Join Us to Optimize Health Through Cohort Research

Deliverable 6.4 Communication and dissemination strategy

Version 1.0

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Abbreviations

Partner abbreviations

EUR	Erasmus University of Rotterdam
MUB	Medical University of Bialystok
SocLab	Fundacja Soclab - Laboratorium Badań i Działań Społecznych
UMG	University Medicine Greifswald
UwB	University of Bialystok, Social Science Department
WB	White Bits

Further abbreviations

D	Deliverable
EC	European Commission
M	Milestone
PLUS	Polish Longitudinal University Study
RRI	Responsible Research and Innovation
RS	Rotterdam Study
SHIP	Study of Health in Pomerania
USP	Unique Selling Points
WP	Work package

Related previous documents

ID	TITLE	DATE OF COMPLETION
D6.1	Events	31/03/2021
D6.3	Plan for communication, dissemination and community building	05/09/2021
M6.1	Joint concept of communication and dissemination strategies developed for the citizens science board	30/04/2021
D5.1.	An overview and critical view on ongoing initiatives that adapted RRI in their educational programs to stimulate engagement of citizens in science.	01/12/2021

Executive summary

The overall aim of JoinUs4Health is to combine Responsible Research and Innovation (RRI) and crowdsourcing as converging approaches to promote inclusive innovation and citizen engagement in cohort research. The applied responsible crowdsourcing approaches allow citizens and other stakeholder groups to formulate research problems, develop a research project or contribute to existing research by interacting via a customized online platform.

The project objectives are to:

1. ESTABLISH and REVIEW a conceptual framework
2. DEVELOP, TEST and APPLY technology to facilitate engaging various actors as part of cohort research
3. EXPLORE, IMPLEMENT and MONITOR institutional changes and incorporate RRI into the governance framework of three institutions conducting cohort studies
4. ADVANCE RRI and citizen science into the mainstream of public engagement, science communication and education
5. PROMOTE engagement and COMMUNICATE and DISSEMINATE outputs via traditional and innovative means

An appropriate communication and dissemination strategy is essential to achieve these objectives, realise the benefits of RRI approaches and ultimately fulfil the overall aim of the project.

This deliverable is a recapitulation and summary of the work related to the dissemination and communication issues of the project, which were conceptualized within the consortium during the first year (conceptualization phase) – see Section "Related previous documents". The target audience includes any potential stakeholders of the project results (scientific community, industry, policy makers, investors, civil society, etc). Sections 1 and 2 provide an overview of the background and underlying assumptions, respectively. Target groups are described in section 3 and communication and dissemination objectives in section 4. In section 5, we outline the shift in our communication and dissemination strategy and related online and offline activities.

1. Background

Note: The term citizen scientist refers to any non-professional scientists, i.e. also representatives from business/industry and the education community as well as policy makers and other societal groups.

The three participating cohort studies in Bialystok, Poland (Polish Longitudinal University Study; PLUS), Rotterdam, the Netherlands (Rotterdam Study; RS) and Greifswald, Germany (Study of Health in Pomerania; SHIP) aim to provide reliable and scientific knowledge in the field of health and well-being of individuals and local communities. While the results from these cohorts have been used to guide policy and practice that benefit local communities, mutual dialogue between the scientific community involved in this research and the populations they study has not been thoroughly integrated into the governance and practices of these studies.

Applying principles and practices of Responsible Research and Innovation (RRI) can offer a variety of benefits:

- Including perspectives from local communities regarding what is investigated in these cohort studies and how these studies are conducted, to better align cohort research with societal expectations
- Ensuring mutual dialogue between researchers and research users, in a way that findings are more easily translated into practice and practice informs how research is conducted
- Increasing ownership and collective responsibility of cohort research from the local communities, thus promoting citizens' confidence and interest in such research and in science in general
- Empowering local communities to initiate and carry citizen science projects, as well as take part in existing research projects as citizen scientists
- Valuing different types of knowledge, integrating experiential and place-based knowledge into cohort research
- Disseminating the accumulated knowledge in languages specifically targeted to the stakeholder group(s)

The result is to promote a systematically increasing involvement of the local community in co-creating science, including cohort studies, at each of its stages.

2. Underlying Assumptions

2.1. Communication and dissemination assumptions

Communication and dissemination activities in JoinUs4Health are inseparably connected with building the engagement process to achieve project goals. Communication and its quality may significantly influence engagement. The number of people involved in co-creating science may determine the scale of dissemination. The more participants are involved, the more effective the communication will be, since dedicated users will fulfil the role of „the apostles of the good news", widening the reach of the project. On the other hand, greater dissemination of project's results leads to a larger number of informed people and thus to a larger "base" for reaching out to further contributors (e.g. co-creators, reviewers, facilitators, etc.).

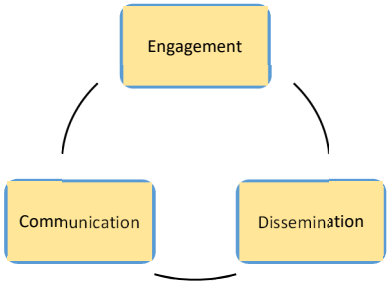

Figure 1. Relations between engagement, communication and dissemination

Although we have shown an inextricable relationship between the three categories, there are differences between communication and dissemination. In the European Citizen Science Association's 10 Principles of Citizen Science (Robinson et al. 2018) it is written that 'citizen scientists receive feedback from the project' (communication); 'citizen science data and metadata are made publicly available and, where possible, results are published in an open-access format'; and 'citizen scientists are acknowledged in project results and publications' (dissemination). This shows that, whilst distinct from communication, dissemination remains important in citizen science: Participants value access to project data and being informed about scientific findings and outcomes throughout a project (de Vries et al. 2019).

The European Commission indicates that **communication** actions go beyond dissemination: apart from project results, they concentrate on the project in general, accenting the societal challenges or added-value of the project. Thus, communication activities target a much wider and more diverse audience, including the use of different media and targeting the general public. To build awareness and communicate the goals and activities of the project and its added value due to the participating cohort projects in Greifswald, Rotterdam and Bialystok effectively, we will implement accessible tools, having in mind the use of appropriate language suited to specific groups of the community. Communication activities (will) include: visual identity (logo, graphic charter, …), project website, leaflets and flyers, social media, videos, press releases, etc.

In parallel, **dissemination** activities will be carried out aimed at maximising the impact of research results obtained with participants in the public domain. Therefore, the target audience of dissemination activities are any potential stakeholders of the project results: the scientific community, industry, policy makers, investors, civil society, etc. (we list them in section 3 "Key target groups"). Consequently, we will list all types of potentially primary and secondary results in the dissemination plan, as well as their target audience and the means to achieve them: scientific papers, public databases, workshops, etc.

For the first year of the project (2021 - referred to in this document as the conceptualization phase), we focussed mainly on communication to familiarize people with the core ideas of the project and its added value as well as activities that will be carried out during the second year (2022 - implementation phase), when the platform and associated tools become available to co-create research projects.

2.2. Facilitation of engagement through communication

The communication during the conceptualization phase provides an important starting point to initiate a "snowball" effect of engagement. Therefore, our goal will be to facilitate engagement through communication (Figure 2) built on the assumptions of participatory communication for empowerment and development.

Bessette (2004) defines participatory development communication as "a planned activity, based on the one hand on participatory processes, and on the other hand on media and interpersonal communication, which facilitates a dialogue among different stakeholders, around a common development problem or goal, with the objective of developing and implementing a set of activities to contribute to its solution, or its realization, and which supports and accompanies this initiative". Servaes (2005) elaborates that the point of departure for participatory communication must be the community: It is at the community level that the problems of living conditions are discussed and interactions with other communities are elicited. The most developed form of participation is self-management. This principle implies the right to participation in the planning and production of media content. However, not everyone wants to or must be involved in its practical implementation. More important is that participation is made possible in the decision-making regarding the topics covered in the messages and selection procedures.

Common practical elements in communication for empowerment are present, as follows: provision of access to information, putting users/beneficiaries and local people in control, building local people's capabilities in communication, emphasis on small and appropriate media, learning with partners, working as a collective, capitalizing and building on felt needs, making it enjoyable, giving them hands-on experience, sharing resources (Cadiz, 2005).

It will be an enrichment of our current approaches, which were based on traditional marketing communication strategies. The synergy resulting from the partners' experience in crowdsourcing, RRI methodology, citizen science and marketing may contribute to the development of a more effective

communication strategy and dissemination of results, taking into account the perspectives of societal actors who will become involved in the project.

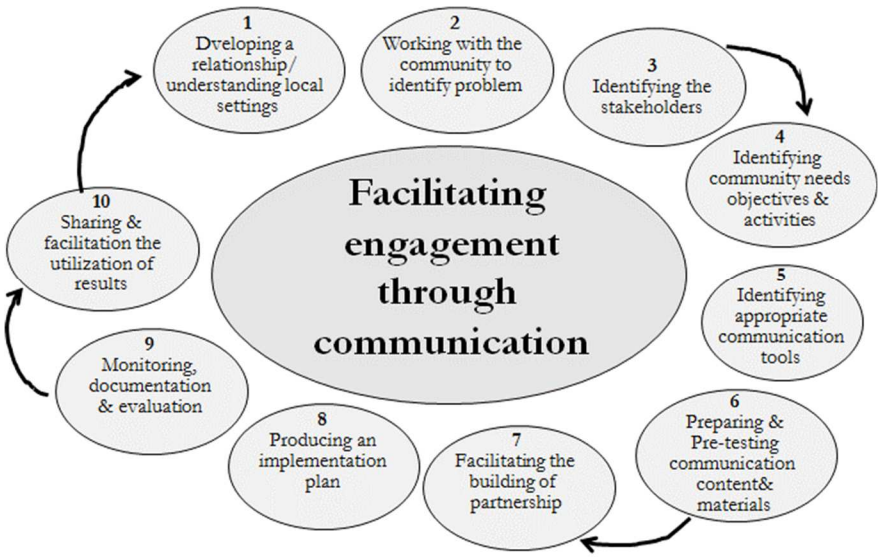

Figure 2. Facilitation of engagement through communication

Ad 1. <u>developing a relationship / understanding local settings.</u>

The first communication activities of the project in addition to building awareness will seek to build relationships with future participants. Already at the stage of submitting the application, such a bond has been established with the participants of the cohort studies, from among which the first co-creators could emerge. Depending on the featured topic(s) or other topics arising via interactions, related stakeholder (groups) and networks can be targeted specifically to raise awareness and offer structures and processes for potential interactions.

We also take into account differences in local settings, for example measured by the level of social capital, which can be a proxy for one's willingness for engagement. Bearing in mind that according to the Social Capital Index (https://solability.com/the-global-sustainable-competitiveness-index/the-index/social-capital date access & index values from 18.02.2022), social capital is lower in Poland (53,7) in relation to Germany (56,1) and the Netherlands (57,9), and Bialystok within Poland and Pomerania within Germany are both structurally weak rural regions in their countries. Furthermore, Bialystok Plus is the youngest cohort wanting to influence local settings. Therefore, we have planned a number of offline activities in Bialystok aimed at activating potential co-creators, since we know that awareness itself is not enough to build a drive for participation.

Ad 2. <u>Working with the community to identify a problem</u>

Lack of community involvement in science and dissemination of research results has been diagnosed as important issues at the level of the entire European Union. Research-performing organisations

have yet to adopt strategies to mitigate these issues, and scientists themselves still employ one-sided communication about their research, focusing on a narrow (often only academic) target audience without allowing for mutual dialogue. Therefore, the project platform will provide structures and processes to involve community members in the process of co-creating science and in the implementation of institutional changes in the cohort institutions conducting cohort research.

Ad 3. Identifying stakeholders

In the conceptualization phase (2021), consortium members specializing in marketing communication identified a priori potential project stakeholders (see section 3 "Key target groups"). In the implementation phase (2nd year of the project), along with the commencement of extensive communication activities, we will revise the assumptions adopted and adjust them to the achieved communication results. Representatives of individual stakeholder groups joining the project will help us evaluate the implemented assumptions and optimize their effectiveness.

Ad 4. Identifying community needs, objectives & activities

The internet platform, created in the first year of the project (in the conceptualization phase), will serve as a place to identify problems of the local community and their needs. In Bialystok, research cafes, schools competitions, a health festival and quadruple helix workshops will also serve this purpose. In order for these activities to fulfil their role, most of them will be used to redirect the attention of message recipients directly to the internet platform or indirectly via the project website.

Ad 5. Identifying appropriate communication tools

Bearing in mind the circular nature of facilitating engagement through communication, in each subsequent cycle (conceptualization phase - 2021, implementation phase - 2022, maintenance and evaluation phase - 2023) we will optimize communication tools that are most effective in reaching representatives of specific societal groups. In the first cycle (conceptualization phase), the platform was not yet functioning as a place of facilitation, so that we can only presume the frequency distribution of the representatives of the stakeholder groups willing to co-create science. A list of online and offline tools (see section 5) was developed to build awareness of the project. In the next cycles (implementation phase, maintenance & evaluation phase), we hope to evaluate selected tools together with interested co-creators and optimize their composition.

Ad 6. Preparing and pre-testing communication content materials

When community representatives join the project (implementation phase), they will actively support consortium members in the preparation and evaluation of content materials. We hope that with the input from societal stakeholders will make communication materials more accessible to potential stakeholders in terms of language and format, thus increasing engagement of other members of local communities

Ad 7. Facilitating the building of partnership

From the second year of the project (implementation phase), along with the launch of the online platform and after gaining awareness among individual societal groups, we expect that working groups (partnerships) devoted to the research topics within the platform will be formed.

Ad8. Producing the implementation plan

As mentioned above, in the conceptualization phase, the main principles of the communication and dissemination strategy will be developed by communication specialists. Following, such communication and dissemination strategy will be implemented in order to build awareness of the platform and set up the first working groups. In the meantime, with the appointment of advisory bodies, i.e. Citizens Science Board and Evaluation and Monitoring Group, subsequent cycles of engagement facilitation through communication will be updated with the active participation of societal contributors.

Ad9. Monitoring, documentation & evaluation

In order to ensure the effectiveness of facilitating engagement through communication, it is necessary to evaluate the adopted strategy and verify its assumptions. This will be accomplished, firstly, by evaluation studies and, secondly, by the Evaluation and Monitoring Group established for this purpose. On the basis of the results obtained, corrective steps will be taken to maximize the effectiveness of activities.

Ad10. Sharing, facilitation & utilization of results

All products generated in the project (including reports of working groups, scientific articles, etc.) will be disseminated through conceptualized communication channels (see section 5), while taking into account the recipients of the message. These outputs will be made publicly available and, if possible, results will be published in an open-access format. In subsequent phases of the project, in the case of suggestions from contributors, the list of communication channels may be revised and extended. When communicating to the general public, the aspect of clarity of the message and the language used will be taken into account. All results developed will be freely available to enhance the dissemination process.

Summing up, we will ensure that communication activities have a two-way direction, with a focus not only on scientific and project outcomes, but also on outcomes generated through mutual dialogue with stakeholders (general public, community, cohort participants, researchers, NGO representatives, policy makers, business & industry representatives). To achieve these conditions, the 10 steps circular strategy of facilitating engagement through communication (see Figure 2) will be implemented.

However, at the very beginning of the project, in order to be able to implement RRI and crowdsourcing solutions into communication activities, awareness of the project must be built using traditional marketing tools. Therefore, in the first year of the JoinUs4Health project, most of the marketing activities has focussed on the preparatory work of communication aimed at building awareness among the defined stakeholder groups that will be described below (see section 3 "Key target groups"). When the awareness of JoinUs4Healt reaches the appropriate level among representatives of particular groups, we

hope that individuals who will become science co-creators will join the process of communication and dissemination, thus contributing to each step of Figure 3.

Referring to the achievements of marketing sciences and the hierarchy of communication effects (Figure 3), we can a priori assume that only people who are aware of the JoinUs4Health project can actively engage in and become participants (science co-creators).

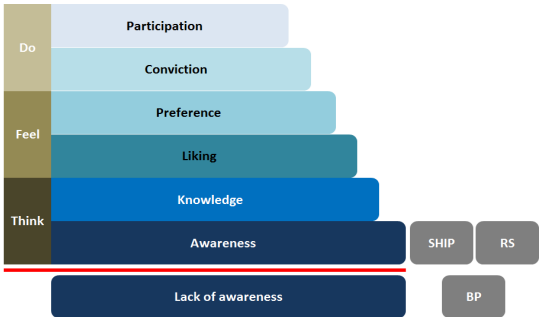

Figure 3. Hierarchy of effects model

Lavidge, R.J. & Steiner, G.A. (1961), "A Model for Predictive Measurements of Advertising Effectiveness", Journal of Marketing 25(6), 59-62.

Additionally, we also know that the level of stakeholder engagement depends on the impact of communication (Figure 4). For a person to follow the think-feel-do path and achieve the level of "participation", conventional communication tools are not enough. They will have to be reinforced by activities supporting the relationship with participants and involving them in the process of co-creating science. We anticipated a number of such activities and events. These will be, among others, an online platform, which is the heart of the project, but also research cafes, quadruple helix workshops, schools competition, health festival. We hope that a more direct contact with the community will allow us to encourage a greater percentage of people to move to the "do" level.

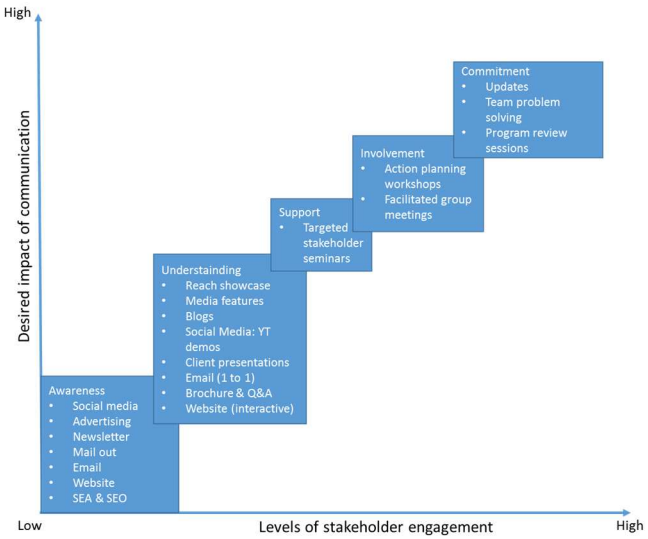

Figure 4. Levels of stakeholder engagement needed for desired impact of communication (adapted from: Gardner 2015; Quirke 1996)

3. Key target groups

In order to be able to implement the principles of participatory communication as soon as possible, firstly, the segmentation of potential project participants must be made in order to effectively apply adequate forms and tools of communication that promote a willingness to participate in the first phase of the project. Therefore, it is imperative to create direct and targeted information which will not be generic (for everyone) via tailored communication channels.

Due to the lack of funds for proper quantitative segmentation research on the general population, based on the experience of the consortium members, we have made a theoretical division into potential stakeholder groups (segments) of actors from which participants and recipients of the project results can be derived. On this basis, six fractions have been extracted, which potentially will be the key stakeholders of the project, where citizens and the other stakeholder groups, although presented separately, are treated as interpenetrating (Figure 5). The size of the segments is now preliminary and will be verified after launching the project's internet platform and related promotional and marketing activities encouraging representatives of individual segments to engage in the project. The grey ellipses and arrows inside the graph represent the process of increasing engagement in each of the segments in the following years of the project. Actors who will be involved in the project will both engage new representatives of the segments, but will also participate and create dissemination materials, thanks to which the "base" of individuals informed about the project will grow systematically.

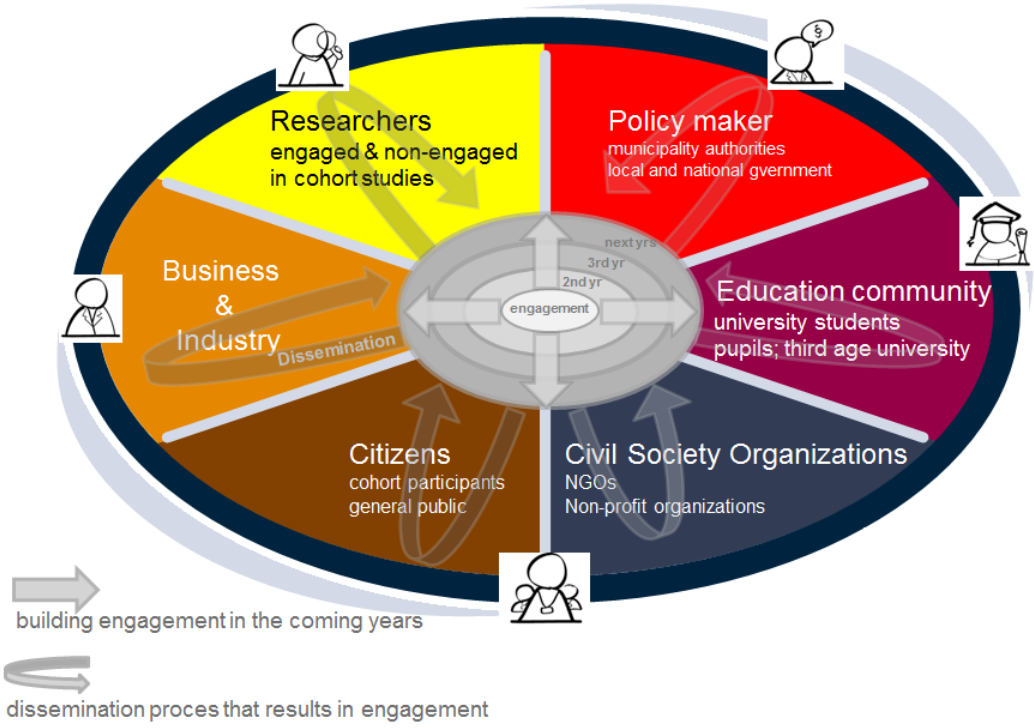

Figure 5. Model of building engagement and dissemination of results amongst stakeholder groups

The suspected increase in interest and devotion is illustrated by the consumer funnel, which clearly combines the stages of the recipient's awareness of the brand - the project (Figure 6). The cardinal goal of marketing activities in the first phase will be to gain the highest possible awareness level, because only people who know about the ongoing project can gain further knowledge about it, like it, target their preferences and beliefs to finally engage in it.

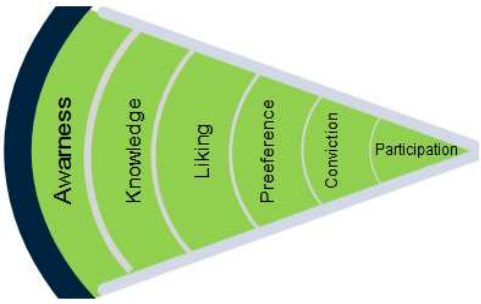

Figure 6. Marketing participants funnel

The a priori segmentation made by consortium members during an internal workshop is not an exhaustive division and there may be smaller fractions within the segments. In order to prepare as precisely as possible for the process of building awareness, personas were conceptualized as part of the workshop on the "Brand Spirit" methodology, who defined representatives of particular groups (personas). Thanks to a more detailed description of personas, online marketing communication tools and, according to the feedback of the workshop participants, the most effective ways of activating them (e.g. liking the project or expressing the will to become its member) were selected (Table 2). Additionally, the events that could serve this purpose were indicated. A detailed description of the profiles is included in M6.1. "Joint concept of communication and dissemination strategies developed for the citizens science board".

To influence awareness and ensure that knowledge and experience are shared, it is crucial to profile the personas, the "typical" representative of each stakeholder group, who is vitally interested in the project outcomes, as well as those who may need information about the activities we are doing. For this reason, any dissemination activity, including the implementation of an internet platform, will facilitate public discussion and involve various categories of stakeholders. With this in mind, we categorize and broaden internally who the main stakeholders are. Based on the above stakeholder groups, we have created a slightly wider list of people with their profile and reasons why they might want to get involved, as well as possible online and offline channels for their activation.

Bearing in mind that the key goal of the project is to involve local communities in co-creating science, based on the guidelines of A. Land-Zandstra et al. (2021), we catalogued a list of potential challenges that may affect the participation of individuals, once awareness is achieved. In order to counteract them, a list of remedies is proposed, which will be included in the process of communication and dissemination (Table 1).

Table 1. Challenges to participation in each phase of citizen science projects and remedies

Phase of project management	**Phase of the participant experience**	**Challenge or barrier to participation**	**Remedies**
Conceptual & Implementation Phase **Recruitment**	Motivation to join a project	Communication is not inclusive	Develop communication strategies based on target audience
		Project goals are not clearly communicated to tap into motivations	Understand what motivates participants in citizen science
	Early stages of engagement	Finding the right task that fits participants' interests, skills, and time availability	Conduct a preliminary assessment of motivations, expectations, availability, and barriers of participants
		Understanding how one can contribute to the project	Communicate clearly tasks for participants, explain aims of the project and the meaning of participants' work
		Not feeling integrated in a well-established group	Plan for welcome of incomers
Implementation Phase & Maintenance & evaluation Phase **Retention**	Perceiving benefits and satisfaction	Motivations are not met	Conduct longitudinal research about motivations throughout the participant experience
		Costs of participation	Identify participants' perceived benefits, assess satisfaction, and ensure benefits exceed the costs
	Continued engagement	Lack of efficiency in data flow	Data collected by citizens must be shared and used
		Not feeling accomplished	Communicate results and impact of contribution
		Not feeling appreciated	Understand how to reward different types of people (training, give responsibility, reward, recognition, feedback)
		Not feeling acknowledged	Acknowledge contribution, giving adequate recognition of achievements on the website
Implementation Phase & Maintenance & evaluation Phase **Evaluation and wrapping up**	Overall experience and role in the wrap up	Feeling that expectations have not been met	Ask for feedback and for unresolved issues to set more realistic expectations for future projects
		The project is archived	Give open access to the documentation produced during the project
		Accessibility of data	Provide access to data to the wider audience
		What's next?	Guide participants to new projects

Table 2. A synthetic list of personas along with an indication of their online activity, activation methods and events.

NAME OF PERSONA	PROFILE	REASONS OF ENGAGEMENT	ACTIVITIES FOR BUILDING AWARENESS:	WAYS OF ACTIVATION – UNIQUE SELLING POINTS (USP)
RESEARCHER / PHYSICIAN	This category includes individuals who perform research activities. Health experts, university professors, students, etc.; candidates for future university departments for implementing institutional change are also included in this category.	• the possibility of popularizing the results of the conducted research • tutoring and the opportunity to transfer your knowledge to science enthusiasts • the opportunity to participate in the Citizen Science Board and influence the development of the project • the possibility of carrying out scientific research on the basis of platform members as part of working groups, with their active participation	**Online:** • social media, inc. Research Gate and Academia, Linked-In • Google Scholar, Google • scientific websites, • email • newsletter • meetings of the monitoring and evaluation groups and citizen • webinars to introduce the platform **Offline:** • activities piloted in Bialystok (quadruple helix workshops, research café, Science and Health Festival) • JoinUs4Health conferences • articles in scientific journals	• building awareness of the project and platform across all online and offline channels • clear communication about the nature of the research and the scope/rules of its sharing • easy contact for information about the engaging in the JoinUs4Health mechanism • **USP: access to reliable data and respondents**
PERSON WITH A SOCIAL-ORIENTED GOAL	This category includes people who are oriented towards pro-social activities, e.g. members of non-governmental organizations, participants of the university of the third age, etc.	• the possibility of using cohort data to influence local authorities in shaping health policy • the possibility of cooperation with scientists and local authorities on solving local problems that bother the community, local activists • exchange ideas to ensure health • showing the idea of crowdsourcing and the advantages of RRI approach • the possibility of influencing the directions of project development and undertaken research topics within working groups • support for postulates that community activists strive for with scientific knowledge	**Online:** • social media especially Facebook, Twitter • Google, • email • newsletter • websites of associations of non-governmental organizations **Offline:** • kick-off meeting • activities piloted in Bialystok (quadruple helix workshops, research café, Science and Health Festival) • JoinUs4Health conferences • events related to the platform • information events organized by cohorts	• building awareness of the project and platform across all online and offline channels • **USP: platform as a tool of generating reliable data to influence on policy makers**

NAME OF PERSONA	PROFILE	REASONS OF ENGAGEMENT	ACTIVITIES FOR BUILDING AWARENESS:	WAYS OF ACTIVATION – UNIQUE SELLING POINTS (USP)
POLICY MAKERS/ DECISION MAKERS	This category includes local, regional, national and European authorities and policy makers active in the social and health sector. It also includes public administration bodies and local, regional educational systems	• possibility of quick and reliable information about what residents need and what bothers them. • possibility of supporting the decisions made with the results of the work of working groups in the form of standardized reports • raise awareness for the situation of RRI • engage the "opinion makers" to promote the JoinUs4Health platform into policy suggestions to influence possible future national and EU efficient regulations • assisting in pushing for policy making at national, European or international level	**Online:** • social media: especially Twitter and Facebook, Linked In • direct email • newsletter • webinars **Offline:** • activities piloted in Bialystok (quadruple helix workshops, research café, Science and Health Festival) • JoinUs4Health conferences • events related to the platform • information events organized by cohorts	• **USP**: **platform a an source of information, what does the local community want**
MEDICAL FIELD SPECIALIST	A professional medical practitioner	• willingness to broaden the knowledge of medicine • possibility of conducting discussions on topics implemented on the platform. • possibility of cooperation with scientists in the field of medicine • willingness to cooperate with the environment • possibility to test your hypotheses based on e.g. data from cohorts	**Online:** • social media, • Google, • medical websites, • email • portals associating doctors **Offline**: • activities piloted in Bialystok (quadruple helix workshops, research café, Science and Health Festival) • seminars to introduce the platform • JoinUs4Health conferences • events related to the platform • information events organized by cohorts	• building awareness of the project and platform across all online and offline channels • user-friendly data analysis (possibly ready-to-print resources, e.g. a leaflet) • **USP: reliable data from cohorts and space for exchanging views with other specialists**
TEACHER / EDUCATOR	Primary and High school teachers	• possibility to diversify lessons through the use of modern and interactive materials based on data and reports from the project platform based on cohort results • facilitate teaching activities through the availability of ready-made lesson scripts on health and related topics • possibility to conduct a research project together with students as part of a course conducted with them • showing the advantages of RRI that they could instill in students • showing the advantages of the platform, thanks to which they could carry out activities with students	**Online:** • social media, especially Facebook, YouTube • Google, • educational portals devoted to science • educational portals for teachers • email • sending information to schools and requesting them to be posted on their websites **Offline:** • activities piloted in Bialystok (quadruple helix workshops, Science and Health Festival, competitions for secondary schools) • seminars to introduce the platform • JoinUs4Health conferences	• ready-made lesson plans for health issues based on data from cohort studies • webinars for teachers • **USP: platform as an easy and attractive space and tool to make lessons more attractive and easier to prepare.**

NAME OF PERSONA	PROFILE	REASONS OF ENGAGEMENT	ACTIVITIES FOR BUILDING AWARENESS:	WAYS OF ACTIVATION – UNIQUE SELLING POINTS (USP)
			• events related to the platform	
COLLEGE AND HIGH SCHOOL STUDENT	High school students and students interested in aspects of medicine and health	• possibility to prepare for project work by jointly conducting a research project with a scientific supervisor • expanding knowledge in a selected area • opportunity to see teaching materials developed by the University of Rotterdam	**Online:** • social media: especially Facebook, Instagram, YouTube, Tik-Tok • Google, • Email • school / university intranet • websites of universities and departments, high schools **Offline:** • Citizen Science Boards • activities piloted in Bialystok (Science and Health Festival, competition for high-school pupils) • events related to the platform	• building awareness of the project and platform across all online and offline channels • user-friendly data analysis • webinars • newsletter • **USP: platform as a space of ideas for research, play and fun.**
SCIENCE ENTHUSIAST	This category includes people from both the local community and the country level who, although not professional scientists, are vitally interested in science.	• possibility of carrying out a research project under the supervision of a scientific supervisor, and in the future, independent management of a research topic via an internet platform • opportunity to expand knowledge in a selected area and ask direct questions to scientists • possibility of suggesting and influencing research topics carried out on the internet platform • belonging to a community with similar interests	**Online:** • social media, especially Facebook and YouTube • Google, • email • newsletter **Offline**: • Citizen Science Boards • meetings of the monitoring and evaluation groups and citizen • activities piloted in Bialystok (quadruple helix workshops, research café, Science and Health Festival) • seminars to introduce the platform • JoinUs4Health conferences • events related to the platform	• building awareness of the project and platform across all online and offline channels • clearly presented forms of participation in the project • user-friendly data analysis • newsletter • **USP: platform as a creative space that joins the science enthusiasts on a level of local, community but also national and international**

NAME OF PERSONA	PROFILE	REASONS OF ENGAGEMENT	ACTIVITIES FOR BUILDING AWARENESS:	WAYS OF ACTIVATION – UNIQUE SELLING POINTS (USP)
PERSON WITH PERSONAL HEALTH NEED	people looking for reliable knowledge about their own health or their relatives' health	• access to reliable medical knowledge based on cohort data • possibility to submit a topic in the framework of the working group, which would be studied with specialists in the field	**Online**: • social media, especially Facebook, Instagram and YouTube • Google, • email **Offline**: • activities piloted in Bialystok (quadruple helix workshops, research café, Science and Health Festival)	• building awareness of the project and platform across all online /offline channels • positioning of key phrases on Google • user-friendly data analysis • guidelines: "if you have symptoms / are in an age group.... - then think about getting tested" • **USP: platform as a space where ones can broaden the knowledge of intriguing matters concerning health**
PERSON NOT INTERESTED IN THE HEALTH-RELATED ISSUES	"Outsiders" who became interested in communication materials and decided to get acquainted with the project's website or platform.	• curiosity • intriguing issues used in marketing communication	**Online:** • social media, especially Facebook and Instagram • Google, • email **Offline:** • activities piloted in Bialystok (Science and Health Festival)	• building awareness of the project and platform across all online and offline channels • interesting, attractively presented information based on data from the project available in social media/media • **USP: Join us for health!**
JOURNALIST	Journalists who are looking for interesting topics to describe.	• ready-made reports generated by working groups in an open version, possible to use in press articles	**Online:** • social media, especially Twitter, Facebook • Google, • email **Offline:** • seminars to introduce the platform • JoinUs4Health conferences • events related to the platform • activities piloted in Bialystok (quadruple helix workshops, research café, Science and Health Festival)	• building awareness of the project and platform across all online and offline channels • user-friendly data analysis about new conclusions sent to a selected group of media representatives • contact for the media available on the website / spokesperson • availability of a person who can talk to the media • **USP: free, adequate, fresh and interesting scientific materials to use in articles**

By concluding the topic of defined stakeholder groups and the detailed personas built on their basis, we also know that the engagement of each individual actor is influenced by our own, internal motivations. Their categorization, proposed by Levontin et al. (2018) is presented in Table 3. It is extremely useful in the context of facilitation of engagement through communication, because apart from the unique selling points described in Table 2, it allows to include behavioural motives in communication activities.

Table 3. Categories of motivation, based on Levontin et al. (2018)

Motivation category	Definition in terms of motivational goals	Example
Self-direction	Independent thought and action – choosing, creating, exploring	'I want to learn'
Stimulation	Excitement, novelty, and change	'I strive to challenge myself'
Hedonism	Pleasure and sensuous gratification	'I want to have fun'
Achievement	Personal success through demonstrating competence according to social standards	'I am seeking fame'
Power	Power through exercising control over people and material and social resources	'I want to gain recognition and status'
Face	Security and power through maintaining one's public image and avoiding humiliation	'I want to enhance my reputation'
Security	Safety, harmony, and stability of society, of relationships, and of self	'I want to live in secure surroundings
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms	'Other people I know are participating'
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact	'I am happy to help'
Universalism –social	Commitment to equality, justice, and protection for all people	'I want to improve our society'
Universalism – nature	Preservation of the natural environment	'I want to help wildlife'
Routine	Every day, ordinary, and regular	'I was doing this activity anyway'
Belongingness	One's feeling of being secure, accepted, included, valued, and respected	'I want to socialise with other people'
Help with research	Contribution to science	'I want to contribute to science'
Teaching	Providing an educational opportunity to others	'I want to share my knowledge and experience'

4. Communication and dissemination objectives

The main and most general **communication objective** will be the promotion of the project and its results. We can segment this general objective into more specific objectives and describe the activities according to the project's duration phase:

Table 4. Specific communication objectives by JoinUs4Health project phase. The implementation starts once the online platform becomes available as a core tool to implement the responsible crowdsourcing methodology

No.	Objectives	Conceptualization phase (1st year)	Implementation phase (2nd year)	Maintenance & evaluation phase (3rd year)
1.	**promotion by increasing the general public awareness about JoinUs4Health**	mainly in the local community where cohort studies are carried out	broaden, outside the local community	by sustaining obtained awareness and ongoing evaluation of main indicators of brand equity
2.	**promotion directed on the engagement building**	by tailored communication aimed at key target groups	by implementing participatory communication approach	evaluation and modification of undertaken actions and tactics
3.	**promotion of the internet platform by directing the attention of the message recipients**	announcement about further platform through project web-site and communication tools (mainly social media)	promoting the platform amongst social actors via online and offline tools	maintaining and increasing the commitment index among defined social actors and ongoing evaluation
4.	**promotion of project's events**		promoting the events via online and offline tools	promoting the events via online and offline tools

Ad1. to build public awareness of the project and its goals in the three partner countries, both in the local community where cohort studies are carried out and in subsequent years at the national level.

Ad2. to engage as many actors with different backgrounds (representatives of defined societal groups) as possible in co-creating science via the project's internet platform. In order to strengthen the engagement process, appropriately selected communication channels and tools, both online and offline, scientific publications and networking events will be used.

Ad3. to promote the internet platform by directing the attention of the message recipients.
JoinUs4health events, contributing to increase its attendance and potential engagement.

Dissemination activities will aim at maximising the impact of project results in the public domain, making them easily available to different stakeholder groups and public audiences with interest in its outcomes. This will be achieved by the use of communication channels (website, internet platform, social media, general press, etc.), but also by enabling open access to scientific publications, and the use of other mechanisms that are analysed ahead in this document. The following are the main dissemination objectives:

- strengthen the engagement process of representatives of defined societal groups to join the project via internet platform;
- disseminate knowledge, methodologies and technologies developed in the project;
- stimulate an early adoption (starting from the project lifetime) of JoinUs4Health results via the platform.

5. Online and offline communication and dissemination activities for engagement building

Our preliminary assumption is that people need to first be made aware of the project before they would be motivated to engage in the co-creation process and contribute to scientific topics that would be investigated within project's internet platform. However, through an internal dialogue between the consortium partners, we are developing a common vision that broadens our previously held ideas about engagement and are moving towards a more holistic view on science communication. This includes incorporating the principles that underlie the crowdsourcing methodology into our strategy in the implementation phase of the project, when the awareness will be obtained amongst pre-defined target group representatives. Figure 7 outlines the differences between the frameworks at the concept phase (left pane) and that we hope to incorporate into our communication strategy in the project implementation and maintenance & evaluation phase (right pane).

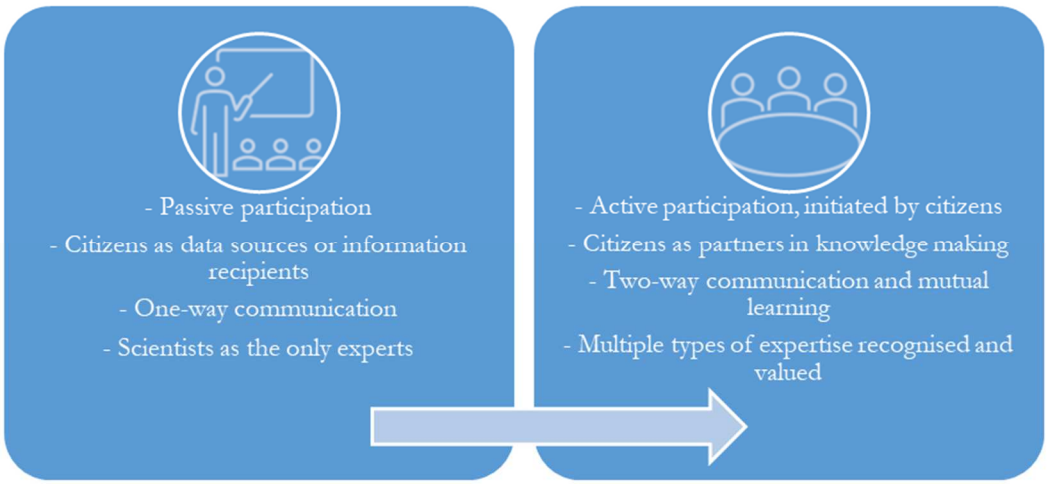

Figure 7. Shifting frameworks on communication from a deficit framework (left) to a dialogue framework (right)

Based on this revised approach, participants are not seen only as recipients and spreaders of information, but also as critical agents, who actively participate in knowledge making and share their questions, concerns, insights, and experiences ("collective intelligence") and thus contribute to more robust scientific research. The concept of co-creation involves a more active role of citizens. It would mean that we work together in the context of a mutual learning process. We are not only interested in communicating and disseminating results in a "classic" way, but also in listening to questions, experiences and concerns, which will allow us to make our work and outcomes more relevant for society. In short, in Years 2 (2022) and 3 (2023) of the project we aim to move beyond traditional marketing and opt for genuine co-creation via crowdsourcing. The community is not a target but a partner. Thus, our approach becomes more inclusive and interactive, as the methodology of crowdsourcing requires. Striving to increase commitment (engagement), where two-way communication can be used most effectively, from the implementation phase, we will try to use this type of cooperation with citizen scientists who will join the project. (Figure 8 - based on the SPOTTERON platform model).

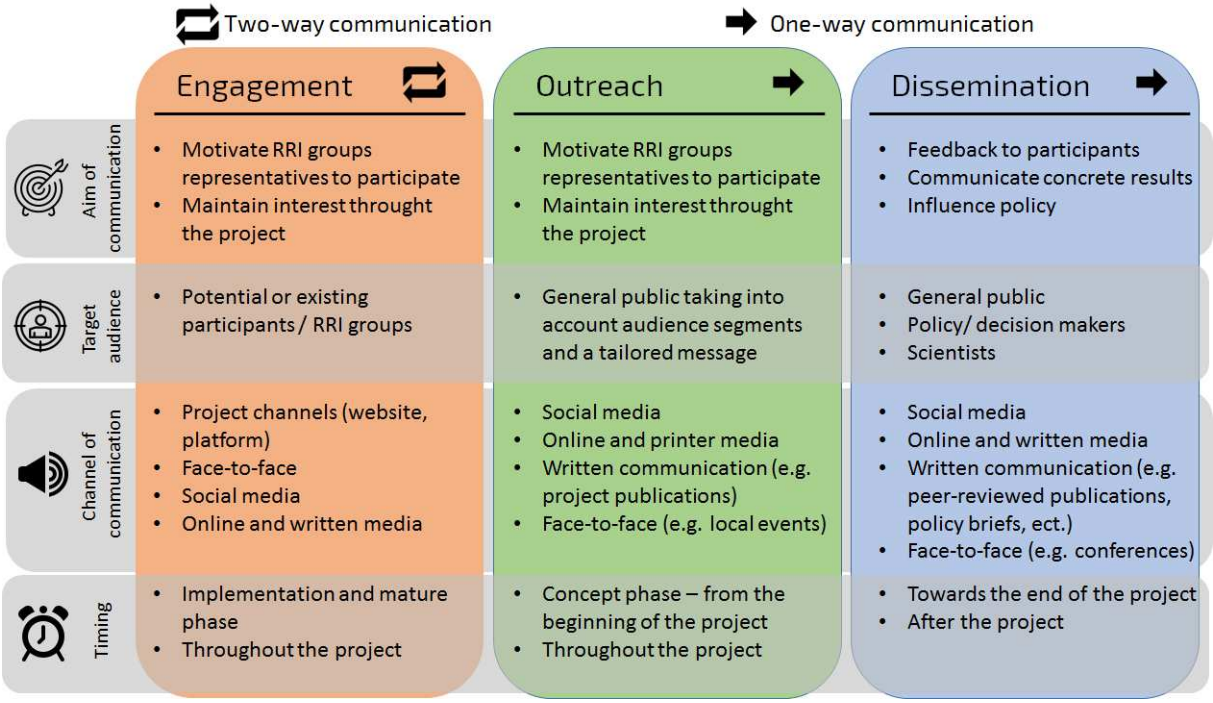

Figure 8. Communication and their associated aims, target audiences, channels of communication, and most appropriate time point within a project (Rüfenacht et al., 2021)

Facilitation of engagement through communication will be carried out in accordance with the previously described scheme (Figure 2), and the tools for its execution will be online and offline activities, which will be described in the next section. Nevertheless, Figure 9 shows the communication and dissemination flow, which we hope will contribute to a greater level of involvement of citizen scientists co-creating the project.

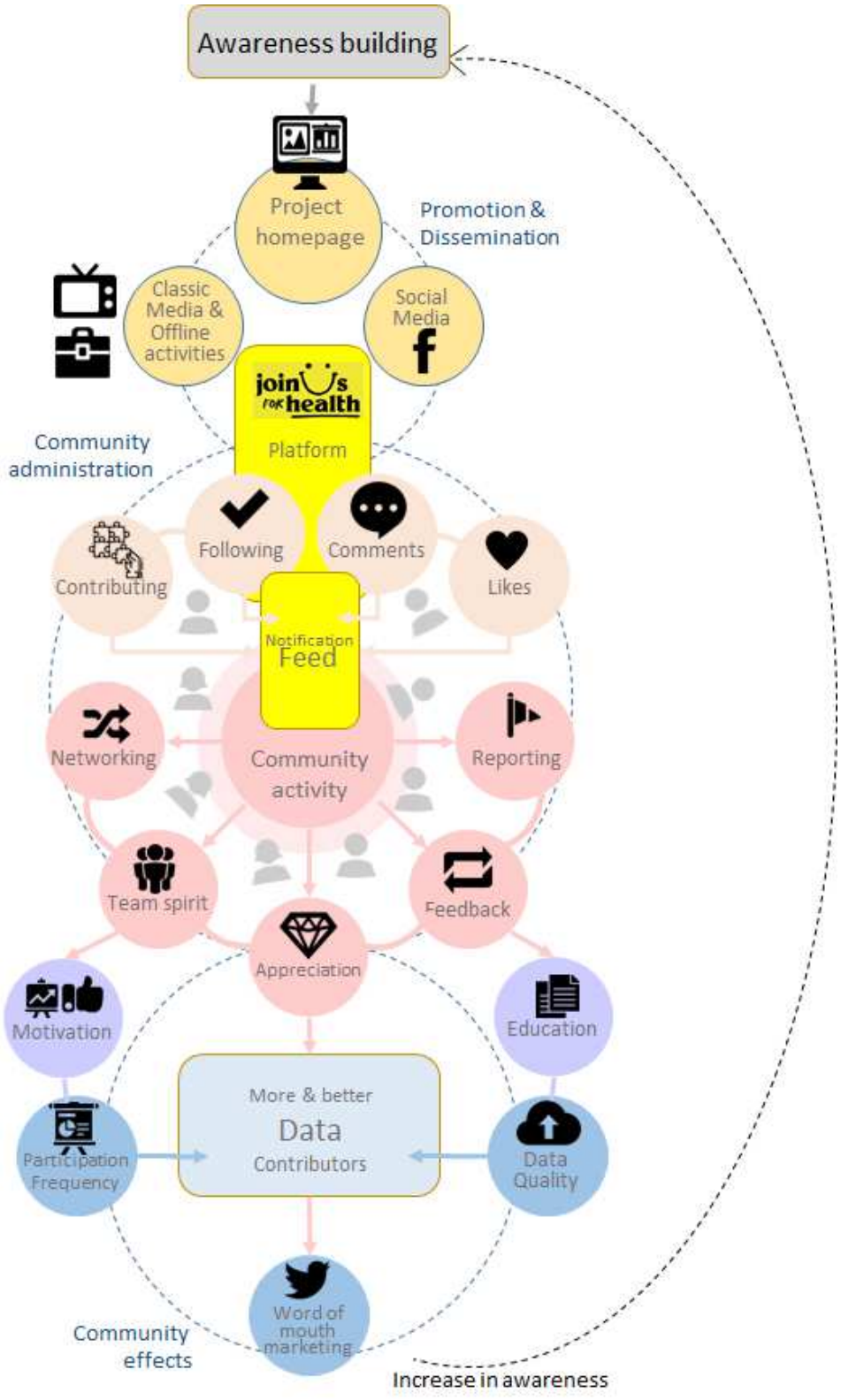

Figure 9. Communication and dissemination flow (Rüfenacht et al, 2021)

5.1. Online communication and dissemination activities

The online activities during the project will include a number of actions that will seek to increase the effectiveness of communication, dissemination and community building (engagement). However, in order for them to be unified and integrated, the main axis of online activities will be the

a) project website and

b) online platform

These are two sides of the same coin, closely related to each other, and all tactical activities both in the online and offline environment will be aimed at redirecting the interest of the representatives of the target groups to the internet platform, indirectly via the website.

The online platform will constitute the "heart" and engine of the marketing activities in the project. Thus, the consortium's activities related to communication, dissemination and building the engagement among the project's co-authors will focus on the online platform. All events regarding the platform will take place in close cooperation with the entities responsible for its creation and will be optimized for the final functionalities of the platform.

5.1.1. Project Website

The JoinUs4Health website (https://joinus4health.eu/) will be the showcase of the project activities and achievements, as well as the place where online communications are gathered. Some offline communications will be also available on the website as downloadable documents.

The JoinUs4Health website home page is designed to provide visitors with an overview of project goals and purposes. At a glance, visitors are introduced to the project objectives, the opportunities at hand, and options what JoinUs4Health can offer them. A graphical representation of JoinUs4Health objectives and activities are used whenever feasible. In addition, the home page continues to highlight most recent news and activities on relevant social networks. The website also includes a short info about partners of the consortium. Moreover, the website is linked via the partners' website, so to increase its visibility on the web. Finally, the project website encourages the transition to the internet platform and explains its main assumptions and possibilities.

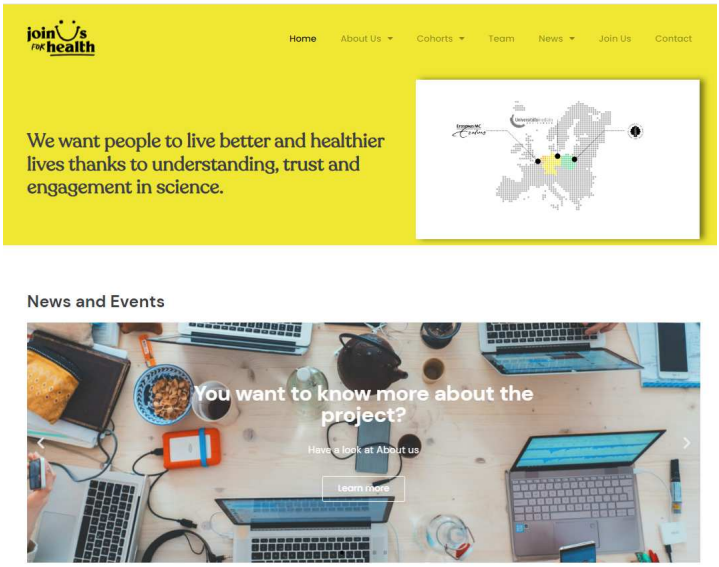

Figure 10. Screenshot of landing page of the JoinUs4Health website

5.1.2. Project platform

As mentioned, the platform is the driving force behind the project and is at the heart of the project where JoinUs4Health community members can interact with each other. Its role will be to enable joint co-conductions of research projects. It will also be a source of up-to-date and reliable knowledge. The principles of its operation are described in detail in the document Deliverable 3.1 "Report on the technical requirement including tools to be used for webinars".

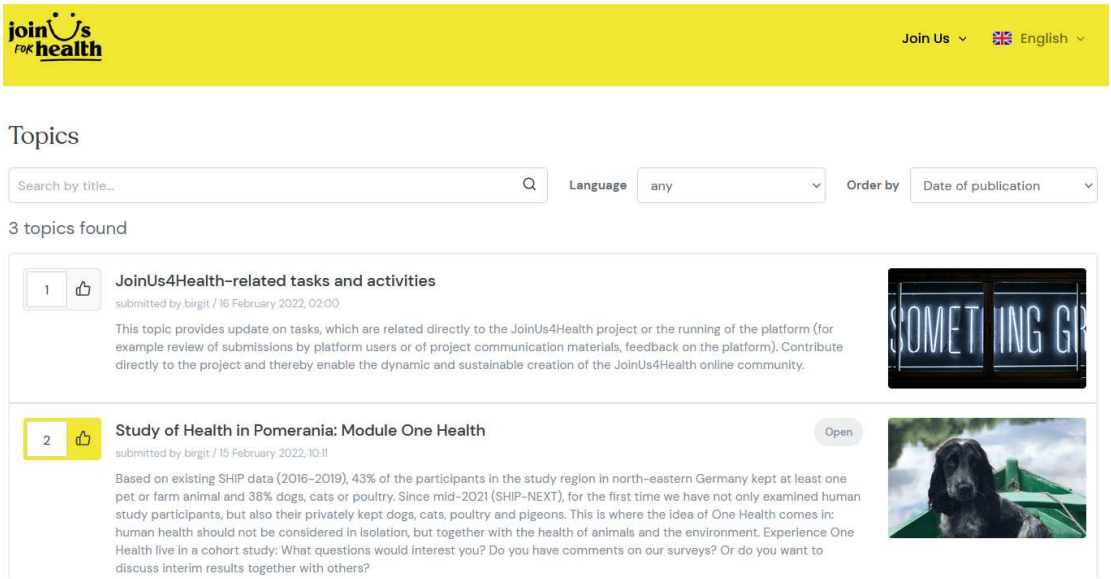

Figure 11. Examples of topics offered via the JoinUs4Health platform

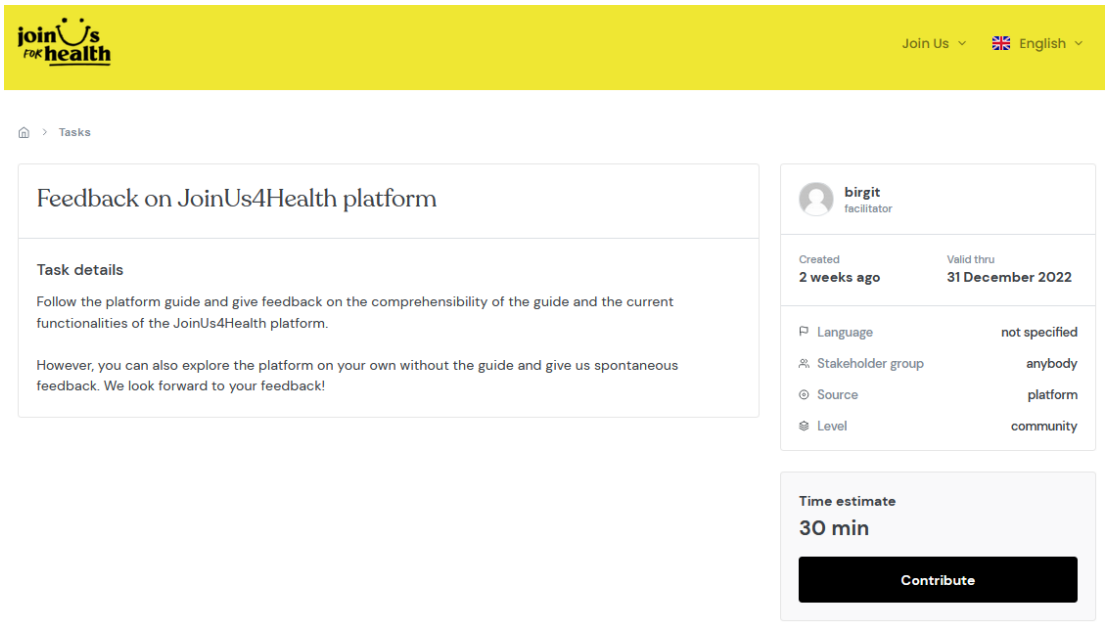

Figure 12. Example of a JoinUs4Health-related task, where a registered platform user can choose to contribute a certain time to a provide feedback on the platform

5.1.3. Social Media

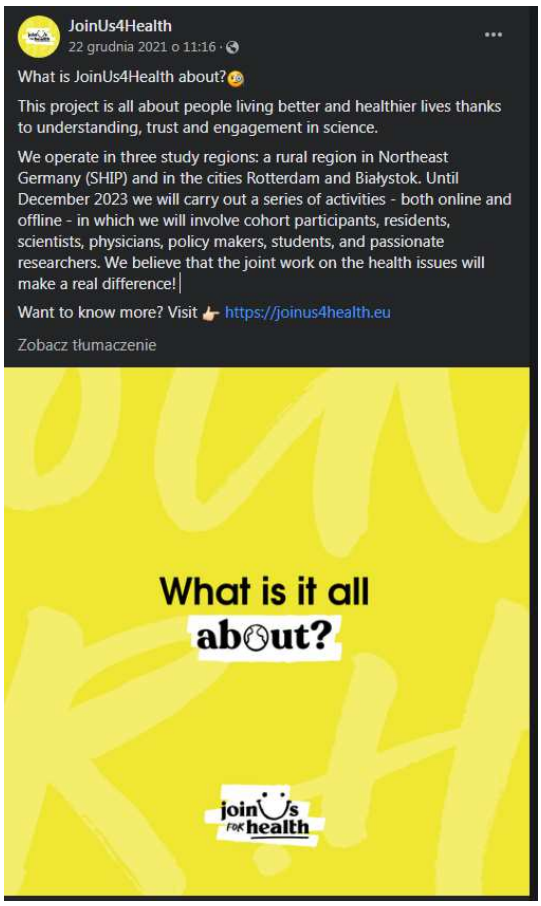

Figure 13. Screenshot from the Facebook fan page (facebook.com/JoinUs4Health)

JoinUs4Health accounts on social media will be created to communicate and advertise the project's goals, activities and initiatives and to disseminate its achievements. They will play an important role in the process of building the awareness and recruiting further participants. A professional agency will be responsible for their moderation, which will help consortium members to skilfully reach potential co-creators of science and facilitate the process of disseminating results to further participants.

Due to budget limitations that can be allocated to paid campaigns, we will focus mainly on the largest social networking sites, i.e. Facebook, Instagram, Twitter and Linked-in. In addition, according to the stakeholders, we do not exclude the selection of other Internet communication channels, such as: Reddit, Research Gate, Academia, Polish Wykop, etc. At the same time, activities related to ePR will be carried out.

Knowing that different social media have typically different audiences, targets and timings and that the same people have accounts on multiple platforms, we will increase the reach by combining a promotional strategy:

Facebook will be used mainly to build awareness during the conceptualization phase. It is the right platform to engage the general public at all stages: from awareness building to real engagement. It allows us to precisely target contents geographically and demographically, i.e. according to place of residence, age, gender, as well as interests. Combined with Instagram, which permits us to reach younger users, it is an effective communication platform. Paid campaigns will be carried out via these two main social media channels. In addition to this ecosystem (Facebook and Instagram), where constant communication will be carried out, we will tactically carry out activities on other above-mentioned social networks.

5.2. Lines of communication

When planning an online strategy for communication and dissemination activities, it is important to categorize social media content (communication lines) to determine what type of response you want to get from the message recipient (Reaction) – see Table 5. If the message is to be effective it should translate into the desired action (Action).

To achieve the abovementioned two major lines of communication:

1. Communication about the project & methodology (awareness)
   Content related to consultations conducted with the consortium members, as well as communication with stakeholders on the methodology, strategy of collecting feedback from users, etc.
2. Communication about activities and results that were developed on the platform by research teams composed of representatives from stakeholder groups (how teams are progressing, new teams, call to action: 'Join the team', etc.). Two effects of such a strategy will be achieved. The first effect will be to strengthen the engagement of existing participants by valuing their role and involving them in the communication creation process. The second effect will be to encourage more representatives of the stakeholder groups by showing that anyone can become a contributor.

Table 5. Lines of communication (conceptualised in practice)

	Expected behaviour on communicate	
I	Reaction How to speak to your audience to:	- catch their attention - make them think ("it might be about me!") - induce them to action - support the processes taking place on the platform
II	Action How to activate the audience towards concrete action:	- interacting with the message in social media (reaction, comment, sharing) - visit of the platform - engagement in activities within the platform / project - increased awareness of health and healthy lifestyle - increased confidence in scientific facts in the field of health

Table 6. Social media content categories examples.

	Content categories	Example
1	RRI – explained	In this category, we explain what RRI and cohort studies are - and why it is important for science and society. Examples of significant changes based on RRI.
2	How you can join	We show how one can engage in the project - through the working team on the platform, joining citizen science board etc. We show how to get involved in creating science (leading topics on the platform, how to join teams, what we can do on the platform): Science is calling you. Will you join?
3	Data / statistics	Information based on what is happening on the platform, example: Did you know that people who climb stairs instead of using the elevator enjoy longer lives? Get to know the latest data and join the discussion!
4	Discoveries	The post about the examination through the strength of the handshake. Finally, a summary: Lots of people joined so we've discovered something exciting! Join us. For health.
5	Engagement	- IG & IG stories - FB Events **Example 1:** Are you: Team smoking or Team running? **Example 2:** Join our quiz and check out what do you know about type 2 diabetes. **Example 3:** FB Event: 10 unknown facts about diabetes for every day / 10 days (daily posting, discussion, summary webinar)

Dissemination and communication process have three major challenges (which are the same as those described in Chapter 4 in Table 1.):

1. to build a sustainable and consistent online communication infrastructure, that is attractive to audiences in particular stakeholder groups, that motivates them to take an action in response to a reaction to the information they receive.
2. to increase the number of people who are open to engage in science-related activities at all levels, from awareness building, non-rejection through liking and conviction, to participation and real input.
3. which keeps participants engaged by providing them with functional gratification (e.g. "I contributed to a valuable report that will influence the city authorities!") and emotional gratification (e.g. "Others will see how smart I am!" - see Table 3 for a detailed list of motives.)

A strong focus is placed on the use of social media to facilitate engagement through communication and promote crowdsourcing by community building. Social media presence will be based on the project branding as well as the strategy developed during the conceptualization phase with the aim to attract users, encourage newcomers to register on the platform and keep up a frequent communication stream with up-to-date information. Social Media channels will be a useful tool that will support all the main and intermediate goals of the project.

Targets of Key performance indicators (KPIs) are shown in Table 7, in which social media communication plays an important role.

Table 7. Proposed targets of key performance indicators

Category	Indicator	Description	Goals (annual)	
			2022	2023
Awareness	Reach	Number of people who viewed social media content at least once	10,000	25,000
Awareness	Impressions	Number of instances when content is displayed	20,000	50,000
Awareness	Frequency	Calculated as impressions/reach	24	24
Engagement / Dissemination	Mentions	A researched connected term (e.g. name) is used in a text published on the internet	20	35
Engagement	Engagements (social media)	Number of reactions (likes), comments or shares	2400	1960
Awareness	Website visits	Number of visitors	2000	7000
Engagement	Online platform	Newly registered platform users	600	600
		Users who engage on platform via community-level interactions (e.g. sharing questions or comments)	300	400
		Active working teams (team-level interactions)	60	60
Engagement / Dissemination	Downloads	Number of downloaded contents from the online platform (data sheets, infographics, reports, etc.)	100	150

5.3. Online communication workflow

Social media channels:

As the primary ecosystem, we are using social media channels: Facebook + Instagram. On 24 November 2021, we created a multilingual page on Facebook (https://www.facebook.com/JoinUs4Health). Another account will be created on Instagram (English) once we established a consistent flow of posts on Facebook.

Multilingual: The Facebook page's default language is English. In addition, we create content in German, Dutch and Polish. Depending on the language version of the browser used by the recipients, information in their language will be displayed. People whose language is not among the additional languages (e.g. French) will see the post in the default language of the page (English).

Editorial Board: White Bits creates an Editorial Board composed of designated representatives from the three cohorts, who regularly (e.g. once a month or quarter) discuss the challenges of the project in a given period and decide how to react using social media channels (prepare information about the project / methodology, support teams on the platform, report outputs etc.). White Bits proposes content that helps in achieving these goals.

Role of White Bits: The leader of the Editorial Board meetings is a representative of White Bits, who watches over the continuity of communication, content acquisition, quality and planning.

In addition to the agreed content plan, the agency responds to the current topics appearing on the platform, to support engagement as well as the ongoing topics from the cohorts / partners (e.g. online event announcement, interesting interview).

Publications:

White Bits is responsible for general communication in English / Facebook + Instagram. Content in national languages, intended for audiences in the three countries, is published by the designated representatives of the partners. As a general best practice, all contents in local languages will also be posted in English to provide an overview of all posts in English. The Agency will support content managers by:

- preparation of the manual on how to publish on a multilingual fanpage,
- granting permissions to designated persons who will be authorized to publish on the fanpage
- preparing editable layouts of graphic elements that can be adapted to the language versions, based on the English version.

Frequency of publications in English: at least four publications / month on every medium (FB + IG).

Paid campaigns

White Bits is responsible for paid media. The goal of the social media paid campaigns is to reach stakeholder groups' representatives and achieve the designated Key Performance Indicators.

Important! To achieve sustainable communication and keep the dialogue with audience, cohort representatives must be active participants of the content preparation and approval process.

In addition, to maximize audience reach, every cohort is encouraged to publish content in their national language, concerning local matters (e.g. local meeting, interesting interview, interesting research results for the local community, etc.).

To achieve the above assumptions, a dual strategy is envisaged:

1. persons recruited by facilitators via the posting of topics, tasks, events or study teams will be directed to the platform after training in its use, rules and functionality at that time.
2. people recruited through online marketing activities (Facebook, Instagram, Youtube etc.) will be directed to the project's website, where an attempt will be made to convert potential contributors from the level of awareness to the conviction level and finally to participation.

5.4. Offline communication and dissemination activities

Although, due to the optimization of the project budget, most of the activities have been planned online and will focus around the online platform, in the case of Poland and the Bialystok PLUS cohort coordinated by MUB, a number of offline engagement activities are also planned, i.e. quadruple helix workshops with representatives of local community representatives and NGOs, Health Festival, research cafes for members of the third age university and secondary school competition workshops (see Deliverable 6.1 for details). Offline engagement activities are particularly important for building the community in Bialystok Plus as this cohort has only started in 2019, so that awareness of the cohort in this community is much lower than for SHIP and the Rotterdam Study. Hence, offline activities help building awareness and disseminating the results.

In the other cohorts, no budget allowance has been assigned to offline activities. However, facilitators trained as part of JoinUs4Health can also create team exchanges in offline environments on their own accord and report outputs via the platform.

Besides offline engagement strategies, all partners will also use offline dissemination tools through the instruments from Table 8. Thus, stakeholder groups representatives who have no internet access can still receive information about the project. Furthermore, registered platform users can organize offline

meetings and use platform functionalities to link resulting outputs back to the platform and benefit from interactions and collaborations with other platform users or working or study teams.

Table 8. List of offline communication and dissemination instruments

	Instruments	Description
1	Radio advertising	Communicating and disseminating project activities through local radio stations. Free advertising that increases the reach and influences the awareness.
2	Press advertisement	Communicating and disseminating project activities through local newspapers. Free advertising that increases the reach and influences the awareness.
3	TV advertisement	Communicating and disseminating project activities through local TV channels. Free advertising that increases the reach and influences the awareness.
4	Outdoor advertising	Use of outdoor space on consortium members' buildings to display project information. In Bialystok, it is planned to place a printed advertisement in the city center in a multi-storey car park informing about the ongoing project.
5	Press articles	Press articles presenting the effects of the project, thus increasing the reach and increasing the awareness of the recipients of the message.
6	Public Relations	Planned ongoing activities undertaken in order to gain and consolidate the good reputation of the project and to achieve mutual understanding between the consortium and its customers.
7	Marketing based on databases	Recruiting people for the project will be associated with a declaration regarding the possibility of sending marketing information to project participants. If they give their consent, participants prepared to engage in offline engagement activities can receive information about the project both online and offline instruments. Therefore, in Bialystok Plus, lack of internet access will not be an exclusion criterion.
8	Word over mouth marketing (WOM)	We assume that on-line and off-line activities leading to the involvement of stakeholder groups on the platform will spontaneously contribute to the dissemination of information about the project and its "products". Word over mouth marketing will be a useful tool to increase the popularity of the JoinUs4Health project.

6. Concluding remarks

The Communication and Dissemination Strategy described above is the culmination of over a year's work of the consortium team based on a continuous process of mutual learning and understanding of the principles of RRI methodology and crowdsourcing, which the experienced EUR partners devotedly shared with all. This applies in particular to the further training of the partners responsible for communication and dissemination of project results. The implementation of the RRI approach to the classically defined process of marketing communication was quite a challenge, especially in the mental sphere, where from the role of specialists who manage the communication of brands we had to go beyond the schematic approach and try to develop a process of building commitment through communication by involving representatives of stakeholder groups in this process, who became partners instead of the "target" of communication and dissemination. The above document is an initial attempt at synergizing two universes, which at first seemed very distant, but eventually developed into an approach that reflected the vision of the project.

As the project also involves institutional changes in the partner organizations, we hope that peer-coaching will allow us to improve our approach, not only in terms of communication and dissemination. Hence, at the close, we make a declaration that:

- we may generate updated versions in the future based on experiences made and feedback by stakeholders according to the RRI approach.

- we ask a wide audience for feedback, which can be sent to contact@joinus4health.eu.

Brand Book

Attached pdf file

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