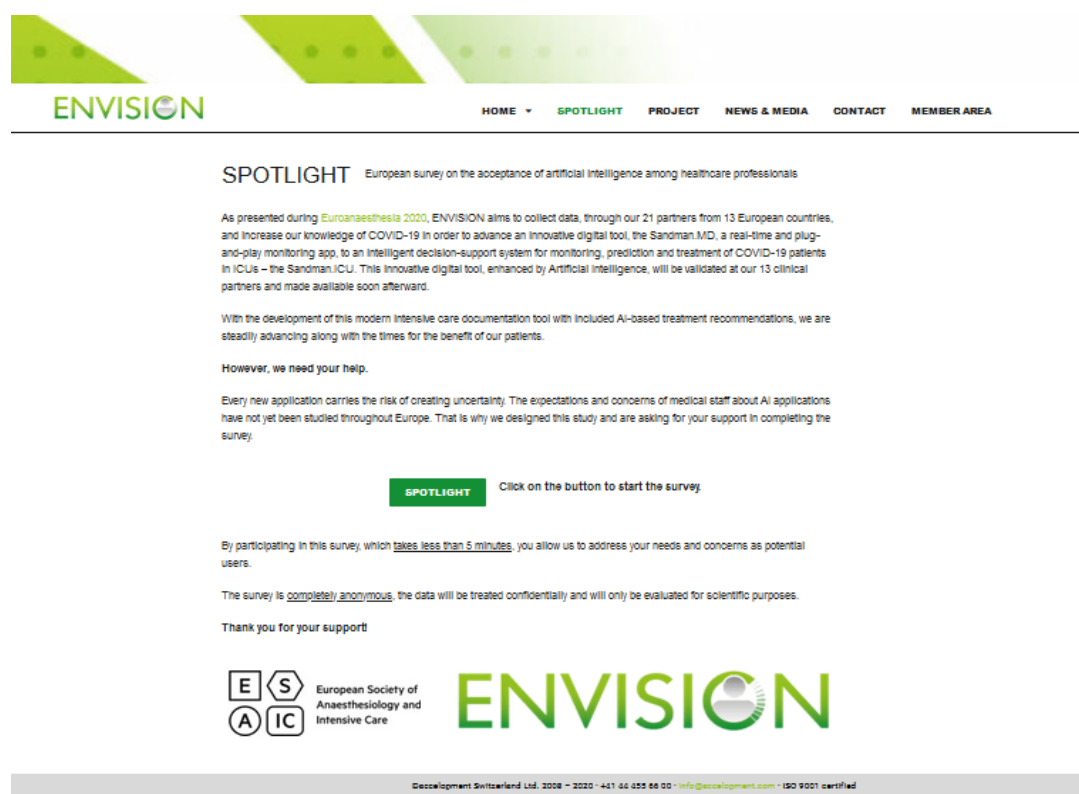


Figure 8. SPOTLIGHT survey for healthcare professionals (webpage)

### 5.3 Social media

Social media accounts such as Twitter and LinkedIn will be created and maintained in order to communicate (in a two-way exchange) about the project and about the project results. We will use and benefit from partners’ established social media to engage with key audiences. The tone for LinkedIn will be more clinical and scientific to target these groups specifically, whereas on Twitter a more personal tone is considered accurate to target society as a whole.

Social media
<p><b>Target group:</b> Researchers, health care providers, industry, policy makers, patients and patient advocacy groups, society</p> <p><b>Impact:</b> Raising general awareness of the project and creating key contacts</p> <p><b>KPIs:</b> Network of 400 contacts per social media channel</p>

### 5.4 Print and online communication materials

We will create various materials based on the project corporate design so that partners can distribute these in print and they be made available online. This will include a project flyer providing basic information, a poster and a roll-up for use in hospitals and during events, an infographic targeting medical groups and a factsheet for the general public. The materials will be translated to the languages of our partners if possible to increase outreach and understanding of the project on a national level.

Print and online communication
<b>Target group:</b> patients, researchers, health care providers, society, policy makers
<b>Impact:</b> Spreading general knowledge on the project, informing patients and healthcare providers alike
<b>KPIs:</b> >200 views, downloads and print handed out

### 5.5 Newsletters and Press releases

Quarterly newsletters based on the project’s progress reports and project news articles published on the website will be distributed to the relevant networks and made available on the website to download as pdf. Press releases including objectives, achievements and results will be developed for distribution in professional magazines, in collaboration with the partners’ PR departments. Articles published in press and media will be collected and displayed on the project website.

Newsletters & press releases
<b>Target group:</b> healthcare providers, researchers and media
<b>Impact:</b> Extend outreach of project activities and inform on the projects progress and results.
<b>KPIs:</b> At least 2 articles per month in public (online) newspapers/ magazine and 100 downloads of newsletters from website.

### 5.6 Audio-visual materials

Interactive digital audio-visual material will be created including videos presenting the project activities, interviews with key partners and use case animations to visualise complex information in a simple way and share it with the networks of clinicians and the general public. The digital media will be shared via the project website, social media channels and existing partner networks.

Audio-visual material
<b>Target group:</b> patients, society, health care providers
<b>Impact:</b> Inform dedicated target groups about project, its consortium and the possible impact on society
<b>KPIs:</b> 500 views/downloads of videos and materials

### 5.7 ENVISION sessions

The consortium will organise dedicated sessions at key conferences in the field of anaesthesia, specifically the Euroanaesthesia (annually in May, visited by 5,800 in 2019) and the World Congress of Anaesthesiologists (annually, 13,000 participants in 2019) . During these networking sessions ENVISION results and key outcomes will be presented. Topics could include big data in critical care, predictive modelling and recommendations or digital diagnostics in ICUs.

ENVISION sessions
<b>Target group:</b> Scientific & medical target group
<b>Impact:</b> Knowledge transfer, networking, detailed information and clear feedback on ENVISION objectives and results
<b>KPIs:</b> Min. 2 networking sessions, 100 participants.

### 5.8 User focus groups

This dissemination activity is closely linked to the Task 2.1 *User requirements and technical specifications* and the surveys conducted (e.g. SPOTLIGHT). GUF will organise user focus groups in moderated web conferences. ESAIC will set up and send out an online questionnaire to their network to collect additional requirements. Feedback, opinions and requirements for patient health and treatment options in ICUs will be gathered and documented in the user requirements report.

User focus groups
<b>Target group:</b> Clinicians, medical staff and hospital management
<b>Impact:</b> Direct feedback on ENVISION results and planned activities from WP1 outcomes.
<b>KPIs:</b> 3-5 web conferences, 10-20 participants

### 5.9 Conference presentations and peer-reviewed publications

Complying with Guidelines for open access to publication, data and other research outputs for Horizon 2020 working on COVID-19, results to be published in peer-reviewed journals, e.g. European Journal of Anaesthesia (editorial staff at ESAIC). The consortium will be presenting results at established international conferences such as Euroanaesthesia organised by ESAIC.

Conferences & publications
<b>Target group:</b> Scientific community, WHO, intensivists, other clinical staff
<b>Impact:</b> Peer scrutiny and validation of results, knowledge sharing
<b>KPIs:</b> Min. 8 publications. Min. 2 conference presentations per academic partner

### 5.10 ENVISION eLearning materials

The consortium will use ESAIC’s existing eLearning platform, The ESAIC Academy, to create and distribute training material for clinical staff. The aim is to train clinical staff from outside the project on the ENVISION data tool using a blended module approach. Materials will be based on the internal user guide and training materials developed in WP4 (D4.2) and adapted to train a larger clinical audience. Webinars can be attended by hospitals instead of instructor traveling to each country and be available online to a broader group for longer. Materials can be distributed and made available via ESAIC’s existing two training platforms.

eLearning materials
<b>Target group:</b> Intensivists, clinicians, medical staff
<b>Impact:</b> Training and transfer of knowledge to primary user group. Facilitate the uptake of the ENVISION solution in the future
<b>KPIs:</b> 200 views and down-loads of created material

### 5.11 Best practice guidelines for clinicians

We will provide recommendations to be considered for future guidelines and international regulations based on results from the clinical validation. The ESAIC institutionalised guideline committee with clear points on how guidelines should be set up and endorsed will be invited to comment on the ENVISION approach and best practice guidelines. ESAIC members will also be contacted for comments on the draft paper. These guidelines are not legally binding but could potentially influence regulations if our results are strong which could require countries to change their laws. The published results will be presented during the final project event.

Best-practice guidelines
<b>Target group:</b> Regulators & policy makers, relevant authorities
<b>Impact:</b> Potential to influence current practices and regulations on a national level
<b>KPIs:</b> Guidelines published in EJA (Impact factor 4.410)

### 5.12 Final event – European Parliament

The goal of the final event is to present final project results and future outlook of the ENVISION solution. The consortium plans to invite members from the established networks including members from the European Commission, decision-makers from EU member states and ESAIC’s existing networks.

Final event
<p><b>Target group:</b> Patients, patient associations, clinicians, medical staff, healthcare policy- and decision makers and payers</p> <p><b>Impact:</b> Facilitate knowledge sharing and industry engagement, ex-change of views, validation and direct feedback from expert groups</p> <p><b>KPIs:</b> 40-70 participants at final event</p>

### 5.13 Virtual and live demonstrations

Our clinical partners will present and showcase the developed app and technologies in virtual and live demonstrations. Other hospitals and key stakeholders from policy will be invited to participate to facilitate outreach and uptake. Develop virtual demonstrations using renderings and use cases to reach a larger interested audience and present healthcare providers and hospital management the opportunity to see the benefits of the ENVISION solution in case travelling is restricted.

### 5.14 Fairs and exhibitions

In order to promote the Sandman.IC, AAW will exhibit and demonstrate the digital tool at fairs and trade shows at which they have been an exhibitor with their own booths such as [XPOMET Medicinale](#), [HAI](#) and [Design Automation Conference](#) or where cooperation and market partners are represented.

## 6 Monitoring and evaluation

The overall aim of evaluating the communication and dissemination activities is to keep improving the effectiveness of the outreach plan and, thus, the overall impact of ENVISION. Clear performance indicators and targets have been set and will be tracked over the duration of the project. These are based on the objectives and the main activities described above and will be revised and updated – if necessary – in the framework of the first progress report (M10). The collection and analysis will be performed by accelCH.

The monitoring and evaluation of the outreach activities is conducted on a continuous basis to ensure an effective impact assessment, as well as the quality of the dissemination and outreach actions carried out. In this sense, the effectiveness of the dissemination and outreach activities will be monitored regularly. The evaluation can be broken down into:

- ◆ Impact measurement
- ◆ Monitoring and reporting.

### 6.1 Impact measurement

In order to measure the impact of the project and conduct a precise evaluation of the public engagement and dissemination activities, both quantitative and qualitative indicators must be considered. In this context, measuring these indicators on a regular basis is important to understand if progress is being made or if additional measures must be implemented to ensure that target values are achieved.

Online and digital channels and media often offer integrated tools to measure their impact over longer time periods via website analytics or number of followers. Here, evaluating not only focuses on the numbers but should also take into consideration that the ENVISION activities are interlinked. For example, if there is an increase of visitors to the website this does not necessarily mean the website is meeting its targets, it could be linked to a new publication, which increased interest and drew more visitors to the website. If the website then does not meet the visitor’s expectations the duration of their stay on the website will be short.





An important part of the evaluation process is to allow feedback loops to reassess and adapt activities and approaches when targets are not met. As print material does not allow automatic feedback, accelCH is highly dependent on input from all partners to firstly use and distribute material but also to send feedback so that the usefulness of materials and activities can be evaluated.

The purpose of evaluating dissemination activities is to ensure that all partners and stakeholders are aware of the results achieved in the project and that these measures are appropriate to the audience. Furthermore, although the aim is to achieve as much positive feedback as possible, negative feedback should also be taken into consideration as it can show limitations, which will help guide the project in towards maximizing its impact and facilitating future exploitation.

### 6.1.1 KPI-based quantitative assessment

The numeric verification of the activities’ impact is useful to decide on how to proceed with the implementation of the outreach plan. If after a first evaluation some activities are not yielding the expected results, they need to be adapted. To achieve a high level of efficiency, this cycle of implementation, evaluation and adaptation is the key to best benefit from learning effects within the project.

*Table 4. Overview of evaluation measures of outreach activities*

Activity 	Indicator 	Target value 	Source 
Project website	Number of visitors	Average of 400 page views per month	Website metrics (Google Analytics)
Website news articles	Number of news articles published / Traffic on news page	At least 1 article per month (min. 20 in total)	News entries on website
Newsletter	Number of downloads	100 downloads per newsletter	Website metrics
Press & media	Number of published articles	40 articles on ENVISION published	Articles collected
Twitter	Number of followers Number of tweets	300 followers 120 tweets (min. 1 tweet/week)	Metrics taken from twitter account
LinkedIn	Number of followers	100 followers 80 posts	Metrics taken from LinkedIn account
Publications	Number of publications	2 publications within project duration (20 months)	Peer-reviewed journals / publication tracking list

Flyer/Booklet	Number of booklets distributed	Distribution of 50 booklets in relevant events	Consortium information
Factsheet	Number of downloads from website	1000 downloads	Website metrics
Infographic	Number of downloads from website	500 downloads	Website metrics
Poster	Use of posters at presentations and events	Posters used in 15 events	Partner feedback
Press release	Number of press releases	3 press releases	Published
Interviews	Number of views per interview	1000 views per video	Website metrics
Use case animation	Number of views	1000 views	Website metrics

### 6.1.2 Qualitative assessment

The qualitative assessment of public engagement and dissemination activities will be based on feedback of target audiences. Whereas the numbers of the quantitative assessment will already serve as an indicator if dissemination activities have been effective, the feedback will show how the activities have been perceived. If the feedback is positive in a majority of cases it will be an indicator that the communication and dissemination activities are effective. Negative or the lack of feedback shall be analysed and if justified and possible, the implementation of the affected activities adjusted.

## 6.2 Monitoring and reporting

In order to monitor communication and dissemination activities, to maximize communication efforts and see if the consortium is reaching their expected goal of engaging the right target groups in ENVISION activities, we developed a self-monitoring tool, the *Dissemination and communication tracking list* (see Annex I) that based on the *Continuous Reporting* on the Funding & Tenders Portal. The monitoring tool will be made available in the member area of the project website as a survey form to facilitate the collection of activities by participants. The survey forms can be directly submitted by members of the consortium online and are collected by accelCH.

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## Annex I



Intelligent plug-and-play digital tool for real-time surveillance of COVID-19 patients and smart decision-making in Intensive Care Units

### Dissemination and communication tracking list

Periodically updated list of achieved and planned dissemination activities

<b>Type of activity (please select one of the categories listed below):</b> <ul style="list-style-type: none"> <li>• Organisation of a Conference</li> <li>• Organisation of a Workshop</li> <li>• Press release</li> <li>• Non-scientific and non-peer-reviewed publication (popularised publication)</li> <li>• Exhibition</li> <li>• Flyer</li> <li>• Training</li> <li>• Social Media</li> <li>• Website</li> <li>• Communication Campaign (e.g. Radio, TV)</li> <li>• Participation to a conference (presentation, poster)</li> <li>• Participation to a Workshop (presentation, poster)</li> <li>• Participation to an Event other than a Conference or a Workshop</li> <li>• Video/Film</li> <li>• Pitch Event</li> <li>• Trade Fair</li> <li>• Participation in activities organized jointly with other H2020 projects</li> <li>• Publication</li> <li>• Other</li> </ul>		
<b>Type of audience (if possible, please specify the estimated number of persons reached in each of the following categories):</b> <ul style="list-style-type: none"> <li>• Scientific Community (Higher Education, Research)</li> <li>• Industry</li> <li>• Civil Society</li> <li>• General Public</li> <li>• Policy Makers</li> <li>• Media</li> <li>• Investors</li> <li>• Customers</li> <li>• Other</li> </ul>		

Partner	Type of activity	Main leader	Posters, Presentations other activities or events – please describe Author(s), Title, Event	Date	Place	Type of audience	Size of audience	Countries addressed