



Join Us to Optimize Health Through Cohort Research

Deliverable 7.5 Experiences with citizen science

Version 1.0

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 101006518.



Project Name	Join Us to Optimize Health Through Cohort Research (JoinUs4Health)
Project No.	101006518
Project Type	Coordination and Support Action
Project Duration	01/01/2021 – 31/12/2023 (36 months)
Project Website	https://joinus4health.eu/
Project Platform	https://platform.joinus4health.eu/
Project Coordinator	Birgit Schauer (UMG)
Funded under	Grounding Responsible Research and Innovation in society with a focus on citizen science (SwafS-23-2020)
Work Package	WP7 Management, monitoring and evaluation
Deliverable	D7.5 Experiences with citizen science
Version	1.0
Planned Date	- (this is an extra deliverable defined during the midterm review)
Date of Submission	29/02/2024
Authors	Birgit Schauer (UMG), Nicole Rosenkötter, Marlene Lakemann (AkademieÖGW)
Contributors	Hannes Dieckmann, Tabea Troschke (UMG), Silvan Licher, Natalie Terzikhan (EMC), Kasia Stempniak (Whitebits), Katarzyna Sztop-Rutkowska, Michal Lemanski (SocLab), Ana Barbosa Mendes, Hub Zwart (EUR), Pawel Sowa, Maria Szlachta (MUB) and other partners and contributors

AkademieÖGW, EMC, EUR, MUB, SocLab, UMG, Whitebits: See page 5

Contents

Table of Figures	4
Table of Tables.....	4
List of abbreviations	5
Executive summary	6
1 Background	6
2 Methods.....	6
2.1 Platform suggestions and topics.....	6
2.2 Outreach activities.....	7
2.3 Bialystok population research conference	7
2.4 Workshop series with public health authorities	7
3 RRI perspective	8
3.1 RRI x crowdsourcing	8
3.2 Incentives.....	8
4 Technical perspective (platform, website).....	9
4.1 Concept and technical implementation of the platform	9
4.2 Facilitators, moderators and advisory boards	10
4.3 Changes in our approaches	10
5 Consortium perspective	11
5.1 Consortium composition	11
5.2 Role of cohorts	12
5.3 Addressing suggestions / comments via research.....	12
5.4 Influencing research.....	12
5.5 Role of science / scientists	13
5.6 Need to slow down	13
6 Perspectives shared by cohort representatives.....	14
7 Online seminar series with public health representatives in Germany.....	17
8 Activities in Bialystok, Poland	17
9 Focus in Rotterdam, The Netherlands: Education.....	18
10 Concluding remarks.....	19
Acknowledgments	20
References.....	21
Appendices	22
Appendix 1: Details on platform contents	22
Appendix 2: Methodological considerations	41
Appendix 3: Workshop series with representatives from public health authorities	43
Appendix 4: Activities in Bialystok	52

Table of Figures

Figure 1 Activities by AkademieÖGW in 2023. ÖGD = Öffentlicher Gesundheitsdienst (eng.: Public Health Services).	7
Figure 2. Overview of the JoinUs4Health concept with community-level and team-level interactions.	10
Figure 3. Discussed approach of implementing management cycles per cohort region (late 2022).	11
Figure 4. Agenda of the Seminar Series and Symposium as part of the 2023 Minor “From Science to Society” implemented by EMC with input from EUR.	19
Figure 5: Proposed timeline for planned management cycles, developed by EUR with input from UMG and a visiting Master student at UMG	41
Figure 6. Flyer developed for the online seminar series targeting public health representatives	50

Table of Tables

Table 1 Participants in the web seminars	17
Table 2. Details of suggestions posted on the JoinUs4Health platform as of 07.02.24	22
Table 3. Number of followers, contributors, voters and comments posted on the JoinUs4Health platform as of 15.12.23 sorted by date (newest first).	26
Table 4. Details of topics posted on the JoinUs4Health platform as of 15.12.23 sorted by date (newest first).	28
Table 5. Overview of videos available on YouTube as of 15/12/23.	40
Table 6. Proposed methodology for the implementation of a 12-week block of three management cycles (MCs) covering four weeks each, developed by EUR with input from UMG and a visiting Master student at UMG	41
Table 7 Dissemination activities of the Academy for Public Health Services	46
Table 8. Number of public health representatives who registered themselves and participated in the four web seminars.	47
Table 9. Padlet responses submitted during discussions at the 4 th seminar.	51

List of abbreviations

AkademieÖGW	Akademie für Öffentliches Gesundheitswesen in Düsseldorf, Germany
EUR	Erasmus University of Rotterdam, Netherlands
EMC	Erasmus Medical Centre, Rotterdam, Netherlands
GDPR	General Data Protection Regulation
MUB	Medical University of Bialystok, Poland
OH	One Health
P	Partner
RRI	Responsible Research and Innovation
SocLab	Foundation Laboratory of Research and Social Actions "SocLab", Bialystok University of Technology, Poland
UMG	University Medicine Greifswald, Germany
UwB	Social Science Department, University of Bialystok, Poland

Executive summary

This deliverable was defined as part of the mid-term review of the EU-funded project JoinUs4Health (grant agreement number: 101006518). The aim of this deliverable is to document experiences with citizen science by highlighting different perspectives. Appendices 1 to 4 summarize contents / inputs gathered via various means (e.g. platform, workshop, social media comments etc.). The reader is most welcome to reach out (contact@joinus4health.eu) for further discussions on these experiences.

1 Background

The 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. Please refer to Deliverable 2.2 for definitions of crowdsourcing and RRI. The project included seven Work Packages, under which a range of deliverables has been published. Most of these deliverables are publicly accessible via our website (www.joinus4health.eu) or zenodo (<https://zenodo.org/communities/joinus4health>). Details of platform contents (<https://platform.joinus4health.eu/>) and various JoinUs4Health related activities are summarized in the Appendices of this deliverable. The infrastructure of the platform is open source (<https://github.com/JoinUs4Health>).

Please refer to Deliverables 2.1, 2.2 and 2.3 for an overview of methodological aspects in relation to RRI, citizen science, the concept and the platform. The aim of this deliverable is to document our experiences with citizen science and also highlight different approaches and perspectives. Appendices 1 to 4 summarize contents / inputs gathered via various means (e.g. platform, workshop, social media comments etc.).

2 Methods

This deliverable is based on exchanges and methodological considerations amongst project partners as well as input received during exchanges with stakeholders and via outreach activities, social media campaigns and the platform.

2.1 Platform suggestions and topics

The JoinUs4Health platform has been publicly accessible since April 2022. Appendix 1 summarizes platform contents, i.e. suggestions (Table 2), reactions (Table 3) and topics (

Table 4).

2.2 Outreach activities

Wide range of outreach activities, mainly in Poland (Appendix 5.1), but also in Germany (Appendix 5.2). Based on the interactions with various stakeholder groups, we summarized some of our experiences.

2.3 Bialystok population research conference

The three cohort partners shared their experiences with other European cohorts at the “Towards Comprehensive Population Studies II” Conference in Bialystok on 01 & 02/12/23. Conveyed messages are summarized in Section 6. Video recordings are accessible at the bottom of the conference website¹.

2.4 Workshop series with public health authorities

Sections 2.4 and 7 as well as Appendix 3 were created by partners of the Academy for Public Health Services (AkademieÖGW, partner 8), a training and further education academy that organises courses for employees in (municipal) public health services, for 13 federal states of Germany. As partner in the JoinUs4Health project, the AkademieÖGW organised a four-part series of web seminars entitled "JoinUs4Health - Research cooperation in practice: Making population studies usable for public health services" and disseminated information on JoinUs4Health and the JoinUs4Health web seminars via their news channels (print, website, social media, app). Details are summarized in Appendix 3.1.

The series of web seminars was designed for employees in the public health sector (here “Öffentlicher Gesundheitsdienst” (ÖGD) which means public health services), in particular for human and veterinary staff, employees in health reporting, employees who deal with epidemiological issues and employees in health promotion and prevention. The aim of the series of events was to familiarise participants with the cohort studies involved and to enable them to contribute their own questions to the research cooperation of JoinUs4Health. An overview of the AkademieÖGW's activities is summarised in Figure 1.

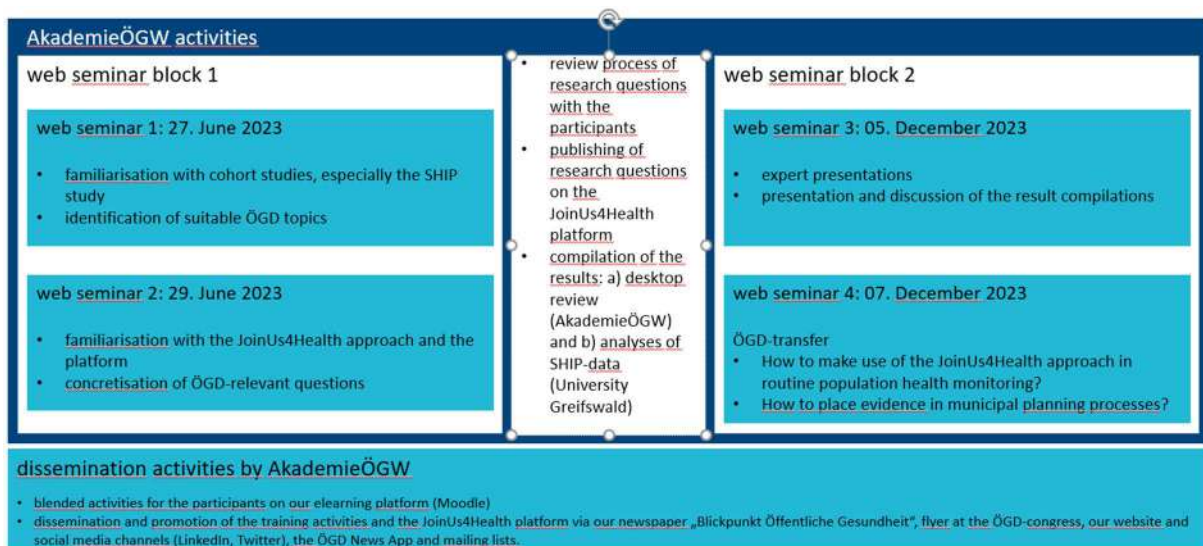


Figure 1 Activities by AkademieÖGW in 2023. ÖGD = Öffentlicher Gesundheitsdienst (eng.: Public Health Services).

¹ <https://conference.bialystok.plus/>

3 RRI perspective

3.1 RRI x crowdsourcing

The combination of RRI and crowdsourcing as converging approaches is still only being explored. The earliest application of crowdsourcing as a concrete instrument for operationalising RRI we found was an RRI project funded by the Research Council of Norway (Molla et al., 2018). Just recently, crowdsourcing was promoted as a valuable tool for EU policy making following a consultative exercise in ten European cities (Ellena, 2023). Between 01/22 and 01/23, the European Citizen Action Service (ECAS) provided an online platform, which allowed citizens to propose solutions on how to improve air quality and vote on others' suggestions with the most favoured ones being presented to policy makers.

The JoinUs4Health concept provides a range of experiences of combining crowdsourcing and RRI. We have not yet been able to fully implement and test proposed crowdsourcing approach and platform as no team-interactions took place online, i.e. contributors working together online using the virtual meeting room, chat function, joint editing of documents. Also, the propagated key incentive, the option to apply for results from three cohort studies, which have examined over 30,000 participants in approximately five-year intervals for up to 35 years, could not be fully explored yet. Contributions via the platform included however a range suggestions (Table 2) and topics (Table 4).

3.2 Incentives

Here is an outline of thoughts shared during a meeting with a RRI officer from Spain, which illustrate that rewards are a challenging concept:

On the one hand, you invite people to engage and share experiences, knowledge and concerns on a voluntary basis, i.e. without getting paid. On the other hand, without rewards, the intrinsic reward may not be sufficient to involve enough people. To be practical, people need to make an effort, which in itself justifies some kind of reward.

From a conceptual point of view:

Ideally, we shouldn't promote financial incentives for contributing time apart from reimbursement for expenses, which is self-explanatory. But incentives need to be part of the system otherwise it won't work. Nevertheless, rewards should be treated carefully. Contributors should remain independent. A symbolic reward is better than a financial reward. Otherwise it might influence the content of the input. But if people are expected to contribute for free, they may not be sufficiently committed.

Examples of symbolic rewards:

- For students, offer engagement activities as part of seminar work or task as part of a course
- For platform users, provide gamification features, e.g. awards or badges based on the levels of commitment, opportunities to take part in scientific conferences, recognition of contributions as part of topic-related outputs, publications or reports (not yet implemented as part of the platform)
- For academic institutions and departments: Rewards for magnitude/frequency and depth of contributions of individual scientists, departments or institutes

4 Technical perspective (platform, website)

4.1 Concept and technical implementation of the platform

Deliverable 3.1 describes the initial concept (Figure 2), and how the platform design (<https://platform.joinus4health.eu/>) relates to these steps. The platform includes the home page and four main pages (Suggestions, Topics, Tasks and Teams). Community-level interactions include the ability to submit suggestions, vote and comment on other users' suggestions, follow and indicate willingness to contribute. Prioritized suggestions that attracted enough contributors (initially votes; adjustment according to Deliverable 2.2) and at least one platform user agrees to facilitate interactions, a moderator is assigned. The topic then outlines first background and details and recruitment can take place / input be sought. Such topics can then result in working teams. The topic's facilitator or working teams can also create community tasks to recruit further community input (blue arrow) and apply for cohort results (Step 4e).

We implemented various new features in response to user feedback, such as an upload function or a mobile version. But several improvements would be valuable such as gamification features. Furthermore, methodologically, the following suggestions were made in Deliverable 2.2 to improve the implementation of the concept via the platform, which could not be implemented yet given the short remaining time frame:

Extract from Deliverable 2.2:

One of the determining factors of our difficulties in testing methodological innovation was the lack of a user base in our platform. We ran into issues during development, which delayed the launch of our platform and therefore delayed our engagement and advertisement efforts. While we had some initial engagement, especially derived from our in-person events, we did not have enough active or passive contributors in the platform to take up suggestions and questions that were posted in the platform and engage in a co-creation process. Not all suggestions can be taken up, only those suggestions that are endorsed by enough contributors to make interactions worthwhile.

Recommendations extracted from Deliverable 2.2:

For the platform:

- Instead of Suggestions, use health stories as our starting point:
 - Stories can help to make sense of own experiences and connect such experiences with the experience of others
 - Stories would also situate the contributed knowledge in the platform by providing enough contextual information for others to relate to the contribution from the perspective of the original poster.
 - By using stories as a starting point, we invite people that would have otherwise come into the community as a representative of their professional group or organization, for example, to provide a more embodied and situated contribution and thus allowing for anyone, regardless of their affiliation to an institution or organization (or lack thereof) to make a meaningful contribution to the knowledge base in the platform.
- disconnect the number of passive votes to the progression of an initial contribution to encourage contributions that might not have wide interest in the community to still be developed into proposals if enough community members are willing to actively support it: Our platform has the potential to promote research that starts from the needs of marginalized communities that would otherwise not be performed in an institutionalized context of academic research.
- decoupling passive votes from the establishment of working teams may lead to the creation of epistemic bubbles, where projects that represent exclusively niche and

narrow perspectives could be proposed and executed. Co-creation of the knowledge-making proposal between the initial contributor and the community members that signal they would like to actively contribute to the topic may help mitigate this risk

Incorporate systems thinking or mind mapping tool to support team collaborations on the platform

Our suggestions for methodological innovations have yet to be tested due to a lack of a user base on the JoinUs4Health platform at the end of the funding period.

For future consortia:

- they co-create their platform and their adapted methodology with potential users from the beginning of the project and continue to do so iteratively throughout their project.
- time is allowed to create a common language and vision between project partners to ensure the manner in which the methodology is adapted into the project's context realizes the shared goals in the project consortium.
- future projects embedded their testing of the methodology into a structure of responsibility within institutions involved in the project

4.2 Facilitators, moderators and advisory boards

This concept implies that the primary drive should come from platform users not project partners. If a volunteer agrees to act as facilitator, the moderator provides high-level mentoring support (e.g. advising on the approach or engagement process), but is generally not the primary driver of the topic.

Advisory boards were considered to play a key role. For instance if a team intends to apply for cohort results, the advisory boards would be asked to review the application. Furthermore, advisory board members were planned to provide input in case feedback is needed. However, many of these assumptions could not be tested yet, given the lack of sustained team interactions and applications for cohort results. Advisory boards should ideally become part of the safeguard and mentoring element, to ensure that scientists learn along the way to value different knowledge sources and minimize power imbalance.

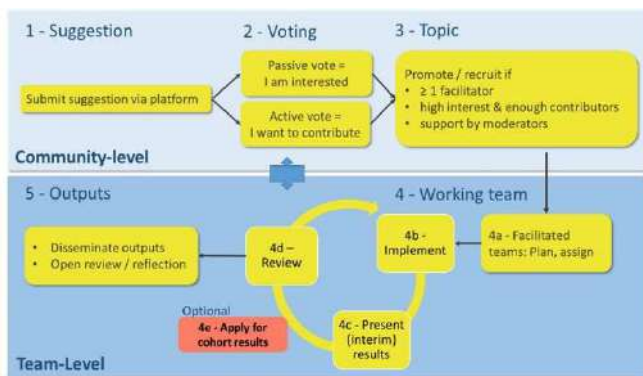


Figure 2. Overview of the JoinUs4Health concept with community-level and team-level interactions.

4.3 Changes in our approaches

Initially, we intended to organize interactions in form of management cycles (Figure 3), where each cohort would support a given topic over a three-month period.

Within each three-month period, Each month, volunteers were planned to be engaged in a systematic co-creation approach (see Milestone 3). However, given our challenges in attracting enough volunteers, we abandoned this initial process and worked in an open manner, trying to respond to inputs collated to the best of our capacity.

In conclusion, the full benefit of the concept has not become clear yet as no active community could be created to date. The question remains to what extent the design of the concept, including the two platform roles of moderators and facilitators as well as the advisory boards can provide an adequate framework to implement Responsible Crowdsourcing.

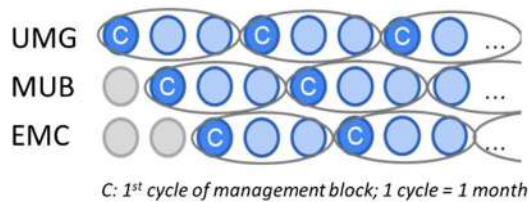


Figure 3. Discussed approach of implementing management cycles per cohort region (late 2022).

Appendix 2 summarizes our initial plan for co-creation as part of the first One Health Topic. Each cohort would have monitored one topic in their region leading to quarterly management cycles Figure 3.

5 Consortium perspective

5.1 Consortium composition

The consortium included eleven partners, three cohort partners, two further academic institutions (UwB and EUR), three non-governmental organisations (SocLab, MDOG and NPF), two companies (Whitebits, Science4People) and one organization responsible for the training of public health representatives (AkademieÖGW). Only one of these partners (EUR) was experienced with RRI. Furthermore, most partners had not worked together previously. Deliverable 7.4 (Experiences as a young consortium; REF) summarized challenges faced and outlines recommendations for future consortia.

Extract of challenges:

The way the project was planned in terms of tasks and deliverables was in tension with RRI approach. The scope and overall goal of the project were not commonly envisioned by all partners. Little space was available for revisiting the assumptions that underpinned the decisions made when designing and implementing the project. Also, methodological development activities were disconnected from the working of the platform, partly because of the time constraints in platform development and partly because of our difficulties in attracting active users.

Extract from recommendations:

- Carefully consider staff requirements when estimating the budget. One part-time position per Work Package proved insufficient to manage internal and project related tasks in a timely manner, which was amplified by unexpected losses in productive hours.
- Establish and document project processes at the outset (e.g. project manual).
- Co-create a joint vision amongst partners early on during the project and revisit this process repeatedly to ensure joint understanding.
- Nurture positive partner relations and negotiate early in the process if discrepancies occur.
- Take into account that mobilisation may take considerable efforts and time.
- Team up with other projects dedicated to changing the practice of research and exchange experiences and solutions.

5.2 Role of cohorts

As mentioned in the previous section, for a long time, partners had different perspectives on the role cohorts could play as part of the concept and platform. Cohort representatives perceived the role of cohorts as rather central to the project given the title “Join Us to Optimize Health Through Cohort Research” and the potential value cohorts can offer to local communities. Another perspective was that cohorts should rather remain passive so not to risk the creation of power imbalances.

But difference in perception between partners remained. Here is an input by a partner at one of the discussions: Where is the demand? Let’s create an image of drawing a picture / painting:

“We offer a tool, and we ask people to paint, but they do not want to paint. As a first step, we may need to help people to identify their need. Maybe someone has a need, but has not realized yet. First, we need to discuss what people need. Then develop activities to work together on addressing the need. In this process, it helps to see other pictures / paintings, i.e. other people’s suggestions.

So, the first step of the process may be that people just state what they have in their mind, brainstorming phase. That repository (see Suggestions and Topics) can then become the repository of knowledge. That also includes, identify what regional partners / cohorts have in mind. “

Lessons learnt (see Milestone 3 and Deliverable 7.4 for further details):

- Scientists and academic institutions may not be familiar with the concept of RRI and what it entails
- It was decided not to emphasize RRI as a concept via the platform (2nd international RRI advisory board meeting)
- RRI may not mean the same thing to everyone: Systems thinking workshops with the aim to identify relevant elements and the link between them may bring out differences in perspectives and provide opportunities to engage people in dialogues.

5.3 Addressing suggestions / comments via research

User expectations may not have been met when a question is posed. The design of the concept assumes that volunteers take up suggestions and pursue them as part of topics. Cohorts can assist teams working as a topic, but were not considered the active respondent to questions posed via the platform. In principle, feedback by cohort representatives directly in response to a question posed as suggestion, the platform offers the option to do so, e.g. by posting comments with links to resources.

5.4 Influencing research

Currently the platform mainly serves as a collation of suggestions and ideas for topics. The question is also whether the platform can fully provide the functionalities and user experience we sought to implement based on the concept. Without an active community, it has not been possible to explore the full potential of the concept. Another limitation is that currently no systematic channel has been created yet to feed contents back to the cohort or engage cohort representatives in a target manner.

Several recommendations were made on how to institutionalize RRI, such as the need

- to ensure adequate staff resources (see Deliverable 7.4)
- for RRI and Open Science champions (see Section 6 and Deliverable 2.3)
- for clarity in visions amongst cohort representatives (see Deliverable 7.4)
- to consider the role RRI at different levels, i.e. the level of the platform, methodology, the overall project and the wider scientific landscape (e.g. see Milestone 3)

5.5 Role of science / scientists

The role of scientists was frequently debated during project meetings. Looking back, it seems to depend on how RRI is viewed, as

- a rather liberating process, breaking the chains of hierarchy, where science is kept in the background and rather responds to needs and suggestions without any place in advisory meetings so not to create power imbalances
- a process where input from both sides (and that itself sounds polarizing) is valued as long as RRI principles are encouraged at all times along the way.

Crowdsourcing should be performed in a responsible manner, where volunteers are not considered as providers of views, perspectives and contributions, but valued as co-creators. Ideally, the concept should be driven by a bottom-up approach, where cohort representatives support volunteers in their work without proposing own topics and areas of collaboration. But when we tried to apply a bottom-up approach initially, it did not work out at this early stage, as we were trying to wait for the users, but in fact there were no users. Other projects face similar challenges engaging stakeholders in the platform (Franzoni et al., 2022). Therefore, we decided to also provide some content from cohort studies, i.e. knowledge that would be interesting to people and see how people will respond to such input. We still intended to work on enhancing bottom up approach after we managed to build a stronger platform community.

At a meeting early January 2023, we discussed this approach once more amongst representatives from EUR, UMG and MUB. It was agreed that from an RRI perspective, the connection between those two approaches is important: It needs to be a combination between top down and bottom up: invite people, present something, etc. It is a mutual learning process how to best organize this interaction. There always has to be an interaction - a process has to be ongoing for RRI to be relevant.

From a cohort partner's perspective:

- the initial concept was designed to provide opportunities of exchanges for all stakeholder groups, including citizens, students, scientists and others
- the role of scientists during exchanges needs to be handled with care to ensure that hierarchies are flattened and different voices and knowledge sources are heard and valued
- scientists are individuals (and also citizens), and there are many individual scientists who would be keen to engage, but are unsure how to
- students and scientists learn best how to implement RRI when being able to do so in practice
- the platform can provide a tool to do so, to practice reaching out, bringing relevant stakeholders to the table, etc.
- but there needs to be continuous oversight to ensure that interactions are done in a responsible manner (e.g. moderators and advisory boards; see Section 4)

5.6 Need to slow down

An important observation was that RRI requires time for engagement and reflection. Therefore, RRI requires research to slow down. Consortium partners were often under high pressure. The necessity to combine work on RRI projects with a plethora of other tasks is a systemic challenge. However, in fact, RRI should not be an "extra task", but should be regarded as a changing the way, in which research is conducted. For the cohort institutions, this is not the end, but still the beginning of a journey. There is further need to recognise and reward participatory research within the institutions. Engagement turned out to be more challenging and time-consuming than we had envisaged. It is hard work, especially in the beginning, when

a platform community is not yet established. During that phase, we need people in the middle, and that requires effort and money (see Section 6).

6 Perspectives shared by cohort representatives

Day 1: Presentation by Karol Kaminski during SESSION 1 (“Population-based studies and executive authorities – how to maintain sustainable bridges?”):



Karol Kaminski is

- Professor at the Medical University of Bialystok
- Vice-Dean of the Medical Faculty of Medical University of Bialystok
- Head of the Department of Population Medicine and Civilization Diseases Prevention
- Consultant in the Department of Cardiology University Teaching Hospital in Bialystok

Extract from the presentation “The development of the BIALYSTOK PLUS project”, which is recorded on Day 1 starting at 55:00 (Kaminski, 2023):

Key points:

- We continue this involvement of local community:
 - Dr Pawel Sowa has received a Grant for creating a kind of canvas to present the data of our population study to the general public, but also to policy makers, different stakeholders to create the accessible way to present and talk about the results of the population study.
 - We also want to include our strength, which is the green lungs of Poland, where we promote the health benefits that come from the contact with nature, from the woods. A Horizon project has been submitted recently just to do that.
 - And we also want to continue to promote governance at the level of the city and the university.

During Natalie Terzikhan’s presentation at 3:37:00

“We had lots of talks. We had different perspective: We thought we will have a place, where citizens will come and then they will contribute. In fact, it is hard work to encourage people to participate. Those actors and facilitator are needed, and that needs funding. We need an attitude amongst scientists to appreciate the value of openness. Then we need people to promote the knowledge transfer, enriching the population. But it must be bidirectional. Citizens need to be activated to actively participate in science. But we need people in the middle. That requires effort and money.”

Day 1: Presentation by Natalie Terzikhan during SESSION 2 (“What is the relevance of cohort studies in today's world – should we anticipate its dynamic changes in the future?”)



Natalie Terzikhan (PhD) is the Manager of Scientific Affairs and Responsible Research at the Department of Epidemiology at Erasmus Medical Centre in The Netherlands

The following contents are extracted from the presentation (“How the Rotterdam Study adapts to the changing science and society”), which is recorded on Day 1 starting at 03:16:00 (Terzikhhan, 2023)

Communicated key messages:

- Although RRI has been promoted for over 10 years, it initially appears complex. It took me a few months to digest this idea. Now I cannot stop talking about it.
- RRI is a strategy as a way of working.
- The JoinUs4Health platform is like a virtual science shop. It is building up slowly.
- Digitalization versus social support: Relationship building and personal connections are important, to be there as a community for citizens.
- It is important to come closer to citizens and get them to talk to you.
- We need RRI and Open Science champions, people on the ground who take the idea of RRI further who are able to connect everything together (education, research, infrastructure, community building)
- Make sure that you have champions everywhere: Otherwise it may take a long time to achieve a change in mindset

In response to Karol’s comment (see above):

- Point 1: We should not make the mistake to assume that people are ready to contribute. In Holland people are different than people in Germany and Poland. We should not assume anything for citizens. In order to be inclusive, we need to sit and talk to them.
- Point 2: Infrastructure, education and research are needed. To be ready it may take several years. But we are all reaching a lot by investing. We are still not there that the society understands why this is important. It is not enough yet. We need to make sure that people understand the relevance of it and then it will roll. Society will come closer and will participate more and response rate will increase. But it takes more time.

Day 2: Presentation by Arfan M. Ikram during SESSION 5 (“Disruptive science – from population studies to ground-breaking findings”)



Arfan M Ikram² is

- Professor and Chair of Epidemiology at the department of Epidemiology, Erasmus MC Rotterdam, the Netherlands.
- president of the Dutch Organization for Health Research and Development (ZonMW), the largest public funder in healthcare in The Netherlands
- principal investigator of the Rotterdam Study
- a key collaborator in the CHARGE (Cohorts for Heart and Aging Research in Genomic Epidemiology) consortium

Extract from the presentation (“The main challenges and opportunities for populations studies in 5, 15 and 25 years”), which is recorded on Day 2 starting at 00:00:00 (Ikram, 2023):

Communicated key messages:

- The only way to investigate the causes of disease in the intact human is epidemiology (Sr Richard Doll)
- The closer you are to the community, the higher response remains
- Strengths of cohorts: Measurements are broad
- But for the participant, there is little return on investment
- The aim is not just to look at disease, but health and lifestyle

² <https://www.hsph.harvard.edu/profile/mohammad-arfan-ikram/>

- Returning knowledge back to society
- We do not have enough people to analyse all the data
- The question is how to engage citizens
- What are the strategies and pitfalls
- Everyone is still learning
- Most important is a change of mindset. The citizen is not passive. That person also thinks, engages and is ready to invest time (by participating in the cohort examinations)
- The question is: Are there ways this person can help solve health-related questions?
- Not everyone wants to engage, so it is important to search for those who can add value
- We need to engage the very moment we have the idea. Then we see value of engagement.
- Joinus4Health taught us that we need to act at multiple levels.
 - We need to increase awareness amongst scientists, citizens, stakeholders and policy makers
 - Institutional changes will take time and money so that the interplay between science and society is sustainable, not just one project
 - We need to create people who facilitate that. Not just the science, but the actions. The JoinUs4Health project has taught us a lot!

7 Online seminar series with public health representatives in Germany

Table 2 shows the number of participants that registered for, respectively participated in the web seminars. The participants came from a total of 11 different federal states, including Thuringia, Hesse, Rhineland-Palatinate, Hamburg, Berlin, Brandenburg, Lower Saxony, North Rhine-Westphalia, Schleswig-Holstein, Saxony-Anhalt and Mecklenburg-Western Pomerania.

The web seminars were evaluated via an online survey. The evaluation included questions about the comprehensibility of the content and whether the documents provided and the didactic structure were helpful and useful. Further aspects of the evaluation were the responsiveness to participants' wishes, the relevance to everyday working life and an assessment of the organisation as a whole. All aspects were predominantly rated as good or very good. However, it should be noted that participation in the evaluation was low: five responses for the web seminars in block 1 and four responses for the web seminars in block 2.

Table 1 Participants in the web seminars

	Number of registered participants	Number of participants in the web seminars
web seminar 1 (27/06/23)	16	14
web seminar 2 (29/06/23)	14	10
web seminar 3 (05/12/23)	20	12
web seminar 4 (07/12/23)	15	10

In addition to closed questions, free text answers were also possible. The evaluation of the second event block provided feedback on the JoinUs4Health approach and the JoinUs4Health platform. It was noted that the key question of how cohort studies can be utilised for public health services remained unclear and that there was a lack of concrete starting points for the transferability of the concept to everyday working life. This point of criticism was also addressed in the final discussion at the end of the 4th web seminar.

The participants also noted that the community using the platform is not yet sufficient and that it is unclear with what degree of reliability questions are answered by using data from the cohort studies, including an assessment of the transferability of the results to other regions in Germany. Focussing the approach and the platform on a specific target group, for example the public health services, could increase acceptance and use.

8 Activities in Bialystok, Poland

The team constellation in Bialystok included 2 academic partners, one marketing company (Whitebits) and one non-governmental organisation (SocLab). Regular in-person meetings, a lively collaborations between these partners from different background and the combination of offline activities with the online platform allowed citizen science to thrive in this region.

Pawel Sowa, Work Package 4 leader, summarized his perceived impact in Bialystok as follows:

“The impact of the project in Bialystok has been substantial, marking a significant step towards embedding Responsible Research and Innovation (RRI) principles into the city's scientific and educational landscapes. Through the project, Bialystok has witnessed a series of strategic initiatives aimed at enhancing public engagement, fostering science literacy, and integrating RRI into the operational frameworks of institutions like the Medical University of Bialystok. One of the notable achievements in Bialystok has been the successful engagement of the local community and especially secondary school students in RRI-related activities. Events like the Hackathon for Health and the Research Café not only introduced participants to the practical applications of scientific research but also encouraged them to contribute their perspectives to discussions on health and the environment. Such initiatives have played a crucial role in bridging the gap between scientific research and public understanding. Moreover, the establishment and operation of advisory bodies, including Citizen Science Boards, have facilitated a broader inclusion of diverse societal viewpoints in the governance of scientific projects. This inclusive approach has led to the enrichment of decision-making processes with a wide range of perspectives, significantly enhancing the initiative's effectiveness. The project's emphasis on science literacy and university engagement has also seen the integration of RRI principles into the curricula of the medical faculty's subjects at MUB. Educational initiatives have broadened the reach and accessibility of scientific education, actively involving students and community members in RRI principles from an early age. The development and continuous improvement of an online platform for public engagement have further demonstrated the potential of digital tools in promoting co-creation and multilateral communication. Despite challenges related to engagement verification and sustaining user interest, the platform has laid a promising foundation for future initiatives to build upon.”

Appendix 4 summarizes the vast range of activities in Bialystok. Feel free to reach out to the team in Bialystok for discussions or further input.

9 Focus in Rotterdam, The Netherlands: Education

In Rotterdam, the project was predominantly implemented through education. Activities included

- Mapping education activities that included RRI (Deliverable 5.1)
- Engagement of high school, graduate and post graduate students
- Development and implementation of a 10-week Minor programme (“From Science to Society”³) (e.g. see agenda of the seminar series in 2023 in Figure 4)
- Design, development and implementation of online course (From Science to Society) and two podcast series

Deliverable 5.5. illustrates how engagement of citizens and students can be achieved through Scientific Courses:

- Accessibility and Inclusivity (Interactive Learning, Train the trainer),
- Mentorship programs and research opportunities (Mentorship Programs, Research Opportunities)
- Measuring impact and success (Assessment Tools, Long-Term Tracking).

Although a large component of RRI is the outreach to society in a responsible manner, the internal or institutional dimension of RRI is an integral component of the success of implementing RRI. Participatory processes should become part of research and teaching. Since RRI is an innovative, but also time-consuming process, academic mechanisms should be developed to acknowledge and reward contributions by scientists and students.

³ <https://www.eur.nl/en/impactatthecore/science-society>

Please refer to Deliverable 5.1 to 5.5 for a detailed overview of the work performed and the summary of Natalie Terzikhan in Section 6 and the video recording on the conference website.

Personal note by Birgit Schauer (UMG): Things just seemed to be falling into place at EMC, and with the great passion of various people at EMC RRI has become an integral vision for the future. The Rotterdam Study is developing into a RRI Hub with potentially long-reaching effects on science and society through education and institutional changes. Given that EMC is leading the Rotterdam Study, which is a highly influential project in Europe, this direction is very promising.

The From Science to Society Seminar Series & Symposium

This series is part of the course 'from Science to Society', in which students discover the foundations of Responsible Research and Innovation (RRI) and Open Science. We care about sharing knowledge and insights from our course, that's why our guest lectures are open to guests!

Date	Time	Guest speaker	Topic	Teams-link
05/09/2023	10:00-12:00	Genie Miklos Assistant Professor at Erasmus School of Social and Behavioral Sciences	Problem-oriented project work	Link
11/09/2023	10:00-12:00	Elisabet Blok R.O.I.T. science club	Reward systems for academic researchers	Link
12/09/2023	9:30-12:00	Samira Abbadi Senior Diversity and Inclusion officer Erasmus MC	European University of Post-Industrial Cities	Link
14/09/2023	10:45-12:00	Lex Bouter Professor of methodology and integrity	Research Integrity	Link
19/09/2023	10:30-12:30	Daniel Bos & Charlotte Cecil Associate professors Erasmus MC	Considering an academic career path?	Link
26/09/2023	09:00-12:30	Sam Riedijk & Dreuwertje Houtman Lead master programme Genomics in Society	How to measure impact	Link
28/09/2023	09:00-12:30	Florian Wijker Erasmus Verbindt	Erasmus Verbindt	Link
03/10/2023	11:00-12:00	Arfan Ikram CEO NMO, chair ZonMW head Department of Epidemiology Erasmus MC	The political funding landscape in the Netherlands	Link
09/10/2023	10:30-12:00	Gaston Remmers Chair European Citizen Science Association, Director Mijn Data Onze Gezondheid	Citizen Science for Health	Link
10/10/2023	09:00-12:15	Eliane Lauwers and colleagues Communication and public affairs lead Janssen & Janssen	The role of pharmaceutical industries	Link
13/10/2023	09:30-11:00	Martha Teijema Director Antares Foundation	The interaction between NGOs and science	Link
24/10/2023	09:00-12:30	Amber Yaqub Blogger Faces of Science - KNAW	Science in the media	Link

We cordially invite all our speakers and those interested to our final Symposium on Wednesday 08/11/2023 13:00-16:00 hours. More information will follow later

Figure 4. Agenda of the Seminar Series and Symposium as part of the 2023 Minor “From Science to Society” implemented by EMC with input from EUR.

10 Concluding remarks

The implementation of the JoinUs4Health concept has not been straightforward. Even though the concept itself appears simple in its steps (suggest – vote – select a topic – recruit volunteers – plan team work and input – work together in teams - request input via tasks – disseminate). One of the keys of this concept is really the potential to cross-fertilize between ideas, build on the work of others, engage (lacking) stakeholder groups in discussions in a targeted manner (e.g. instigated by the moderator), ... Furthermore, the option to apply for local cohort results was considered a major incentive for participation.

The platform at this stage however has rather served as a collation of idea (Suggestions) and suggestions for approaches (Topics). True collaboration between Teams has not yet taken place yet. One limiting factor was that we did not take time in the beginning to achieve clarity between partners and invite stakeholders to co-create the platform (see Deliverables 2.2 and 7.5). The platform appears at times still not intuitive enough despite revisions. So technical advancements may help attracting contributors.

We had many discussions on the approach to ensure a dialogue framework and bottom-up approaches rather than a deficit framework where scientists are regarded as “experts” and citizens as “lay” people. We worked hard on aligning our activities as much as possible with the RRI philosophy. But fundamental differences remained in the perspectives of partners, especially regarding the potential, value and role of cohorts.

Furthermore, our initial co-creation approach (see Appendix 2) could not yet be tested due to a lack of sufficient volunteers. So this deliverable can hopefully inspire and provide ideas to explore different approaches. We were open in the choice of topics and tried to encourage people to engage during the whole process of idea creation, formulation of questions, collaboration, discussion and review (e.g. see Appendix 3.2 – flyer for public health officials). But it takes time. RRI is also about relationship building. Through this project, the cohorts had opportunities to build new relationships in their regions, work which will continue in the future.

In conclusion, this deliverable documents some of our experiences, aiming to demonstrate different perspectives. It also outlines challenges we encountered. Further project deliverables provide additional valuable information created by the different Work Packages. The project has been a tremendous learning experience for the individuals involved in the project, the cohort institutions and hopefully also for the various stakeholders and stakeholder groups involved throughout the process.

Acknowledgments

Thank you to everyone involved in the project, to all stakeholders, cohort representatives and the European Commission for the chance to implement this concept in practice! It has been an amazing journey! A big thank you also goes to all cohort participants for dedicating their time to support population-based cohort research. Without these data treasures we would not have embarked on this journey. We had many interactions, at the local, regional, national and international level. These exchanges added value along the way. A big thank you goes to the early innovators who provided suggestions and engaged in exchanges via the platform or during offline events. Also, from the cohort institutions we received tremendous internal support. There were many unpaid hands and brains helping along the way to promote the project and concept within the institution and the region.

References

- Ellena, S. (2023, March 29). *Crowdsourcing citizens' ideas can benefit EU policy cycle, experts say*. Euractiv. <https://www.euractiv.com/section/participatory-democracy/news/crowdsourcing-citizens-ideas-can-benefit-eu-policy-cycle-experts-say/>
- Franzoni, C., Poetz, M., & Sauermann, H. (2022). Crowds, citizens, and science: a multi-dimensional framework and agenda for future research. *Industry and Innovation*, 29(2), 251–284. <https://doi.org/10.1080/13662716.2021.1976627>
- Ikram, A. M. (2023, December 2). The main challenges and opportunities for populations studies in 5, 15 and 25 years. *Towards Comprehensive Population Studies II*. <https://conference.bialystok.plus/> (video recording available)
- Kaminski, K. (2023, December 1). The development of the BIALYSTOK PLUS project. *Towards Comprehensive Population Studies II*. <https://conference.bialystok.plus/> (video recording available)
- Molla, F. S., Line, B., & Harald, T.-H. (2018). Practicing responsible research and innovation in a crowdsourcing project in Norway. *The ORBIT Journal*, 2(1), 1–28. <https://doi.org/https://doi.org/10.29297/orbit.v2i1.82>
- Terzikhan, N. (2023, December 1). How the Rotterdam Study adapts to the changing science and society. *Towards Comprehensive Population Studies II*. <https://conference.bialystok.plus/> (video recording available)

Appendices

Appendix 1: Details on platform contents

Table 2. Details of suggestions posted on the JoinUs4Health platform as of 07.02.24

ID	Title	Details
33	Litter pollution of individual cities	In this project, we will investigate waste pollution in different cities. During the project, we will investigate the most polluted places and areas of a city and try to increase their cleanliness by putting up additional garbage bins. Furthermore, we will spread awareness about waste segregation and proper waste disposal through encouraging banners.
32	Amount of sleep	Sleep affects how we feel during the day. When we sleep too little we feel tired all day. We want to find out what the right amount of sleep is and how we can improve the quality of our sleep. You can help us with this by checking how much sleep you get and how you feel during the day.
31	Uses – need or choice	WHY IT IS IMPORTANT: Nowadays, there is a large availability of various stimulants on the market (e.g. coffee, nicotine, alcohol, drugs). This makes it easy to fall into addiction and impair one's health. WHAT QUESTIONS ARE WE SEEKING ANSWERS TO: How often do teenagers use stimulants during the day? How much money do teenagers spend on stimulants in a month? What types of stimulants do they reach for most often? What are the reasons for reaching for stimulants? HOW CITIZENS CAN HELP US: Citizens can report, e.g. in a forum, how many times a day they use stimulants, which types are most frequent. They can tell what their day is like and through which situations they turn to stimulants. They can say how much money they spend on it, have there been situations where they have had to borrow money? EXPECTED RESULTS: To draw attention to the amount of stimulants consumed.
30	Waiting times for medical examinations	We want to reduce the waiting time for tests, because with a quick diagnosis there is less chance of developing a disease. We are looking to find out why the waiting time is so long, you can help us by telling us how long you have been waiting for tests. We hope to reduce our waiting times through our project.
29	Saving water in households	In some places in our environment as well as around the world, water is very much needed. Unfortunately, many people do not realise how much water is wasted. We are looking for answers to the question: how can we save water and use it wisely? Citizens can help us by giving us their own ideas on how to manage water well and where not to use it. We are interested in finding out how such simple uses of water can be applied in more homes and perhaps how to use it on a larger scale.
28	Meaninglessness of physical education during the course of youth education	Young people are avoiding physical education lessons. For good reason. It affects their mental health and their general attitude towards physical activity. Hence our questions: - How does physical education affect people's mental health? - Is physical education in any way effective and tailored to the individual needs of students? - Why are a significant number of young people looking for ways to avoid physical education classes? In our search for answers to these questions, we are looking for volunteers to provide answers to the above questions, offer their opinions and share their experiences of physical education classes and help collect additional data. We look forward to adapting physical education to the individual needs of students/ possibly reducing the number of hours of physical education or removing it.
27	Beyond Expiry – Actual date of consumption versus expiry date	Why it is important: - preventing food waste - raising public awareness - consumer safety - producer responsibility Questions we seek answers to: Is the expiry date stated by the manufacturer always accurate? What does the food look like after the expiry date? What are the

ID	Title	Details
		consequences for consumers after eating a particular expired food? What are the ways to determine the actual expiry date? How can citizens help us: - sharing experiences and evaluating products - conducting field research - reporting infringements Expected outcome: - practical guidance for consumers - recommendations for products and regulatory authorities - increased public awareness - more accurate knowledge of expiry dates of products
26	What is the ratio of places with polluted air to green spaces?	Through the website, users report the presence of green spaces and places with extremely high air pollution, in their area. They report on the number of cars and places where potentially harmful substances may be smoked. Based on the results of the survey, a citizens' project will be prepared to improve air quality by increasing the amount of green areas in selected locations.
25	Availability of parking spaces in the area	Looking for parking spaces often generates a lot of exhaust fumes and takes a lot of time, and creates a lot of nerves which can cause accidents. We want parking spaces to be in frequented areas and limited in areas where there are no drivers. Citizens will mark free parking spaces and places where there are often no spaces in the app.
24	SunZones	The project involves the creation of maps of major cities, where users will be able to report observed third-party fainting to obtain data suggesting where shaded areas should be built and additional trees planted.
23	Forest versus traditional preschools – the impact of nature deficit on children's development	I am putting forward the idea of a study to monitor how free access to nature at the pre-school stage influences children's emotional, motor and cognitive development in the long term.
22	Is the keto diet healthy?	What are the advantages and contraindications to undertaking this diet?
21	Digital participation of seniors as a prerequisite for the use of health and fitness apps	The advantages and possibilities of health apps (e.g. determining important values in the case of illness and transmitting them to the doctor or reminding them of appointments) only come to fruition if they are actually permanently available to users and have not failed due to technical difficulties or operating errors.
20	Meeting Young to Young	Hi everyone! As the Youth Council of the City of Bialystok, in cooperation with the SocLab Foundation as part of the international project "JoinUs4Health", we are preparing a meeting "Young to young", during which we want to raise the topic of mental health of young people today. We are convinced that this is an extremely important issue and deserves our attention. However, we would like to hear your voices to make the meeting as relevant to your needs as possible. Therefore, we ask you - what are your most important mental health issues? It could be stress, pressure from overwhelming responsibilities, feelings of loneliness, difficulties in dealing with your emotions, or anything else that affects you. Our aim is to organise a meeting that will be really useful and valuable for you as young people. We are aware that mental health is a topic often associated with taboo and shame, so we want to create a safe space where everyone can express their opinions and share their experiences. We rely on your honesty and courage to share what is bothering you. Your opinions are extremely important to us and will allow us to better understand your needs in order to make the 'Young to Young' meeting the most valuable experience possible. Thank you for your help and we invite you to actively participate in the preparations for the meeting! Greetings! Youth Council of the City of Bialystok and the SocLab Foundation! If interested, select "Contribute".
19	Factors that increase cancer risk	

ID	Title	Details
18	Neurodegenerative diseases	Prevalence of neurodegenerative diseases among young people.
17	Why should we take care of our health?	-
16	How has COVID-19 worsened the overall health of Bialystok residents?	The question is whether the health of the people of Bialystok has deteriorated and whether it has deteriorated at all.
15	Autism spectrum disorder	Does living high above sea level during pregnancy, where there is less oxygen concentration, increase the risk of the oval opening not closing after birth?
14	Environmental pollution	I would like to ask about environmental pollution in Białymstoku środowiska w Białymstoku
13	Information verification training	Idea for information verification training with a focus on new forms of fraud using artificial intelligence (AI) used in both the creation of health misinformation and the increasing attempts at financial fraud.
12	How does contact with animals affect the mental state and recovery time of long-term hospital patients?	-
11	Influence of the level of patient information about the medical procedure versus recovery time	Influence of the level of patient information on the procedure and recovery time. Also with general anaesthesia.
10	How to start therapeutic garden – practical tools	I was wondering if anyone has or is willing to share a hands-on guide for creating a therapeutic gardens for people experiencing depression and anxiety.
9	Healthy studying – what do you wish for?	Your studies take place in your own living environment. It offers challenges and opportunities. We would like to know what you would like to see for healthy studies at the University of Greifswald? We look forward to your participation!
8	"Bone Health" Initiative – "predictive" prevention of osteoporosis	Osteoporosis ("bone loss") is a widespread "disease of civilisation". In Germany, about 5.2 million women and 1.1 million men (mostly aged >50) are affected. Every year, 885,000 people in Germany develop osteoporosis. Because the disease is asymptomatic for a long time, it is often only recognised when considerable damage has already occurred. However, through new concepts in the context of primary prevention, there is hope that early measurement of biomarkers in combination with individual interventions - especially in the areas of nutrition, micronutrient supply and exercise - can significantly reduce the personal risk of those potentially affected. Guiding questions for a citizen science project would be: Which risk factors (e.g. family tendency, lack of exercise, ...) are relevant? How can these be systematically recorded? Which biomarkers (laboratory values, e.g. vitamin D levels) could be used for individual risk assessment? Which interventions would be relevant for an active reduction of personal risk? The aim of the initiative would be to build up a group of interested people who a) contribute to the content of the guiding questions (especially experts from the health sector, such as doctors, nutritionists, fitness trainers) and b) a group of potentially affected users who would like to work concretely on their health and on reducing their individual risk in the medium to long term.
7	Forest bathing in connection with	Conservation medicine is a growing field that combines veterinary science, conservation biology and public health to address animal,

ID	Title	Details
	conservation medicine	human and ecological health holistically, rather than as siloed branches of knowledge. Forest bathing could create a positive impact in conservation medicine by increasing the sense of belonging in citizens due to connections to their natural environments. For example it could be used as a tool of education around the ecosystem and the animals that live in it. This could also translate into policies that protect the forest areas.
6	Health effects of commuting to work by bicycle	I am interested if scientific research has looked at this aspect
5	Garden for health in practice	Establishing support groups through the garden for people experiencing a mental crisis, e.g. at patient clubs or day wards, therapy gardens, hospital gardens, hortitherapy, community gardens, gardening as a form of rehabilitation and prevention
4	Implementation of daily lessons in the natural environment (school grounds, park, forest, other places) into public kindergartens and primary schools	<p>We have been brought up in a closed environment for many years. Classes at school and kindergarten are mostly held in classrooms equipped with ready-made educational aids, usually made of non-ecological materials (e.g. plastic) and virtual aids (computer programs and teaching aids from the Internet resources). Contact with nature is minimal. A lot of people think it's time for a change in this regard. People and especially children need contact with living nature, experiencing its influence with all senses every day. Since children spend most of the day in kindergarten, and then in school, these institutions should meet these basic needs. Let's create a group of people who want to change the thinking and actions of educators, carers and principals of kindergartens and schools to whom we entrust our children. A revolution in thinking about activities and spending time outdoors and in motion is also due to parents :) Education does not only apply to the young generation. If teachers learn to conduct their lessons in the field (for their own and students' better health), all their lessons, i.e. languages, maths, history, biology, etc., this would lead to many health-promoting effects. Summarizing, the idea is to implement the following tasks:</p> <ol style="list-style-type: none"> 1. Change in the thinking and mentality of the teaching staff in schools and students' parents (weather factors are not an obstacle to children's spending time in the yard for a long time, all knowledge with a little good will can be passed on outside the classroom) through extensive information activities, exchange of experiences whether participation in projects or practical workshops; 2. Introducing everyday lessons outside to kindergartens and schools (e.g. backyard, playground, lawn, park, forest); 3. Making students aware of the impact of broadly understood Mass Media and advertisements available to everyone during educational lessons, even on a mobile phone equipped with the Internet. The messages conveyed on news portals are unfortunately formulated in such a way as to arouse in the recipient the emotions desired by the sender, which are often detrimental to the mental and physical health of the recipient. The awareness of the impact of information reaching us and the way in which it is transmitted makes us immune to attempts to influence our well-being and, consequently, health. 4. Improvement in the health sphere of students would also bring a revolution in the way of conducting lessons - rat race, evaluation, competition (wins the best) present in many lessons and in the minds of ambitious parents is an additional stress factor in young organisms. <p>Is this what we really want for ourselves and our children? Is that what we're here for? Are we living for this?</p> <p>Learning at school means constantly gaining new experiences and knowledge, which means frequent mistakes, mistakes for which children are judged. Assessment, on the other hand, is a clash with self-esteem.</p>

ID	Title	Details
		When self-esteem lowers, the brain automatically shifts that burden onto the body. And we have the beginning of all kinds of diseases. Do we really need grades in the education system? Or maybe we are so used to them that we cannot imagine school without them. Yet many education systems have long functioned without grades, and with great success. So I ask myself: Who and what is responsible for the maintenance of old, ineffective teaching systems in the public school? Will there be a brave one to say STOP?
3	Positive effects of forest bathing for preschool children	I would like to know what is the scientific evidence for the effectiveness of forest bathing
2	What factors influence positive effects of forest bathing?	Activities on forest bathing could aim to generate practical guidelines on how we can make use and optimize potential benefits of "forest bathing" as individuals based on our options, preferences and needs. Which questions are of interest? What results and experiences do exist? Where are information and research needs? Possible questions for example might be: 1) What should be paid attention to (for example no electronic devices, clear mind, consciously connecting by sitting under tree, walking barefoot?) 2) Is it more effective to spend the time on "forest bathing" in the morning or afternoon? 3) What is the recommended and minimum duration per "forest bath"? 4) Does the type of forest make a difference? 5) Is it possible to mimic forest bathing in a digital environment? 6) Do other natural environments such as beaches have similar effects? 7) Which mechanisms lead to the positive effects of forest bathing?
1	Assessing the effect of green space in cohort research	Many cohort studies have already looked into the effect of green space on various health measures. Could we invite cohort representatives and other stakeholders to brainstorm on the availability of cohort data, literature and experiential knowledge to jointly discuss potential analyses? This could include mind mapping and systems thinking approaches. Scientists from another research team could be invited to present their findings. Results could then be jointly summarized and a proposed plan, potential analyses and aspects to consider documented.

Table 3. Number of followers, contributors, voters and comments posted on the JoinUs4Health platform as of 15.12.23 sorted by date (newest first).

ID	Date created	Group	Title	Original language	Followers	Contributors	Votes	Comments	Status
17	24/10/23	Youth	Mental health prevention for young people	Polish	1	4	4	0	active
16	10/09/23	Public Health	Strengthening the sun protection competence of the population	German	1	2	6	1	active
15	10/09/23	Public Health	Strengthening the mental health of children and young people	German	1	1	5	2	active
14	07/09/23	Public Health	Climate change and health	German	1	1	6	0	active

ID	Date created	Group	Title	Original language	Followers	Contributors	Votes	Comments	Status
13	23/08/23	Partner	Proposals from animal owners in SHIP-One Health	German	0	0	3	0	active
12	12/06/23	Partner	Diabetes and pre-diabetes - call for preventive action	Polish	0	0	3	0	none
11	15/05/23	Partner	Use of population-based health research in the context of public health	German	0	0	4	0	active
10	15/05/23	Science (extern)	Healthy Studying - Healthy University of Greifswald	German	1	0	4	0	continuous
9	12/04/23	Citizen	Senior fitness	German	1	0	4	0	active
8	12/04/23	Science (extern)	DDR Psych Study	German	1	2	4	0	active
7	29/06/22	Partner	Sedentary lifestyles - the invisible pandemic of the 21st century	Polish	5	7	8	1	active
6	20/06/22	Students	Multimorbidity: bad luck, coincidence or cause?	Dutch	0	1	3	0	active
5	31/05/22	NGO	Gardening for Health	Polish	4	6	10	9	active
4	20/04/22	NGO	Forest bathing	Polish	3	3	6	1	active
3	12/04/22	Partner	Festival of The New European Bauhaus	English	1	1	5	2	closed
2	11/04/22	Partner	JoinUs4Health related activities	English	2	1	4	0	continuous
1	11/04/22	Partner	NEXT-One Health module in the "Study of Health in Pomerania" (SHIP)	German	1	1	5	0	closed

Table 4. Details of topics posted on the JoinUs4Health platform as of 15.12.23 sorted by date (newest first).

ID	Details	
17	Mental health prevention for young people	Citizen
Intro	<p>The Youth Council of Bialystok (Poland), in cooperation with the SocLab Foundation, has developed recommendations on mental health prevention. They are based on a diagnosis carried out during the Youth Forum on Mental Health "Youth for Youth" on 13 June 2023. More than 50 male and female students from secondary schools participated. Together, we diagnosed problems in three areas: stress, fatigue, depression. We listened to and recorded the experiences of the young people and their ideas on how they can be supported. We invite you to discuss these solutions. Perhaps you have other ideas?</p> <p>The recommendations were developed by: Representatives of the Youth Council of the City of Bialystok: Bartosz Cieślak, Patrycja Jacewicz, Konrad Ochrymiuk</p> <p>Pawel Potas. From SocLab Foundation: Dr. Katarzyna Sztop-Rutkowska, Michal Lemanski.</p>	
Details	<p>Fatigue Diagnosis: We feel the need to calm down while in school. Being there for 7-8 hours a day, with noise and a lot of tension, we need space to relax, if only for 15 minutes. We lack the knowledge of how to calm down, relax and regenerate ourselves. This knowledge and skills are needed not only for us, but also for the whole school community, including teaching staff and parents. We have a problem with good nutrition and exhaustion due to too much homework. Suggestions for activities to be implemented: A quiet corner in each school Create a space in each school, e.g. a room or a separate part of the corridor for relaxation and quiet time. Place comfortable poufs, loungers, mats. These could be, for example, reading areas where pupils can borrow books from other pupils, discuss them or simply lie down in silence and breathe. In such corners, it will be possible to get simple instructions on how to relax with, for example, breathing exercises or a short meditation. Through such activities, we will create an opportunity to relax for a short time, to get away from excess stimuli and exhaustion. Such a space should be free of social media, internet and mobile phones. Walking+ During parent-teacher, religion or physical education lessons, instead of the traditional sitting in desks, we take walks together to spend time actively, oxygenate the brain, break out of the routine and simply relax. Not a certificate, but a person for six A campaign to promote a mindset among teachers, parents and students themselves that a grade on a single test or answer sheet is not equal to our worth. To draw attention to the fact that although grades are important to many people, they are not an indicator of our worth. We can also fulfil ourselves through our passions, hobbies and social activities. Workshop programme for schools - sharing information about organisations, coaches etc. Create a list of proven individuals/organisations who are willing to run workshops on e.g. social skills, time planning, management, motivation (general self-development). Such activities could be conducted during lessons with the tutor or even after school as additional workshops for those who are willing. This is to gather information and network the community that deals with this type of education. Such a list could be made, for example, by the Education Department of the City of Bialystok. Healthy pupils, healthy Bialystok Implementation by the city of projects related to healthy eating among young people, starting with awareness (media campaign), then transferring knowledge (debates, conferences, workshops), and in the next stage implementing practice (implementing changes e.g. in school canteens or introducing standards in school food vending machines or e.g. introducing "healthy food kits" in secondary schools (following the example of primary schools)). Slower afternoons and weekends Hold discussions and develop solutions to reduce the homework burden, especially at the weekend. This will allow pupils to gain some respite. They will be able to devote their free time to their development through various activities or to simply relax, reducing their fatigue</p>	

ID	Details
	<p>after a full week of work. One of the positives will be the conscious origin of the student to study on the days set aside for it. One option could be to not give lessons in subjects in which the student is not preparing for any exams (baccalaureate, vocational exams) or to not give homework on weekends.</p> <p>DEPRESSION</p> <p>Diagnosis:</p> <p>The topic of depression is very important to us. We see around us how our friends increasingly have problems with constant bad moods, with suicidal thoughts and self-harm. The topic of depression is no longer a taboo subject for us: we want to talk about it, we already know quite a lot. Unfortunately, we sometimes feel ignored by adults. We also have problems accessing professionals, sometimes fearing that the school psychologist will not be discreet. We need safe spaces to talk about our problems, thoughts and dilemmas.</p> <p>Proposals for activities to be implemented:</p> <p>Youth Centre:</p> <p>Create a Youth Centre in an abandoned building owned by the city to serve as a space for prevention activities. The centre should offer psychological support, counselling, workshops on dealing with emotions, and act as a place where young people can meet, talk and support each other;</p> <p>Awareness campaigns on depression/the impact of social media on young people's sense of self-worth</p> <p>Carry out online and social media awareness campaigns to educate young people and the public about depression, overstimulation, and to show a true picture of life, rejecting idealised images. Including influencers in this campaign can help to reach a younger audience. This could be implemented in a competition format for young people.</p> <p>Education in schools</p> <p>Work with the Department of Education to create a list of professionals and organisations that can come to schools and give workshops, talks and lectures on mental health prevention, stress and emotion management during parenting hours.</p> <p>Education of parents</p> <p>Organise meetings with parents about depression and mental health problems. Imparting knowledge about behaviours that may indicate a pre-depressive state or depression. Encouraging the use of specialist support. Acquiring the skills to select people suitable for therapeutic work.</p> <p>Normalising depression</p> <p>Emphasising that depression is an illness, not a sentence, and that there are effective forms of treatment. Avoiding the stigma associated with psychotherapy and psychiatrists. Promoting the use of psychological and psychotherapeutic help as a natural behaviour in caring for mental health.</p> <p>24/7 Helpline:</p> <p>Popularise the helpline for young people. This is a much-needed way of first contact with a psychologist outside of school. Anonymity and a sense of security that the information provided about wellbeing will not be used inappropriately is important here.</p> <p>First visit to the psychologist without parental consent</p> <p>Introduce the possibility of a first visit to a psychologist or therapist without parental consent. This will allow young people to feel more independent and enable them to seek support if they are not ready, if they do not want to inform their parents about their problems and/or if the parents do not agree to see a psychologist, e.g. because they think that depression is not an illness and that the child does not need to see a psychologist, but can, for example, go for a run.</p> <p>STRESS</p> <p>Diagnosis:</p> <p>Stress accompanies us every day: at school, in the family, it is part of our relationships with our peers. School is a source of very high stress: a lot is demanded of us, we are not built a relationship with us, we are just trying to pass on knowledge and test it. How do we cope with stress? Through stimulants, shutting ourselves away, we escape from reality. Our bodies react with insomnia, headaches. We need knowledge about how to deal with stress. But we also need more support and acceptance and less pressure.</p> <p>Proposed activities to be implemented:</p>

ID	Details	
	<p>Social campaign "Visiting a psychologist, therapist, psychiatrist is ok". Social campaign to present visiting such a specialist as something normal, important, not stigmatising. Asking parents not to underestimate their children's problems and to allow them to benefit from such services. Emboldening young people to want to use such support. Supporting the building of people-to-people links between residents Supporting or organising various events to integrate the community, especially young people, e.g. board games in the park, a dance in the centre. We need places where it is not stressful but encouraging and everyone, even alone, can come and meet people. Anti-stress workshops in schools</p> <p>We see a need for workshops in schools to teach young people how to deal with stress. For example, meditation or breathing exercises.</p>	
16	Public Health Topic: Strengthening the sun protection competence of the population	Public Health
Intro	<p>How can sun protection skills be taught? What sun protection measures exist and what effects do sunburns in childhood have on health in adulthood?</p> <p>In a virtual series of events entitled "Research cooperation in practice: making population studies useful for the public health service", employees from municipal health offices - the local public health service - discussed which topics are relevant to their work and would benefit from being addressed via the JoinUs4Health platform. One of these topics deals with aspects of health behaviour with the aim of developing measures to strengthen the sun protection competence of the population and to create a collection of sun protection measures in kindergartens and schools.</p>	
Details	<p>On the topic of health behaviour, the focus was on the sun protection competence of the population and the effects of sunburns in childhood on health in adulthood. For example, the definition of the term sun protection competence and which information materials on sun protection already exist for children, adolescents, adults, older people and professionals and which measures are implemented in kindergartens and schools. In the meetings with representatives of the public health service, questions were defined that are divided into two work packages:</p> <ol style="list-style-type: none"> 1) Knowledge collection - evidence synthesis <ol style="list-style-type: none"> 1.1) What is sun safety literacy? 1.2) What information material on sun protection already exists for the population (children, young people, adults, older people)? 1.3) What information materials on sun protection already exist for professionals (health, education)? 1.4) Which sun protection measures (individual, structural) exist and to what extent are they evidence-based? 1.5) Which sun protection measures are already established in kindergartens or schools? 1.6) What concerns or myths about sun protection exist and how should they be addressed? 2) Evidence from population studies - new analyses and/or compilation of previously published results. <ol style="list-style-type: none"> 2.1) How often do people have sunburns in childhood? Are there differences between population groups? 2.2) What is the impact of a sunburn history on health in adulthood? <p>In the next three months, the tasks developed on the topic will be worked on together with representatives from science, public health services and other interested parties. The results will be communicated publicly via the platform and discussed with the public health service in a second virtual event block.</p> <p>Tell us about your experiences! Let us know via the comments field.</p> <p>Or would you like to work on proposals with others in a team? Click on "Contribute" and we'll get back to you with details.</p>	
15	Public Health topic: Strengthening the mental health of children and young people	Public Health

ID	Details	
Intro	<p>What findings are there on school absenteeism and how can trauma experiences in childhood be recognised?</p> <p>In a virtual series of events entitled "Research cooperation in practice: making population studies usable for the public health service", staff from municipal health offices - the local public health service - discussed which topics are relevant to their work and would benefit from being addressed via the JoinUs4Health platform. One of these topics deals with aspects of mental health with the aim of being able to develop measures to strengthen mental health and resources in childhood at the municipal level.</p>	
Details	<p>On the topic of mental health, the participants focused on the areas of school absenteeism and trauma experiences in childhood. For example, findings on risk and protective factors of truancy, warning signs of childhood trauma experiences or influences of childhood trauma experiences on physical and mental health in adulthood were discussed.</p> <p>In the meetings with representatives of the public health service, the following questions were defined that are divided into two work packages:</p> <ol style="list-style-type: none"> 1) Knowledge collection - evidence synthesis <ol style="list-style-type: none"> 1.1) What evidence is there on risk and protective factors of truancy? 1.2) What is the evidence on trauma experiences in childhood and health development in adulthood? 1.3) How can trauma experiences already manifest themselves in childhood? 1.4) What are the warning signs of child trauma experiences? 1.5) How can professionals be sensitised to recognise warning signs regarding child trauma experiences in time? 1.6) Which structural services are useful to support children, adolescents and their parents with psychological problems? 2) Evidence from population studies - new analyses and/or compilation of already published results <ol style="list-style-type: none"> 2.1) What influence do trauma experiences (retrospective questionnaire) from the past have on physical and mental health? 2.2) Can evidence on trauma experiences and health be generated from the SNIP birth cohort (SNIP= Survey of Neonates in Pomerania)? 2.3) Can evidence on risk and protective factors of school absenteeism be generated from the SNIP birth cohort? <p>In the next three months, the tasks developed on the topic will be worked on together with representatives from science, public health services and other interested parties. The results will be communicated publicly via the platform and discussed with the public health service in a second virtual event block.</p> <p>Tell us about your experiences! Let us know via the comments field.</p> <p>Or would you like to work on proposals with others in a team? Click on "Contribute" and we'll get back to you with details.</p>	
14	Public Health topic: Climate change and health	Public Health
Intro	<p>Heat waves are becoming more and more frequent. The heat leads to increased physical stress, a reduction in well-being and performance, and even heat-related deaths.</p> <p>In a virtual event series entitled "Research cooperation in practice: making population studies useful for the public health service", employees from municipal health offices - the local public health service - discussed which topics are relevant to their work and would benefit from being processed via the JoinUs4Health platform.</p> <p>The aim of this topic is to better understand heat events and their impact on health. In this context, it is particularly important for the public health service at district level to be able to plan and implement measures, activities or even information campaigns at local level as efficiently and specifically as possible.</p> <p>Representatives of the health authorities, scientists and citizens are cordially invited to participate in this exchange!</p>	
D et	<p>On the topic of climate and health, the participants discussed in particular how the</p>	

ID	Details	
	<p>population's exposure to heat can be measured and what information is already available to inform the population more effectively. What information, measures and resources are needed to effectively protect the population, especially vulnerable groups?</p> <p>The following tasks / questions were defined:</p> <ol style="list-style-type: none"> 1) Knowledge collection - evidence synthesis. <ol style="list-style-type: none"> 1.1) How are heat days defined, and at what threshold should attention be paid? 1.2) How is heat death defined? 1.3) How is heat-associated mortality calculated by the Robert Koch Institute? 1.4) What influence does heat have on the metabolism? 1.5) How burdened is society and how can this burden be measured? 1.6) What factors / pre-existing conditions influence the risk of heat death? 1.7) What information is already available on the impact of heat on health and how does it differ? Evaluation of existing information (e.g. education on drinking behaviour) 1.8) What information can be made available to the population or already exists to protect against heat-associated risks? 1.9) Which structural offers would be useful to reduce heat-associated risks? 1.10) What measures are necessary to improve the database on heat-related deaths and, if necessary, to enable small-scale analyses? 2) Evidence from population studies - new analyses and/or compilation of already published results <ol style="list-style-type: none"> 2.1) Which weather data were linked to the (SHIP) data? 2.2) Which analyses of the SHIP data are possible to make statements on the influence of heat on health? 2.3) What results on the influence of heat on health are already available in SHIP? <p>Do you have any hints, suggestions or your own experience reports? Comment directly on individual questions via the comment field.</p> <p>Or would you like to work on questions in teams with others? Click "Contribute" and the supervisor of the topic will contact you.</p>	
13	Proposals from animal owners in SHIP-One Health	Partner
Intro	<p>"What question currently interests you most when it comes to the topic of human and animal health?"</p> <p>Since mid-2021, we posed this question to all participants of the SHIP One Health module. Feel free to comment: What interests you most and why? Or be inspired by previous answers from SHIP participants.</p>	
Details	<p>The basic idea behind the concept of "One Health" is not to look at human health in isolation, but in close connection with the health of animals and our environment. Since mid-2021, the "Study of Health in Pomerania" (SHIP) project, founded in 1997, has been implementing this holistic health concept in its third study group (called NEXT). This means that not only the human participants are examined, but also their animal companions at home - be it dogs, cats, poultry or pigeons.</p> <p>As part of the One Health module, we asked the participants: "To what extent does contact with your pet help to promote your mental and physical health?".</p> <p>In the attached PDF document you will find a summary of the 143 answers received so far. We look forward to hearing about your personal experiences and impressions! Please share them with us in the comments field.</p> <p>Would you also like to work on ideas and suggestions received together with others in a team? Then click on "Contribute" and we will get back to you with further details.</p>	
12	Diabetes and pre-diabetes - call for preventive action	Partner
Intro	<p>Diabetes remains a major public health priority due to the steady increase in its prevalence.</p>	

ID	Details	
	<p>More than 6% - equivalent to approximately 537 million people in the global population - are affected by type 2 diabetes [1]. Although typically diagnosed in middle-aged people (45-64 years), the prevalence is increasing in all age groups. Equally dangerous can be the pre-diabetic state is an intermediate hyperglycaemic state with elevated blood glucose parameters above normal but below the threshold for diabetes [2]. Such a state is classified as dysglycaemia and is a prelude to diabetes [2]. The incidence of progression of type 2 DM five years after the diagnosis of abnormal glucose tolerance or abnormal fasting blood glucose is estimated to be 26% and 50%, respectively [2]. The natural progression of the pre-diabetic state is insulin resistance and pancreatic B-cell dysfunction, leading to overt diabetes [3]. The prevalence of non-diabetic hyperglycaemia is steadily increasing: 541 million adults (10.6% of adults worldwide) have abnormal glucose tolerance and 319 million (6.2%) have abnormal fasting blood glucose [1].</p>	
Details	<p>More than 1,000 Bialystok residents were surveyed as part of the Bialystok PLUS population-based study. Medical history data indicated that 75 patients had diabetes mellitus, representing 7.14% of the study population. On the basis of laboratory tests, we found that pre-diabetic status was present in 410 individuals (approximately 40%). We identified a population group without abnormal glucose metabolism, which accounted for 47.1% (n = 495). Participants with abnormal fasting glucose (IFG) accounted for 22.93% (n = 241) and those with abnormal glucose tolerance (IGT) for 6.1% (n = 169). Among these patients, we detected 104 patients with both IGT and IFG (25.37% of all prediabetics). Furthermore, we showed that 6.76% (n = 71) were diagnosed with diabetes for the first time in our study after performing an oral glucose load test (OGTT). Of this group, 62% (n = 44) had a fasting glucose below 126 mg/dl, suggesting that the OGTT should be performed routinely for the diagnosis of glucose metabolism disorders. As many as 146 (13.8%) of the total study population were found to have diabetes.</p> <p>We have prepared an information booklet summarising the most important issues to look out for in diabetes prevention...</p>	
11	Use of population-based health research in the context of public health	Partner
Intro	<p>Population-based studies provide extensive information on the health of the population and allow specific questions to be answered. In order to better use the results of the studies for the public health service, representatives of the public health service have the opportunity to become part of the scientific process and the research community JoinUs4Health in a series of events organised by the Academy for Public Health. This type of exchange is possible because three European cohort studies - including the SHIP study (Study of Health in Pomerania), which has been active in the Western Pomerania region since 1997 - have opened up for research cooperation with the public health service and other social actors.</p>	
Details	<p>In the four-part series of events organised by the Academy for Public Health, representatives of the public health service in Germany learn about the three cohort studies involved in JoinUs4Health.</p> <ul style="list-style-type: none"> > representatives of the public health service in Germany get to know the three cohort studies involved in JoinUs4Health, > develop questions relevant to the public health service together with other participants, > submit these via the JoinUs4Health collaboration platform and > discuss the results against the background of their applicability and integration into the practice of the public health service. <p>The potential range of topics is diverse, for example:</p> <ul style="list-style-type: none"> > behavioural and situational prevention, > physical health, > mental health, > utilisation of health care services, or > animal husbandry (zoonoses, hygiene). <p>All the questions developed will be jointly prioritised within the framework of the training series with regard to their relevance for the public health service and submitted via the JoinUs4Health platform for discussion and (joint) processing.</p>	

ID	Details	
	<p>When do the events for representatives of the public health service take place? The elaboration, prioritisation and submission of the questions are part of the first two events on of the first two events on 27 and 29 June 2023. At the end of the year, we will hold two further events to review the results and discuss how the results can support the work of the public health service. All events will take place online. How can you contribute as a platform user? Submit suggestions via the platform on what issues could be relevant to the Public Health Service. Contribute to work with others on needs raised at the events.</p> <p>Questions: Feel free to contact us. Just write a comment with "CONTACT" and we will get back to you.</p>	
10	Healthy Studying - Healthy University of Greifswald	Scientist
Intro	<p>Your studies take place in your own living environment. It offers challenges and opportunities. We would like to know what you would like to see for healthy studies at the University of Greifswald? Your voice is important to us because we want to create an environment that promotes your well-being.</p>	
Details	<p>Your studies take place in your own living environment. It offers challenges and opportunities. We would like to know what you would like to see for healthy studies at the University of Greifswald? Your voice is important to us because we want to create an environment that promotes your well-being.</p> <p>Tell us what measures, offers, condition, and support you envisage to enable a healthy and successful study period – in terms of physical, mental and social well-being. Whether it's mental support, sports activities, a good work-life balance or other aspects – we are looking forward to your ideas and suggestions!</p> <p>Your contribution is crucial to creating an environment together that makes your studies at the University of Greifswald even more enriching.</p> <p>We look forward to reading from you and creating a healthy study environment together!</p>	
9	Fit at older age	Citizen
Intro	<p>Physical activity and sport are pillars of a healthy lifestyle regardless of age. Despite the many benefits of an active lifestyle, seniors move less and less in everyday life, so that their physical performance declines. The project "Fit im Alter" aims to maintain and improve the physical activity of older people and thus their health through structured training offers. The impulses for sport are to be used directly from the middle of the population and a training network is to be created. In the long term, the aim is to strengthen everyday skills and performance and also to improve confidence in one's own ability to perform, to expand the social network and thus to promote active participation in life.</p>	
Details	<p>The target group is citizens who are 65 years or older. The intervention will be implemented locally in Ueckermünde, Vorpommern-Greifswald, Germany. However, contributions from outside this region are also welcome, especially from senior citizens. Participants will be asked in a scientifically supervised kick-off meeting what goals they hope to achieve and by which target parameters these could be made verifiable. For six months, the participants visit an easily accessible cooperating fitness centre in the project region and document their training times and progress using an app. Through training partnerships and a training network, motivation and stamina are to be strengthened. This is particularly important as the project aims to reach people who have not yet had any contact with sporting activities in old age. The training programme is medically supported by the University Medical Centre Greifswald (UMG), the regional medical network HaffNet and digitally (e.g. smartwatches, fitness apps). By means of a scientifically monitored before-and-after examination, individual feedback on the state of health can be given both at the start of the project and after the six-month training period, and success can be measured on the basis of the defined target</p>	

ID	Details	
	<p>parameters.</p> <p>The data will be analysed and evaluated by scientists from the UMG and then compared with the results of the population-based Study of Health in Pomerania (SHIP), which has been conducted in the same region for decades. Within the framework of the SHIP study, extensive information on the general state of health and fitness in the general population of the project region was recorded in a standardised manner. In a joint final workshop, the participants will exchange experiences and discuss information about their successes as a group, also in comparison to the group of people examined in the SHIP study. Furthermore, this meeting will be the starting point for planning the continuation of the network. The current participants are invited to engage themselves as future fitness guides for new comrades-in-arms.</p>	
8	DDR Psych Study	Scientist
Intro	<ul style="list-style-type: none"> • What effects do different conditions of growing up in East and West Germany have on health, quality of life and well-being? • How influential is the GDR past for East Germany, especially in Western Pomerania? • And which influences tend to have a favourable effect in the long term? 	
Details	<p>At the University of Greifswald, we have been investigating the long-term effects of different biographical experiences in connection with growing up in East Germany during the pre-turnaround, turnaround and post-turnaround periods on the personal quality of life, the general (well-)being and the subjective health of the population.</p> <p>Among other things, we are interested in whether there are also "favourable" influences - these can be so-called "resources" and "protective factors" - for example, social support from the circle of friends, social cohesion in the neighbourhood or the way people are optimistic or pessimistic in general.</p> <p>We are also interested in which types of life events related to the pre-turnaround, turnaround and post-turnaround periods have a particular influence on health, quality of life and well-being. These could be, for example, the loss of a job, starting a family or the end of a romantic partnership.</p> <p>We would like to use this platform to share and discuss our findings with the citizens of Western Pomerania, but also nationally from Eastern and Western Germany!</p>	
7	Sedentary lifestyles - the invisible pandemic of the 21st century	Partner
Intro	<p>Sedentary lifestyles have become one of the independent factors affecting overall mortality in European countries in the 21st century [1]. The World Health Organization estimates that nearly one in three people over the age of 15 have insufficient levels of daily physical activity, contributing to approximately 3.2 million deaths each year [2]. For European countries, these estimates are even less optimistic, stating that almost one in two people has a sedentary lifestyle.</p>	
Details	<p>What does it mean to sit?</p> <p>The definition of a sedentary lifestyle has been the subject of lively debate among researchers for many years. A consensus has emerged that a sedentary lifestyle is any behaviour (other than sleep), such as sitting or bending, for which the energy expenditure is 1.5 MET (Metabolic Equivalent of Task) or less [3]. This rate roughly corresponds to the average energy expenditure during exercise of a given type (or at rest). It is assumed that one MET is equivalent to the oxygen consumption during one minute of being at rest (e.g., sitting) [4]. Of course, this is only an approximation as it is influenced by individual characteristics such as gender, age, body composition, training level, etc. Examples of sedentary behaviour include watching TV, using a computer, sitting at school, at work or when moving around.</p> <p>Scientific literature clearly indicates that sedentary lifestyles increase overall mortality and the risk of cardiovascular disease, diabetes, hypertension and cancer (breast, colon, colorectal, endometrial and ovarian cancer) [5-7].</p> <p>How long can I sit?</p> <p>Establishing a quantitative threshold of time spent sitting per day that would be considered an additional health risk is a difficult task. Much depends on a number of factors including socioeconomic status, type of occupation, age, gender, frequency and type of physical activity undertaken. Thus, in some studies we observe distant population averages ranging from 2.5-</p>	

ID	Details	
	<p>3 hours per day in Portugal, Brazil or Colombia, to 7-8 hours in Saudi Arabia, Japan or the UK [8-10]. One study summarising numerous research findings concluded that the risk of overall mortality increases significantly above 7 hours spent sitting per day [11].</p> <p>Is this really our problem?</p> <p>Not very optimistic observations come from the Polish study Białystok PLUS, according to which, regardless of age and gender, every fourth Białystok resident spends from 8 to 10 hours every day in a sitting position. People aged 70-80 understandably spend the most time sitting, while women aged 20-39 and men aged 30-39 (in almost the same proportion as seniors) and 40-49 sit for only a few minutes less per day. When men and women are compared, there are no differences among the youngest Białystok residents during the working week (Monday-Friday). It is only in the age group of 30-39 that a trend becomes noticeable where men spend more time sitting, reaching a maximum difference (52 minutes on average) in the age group 40-49. The greater tendency for men (compared to women) to spend time sitting becomes even more apparent at the weekend - on their days off: women try to sit less (a few tens of minutes less compared to the working week), while most men treat sitting as a form of relaxation, reaching higher values on average than between Monday and Friday.</p> <p>Why is this important and what can we do?</p> <p>A sedentary lifestyle becomes part of our behaviour quite quickly and easily. It is a habit that is difficult to overcome due to the need to take action with completely different characteristics - movement and physical activity. Spending time sitting gives an apparent feeling of relaxation, while in the broad perspective of our health, it can have devastating effects. What should we do? The right answer is physical activity, selected in an appropriate manner to suit individual preferences and abilities of a given person. The most recommended type of physical activity is Moderate to Vigorous Physical Activity (MVPA), which, if performed for more than 10 minutes, allows us to achieve health-promoting values of energy expenditure. This type of physical activity can be recognised by observing yourself while performing it - it should be accompanied by an accelerated heart rate, increased body temperature, increased sweating, and accelerated and deepened breathing. It is worth remembering that in such an effort we should not reach our maximum capacity, and its performance should be preceded by a warm-up and a phase of rest afterwards. Examples include walking with variable dynamics, cycling at a medium pace, swimming at a slow pace, doing breathing exercises and exercises to increase muscle flexibility, or dancing. We should also not forget to take regular breaks while sitting, during which it is advisable to do stretching exercises or exercises to improve our posture. It turns out that taking regular breaks while sitting for physical activity (of different intensity) can effectively lower blood pressure, triglyceride levels or blood glucose levels [12].</p> <p>Our aim is to raise awareness about the issues of sedentary lifestyles. We want to encourage you to ask questions and discuss the issue of physical activity in our regions. What can we do to prevent the invisible pandemic of sedentary lifestyles? Are the places we live in conducive to physical activity? Can physical activity enthusiasts together with researchers generate added benefit for the local community?</p> <p>Join Us: Submit suggestions as comments under this topic or click "Contribute" to indicate your willingness to invest time to work on this topic</p>	
6	Multimorbidity: bad luck, coincidence or cause?	Students
Intro	<p>More than half of people will develop not one but several long-term conditions in their lifetime, such as a combination of diabetes, depression and cardiovascular disease. In the near future, the number of people with such 'multimorbidity' will increase rapidly due to aging of populations. We are also able to live longer with a single long-term condition. This is due to advances in the diagnosis and treatment of these conditions, but also due to improved lifestyle and self-care by patients.</p> <p>We speak of multimorbidity when someone has multiple long-term conditions at the same time. The different combinations of diseases cause many different care needs for patients, and these differ between men and women. Most healthcare systems are not yet designed for this new demand of care. These are currently still designed for disease-specific care and treatment.</p>	

ID	Details	
Details	<p>We seek to answer the following questions:</p> <ol style="list-style-type: none"> 1. How do you think we should design our future healthcare systems to provide the best possible care to patients with multiple long-term conditions? 2. If you have several long-term conditions, do you have the impression that 1 of your conditions is central? 3. To what extent do your conditions influence each other? For example, due to medication use, (conflicting) advice from healthcare providers or frequent appointments. 4. Do you ever feel the need to discuss or share experiences with other people who also have multiple long-term conditions? 	
5	<p>Gardening for Health: A community garden as a community support to strengthen the recovery of people experiencing a mental health crisis</p>	<p>NGO</p>
Intro	<p>It seems that today everything can be therapy. There is laughter therapy, apitherapy, cavioterapia, ornithological therapy... If, in a nutshell, we consider therapy to be a way to change, it seems that man needs change so much that he has invented various ways of doing it. Everyone can choose their own path. I believe in the power of the garden. And this is what I want to share.</p> <p>I believe, as Geoff Lawton, the permaculture specialist, says, that all the world's problems can be solved in the garden. Incidentally, I have this feeling that permaculture is something like a holistic approach to health. And returning to the subject of gardens and therapy, hortitherapy, or therapy through the garden, can also be added to the list. Horticulture was recognised as an official method of therapy in 1936 in England, and the first diploma in hortitherapy was handed out in the United States in the 1950s. For about a decade now, hortitherapy can also be studied at Polish universities.</p> <p>My life path has led me to a place where, as a gardener, hortiterapist and recovery assistant, I would like to support the recovery of people experiencing mental health crises and promote gardening as a way of healthy living. Hence the idea of a garden for health.</p>	
Details	<p>Vision</p> <p>The garden is to provide a safe, comfortable and naturally inspiring base for the self help group and to strengthen its integrative and activating character. It is meant to create space for interaction with the natural, landscape and social environment, i.e. to foster the establishment, nurturing and development of relationships with the Earth, soil, inter- and intrapersonal.</p> <p>As part of the activity, the participants will plan and establish a community ornamental garden from materials provided, which will be a place for meetings, conversations and various activities. Participants will grow and care for vegetables, flowers and herbs and respond to the current needs of these plants, and successively harvest and use the crops. The group process will intersect with the gardening calendar and the rhythm of nature. The intention of embedding the process in the full growing season is to draw on the potential that is mobilised by observing and actively participating in the transformations of the garden from sowing of seeds to potential harvest.</p> <p>Objective</p> <p>To improve the well-being of people using the community garden</p> <p>Among the outcomes of the activity, the following changes can be expected:</p> <ol style="list-style-type: none"> 1. improved overall well-being of participants 2. individual health-promoting benefits from close contact with soil and soil bacteria (<i>Mycobacterium vaccae</i> antidepressant and anxiety-reducing effects, among others) 3. horticultural competence increase, including knowledge and skills to grow own food 4. Increased awareness of the value of soil and how to influence its creation (the principle of mutual exchange in practice, in nature and in society) 5. increased attentiveness to self, others and the world of plants and animals 6. development of skills of co-existence and cooperation in the natural and social environment 7. increased personal involvement in creating their own living environment and responsibility 8. Increase in self-confidence, belief in oneself and one's own abilities and self-esteem, 	

ID	Details	
	<p>as well as the ability to cope with the challenges of life and the world, increase in the sense of empowerment</p> <p>9. empowerment in recovery</p> <p>Action plan</p> <p>At first we look for answers to the following questions:</p> <ol style="list-style-type: none"> 1. With whom can community gardens be done in Bialystok? (or other place as for example in Greifswald or Rotterdam) <p>Gardeners, landscape architects, garden designers, hortiterapists, occupational therapists, environmental therapists, recovery assistants, psychotherapists, doctors, psychologists, nurses. Building a community of professionals around a community garden.</p> <ol style="list-style-type: none"> 2. Where in Bialystok can community gardens be done? Where is suitable space available? What should it be like? 3. What for community gardens? Finding funding. 4. What are the benefits of a community garden and who does it benefit? 5. Who to do a community garden for? Who is the potential audience-gardener, participant, target group? 6. When can you start doing a community garden? 7. How to do it? Where to start? 8. Who will run and maintain the garden? Organisational form, e.g. a support group through a garden for people with experience of mental crisis, a Garden Club e.g. at the Psychiatry Centre in Białystok. <p>The answers to the above questions will allow us to gather resources, clarify and define the vision and translate it into further concrete actions from conception, through planning, design to establishing the garden.</p> <p>Expected result</p> <p>Opening and running of the Municipal Community Garden for Health in Bialystok, which supports and strengthens in recovery the people who use it.</p> <p>If you are interested in the topic, join us!</p> <p>This topic currently focuses on finding interested contributors and gathering initial input on the questions. On this basis, further activities (tasks or teams) can then be planned. Therefore, submit comments on any of these questions and/or click on "Contribute" to indicate your willingness to participate in future activities (tasks, teams). For the implementation of activities, facilitators will also be needed. You too can become a facilitator of a future activity. Use the comment function to make special suggestions or offers, such as "I would like to become a facilitator".</p>	
4	Forest bathing	NGO
Intro	<p>Forest bathing is a technique that restores the physical and psychological health of the human body through a "five senses experience" (vision, smell, hearing, touch, and taste) when the body is exposed to a forest environment.</p>	
Details	<p>As a starting point, a Research Café was organized on the topic of forest bathing in Bialystok on 20 April with two invited speakers:</p> <ul style="list-style-type: none"> • a doctor of psychiatry and • a creator of kindergartens and forest schools in Bialystok (we were first in Poland with such schools). <p>Both are researching and putting into practices so-called forest bathing and forest therapy, practices initiated in Japan but increasingly popular also in Europe. We think this is a topic that will attract participants of the Research Café. They will also be able to learn about the JoinUs4Health platform and project.</p> <p>We hope to generate a list of suggestions and ideas for activities on the platform as a result of the meeting. Platform users can submit additional suggestions regarding this topic. Suggestions, votes and resources can provide a basis for further activities.</p>	
3	Festival of The New European Bauhaus (9. - 12.06.2022)	Partner

ID	Details	
Intro	<p>The festival brings together people from all walks of life to discuss and shape our future. A future that is sustainable, inclusive and beautiful. It's a great opportunity to network, share and celebrate - from science to art, from design to politics, from architecture to technology. Find out more about the festival, our expression of interest to participate and how you too can help support the values of the New European Bauhaus!</p>	
Details	<p>The official website of the New European Bauhaus provides further updates: See External Links</p> <p>The festival focuses on four thematic axes:</p> <ol style="list-style-type: none"> 1. reconnecting with nature: increasing awareness and willingness to address climate change and reduce the burden of pollution. 2. reconnecting with a sense of belonging: building bridges between people and emphasising the role of cultural and social values as key factors in the uniqueness of a place. 3. prioritising places and people most in need: affordable and accessible solutions for all, with a focus on the most vulnerable groups and individuals. 4. promoting long-term, life-cycle and integrated thinking in the industrial ecosystem: the need for more circular economy to address unsustainable use of resources and waste. <p>Through our first focus topic "One Health" and our fourth planned topic "participation" we can possibly initiate exchanges on the thematic axes 1 and 2 and report outputs via the platform.</p> <p>Contribute your ideas and creativity by drawing links between the first activities on JoinUs4Health and the New European Bauhaus.</p>	
2	JoinUs4Health related activities	Partner
Intro	<p>Here you find up-to-date information on tasks, teams and other activities related to the JoinUs4Health project. You can for example contribute to the revision of our concept, methods, guidelines and platform or help with system-relevant tasks such as review of contributions or facilitation of teams or tasks.</p>	
Details	<p>Here we continuously update on ongoing teams or tasks to seek input, feedback or ideas in relation to the JoinUs4Health project. Our current focus lies on obtaining feedback on the platform (see tasks).</p>	
1	NEXT-One Health module in the "Study of Health in Pomerania" (SHIP)	Partner
Intro	<p>Experience One Health up close in the practice of cohort research: In the study "Life and Health in Western Pomerania" (SHIP), human health is not considered in isolation, but together with the health of the animals living in the household (dogs, cats, poultry, pigeons). What questions are you interested in? Be inspired by the questions of others. Do you have comments regarding our data collections? Do you want to discuss interim results with others as part of a team? We look forward to your contribution!</p>	

ID	Details
Details	<p>Based on existing SHIP data (2016-2019), 43% of participants kept at least one pet or farm animal and 38% dogs, cats or poultry in the study region in north-eastern Germany. Since mid 2021 the Study of Health in Pomerania (SHIP) examines for the first time not only human participants but also their animal contacts (dogs, cats, poultry, pigeons)</p> <p>The results of this project will support the development of husbandry and hygiene recommendations. To this end, we are collecting information needs and feedback on the data collection protocols and invite you to jointly review interim results and work on selected research questions.</p> <p>We will present an overview of the data collections and selected interim findings. You can contribute by submitting suggestions (e.g. information needs, research questions) or join a working group to discuss specific aspects of the SHIP-NEXT One Health module.</p> <p>The project is carried out jointly with the Friedrich-Loeffler-Institute, Greifswald-Insel Riems. For more information: See external links</p> <ul style="list-style-type: none"> > SHIP-NEXT OH website (German only) > recent press release > newsletter 1 and poster on the SHIP-NEXT module One Health <p>Click "Contribute" or make suggestions or comments. We look forward to your contribution!</p>

Table 5. Overview of videos available on YouTube as of 15/12/23.

id	Name of video	Duration	Number of hits
1	Poznaj Białystok PLUS - badanie kohortowe Uniwersytetu Medycznego w Białymstoku	3:02	100
2	Citizen Power by JoinUs4Health – podcast	2:44	
2a	... English version	2:44	4
2b	... Polish version	2:44	5
3	Citizen Power #JU4H - Webinar dla nauczycieli	31:18	4
4	Citizen Power workshop	1:36	14
5	LEVEL UP YOUR LIFE. Campaign JoinUs4Health	1:09	52
6	LEVEL UP YOUR LIFE #makingof JoinUs4Health	2:32	15
7	Get to know JoinUs4Health Platform!	1:42	
7a	... German version	1:42	46
7b	... Polish version	1:42	27
7c	... English version	1:42	13
7d	... Dutch version	1:42	0
8	Petros Psyllos Hackathon dla Zdrowia 2023	36:59	106
9	Hackathon dla Zdrowia / Hackathon for Health 2023	4:25	63
Total		1:24:27	449

Appendix 2: Methodological considerations



Figure 5: Proposed timeline for planned management cycles, developed by EUR with input from UMG and a visiting Master student at UMG

Table 6. Proposed methodology for the implementation of a 12-week block of three management cycles (MCs) covering four weeks each, developed by EUR with input from UMG and a visiting Master student at UMG

MC	Week	Goals	Synchronous work	Asynchronous work
1	1	<ul style="list-style-type: none"> • Breaking the ice • Getting to know each other • Provide basic knowledge relevant to the adequate development of the activities 	Introductory meeting and training in: <ul style="list-style-type: none"> • System thinking • One Health • Cohort research Present Systems map for health with variables of each cohort as elements.	Add/remove/edit elements of the map and discuss in the platform
	2	<ul style="list-style-type: none"> • Choose a subsystem to focus in • Establish the boundaries of that subsystem 	Meeting to discuss what aspects of the subsystem contributors want to research further.	Discussion about what subsystem they want to choose, define the systems map for the subsystem.
	3	<ul style="list-style-type: none"> • Refining of the subsystem map • Reflection on the topic and context • Feedback and ideas from the community 	-	Through the platform: <ul style="list-style-type: none"> • Posting questions about the discussed topics

MC	Week	Goals	Synchronous work	Asynchronous work
	4			<ul style="list-style-type: none"> Consulting the community on the topic (voting) Posting about possible stakeholders to be included
2	5	<ul style="list-style-type: none"> Reach consensus on the goal of the project Start the discussion on different methods to reach the goal 	The second month (MC2) starts with a meeting to discuss the input from the community and overall experience from the interaction through the platform.	Continuation of the discussion in the platform as needed.
	6	<ul style="list-style-type: none"> Define the methodology Define tasks and discuss them 	-	<ul style="list-style-type: none"> Continue to collate suggestions for possible strategies and methods for the project. Team members can choose to interact with the community at this stage or not.
	7	<ul style="list-style-type: none"> Creation of a schedule for the execution of the project Creation of specific tasks Assignment of task to group members, or community-open tasks 	Meeting to reach consensus on the methodology and creation of a work-plan.	<ul style="list-style-type: none"> Organization of the work plan with scheduled tasks Assignment of tasks to participants Publication of task in the community
	8	<ul style="list-style-type: none"> Beginning of the project Refining methods/strategies 	-	<ul style="list-style-type: none"> Execution of the plan according to the work plan Refinement of the process envisioned by the team Through platform interactions or meetings
3	9	<ul style="list-style-type: none"> Execution of the work plan Refining strategies/methodology 	-	<ul style="list-style-type: none"> Continuation of the work plan in line with schedule Through platform interactions or meetings
	10			
	11	<ul style="list-style-type: none"> Collating the tasks results Refining of the output Post output in the community 	Participants will meet to reflect on their experience and to collate the results. They will also refine the output if needed.	<ul style="list-style-type: none"> Refining of the output Final considerations
	12	<ul style="list-style-type: none"> Discuss the input from the community regarding the output created Gain feedback from the participants on the whole experience Reflect on the gained experience/knowledge and obstacles of the experiment 	Final meeting for two hours to reflect on the opinion of the community and reflection on their experience of the whole process.	<ul style="list-style-type: none"> Additional tasks can be done by the participants if they choose to do so beyond the limits of the management cycle block

Appendix 3: Workshop series with representatives from public health authorities

Appendix 3.1: Detailed methods

Web seminar block 1

The full-day web seminars in the first block were designed to be interactive. In addition to providing input, the focus was on exchanging ideas with the participants and formulating ÖGD-relevant topics for the JoinUs4Health process. The detailed agenda can be found in Appendix 3.2.

During the first web seminar (27/06/23), the SHIP cohort study was presented in detail. The participants were given an insight into the cohort study design, the invitation procedure of participants and the content of the analyses and surveys according to the cohort design. The SHIP data catalogue was explored in group work to gain knowledge on the information available and – partly based on this – the participants identified three ÖGD-relevant topics for the JoinUs4Health participation process:

1. Health behaviour
2. Mental health
3. Climate change and health

The second web seminar (29/06/23) began with a presentation of the JoinUs4Health approach and the structure of the JoinUs4Health platform. Subsequently, the previously defined ÖGD-topics were specified by the participants and detailed questions were formulated in topic-specific working groups. The participants were supported by SHIP scientists during this process.

Kristin Henselin (University Greifswald) supervised the health behaviour group. The group focussed on the sun protection competence of the population and the effects of sunburns in childhood on health. The questions tackled aspects like the definition of the term sun protection competence; the lack of knowledge regarding information materials on sun protection for children, adolescents, adults, older people and professionals; as well as suitable sun protection interventions for kindergartens and schools.

Dr. Birgit Schauer (University Medicine Greifswald) accompanied the topic of climate change and health. The group decided to focus in particular how the population's exposure to heat can be measured and what information is already available to inform the population more effectively. Additionally, questions were formulated on suitable measures and resources to effectively protect the population, especially vulnerable groups?

Dr. Sandra van der Auwera (University Medicine Greifswald, Institute of Psychology) supported the group on the topic of mental health. The participants focused on the areas of school absenteeism and trauma experiences in childhood. They formulated questions on risk and protective factors of truancy, warning signs of childhood trauma experiences or influences of childhood trauma experiences on physical and mental health in adulthood were discussed.

The concretised topics were then presented in plenary and the options for further work were discussed. The availability of the data was assessed by Dr Henry Völzke, head of the SHIP study (University Medicine Greifswald).

Activities after web seminar block 1

After the first web seminar block, the topics were summarised by staff from AkademieÖGW and the University Greifswald and clear objectives and questions were defined based on the group results of the second web seminar. These summaries were fed back to the participants

for comment before being posted as topics on the JoinUs4Health platform in late summer. Each topic was specified by a list of questions for a knowledge collection (evidence synthesis based on desktop reviews) and questions that could potentially be answered by evidence from population studies, in particular the SHIP cohort study. More details on the topics and the related questions can be found on the JoinUs4HealthPlatform and in

Table 4 (IDs refer to this table):

1. Public Health Topic: Strengthening the sun protection competence of the population. Platform link: <https://platform.joinus4health.eu/ju4htopic/health-behaviour-strengthening-the-sun-protection-competence-of-the-population/#>

2. Public Health topic: Climate change and health: Platform link: <https://platform.joinus4health.eu/ju4htopic/public-health-topic-climate-change-and-health/>

3. Public Health topic: Strengthening the mental health of children and young people. Platform link: <https://platform.joinus4health.eu/ju4htopic/strengthening-the-mental-health-of-children-and-young-people/>

Afterwards the AkademieÖGW started to plan the second block of web seminars and AkademieÖGW employees and SHIP scientists compiled a knowledge collection on each topic as well as results generated from the SHIP study.

Web seminar block 2

The second block of the web seminar series took place in December 2023 and comprised two half-day web seminars. The detailed agenda can be found in Appendix 3.

Web seminar 3 (5. December 2023) focused on the presentation and discussion of the topic-specific knowledge collections and results from the SHIP cohort study. Both were supplemented by expert input on two of the three topics:

- Dr Frederike Kienzle, the medical director of the Social Paediatric Centre, Child and Adolescent Outpatient Clinic of Cooperative Mensch eG, shed light on the effects of childhood trauma on long-term health.
- Dr Nadja Knauth, Head of the Prevention Centre of the National Centre for Tumour Diseases Dresden, explained the importance of sun protection skills for the population and showcased the "Clever in the sun" prevention approach.

In the plenary session, the topic of climate change and health was presented and discussed more in detail following a vote by the participants. Dr Birgit Schauer presented a short desktop review on the topic of heat and health. Dr Birgit Schauer and Dr Till Ittermann (lead statistician at SHIP) provided an insight into the available data from the study.

All results were also made available to the participants via the AkademieÖGW e-learning platform.

In web seminar 4 (7 December 2023) Dr Nicole Rosenkötter gave an input on how evidence and the JoinUs4Health approach can feed into routine tasks of public health services like population health monitoring and reporting. Prof Dr Bertram Szagun then presented a lecture on knowledge transfer with a focus on the local context, local resources and political structures. In a subsequent plenary discussion, the necessary structures for an effective exchange between science, practice and politics were discussed and participants reflected about the perspective of the JoinUs4Health platform and its possible future prospects. Details can be found in the evaluation section.

Communication and dissemination

The AkademieÖGW event mailing list and other AkademieÖGW publication media were used to promote the web seminar series. The AkademieÖGW also used their publication channels (Website, newspaper "Blickpunkt Öffentliche Gesundheit", social media channels, ÖGD News App) to publicise the JoinUs4Health project and the JoinUs4Health platform (see Table 7).

The web seminar series was also accompanied by the AkademieÖGW e-learning platform. Here, information on JoinUs4Health was shared with the web seminar participants, the

presentations from the web seminars as well as the knowledge compilations and SHIP study results on the ÖGD topics were made available and the exchange with the registered participants was organised.

Table 7 Dissemination activities of the Academy for Public Health Services

Date or edition	Activity	source or url
3/2022	Newspaper Blickpunkt Öffentliche Gesundheit: Advertising the JoinUs4Health platform	https://www.akademie-oegw.de/fileadmin/Services/Mediathek/Blickpunkt/2022/Blickpunkt_03_22.pdf (page 7)
24.04.2023	Booking opened for block one of the webinar series on the AkademieÖGW website. It was possible to book each web seminar separately. These web seminars and other open and new courses were also regularly advertised via the AkademieÖGW mailing lists.	url not active anymore
26. – 29.04.2023	The AkademieÖGW had a booth at the annual German Public Health Services congress. The booth was used to advertise the webinar series with a flyer and by addressing experts in local public health services in person.	see flyer in Appendix 3
11.05.2023	Advertisement of the webinar series on the AkademieÖGW website and via the social media channels (LinkedIn, Facebook, Twitter (X))	https://www.akademie-oegw.de/aktuell/detail/fortbildungs-veranstaltung-im-rahmen-des-projektes-joinus4health
3/2023	Newspaper Blickpunkt Öffentliche Gesundheit: Dissemination of the ÖGD topics on the JoinUs4Health platform	https://www.akademie-oegw.de/fileadmin/Services/Mediathek/Blickpunkt/2023/Blickpunkt_03_23.pdf (page 2)
28.09.2023	Detailed news item about JoinUs4Health, the JoinUs4Health platform and the ÖGD topics disseminated on the AkademieÖGW website, social media channels (LinkedIn, Facebook, Twitter (X)) and the ÖGD News App	https://www.akademie-oegw.de/aktuell/detail/digitale-kooperationsplattform-joinus4health-sonnenschutz-mentale-gesundheit-und-klimawandel-als-fokusthemen
02.11.2023	Booking opened for block two of the webinar series on the AkademieÖGW website. It was possible to book each web seminar separately. These web seminars and other open and new courses were also regularly advertised via the AkademieÖGW mailing lists.	url not active anymore
15.11.2023	Special advertisement of block two of the webinar series via the AkademieÖGW mailing list.	

Evaluation

Table 2 shows the number of participants that registered for and participated in each of the four web seminars. The participants came from 11 of the 16 German federal states (Thuringia, Hesse, Rhineland-Palatinate, Hamburg, Berlin, Brandenburg, Lower Saxony, North Rhine-Westphalia, Schleswig-Holstein, Saxony-Anhalt and Mecklenburg-Western Pomerania).

The web seminars were evaluated via an online survey. The evaluation included questions about the comprehensibility of the content and whether the documents provided and the didactic structure were helpful and useful. Further aspects of the evaluation were the responsiveness to participants' wishes, the relevance to everyday working life and an assessment of the organisation as a whole. All aspects were predominantly rated as good or very good. However, it should be noted that participation in the evaluation was low: five responses for the web seminars in block 1 and four responses for the web seminars in block 2. In addition to closed questions, free text answers were also possible. The evaluation of the second event block provided feedback on the JoinUs4Health approach and the JoinUs4Health platform.

Table 8. Number of public health representatives who registered themselves and participated in the four web seminars.

Seminar	Date	Number of registered public health representatives ...	
		Registered	Participating
1	27/06/23	16	14
2	29/06/23	14	10
3	05/12/23	20	12
4	07/12/23	15	10

Appendix 3.2: Agenda, flyer and padlet responses

Block 1 (June 2023)

Web seminar 1 - Tuesday, 27 June 2023

10:00 Welcome and introduction to the web seminar series

Nicole Rosenkötter and Birgit Schauer

10:30 Getting to know each other

Nicole Rosenkötter and Tabea Troschke

11:00 Getting to know the cohort studies and previous results

Birgit Schauer

12:00 Lunch break

13:00 Joint review of the SHIP data descriptions

Working groups and Birgit Schauer

14:00 General prioritisation of topics and first general brainstorming of potential questions

Plenary session

14:45 Outlook: Where do we go from here?

Nicole Rosenkötter and Tabea Troschke

End of the day's programme approx. 15:15

Web seminar 2 - Thursday, 29 June 2023

09:00 Welcome and review of the first event

Nicole Rosenkötter and Birgit Schauer

09:30 Getting to know the JoinUs4Health platform and the collaborative concept

Birgit Schauer

10:15 Theoretical input: Formulation of questions

Birgit Schauer

10:45 Break

11:00 Explanation of the working group phase

Nicole Rosenkötter and Tabea Troschke

11:30 Part 1: Work in the working groups and definition of ÖGD-relevant questions

Working groups

12:30 Lunch break

13:15 Part 2: Work in the working groups and definition of ÖGD-relevant issues

Working groups

14:15 Presentation of the results from the working groups

Plenary session

15:00 Break

15:15 Collection and prioritisation of questions

Nicole Rosenkötter and Tabea Troschke

16:00 Options for (joint) processing of the questions

Birgit Schauer

16:45 Conclusion and outlook for the events in winter 2023/2024

Nicole Rosenkötter and Birgit Schauer

End of the day's programme approx. 17:00

Block 2 (December 2023)

Web seminar 3 - Tuesday, 5 December 2023

09:00 Welcome and review of the first event block

Nicole Rosenkötter and Birgit Schauer

09:45 Lecture on mental health: trauma experiences (in childhood)

Frederike Kienzle

10:30 Break

10:45 Lecture: Are you already "Clever in sun and shade"? Programmes for Sun protection and skin cancer prevention programmes

Nadja Knauth and Melanie Glausch

11:30 Discussion: Review of previous results on the JoinUs4Health platform incl. the results from the cohort studies - discussion of the significance for the ÖGD

Climate change and health working group

Mental health working group

Working group on health behaviour

12:45 Outlook: What happens on the 2nd day of the event?

Nicole Rosenkötter

End of the day's programme approx. 13:00

Web seminar 4 - Thursday, 7 December 2023

09:00 Welcome and introduction to the day: How does data become action?

Nicole Rosenkötter

09:45 Knowledge transfer in the ÖGD - between local context, resources and politics

Bertram Szagun

11:15 Break

11:30 Discussion round: Summary - necessary structures for a good exchange between science, practice and policy

Plenary session

12:00 Conclusion and outlook: Prospects for the JoinUs4Health platform?

Birgit Schauer and Nicole Rosenkötter

End of the day's programme approx. 12:30 pm

**AO
GW** AKADEMIE FÜR
ÖFFENTLICHES GESUNDHEITSWESEN

&

**joinUs
FOR health**

**Forschungskooperation konkret:
Bevölkerungsstudien für den ÖGD
nutzbar machen**

Veranstaltungsreihe für den ÖGD

**WERDEN SIE TEIL DER FORSCHUNGSCOMMUNITY
JOINUS4HEALTH!**

Bevölkerungsbasierte Studien liefern umfangreiche Informationen zur Gesundheit der Bevölkerung und erlauben die Beantwortung spezifischer Fragestellungen. Um die Ergebnisse der Studien besser für den ÖGD nutzen zu können, haben Sie in dieser Veranstaltungsreihe die Möglichkeit, Teil des wissenschaftlichen Prozesses und der Forschungscommunity JoinUs4Health zu werden.

Diese Art des Austauschs ist möglich, da sich drei europäische Kohortenstudien - u. a. die SHIP Studie (Study of Health in Pomerania), die seit 1997 in der Region Vorpommern aktiv ist - für Forschungskooperationen mit dem ÖGD und anderen gesellschaftlichen Akteur:innen geöffnet haben.

WAS MACHEN WIR?

In der vier-teiligen Veranstaltungsreihe für den ÖGD lernen Sie die drei Kohortenstudien kennen, entwickeln gemeinsam mit anderen Teilnehmer:innen ÖGD-relevante Fragestellungen, reichen diese auf der JoinUs4Health-Kollaborationsplattform ein und diskutieren die Ergebnisse schließlich vor dem Hintergrunde der Anwendbarkeit und Integration in die ÖGD-Praxis.

Das potentielle Themenspektrum ist dabei vielfältig und kann Fragestellungen zur Verhaltens- und Verhältnisprävention, physischen Gesundheit, psychischen Gesundheit, Inanspruchnahme von Versorgungsleistungen oder Tierhaltung (Zoonosen, Hygiene) beinhalten.

Alle erarbeiteten Fragestellungen werden im Rahmen der Fortbildungsreihe gemeinsam bzgl. der ÖGD-Relevanz priorisiert und über die JoinUs4Health Kollaborationsplattform zur Diskussion und (gemeinsamen) Bearbeitung eingereicht

WANN FINDEN DIE VERANSTALTUNGEN STATT?

Die Erarbeitung, Priorisierung und Einreichung der Fragestellungen sind Bestandteil der ersten zwei Veranstaltungen am 27. und 29. Juni 2023.

Im Winter 2023/2024 werden wir in zwei weiteren Veranstaltungen die Ergebnisse sichten und diskutieren, wie die Ergebnisse die Arbeit des ÖGDs unterstützen können.

Alle Veranstaltungen finden online statt.

Die Veranstaltungen zur „Forschungskooperation konkret“ können einzeln über unsere Website <https://www.akademie-oegw.de/> gebucht werden. Wir empfehlen die Teilnahme an allen Terminen, damit Sie Teil des gesamten Kooperationsprozesses sind.

Projekt JoinUs4Health <https://joinus4health.eu/>
Kollaborationsplattform <https://platform.joinus4health.eu/>
JoinUs4Health wird gefördert durch das Horizon 2020 Rahmenprogramm der Europäischen Union unter der Grant Agreement No. 101006558.

English translation

Research cooperation in practice: Making population studies usable for the public health service

Event series for the public health service

Become part of the JoinUs4Health research community!

Population-based studies provide extensive information on the health of the population and allow specific questions to be answered. In order to better utilise the results of the studies for the public health service, this series of events gives you the opportunity to become part of the scientific process and the JoinUs4Health research community.

This type of exchange is possible because three European cohort studies - including the SHIP study (Study of Health in Pomerania), which has been active in the Western Pomerania region since 1997 - have opened up for research cooperation with the public health service and other social actors.

What are we doing?

In the four-part series of events for the public health service, you will get to know the three cohort studies, develop public health service-specific questions together with other participants, submit them to the JoinUs4Health collaboration platform and finally discuss the results against the background of applicability and integration into the practice of the public health service.

The potential range of topics is diverse and can include issues relating to behavioural and situational prevention, physical health, mental health, use of healthcare services or animal husbandry (zoonoses, hygiene).

All questions developed will be jointly prioritised in terms of their relevance for the public health service as part of the training series and submitted for discussion and (joint) processing via the JoinUs4Health collaboration platform.

When will the events take place?

The development, prioritisation and submission of the questions are part of the first two events on 27 and 29 June 2023.

In winter 2023/2024, we will review the results in two further events and discuss how the results can support the work of the Public Health Service.

All events will take place online.

The events on "Concrete research cooperation" can be booked individually via our website <https://www.akademie-oegw.de/>. We recommend attending all events so that you can be part of the entire cooperation process.

Figure 6. Flyer developed for the online seminar series targeting public health representatives

Table 9. Padlet responses submitted during discussions at the 4th seminar.

ID	Details
	1. What needs do you have in the ÖGD in the area of scientific cooperation?
1.1	Small-scale data in which health variables can be analysed as a function of socio-economic status/migration background. Subsequently, it would be interesting to analyse the correlation between health status and being affected by multiple discrimination.
1.2	Evaluation of preventive measures
1.3	Transferability of the studies to your own city? (e.g. study with people from rural areas comparable with people from urban areas?) (Politicians always want concrete statements for their own city)
1.4	Making data treasures usable
1.5	Information on access to small-scale data, e.g. from health insurance companies?
1.6	Investigate the effectiveness of prevention chains in place
1.7	Generate longitudinal data
	What structural prerequisites are necessary for this cooperation?
2.1	Co-operation already in the planning of cohort studies.
2.2	Funding for the involvement of science in ÖGD projects must be clarified
2.3	Further interdisciplinary networking with science beyond health: e.g. with regard to environmental determinants and climate change potential networking with ecological research
2.4	Co-operation agreements
2.5	Cooperation, e.g. finding like-minded health authorities
2.6	Newsletter on core results of the cohort studies, at best with suggestions on what can / should be investigated further with municipal GBE
	Which public health topics would benefit from an exchange with the scientific community and consideration in cohort studies?
3.1	Relationship between health status/morbidity and socio-economic status/migration background.
3.2	Climate & health
3.3	Effects of social determinants on various diseases
3.4	Effects of conditions (e.g. structural measures) on health
3.5	Effects of pandemics
3.6	How can the health indicators available at district/city level (e.g. from LZG NRW) be meaningfully interpreted? What are strategies for finding "cut-off" values?
3.7	Usability in everyday life, necessary resources to enter into a joint dialogue, necessary commitment when dealing with topics, opportunities and barriers to exchange
3.8	Good approach. Daily/regular use or collaboration questionable due to resources
3.9	Helpful as an information tool for data on specific topics (study content) for GBE students
3.10	Topic-specific collaboration of ÖGD staff quite conceivable, but who coordinates/is the main contact person/is responsible?

Appendix 4: Activities in Białystok

Appendix 4.1: Engagement of stakeholders

Białystok PLUS, Poland

1. Hackathon for Health (10 March 2023) / <https://hackathondlzdrowia.pl/>



The Hackathon for Health in Białystok aimed to engage secondary school students in problem-solving for health issues. Hackathon was the very first competition of this kind in Białystok, where young people were allowed to:

- engage with scientific data
- identify health problems applicable to their population
- design solutions that are effective and relevant to young people in Białystok municipality.

Recruitment took place over 3 weeks, resulting in 13 teams from 12 schools. Six shortlisted teams participated in the hackathon, focusing on topics like mental health and diabetes. The main event on March 10 resulted in designing creative social campaign ideas.

In Numbers: 46 secondary schools were contacted, resulting in 47 student registrations from 13 schools. 6 teams were shortlisted, with 1 winning the main prize and 1 receiving a distinction.

8 mentors supported the teams.

Effects:

- Introducing young people to citizen science and cohort research
- Involvement in solving health-related community problems
- Increase awareness of factors affecting health

The final outcome of the project was the creation of a social campaign concept by the winning team. The topic: **sedentary lifestyle**. The work was supported by marketing specialists and a professional film crew.

The project has gained interest from local media (**6 publications**: TV, radio, newspapers) and online audiences - **reach: 70 000 users**



https://youtu.be/n3p8VRzDegA?si=p4NGq_k3AskkQKOM

Conclusion:

The Hackathon for Health was a success, garnering **interest from youth, schools, and media**. It highlighted youth's interest in science and the importance of engaging them through project-based learning. The event also underscored the significance of cooperation between local authorities and youth initiatives in addressing health challenges effectively

Detailed report:

<https://joinus4health.eu/wp-content/uploads/2023/06/Status-Report-Hackathon-for-Health.pdf>

Video footage of the event: <https://youtu.be/75Sq08FDwLA?si=wcT6zIANhjJTvico>



Inspiring lecture by young scientist Petros Psyllos:

https://youtu.be/lxuwSGINf_A?si=ZK6v28sGqpr-AV2O

Social campaign created by the winning team:

campaign: https://youtu.be/n3p8VRzDegA?si=p4NGq_k3AskkQKOM

making of: https://youtu.be/fsvN78rtEp0?si=WXcq_KI42BX0INWx

2. Science & Health Festival

The Science & Health festival aimed to disseminate knowledge about health prevention and citizen science, gathering input from various local stakeholders and citizens.

a) 14/05/23 Science Picnic at the Municipal Stadium

During this massive event, the JoinUs4Health project had a separate stand with an information desk on the project platform (computer booth, leaflets, project gadgets). Representatives of the Polish part of the consortium provided knowledge about citizen science in the form of edutainment (quizzes, competitions). During the talks, ideas for projects of interest to residents were collected and posted on the platform.



b) 15/05/2023 Forest bathing in the Zwierzyniec Reserve led by Dr. psychiatry Catherine Simonienko of the Forest Therapy Center

Forest bath prepared in cooperation with the Forest Therapy Center. The event was led by Dr. Catherine Simonienko, a psychiatrist, specialist on forest therapies and the study of the effects of nature contact on well-being. It was a continuation of the theme of contact with nature and therapeutic practices associated with forest bathing (Japanese tradition of shirin-yoku).



c) 17/05/2023 Workshop for young people "What is going on in my head? How to take care of mental health?" A workshop aimed at young people to promote a healthy lifestyle, basic knowledge of the basic conditions for taking care of mental health, maintaining well-being. The workshop was conducted by psychotherapists Katarzyna Maria Żywno and Joanna Adamska.

d) 17/05/2023 Debate "Young mind - mental health of youth - the challenge of our time" (15 participants). Guests: Julita Maleszewska - psychologist, psychotherapist,

vice-president of the Polish Psychological Association Białystok Branch; Agnieszka Kulak-Bejda, MD, PhD, psychiatrist, psychotraumatologist; Jarek Żyliński - educational psychologist. Moderation: Dr. Katarzyna Sztop-Rutkowska - sociologist, vice-president of the SocLab Foundation board. This debate was a prelude to the "Youth to Youth" meeting on youth mental health organized by the Youth Council of the City of Białystok within the project JoinUs4Health. The meeting took place on 13/06/23.



- e) **19/05/2023 Forest workshops** in the spirit of Forest School (11 participants) were aimed at children aged 8-12. They were aimed at building a bond with nature, physical activity, experiencing togetherness in a group, and tasting the goodness that the forest and fresh air offer, which is an essential condition for the physical and mental well-being of every child. The activities were held outdoors in the Antoniuk forest area, and the place of assembly will be the base of the Forest Tawny School in Osowicze.



3. CitizenPower: together with young people we create modern health knowledge!

a) Workshop lessons

Date: September-October 2023

Venue: Białystok

Reach: 234 students participated in workshops, of which 174 were unique. It happened that some students took part in several workshops.



As part of JoinUs4Health, workshop lesson scenarios dedicated to high school students in Poland were created in cooperation with an experienced educator selected through a two-stage recruitment process. The scenarios were embedded around five key themes for the project:

1. RRI - about the importance of responsible research and innovation;
2. Crowdsourcing in science - about how citizens can, for example, collect scientific data and help scientists;
3. Cohort research - about long-term population studies and the importance of citizens participating in them;
4. Fact checking - how to check information found on the Internet with reliable scientific sources;
5. Urban health - about how modern health research and urban planning can influence the future development of our cities

They are available under the link:

<https://joinus4health.eu/pl/free-scripts-for-teachers-citizen-power-ju4h/>

The created scenarios were pilot tested in cooperation with students in two Białostok high schools (The Academic High School of Białostok University of Technology and the Eighth High School in Białostok). A total of 234 students took part in the lessons. Based on the feedback received from the students, the lesson scenarios were optimized, improved and made available in the public domain through both the project website and a subdomain dedicated to this activity: <https://citizenpower.pl/>.

b) Webinar for teachers

30th October 2023

Venue: online

Online reach: 175 users



The next step was the dissemination of the created teaching materials. For this purpose, an open webinar was organized, preceded by a social media campaign targeting teachers. During the webinar, all scenarios were discussed: how to implement a workshop lesson based on the materials provided. The webinar is available at the link:

<https://www.facebook.com/JoinUs4Health/videos/291524707047385>

c) **Podcast studio**

Date: October 2023

Venue: Białystok

Online Reach: 150 300 users

Visits to the podcasts page: 560 (<https://joinus4health.eu/pl/youth-podcast-citizen-power-ju4h-now-available>)

Episodes: 8





Making of: <https://www.youtube.com/watch?v=1PRaRpLbXLY>

Students participating in the workshop lessons were invited to join in the creation of a podcast editorial team during the workshop.

By expanding the Citizenpower concept under JoinUs4Health, students were given the chance to develop their journalistic skills by recording a series of podcasts on scripted topics. With the guidance of an experienced educator, who bases the educational process on the use of techniques that are attractive to young people, the University's Cultural Center produced subsequent episodes in which young people interviewed invited guests on the aforementioned topics, creating an interview script from scratch, executing, editing and publishing it. By being involved in the entire process and having to prepare for the interview, the youth, as it were, were forced to thoroughly prepare and learn the issues pertaining to each topic.

At the end of the joint work, the young people received certificates and had the opportunity to tour the Bialystok Plus cohort research building, where the head of the project Prof. K. Kaminski talked about the role of the youth in the development of science based on, among other things, the RRI methodology.

The podcast 8 episodes are available to listen to on streaming platforms:

- <https://open.spotify.com/show/0vW0yLZuB0fOPJSacmQNqh>



In addition, to support and encourage more teachers, educators to incorporate this form of engaging young people in the learning process, an e-book summarizing the JoinUs4Health podcasting activities and explaining the role of "podcasts as support for educational processes" was created and made available: <https://joinus4health.eu/wp-content/uploads/2023/12/CitizenPowerJU4H-podcasty-EBOOK-full.pdf>

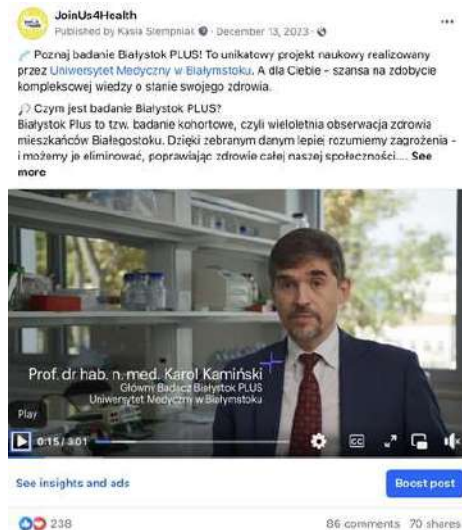
2. „Białystok Plus” video - premiere (December 13, 2023)

We have produced an educational spot on cohort studies, their role for communities and individuals.

Link:

<https://youtu.be/834rnMLzDVo?si=djnAgFWd86Vyo7aT>

Placement: Facebook, Youtube
Campaign: 13-31 December 2023
- reach: 199 800 users
- views: 394 000 users
- reactions: 238
- comments: 86
- shares: 70



4. Citizen Science Week (04-08.12.2023)

We invited the citizens of the city to talk: how do you live in the city? Does - and how! - does everyday urban life affect our well-being? What does the term Healthy Cities mean? How do we create cities in which health is a design feature? These questions were the focus of Citizen Science Week, whose theme was Healthy Cities. Among people from the world of science, social activists, city authorities and residents, we discussed the impact of modern cities on our wellbeing and health - physical and mental. Throughout the week, meetings and workshops were organised, both offline and online. Below is a description of each.



a) *Is a healthy city possible? - science cafe, offline*

Date: 04/12/23

Venue: Białystok

Online reach: 483 users



We started our conversations about the city at Citizen Science Week by meeting two experts in the field. Both practitioners and theoreticians who, with their knowledge and experience, can show the broad and international context of how cities are designed and changed today to create healthy spaces. How are medical science, neuroscience and social science being used to do this? Can we create cities where we do not feel lonely, excluded, bombarded by noise and other pollution? We talked about ideas for a healthy city with Natalia Olszewska and Artur Celiński.

b) *Designing a healthy city in practice. Barcelona. - open online lecture*

Date: 05/12/23

Venue: online

Online Reach: 851 users



Changes in Barcelona towards a healthy and accessible space have been underway for several years. They accelerated especially when the progressive mayor Ada Colau and the local political civic movement Barcelona en Comú took power in Barcelona. Aleksandra Zemke, who lives in Barcelona every day, observes and analyses the specifics of the changes taking place. Among other things, she will tell us about the introduction of the new urban-architectural project Superblocks ('Superilles' in Catalan).

Aleksandra Zemke: Educator, designer, social activist. Graduate of Conflict Resolution at the University of Amsterdam and the Institute of Applied Social Sciences at the University of Warsaw. In 2011 she founded the Non-Governmental Organization (NGO) Smileundo in Spain, creating innovative educational tools to support sustainable development. She has been working for years with institutions working in the field of local politics: United Cities and Local Governments, United Nations Development Programme (UNDP), UrbanLab Gdynia, UN - Habitat, Eduacting Cities or the Province of Barcelona. She creates educational programmes for them, mainly related to Agenda 2030 and innovations in the field of Social and Solidarity

Economy. The tools she creates have received numerous awards, including the prestigious World Summit Youth Award, awarded by the United Nations in Brazil for the best projects using new technologies to promote sustainable development. She is an activist in the urban movement in Barcelona.

c) *Blue and green cities with Jan Mencwel. - science cafe, offline*

Date: 06/12/23

Venue: Białystok

Online Reach: 254 users



We talked about how our cities are changing, how they are being revitalised, how both the perceptions of local authorities and residents are changing.

Our guest: Jan Mencwel. Cultural animator, publicist and reporter, social activist and urban activist. Editor of the "Kontakt" magazine published by the NCU.] He publishes and comments, among others, in the ngo.pl portal, "Kultura Liberalna", "Res Publice" or "Rzeczypospolita". Since September 2018, he was professionally associated with ClientEarth, where he was responsible for campaigns related to climate protection. He is the author of two recently published important books, around which the discussion about the city is still ongoing: "Betonosis. How Polish cities are being destroyed" and 'Hydrozagadka. Who takes Polish water and how to get it back'.

The meeting was moderated by Jakub Medek, TOK FM journalist.

d) *How can architecture support our health? - open online lecture*

Date: 07/12/23

Online Reach: 46 users



Subject: innovative urban design together with older people. Its originators are Natalia Bursiewicz and Anna Shevchenko. The project is called Urban Health Path and involves seniors getting to know their neighbourhood and being physically active in public spaces. It is

a form of 'urban therapy' in which architectural elements such as building façade details or urban furniture inspire physical activity and induce attention to the experience of space.

The project has developed an application that has already been tested in Poland: Gliwice and Barcelona.

Anna Szewczenko - Architect, academic teacher, professor at the Silesian University of Technology, Faculty of Architecture. In her research and teaching work, she addresses the quality of the built environment in the context of the needs and preferences of its users. She is particularly interested in designing for the elderly and the quality of architecture in terms of health-oriented solutions. Co-author of conceptual works and expert opinions on facilities for the elderly (geriatric wards, senior citizens' home). Board member of the Polish Gerontological Society and the Polish Ergonomic Society.

f) *Towards Comprehensive Population Studies - science conference*

Date: 04/12/23

Participants: 120

The Medical University of Bialystok and Bialystok city were the capital of European cohort studies in December 2023. The University hosted the second edition of the international scientific conference 'Towards Comprehensive Population Studies'. It was organised by the UMB Population Research Centre team.

Almost 120 experts from around the world were invited. The conference provided an opportunity to present the experiences and achievements of leading researchers conducting cohort studies in Germany, the Netherlands, Spain, the UK and Poland. Among others, cohort studies included in the JoinUs4Health project were discussed: the Bialystok PLUS study, the Rotterdam Study and the Study of Health in Pomerania (SHIP).

"In today's dynamic world, the role of comprehensive population-based research is becoming increasingly important. These studies offer invaluable insights not only into the health status and challenges facing communities, but also into broader social, technological and policy implications. With an incredible line-up of experts and thought leaders from across Europe, this conference promises a deep dive into cutting-edge methodologies, technological advances and the ever-changing landscape of population-based research."- says Prof. Karol Kaminski, MD, Head of the Department of Population Medicine and Civilisation Disease Prevention at UMB and Chair of the Conference Scientific Committee.



5. Quadruple Helix Workshop

Date: 14/12/23

Participants: 38



On 14/12/23, a one-day workshop called "Youth Mental Health Prevention" was held at the University Cultural Center and was the equivalent of the event entered in the proposal - Quadruple Helix Worksop. The event became a space where the representatives met of the following groups:

- the Youth City Council (17 representatives),
- parliament (Members of Parliament; MPs),
- local government (directors of departments of the City Hall and Marshal's Office),
- education,
- NGO's, and
- the world of science.

The purpose was to present the recommendations developed by young people within the JoinUs4Health platform to improve and prevent their mental health. A report with recommendations was distributed to the participants of the meeting in advance, so that during the workshop moderated by experienced tutor and coach Małgorzata Kijak, they could jointly map out an action plan that would support the youth in implementing the demands made.

During the workshop, young people discussed solutions with Bialystok city authorities, officials responsible for health in the region, representatives of the city's departments of education and social affairs. They discussed specific demands with psychologists and educators, as well as representatives of the superintendency.

- "Walking +": Activities in motion, such as during afternoon biology, PE, parenting or religion classes
- Youth centre: For young people and created together with young people
- Education for parents and anti-stress workshops
- Social campaign "Visiting a psychologist, therapist, psychiatrist is OK"- Helpline
- Campaign "Not a certificate, but a man for six"

The result is an indication and a delineated plan of action, along with the appointment of institutional supervisors who will assist the youth in the implementation and realization of the postulates.

A video with a summary of the meeting, prepared by the youth, can be found at the link:

<https://www.facebook.com/2lotv/videos/1399637547644364>

SHIP, Germany

We selected One Health as starting point. One Health is an approach that recognizes that the health of people is closely connected to the health of animals and our shared environment. The SHIP NEXT module One Health provides a new set of variables. Community input would be valuable to verify that we are collecting information relevant to local communities.

Furthermore, Greifswald is developing into a One Health hub (see T!Raum, EvidenT in Section 1.1.5) with T!Raum providing nine years of funding for innovative One Health strategies.

Rotterdam Study, the Netherlands

Inspired by the JoinUs4Health methodology, Partner 4 (EMC) consulted several Dutch health funds in 2021 to directly discuss the scope of new research ideas that are focused on disease-overarching themes that affect population-health. Through the networks of these organizations, we undertook interviews with over 15 individual patients to pick up their input and to bring together patient priorities for research on co-occurring diseases within one individual ('multimorbidity'). We had email and in-person exchanges with representatives of the collaborating health funds (Samenwerkende Gezondheidsfondsen) in the Netherlands to explore ways of collaborative funding for these disease-overarching projects. As a result of initial co-creative activities with both patients and NGO representatives, the Dutch Lung Foundation awarded the Sterk Participation Award to Silvan Licher, leader of Work Package 5, for the early and important contributions of patients to the design of this research on multimorbidity.

The start of the JoinUs4Health project also resulted in a change how we communicate study findings to the participants. On 27/12/21, we for the first time hosted a webinar for Rotterdam Study participants about study progress and results during the COVID-19 pandemic. Approximately 400 participants joined the webinar. As of 22/08/22, 217 individuals viewed the recording of the webinar online Corona onderzoek in ERGO, van idee tot resultaat – YouTube. A new webinar is already planned, and will cover clinical management of incidental findings when identified during study site visits or imaging exams.

Appendix 4.2: Communication and dissemination

Examples of campaigns

1. Campaign on **4 new topics** on the platform, targeting a German audience / October 2023

Link clicks / conversion to the platform: 1067

Reach: 51 620

Impressions: 100 035

Comments: 49



2. „Sedentary lifestyle” - report and campaign

Dissemination of findings from Białystok PLUS study and invitation to discuss sedentary lifestyles

Ebook link: https://platform.joinus4health.eu/uploads/Siedzacy_tryb_zycia_raport_JU4H.pdf

Link clicks / downloads: 2320

Reach: 60 400

Impressions: 328 000

e-book



campaign visuals:



3. „Diabetes” - report and campaign.

Campaign that supported outreach with a diabetes report based on findings from the Białystok PLUS cohort study.

Ebook link:

https://platform.joinus4health.eu/wp-content/uploads/ju4h/2023/6/22/1687417220_Cukrzyca_Raport_Bialystok_PLUS_2023.pdf

Link clicks / downloads: 3 630

Reach: 68 600

Impressions: 364,295

JoinUs4Health
Published by Mateusz Markowski June 26, 2023

Mieszkaś w Białymstoku lub okolicach? Pobierz najnowszy raport dotyczący zdrowia Białostoczian przygotowany w ramach badania Białystok PLUS!

PLATFORM JOINUS4HEALTH.EU
Pobierz bezpłatny raport! Learn more

WCZESNE ROZPOZNANIE STANU PRZEDCUKRZYCOWEGO MA KLUCZOWE ZNACZENIE KLINICZNE.

Na pierwsze, skłótność metaboliczną, niewyglądniłi stanowi zwiększenie ryzyka rozwoju **cukrzycy typu 2** [5], [6], która stanowi ponad **90% wszystkich przypadków** cukrzycy na świecie [4].

Stan przedcukrzycowy oznacza zwiększoną odporność na choroby układu sercowo-naczyniowego [7] [8].

Ce ważne, wczesne rozpoznanie stanu przedcukrzycowego umożliwia modyfikację niekorzystnych, zapobiegających progresji do cukrzycy.

Trudność w rozpoznaniu hiperglicemii polega jednak na tym, że **często pozostało ona bezobjawowa.**

Objawy, takie jak:

- **nasilenie pragnienia,**
- **częste oddawanie moczu,**
- **zmęczenie,**

często są ignorowane przez pacjenta i uchwycone są przypadkiem. W skłótność **nowe odczyty glikemii** w populacji może być niedobrze poznana [4].

CUKRZYCA: FAKTY

FAKT 1
Za rozwój cukrzycy typu 2 odpowiada **styl życia.**

FAKT 2
Wczesne rozpoznanie stanu przedcukrzycowego lub cukrzycy typu 2 i interwencja (medykalniczna lub farmakologiczna) może **przełamywać** cyklę postępu.

FAKT 3
Przedkole **leczenia i monitorowanie** glicemii może uchronić nas przed powstaniem powikłań cukrzycy typu 2.

FAKT 4
Stan przedcukrzycowy oznacza **wymaga leczenia** - dietoterapię, włączenie aktywności fizycznej czy nowej farmakoterapii.

4. JoinUs4Health animation video

The result of the collaboration between the German and Polish teams was an animated spot about the project. Available on Facebook and Youtube, it provides a brief overview of the JU4H concept. It can also be shown at events or conferences.

Link:

<https://www.facebook.com/JoinUs4Health/posts/pfbid02f4zDahABG8N4rdyydsnQSNT5YcX5bp9AhwsTMwVaGHwLE98Jad9EYF8xXvH9ji9G>

Views: 40 200

Reach: 24 600

Impressions: 134 000

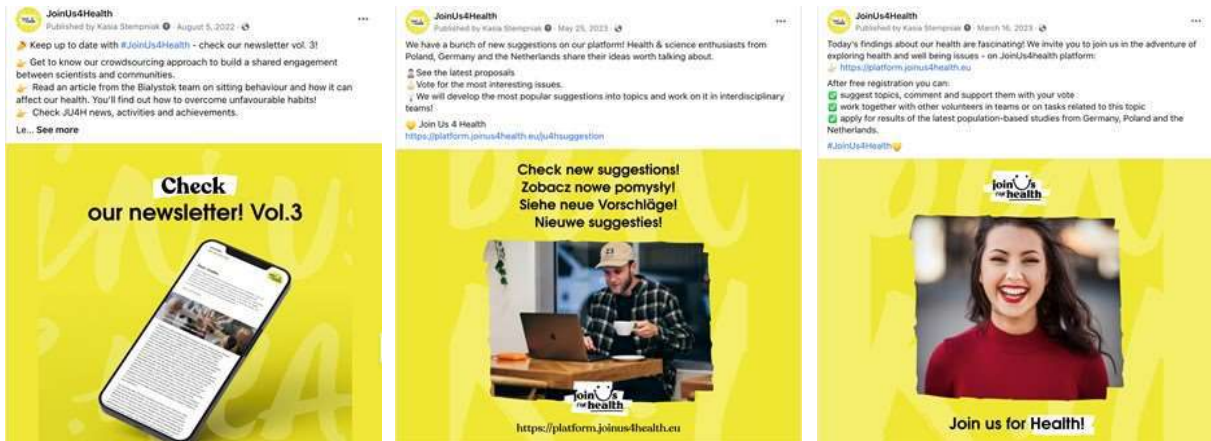


5. Long-term campaigns to gain traffic to the platform

Since the launch of the platform, we have been running campaigns throughout the duration of the project with the aim of attracting an engaged audience and generating traffic to the platform. They were targeted at the 3 participating countries.

Examples:





*Mentions since 07/2022:

Social media

2022

<https://www.facebook.com/fundacjatrzytcztery/posts/pfbid02b9FtnWwQ1TVNSXbRHUbyxn1X4p9nJBuTSFY6HfurVUMDi1Rz9iyh9Tt8vpjPpI>

2023

<https://www.facebook.com/instytutSocjologiiuwb/posts/pfbid0yzdg5asyXD8pN4pNAUY2SvV5S1HYTtcVaHUxGkK53SdzFM8yYVF4xrVXKu7JWkGJ>

<https://www.facebook.com/marek.dabrowski.142/posts/pfbid0J9CbatGtjlsJxrvvixXkx7JtQChYNDrmVBERqk9Q9jo9BmzLYKyWtYeDcDZYeF1Xl>

<https://www.facebook.com/WhiteBitsAgency/posts/pfbid05Hd7BGhWm5Dt6KpGjwG6TKxUG3eXcK9HjFbXihhKJNgGe82KQw7ypQrBahN6CgdGl>

<https://www.facebook.com/LiceumPB/posts/pfbid0wA42kvrWdWRBMy45vA8K6iCzpa6uLxHMMVCyegK4FverDeGx8cQKzLgRuyxZSNUl>

<https://www.facebook.com/2lotv/posts/pfbid0S4sDF9bQ61qzPcTvZDSTDZpjYwwVg8V2tC1eEX4x81wwspZy5z4kkeV8KHQD8NYol>

<https://www.facebook.com/anna.szewczenko.3/posts/pfbid0fo1RtbcRuLnYUeSteQpPC1AiCSRLm5HPv4YKGwwxKav5GwwARJAjiXMKwAhFFigI>

<https://www.facebook.com/watch/?v=1399637547644364>

<https://www.facebook.com/miastojestnasze/posts/pfbid02V3JonhnGiDcjBryJHe9XiJ9bkdGuRLUXVa48yyUx1biQs7bAayUnQLPwoc2ioDal>

<https://www.facebook.com/terapiasna/posts/pfbid0X537vQUHvaJ1W4xTJRNUzbsYFwc4NcShorkt38qrMZDR6e2CEi6nKV04sR14j8Yfl>

<https://www.facebook.com/AkademieOEGW/posts/pfbid0HYUMHfufMfQB9uX6U71p4Mf5BfDAmrFvXQGd6n9rXjWd38ehJEt2JQrDqKaE1uql>

<https://www.facebook.com/mlodziejowa.rada.miejska.bialystok/posts/pfbid02poU7kwN5ngLyB7xaaQSDUSYaAMSeoKwtMe9GfVtAeFlsLTBrCE6ERqZvRpiVSFM4l>

<https://www.eventbrite.co.uk/e/ethical-and-legal-aspects-of-citizen-science-tickets-629177084597>

<https://www.facebook.com/marcin.brainstormer/posts/pfbid02XWovo1W8b7jsAeA9x1dg5Py4Bba591kBN3PQD5AJB3dHtwryYncQ8oAZLwtW4F48l>

https://www.facebook.com/permalink.php?story_fbid=pfbid0qsutx6hWoYtfpmMr41LZFYDz3tpUKeNbc3MeLs3x4c2ezzmj5BzfH2FUK7HPxsNI&id=100094702852410

<https://www.facebook.com/fundacjauzdolnieni/post/pfbid0qcqoZNBiXWY8ouTo1Yg1qWLLr28pV5yk2CrrUwqPYKeF75qFJFTV Af7EgD82AjpI>

https://www.linkedin.com/posts/european-research-executive-agency-rea_citizen-science-month-activity-7052538401312395264-yBcG/?utm_source=share&utm_medium=member_desktop&fbclid=IwAR1zG-VE7W8bvdpeuz5jnkKN3tSt1RsUNtn339WHDi_sl5ADZmzdHbW10B4

https://www.linkedin.com/posts/rosie-responsible-open-science-in-europe-99974b208_ready-for-the-9th-cross-swafs-forum-meeting-activity-7048978572018876416-LRi?utm_source=share&utm_medium=member_desktop

Media

2022

<https://www.youtube.com/watch?v=XmAMuOtt1Q8>

https://www.umb.edu.pl/dre/aktualnosci/23180.Rusza_JoinUs4Health_-_nowy_projekt_UMB_z_Horyzontu_2020

<https://bialystok.wyborcza.pl/bialystok/7,35241,28349601.bialystok-spotkanie-las-w-nas-czyli-o-bliskich-spotkaniach.html>

https://www.radio.bialystok.pl/w-zgodzie-z-natura/index/id/215251?fbclid=IwAR3gAPCkuT61AQ0H5r3nt_TWh42QY_MC7GQ50RcmUM4rtGOyqvk0oCNXpY

<https://onehealth-greifswald.de/en/wisskomm/>

2023

<https://www.gov.pl/web/hpk-polska-wschodnia/joinus4health---5-podmiotow-z-bialeostoku-realizuje-projekt-z-horyzontu-2020>
https://perspektywy.pl/portal/index.php?option=com_content&view=article&id=5573&catid=24&Itemid=119

<https://poranny.pl/dr-pawel-sowa-chcemy-by-bialostoczanie-zyli-jak-najdluzej-w-dobrym-zdrowiu-i-wiemy-jak-to-zrobic/ar/c14-18046929>

<https://wspolczesna.pl/skorzystaja-z-badan-naukowcow-i-opowiedza-o-zdrowym-stylu-zycia/ar/c14-17287999>

<https://uwb.edu.pl/wydarzenia/hackathon-dla-zdrowia-2023-mlodzi-tworza-kampanie-o-zdrowiu-3414.html>

<https://www.bialystokonline.pl/hackathon-dla-zdrowia-2023-mozna-sie-zglaszac-na-maraton-projektow-o-zdrowiu.artykul.134694.9.1.html>

<https://www.umb.edu.pl/aktualnosci/26698,JoinUs4Health HACKATHON DLA ZDROWIA 2023 Nabor grup mlodziezowych do 1902!>

<https://bialystok.tvp.pl/68428289/hackathon-dla-zdrowiafot-tvp3-bialystok>

<https://pb.edu.pl/liceum-ogolnoksztalcace/2023/10/20/citizen-power-ju4h/>

<https://technikum.infotech.edu.pl/2023/03/16/hackaton-dla-zdrowia/>

<https://www.eska.pl/bialystok/trwaja-zgloszenia-do-bialostockiego-konkursu-hackathon-dla-zdrowia-aa-CDKm-ZT9j-mixX.html>

<https://poranny.pl/hackaton-dla-zdrowia-uczniowie-stworzyli-kampanie-spoeczne-skierowane-do-mlodych/ar/c14-17363531>

<https://akadera.bialystok.pl/kampania-spoeczna-o-mlodziezy-i-dla-mlodziezy/>

https://www.wrotapodlasia.pl/pl/wiadomosci/konferencje_szkolenia/hackathon-w-bialymstoku.html

<https://bialystok.wyborcza.pl/bialystok/7,35241,30448064,na-co-i-dlaczego-chorujemy-wyniki-badania-bialystok-plus-na.html>

<https://whitebits.pl/join-us-for-health/>

<https://soclab.org.pl/zdrowe-miasta-tydzien-nauki-obywatelskiej-4-8-12-2023/>

<https://www.umb.edu.pl/dre/aktualnosci/28089,JoinUs4Health Citizen Science Week Zdrowe Miasta 04-08122023>