HORIZON-EIC-2022-PATHFINDERCHALLENGES-01

Project No. 101115115

Interoperable end-to-end **P**latform of scalabl**E** and sustain**A**ble high-th**R**oughput techno**L**ogies for **DNA**-based digital data storage

Deliverable 6.2

Plan for dissemination and communication activities

WP6 – Communication, dissemination and exploitation

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Revision history

Author(s)	Description	Date
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Anna Ziemele, Andreia Cruz (accelCH)	Formatting and formal check	22.03.2024
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Contents

Partner short names

No.	Organisation	Short name
1	**BioSistemika**	BioSis
2	**Gottfried Wilhelm Leibniz Universität Hannover**	LUH
3	**Imagene SA**	IMG
4	**Technische Hochschule Wildau**	THWi
5	**Haute École Specialisée de Suisse Occidentale**	HES-SO
6	**accelopment Schweiz AG**	accelCH

Abbreviations

Abbreviation	Term
AIT	Advanced Inkjet Technology
CA	Consortium Agreement
DoA	Description of Action
EC	European Commission
EU	European Union
GA	Grant Agreement
IP	Intellectual property
M	Month
KPIs	Key Performance Indicators
OA	Open Access
OS	Open Science
T	Task
WP	Work Package

Executive summary

Background

Deliverable 6.2 – Plan for dissemination and communication activities is part of Work Package (WP) 6 and has been developed by accelCH with input from all partners by Month (M) 6 of the project according to Task (T) 6.1 Plan for dissemination and communication.

The plan will be updated in M18 to ensure the maximum impact of the results and the outreach of the project as a whole. The update will be submitted as a deliverable in the form of an evaluation report "D6.4 – Interim report: Plan for dissemination and communication activities".

Objectives

As defined in the Description of Action (DoA), D6.2 is designed to set a strategy and plan for dissemination including communication activities that ensure the widest possible impact of the project. Since this plan is part of WP6: Communication, dissemination and exploitation, the activities are in line with the general objectives of this WP to: 1. Communicate to different audiences to raise awareness and interest, and 2. Disseminate results for knowledge sharing and capacity building.

Methodology and implementation

The plan for dissemination and communication activities is developed by accelCH through a systematic process involving collecting partner input and aligning it with the information from the DoA Part B, Section 2.3 – Communication and dissemination and the coordinator's feedback. This plan will be used throughout the whole duration of the project.

D6.2 plans activities related to the PEARL-DNA project solely as well as activities with other projects under the 2022 EIC Pathfinder challenge: DNA-based digital data storage. The guidelines presented in this deliverable are in line with the European Commission (EC) requirements.

Outcomes

This deliverable covers the following information: approach towards dissemination and communication for the PEARL-DNA project by defining stakeholders, key messages and principles; monitoring and evaluation of the activities; and planned dissemination and communication activities.

Impact

This plan will enable effective planning, tracking and monitoring of the dissemination and communication activities to ensure maximum project impact on identified target groups.

Next steps

The plan will be made available to all project partners who will carry out their respective communication and dissemination activities. The performance will be evaluated according to the monitoring process set in this document. All necessary adjustments to the plan will be covered in the D6.4 – Interim report: Plan for dissemination and communication activities in M18.

1 Introduction

Deliverable D6.2 serves as a guide for the PEARL-DNA strategy towards dissemination and communication. This detailed plan sets all key elements towards the successful implementation of the dissemination and communication activities including identification of the target audiences, key messages, main principles, and specific actions to be undertaken throughout the whole project. Furthermore, it describes a system for monitoring and evaluation of planned activities to be able to track the success of the plan and adapt it in the D6.4 – Interim report: Plan for dissemination and communication activities in M18 if required.

1.1 Objectives

As outlined in the Description of Action (DoA), the general goal of the communication and dissemination plan is to define the strategy and stakeholders as well as plan dissemination and communication activities to help maximise the project impact. D6.2 is part of WP6: Communication, dissemination and exploitation and is therefore designed in line with the general objectives of this WP.

The main objectives of the WP6 are defined in the Figure 1.

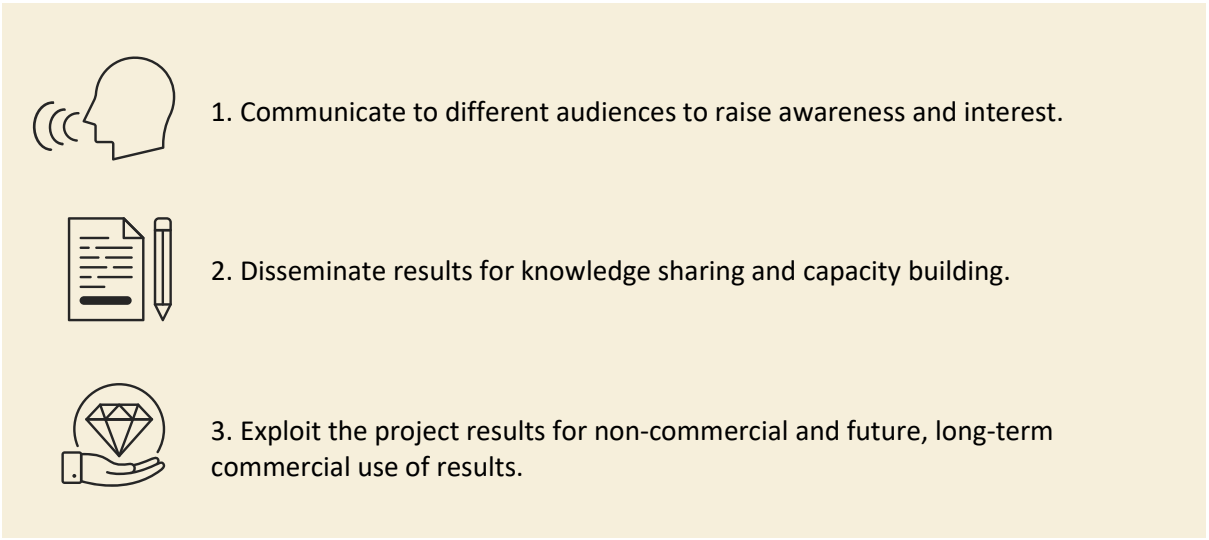


Figure 1. PEARL-DNA WP6 objectives.

The plan for dissemination and communication activities focuses on the first two objectives, while the exploitation strategy is defined in Deliverable 6.3 – Plan for exploitation activities (M6).

1.2 Project overview

PEARL-DNA is an innovative multidisciplinary project aimed at developing an interoperable end-to-end platform of scalable and sustainable high-throughput technologies for DNA-based digital data storage. The project has been funded by the European Commission as part of the EIC Pathfinder Challenge 2022. PEARL-DNA began in October 2023 and will run for 36 months with a total funding allocation of €5.04 million.

Figure 2. Project key information.

The challenge

In a world driven by data, the need for innovative and sustainable data storage solutions has never been more pressing. The global data storage capacity is reaching critical levels, while current technologies for digital data storage face various technological and sustainability limits.

Our technology

PEARL-DNA will develop and assess a complete end-to-end chain of innovative solutions – contributing to improving speed, accuracy, energy efficiency and costs associated with DNA digital data storage. We're pioneering error correction, compression, and data standardization modules, alongside a cutting-edge storage container system. This system will ensure a maintenance-free, long-term preservation of DNA without any energy requirements.

1.3 Consortium

The project's multidisciplinary consortium consists of three SMEs and three research organisations from four European countries. Table 1 describes each project partner, emphasising their individual contributions to dissemination and communication activities. Each partner presents valuable opportunities for sharing the project outcomes, often providing not only content but also platforms for disseminating results and communicating about PEARL-DNA.

Table 1. PEARL-DNA consortium.

BioSistemika	BioSistemika (BioSis) is an innovative IT-Biotech SME and the coordinator of PEARL-DNA. BioSis is actively participating in research and innovation conferences such as AIT, EIC Research and Innovation Week and other events featuring diverse audiences including job fairs EESTEC and BioFair. BioSis is also a member of DNA Data Storage Alliance.

Leibniz Universität Hannover	Leibniz University Hannover (LUH) is one of the nine leading technical universities in Germany providing its expertise in engineering, natural sciences and beyond. As an academic institution, LUH actively disseminates research results and will target ISMB, ECCB and DCC conferences and IEEE Transactions on Information Theory, Bioinformatics scientific journals. Furthermore, LUH frequently organizes events to raise interest in scientific projects such as Girls'Day and Boys'Day and contributes to technology standardisation initiatives.
imagene	Imagene (IMG) stands as an SME specialising in the room temperature preservation of nucleic acids and various biospecimens. IMG has over 15 years of experience collaborating across research, healthcare, and industrial sectors. Furthermore, Imagene has previously participated in joint research articles and is an active member of the DNA Data Storage Alliance in two technical working groups: Data retention and Interoperability.
Technische Hochschule Wildau Technical University of Applied Sciences WILDAU	The Technical University of Applied Sciences Wildau (THWi) is top ranked in research among the universities of applied sciences in Germany. In PEARL-DNA, THWi is involved in several research aspects within the PEARL-DNA project and leads innovation management efforts to ensure effective intellectual property (IP) protection. THWi will introduce PEARL-DNA content in its master and bachelor lectures in study programmes such as Biosystems technology / Bioinformatics and plans to publish scientific articles in journals including Nucleic Acids Research or Scientific Reports.
Hes·so	iPrint – an institute and competence centre of the School of Engineering and Architecture of Fribourg, which is a member of the University of Applied Sciences and Arts of Western Switzerland (HES-SO) – is PEARL-DNA's partner for research, innovation and education in digital printing. HES-SO organises AIT – a conference for the inkjet community, and actively publishes its research results. Furthermore, HES-SO engages with young and diverse audiences through participating in local university events and student projects such as Open Doors.
accelopment	accelopment Schweiz (accelCH) is an expert in the communication and dissemination of EU-funded projects and will support all partners in their activities. Moreover, accelCH possesses extensive experience in creating communication and dissemination materials and provides support in developing the project website, print materials, video content, design templates, and other necessary materials.

A more detailed description of each partner and their involvement in the project can be found on the PEARL-DNA website. Ensuring that each consortium member has an opportunity to participate in dissemination and communication activities is essential. All partners are committed to openly discussing and clearly defining responsibilities. Therefore, this document offers a valuable opportunity to outline and plan partners' involvement in dissemination and communication activities over the duration of the project.

2 Approach

The plan for dissemination and communication activities was developed through a systematic process involving several key steps. First, an input collector was created by accelCH and distributed to all project partners to gather information about their expertise in dissemination and communication activities. This data was then analysed and used as a basis for this report together with the information from the DoA, Section 2 – Impact. Finally, all sections including stakeholder strategy, key messages, tools and the list of dissemination and communication activities have been finalised and approved by the project coordinator and all partners.

PEARL-DNA is one of the portfolio projects funded under the 2022 EIC Pathfinder challenge: DNA-based digital data storage. In order to structure and intensify collaborative efforts of the Pathfinder Challenge, four working groups targeted at different outcomes and interest groups were created. These working groups include Technical synergies, Outreach and public engagement, Metrics as foundation for standards and roadmap, and Protection and exploitation.

As part of the portfolio, PEARL-DNA will participate in each of the working groups to ensure efficient collaboration and development of synergies with other projects within the portfolio. PEARL-DNA partners have been elected to chair two of the work groups and will actively participate in all portfolio-related activities. While this plan primarily focuses on activities related to the PEARL-DNA project, it also outlines plans towards engaging in a broad range of activities with other projects under the same pathfinder challenge to create collaboration and foster innovation.

2.1 Stakeholder focus

As specified in the DoA, the goal of the communication strategy is to raise awareness and interest in the project among all relevant stakeholders. The European Commission's knowledge base defines stakeholders as "individuals or groups of people, institutions, or companies that are interested in the project and may be greatly influenced by its success or failure". In order to implement communication and dissemination strategies effectively, it must be clear who the target audience is and what their needs are. In the context of the PEARL-DNA project, the scientific community, industry, regulatory/policy, and the general public have been identified as the main target audiences. Figure 3 presents more details on the relevant stakeholders within the target groups.

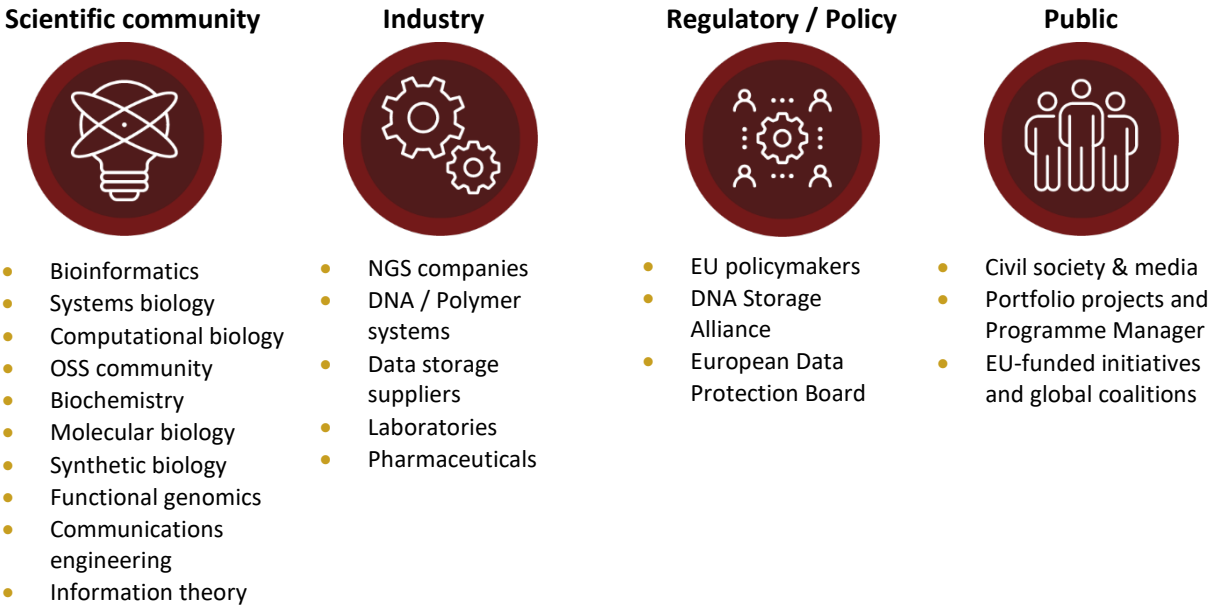


Figure 3. PEARL-DNA stakeholder groups.

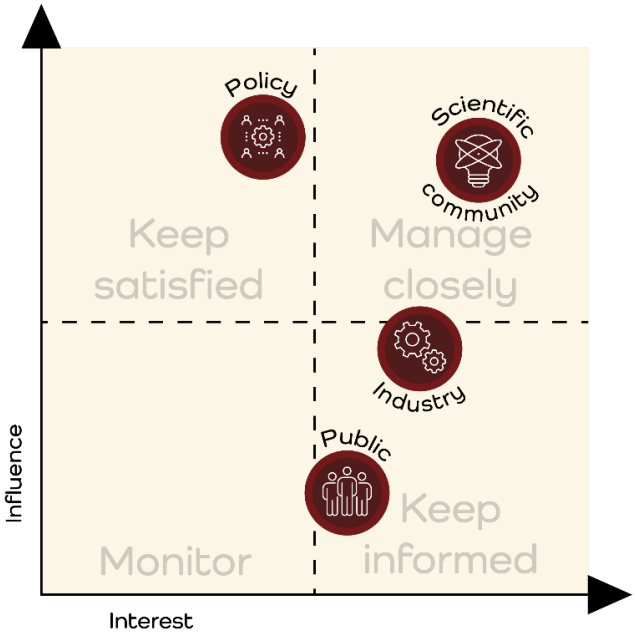


Figure 4. Stakeholder influence/interest matrix.

Stakeholder analysis has been conducted through a stakeholder matrix in order to identify the groups of highest importance, in line with the EC's recommendations. Taking into consideration stakeholder influence and interest levels allows us to strategically plan each dissemination and communication activity aligned with the stakeholder needs and project objectives.

Figure 4 illustrates each target group based on their level of influence and interest. This methodology of stakeholder mapping enables a clear identification of the stakeholder groups that must be kept informed, satisfied, monitored, or managed closely. This further solidifies the dissemination and communication strategy and helps set each activity according to its target audience. More precisely, extra effort will be given to accommodating stakeholder groups that need to be managed closely.

2.2 Key messages

It is crucial to define a set of comprehensive and clear key messages to ensure that the content of the planned activities is delivered in a coherent manner to all stakeholder groups. The key messages for this project are the following:

1. *PEARL-DNA aims to overcome the limitations of current data storage solutions and address the global challenge of data storage.*

2. *PEARL-DNA will develop an interoperable end-to-end platform of scalable and sustainable high-throughput technologies for DNA-based digital data storage that will address the DNA data storage process holistically in a single system for the very first time.*

3. *PEARL-DNA is an interdisciplinary EU-funded project that comprises three esteemed research groups and three innovative SMEs from four countries.*

4. *PEARL-DNA will play a pivotal role in strategically positioning the European innovation ecosystem within the global landscape of DNA-based digital data storage development.*

All dissemination and communication activities will be aligned with key messages identified for the project.

2.3 Visual identity

To harmonise the perception of dissemination and communication activities, all materials including project logo, fonts, colours, and images have been designed according to the visual identity of the PEARL-DNA project. The visual identity has been defined prior to the beginning of the project and was made available to all partners on the project's cloud-based storage platform Box.

Project logo: the logo of PEARL-DNA is available in two variations: the main (dark) logo to be used on lighter backgrounds and the light logo to be used on darker backgrounds, as illustrated in the Figure 5. Furthermore, the logo is available in various formats: PNG – transparent background version to be used for online materials or documents, jpeg – solid background version for digital use or documents, and EPS – vector version with a source file for high-resolution printing.

Figure 5. PEARL-DNA logo variations.

Colour palette: the colours were selected according to the project's general identity and to fit with the logo. The colours are used on the project templates, website and all other communication and dissemination materials.

Figure 6. PEARL-DNA colour palette.

Typography: three fonts were selected to be used for PEARL-DNA materials:

- Como Semibold is to be used for headlines in the communication materials.
- Asap Regular is to be used for body text in the communication materials.
- Calibri Regular is to be used for project documents.

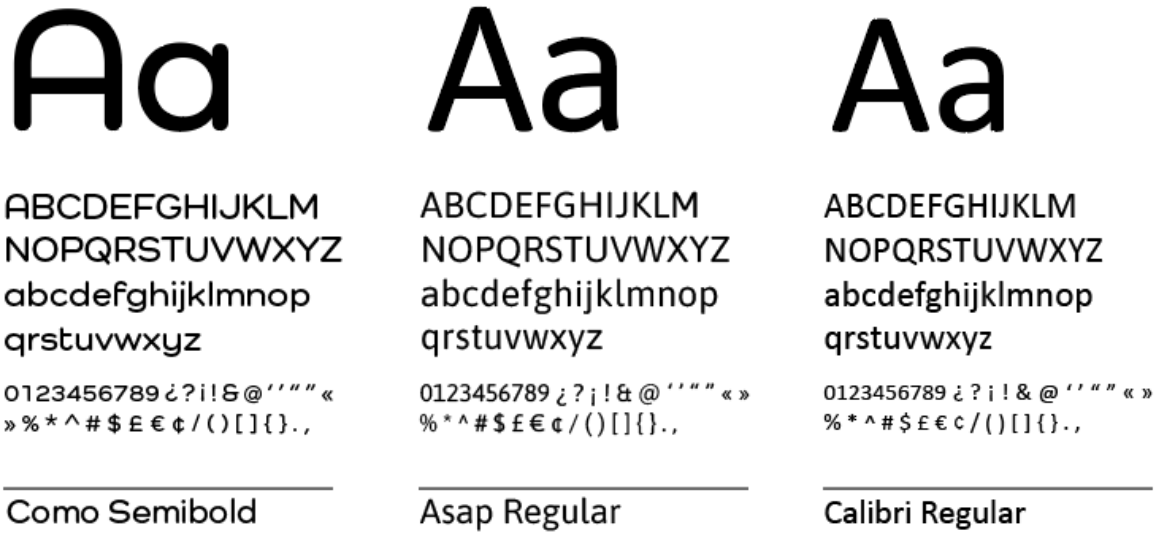


Figure 7. Project fonts.

Imagery: four images have been selected as the main visuals to represent the PEARL-DNA project. These images were selected as a background of communication materials and can be adapted to the size accordingly. High-definition images are available for partners use on Box. Setting a visual identity for a project helps to quickly identify that the material is associated with a particular project and allows users to spend less time and cognitive capacity to comprehend the content when the design is aligned between all materials.

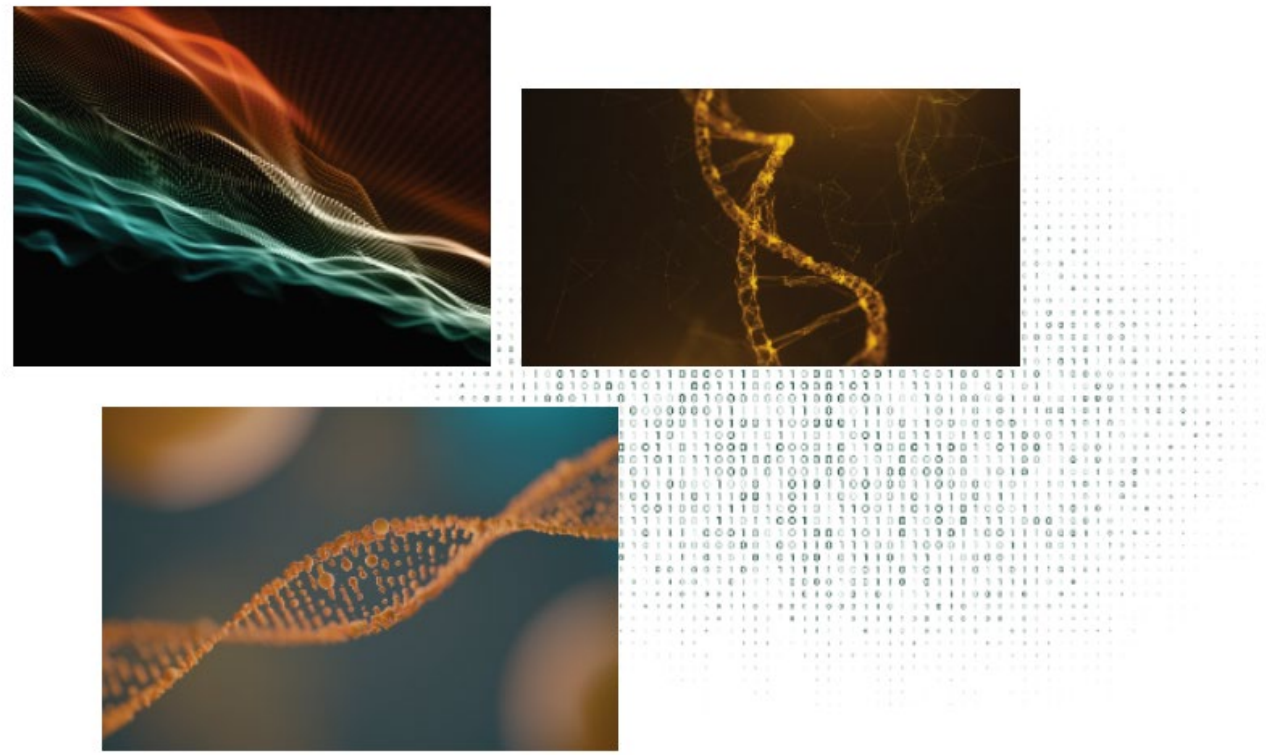


Figure 8. Project visuals.

2.4 Funding acknowledgement

According to the Grant Agreement (GA) Article 17, Annex 5, communication and dissemination activities of PEARL-DNA must acknowledge EU support by displaying the European flag (emblem), funding statement and the logo of the European Innovation Council, unless otherwise agreed with the granting authority. All communication or dissemination activities must include a disclaimer. In PEARL-DNA, this requirement is harmonised with those of the funding authorities of the associated partners accelCH and HES-SO, funded by the State Secretariat for Education, Research and Innovation (SERI), resulting in the emblem and statement below to be used:

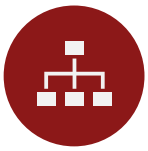
European Innovation Council

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Innovation Council and SMEs Executive Agency (EISMEA). Neither the European Union nor the granting authority can be held responsible for them. Swiss participants in this project are supported by the Swiss State Secretariat for Education, Research and Innovation (SERI) under contract numbers 23.00332 and 23.00328.

2.5 Open science and other principles

The dissemination strategy of the PEARL-DNA is aligned with the EU's Open Science policy. As defined by the European Commission, Open Science (OS) is "an approach to the scientific process that focuses on spreading knowledge as soon as it is available using digital and collaborative technology". Open science principles in the PEARL-DNA project will involve stakeholders on all levels including other portfolio challenge projects. Thus, PEARL-DNA will establish a stakeholder network for DNA-based data storage, facilitating knowledge transfer to other initiatives, scientists, and researchers. The main elements of the OS practices at PEARL-DNA are Open access (OA), research data management, and FAIR principles. How these principles are used in the dissemination process is described in section 2.7.2 of this document.

Open access. According to the GA Article 16, PEARL-DNA will provide "Online access to research outputs provided free of charge to the end-user". Therefore, PEARL-DNA partners will ensure open access to their peer-reviewed scientific publications by depositing a machine-readable electronic copy of the published version or the final peer-reviewed manuscript in a trusted repository upon publication. This deposited publication must be immediately accessible via the repository under the latest available version of the Creative Commons Attribution International Public License (CC BY) or an equivalent license. Additionally, information about any research outputs or necessary tools and instruments to validate the scientific publication's conclusions must be provided through the repository. Metadata of deposited publications will also be open under a Creative Common Public Domain Dedication (CC 0) or equivalent.



Research data management is the process within the research lifecycle that entails the organisation, storage, preservation, security, quality assurance, and rules and procedures for sharing of data including licensing, according to Article 16 of the GA. PEARL-DNA partners are committed to research data management according to the **FAIR** principles: Findable – Accessible – Interoperable – Reusable. Data collection and management serve various purposes, including informing project documents, tracking progress, and disseminating results. Existing and newly generated data, such as DNA sequencing data, will be stored on a compliant cloud platform accessible to all partners. Metadata will be openly available under a CC0 license, ensuring transparency and facilitating reuse. Research outputs will be published under the CC BY license, with consideration for inclusion in the European Open Science Cloud. Interoperable standards will promote data sharing, while additional documentation will enhance data understanding. Open licenses will govern public domain datasets and software code, fostering effective dissemination. Dr. Voges, as the Data Manager of PEARL-DNA, will oversee data governance and manage the Data Management Plan (D5.2) to ensure accessibility and preservation. Each partner bears responsibility for data management within their tasks.

2.6 Tools

The key focus of the PEARL-DNA dissemination and communication plan is to use diverse communication methods effectively. By utilising various tools and channels (Table 2) such as print media, online platforms, and more, the project aims to connect with different stakeholder groups, increase its visibility, spark interest, and encourage collaboration. Moreover, connections between these channels will be established to ensure a seamless flow of information. For instance, materials like brochures and posters will also be accessible on the project's website. This integrated approach ensures that the project reaches a broad audience through their preferred communication channels.

Table 2. PEARL-DNA channels.

Medium	Tools
Online	Website, social media channels, online publications, partner websites, portfolio online communication, digital resources.
Print	Printed journals, flyers, business cards, posters, roll-up.
Audio-visual	Video interviews, technology demonstrations, webinars.
Verbal	In-person presentations, workshops, events

2.7 Monitoring and evaluation

To ensure quality control and continuous improvement of the dissemination and communication plan, monitoring and evaluation criteria must be established. Therefore, each activity proposed in the section 3 of this document includes the following set of data: activity, lead, target group, timeline, and KPIs.

Figure 9. PEARL-DNA monitoring system.

Setting Key Performance Indicators (KPIs) is crucial for comparing the expectations outlined in the dissemination and communication plan with the actual performance of dissemination and communication activities. These KPIs serve as benchmarks for success and help identify areas for potential improvements. If the actual results deviate from the set KPIs, the plan will be readjusted and described in Deliverable D6.4 – Interim Report: Plan for Dissemination and Communication Activities (M18) and later in D6.5 – Final Report: Plan for Dissemination and Communication Activities (M36).

2.7.1 Communication process

The PEARL-DNA communication strategy encompasses both internal and external communication processes. Internally, the focus is on keeping the consortium informed about project progress and updates, providing necessary information and materials. Various tools are employed for this purpose, including online meeting platforms and the cloud storage platform Box, which offers restricted access solely to consortium members. Externally, communication efforts will be directed towards broader audiences, aiming to promote awareness of the project and its goals. This will involve sharing content according to the key messages listed in the section 2.2 about project progress, results, and news. Utilising a variety of communication tools as detailed in the section 2.6, project partners aim to engage with all stakeholder groups. Communication materials will be created by accelCH with input from all partners, in line with EC requirements (section 2.4) and following the project visual identity (section 2.3.)

2.7.2 Dissemination process

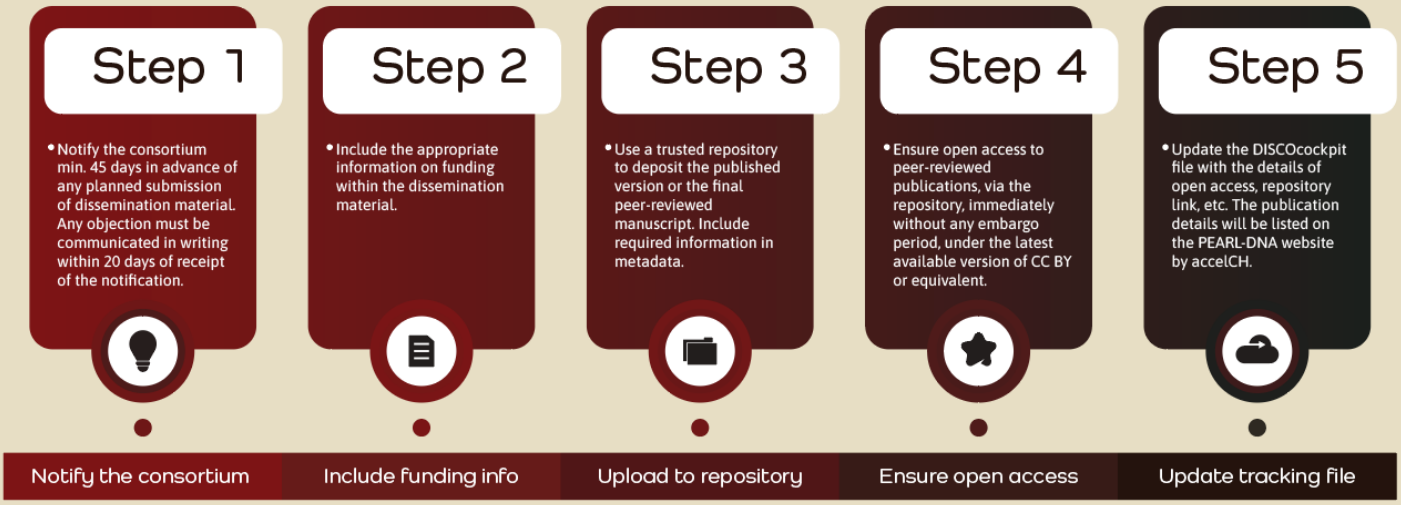


Figure 10. Dissemination process at PEARL-DNA.

All members of the consortium must follow the dissemination protocol outlined in Article 8.4.2.1 of the Consortium Agreement and guarantee open access to all peer-reviewed publications, associated data, and metadata, as outlined in Annex 5 of the Grant Agreement. The dissemination process comprises of the following steps:

1. Notify the consortium at least 45 days in advance of any planned dissemination material submission providing the necessary details. Any objections to the dissemination should be communicated in writing within 20 days of receiving the notification.
2. Ensure that the dissemination material includes appropriate funding information, as specified in section 2.4.
3. Use a trusted repository to deposit either the published version or the final peer-reviewed manuscript of publications, along with information about any research outputs or tools necessary to validate the scientific conclusions. Ensure that the required information is included in the metadata in accordance with Annex 5, Article 17.
4. Guarantee immediate open access to peer-reviewed publications via the repository, without any embargo period, under the most recent version of CC BY or its equivalent. Also, ensure open access to any metadata of deposited publications under CC 0 or its equivalent, according to the FAIR principles.
5. Update the internal tracking file with information regarding open access and repository link. This online tracking file ensures a systematic way of collecting and organizing data for reporting. The publication details will be listed on the PEARL-DNA website by accelCH.

To guide partners in communicating and disseminating project results while avoiding the external disclosure of delicate data related to technology, business strategies, and market insights, an internal guidance document has been developed by the coordinator. This document contains instructions on what information can be disclosed or remain confidential, and the dissemination process. The document is available for all partners on Box.

3 Activities

Project partners have identified concrete communication and dissemination activities that are described in sections 3.1 and 3.2. The outlook of all activities is presented through a GANTT chart in the section 3.4 of this report. Some of the activities may overlap in their goals and provide opportunities for dissemination and communication at the same time (i.e. industry fairs, popular science outlets).

3.1 Communication activities

According to Article 17 of the GA, communication can be defined as "promoting the project and its results by providing targeted information to multiple audiences in a strategic and effective manner". Communication activities start before the project begins. The two types of communication activities can be identified as **outreach** and **public engagement**. The core difference lies in the main goal and direction of information exchange. Outreach activities have the goal of educating and inspiring the audience in the form of one-way broadcasting. The examples include presentations, press releases, podcasts, blogs, lectures, demonstrations, and video content. Through such activities, the project can share information about achievements and outcomes and create interest in the project in the eyes of current and potential stakeholders. On the other hand, public engagement activities create opportunities for the project to learn about its public by listening to their thoughts and addressing their concerns. Examples of such an activity are a roundtable event or a workshop.

3.1.1 Project website

Activity:	Lead:	Target group:	Timeline:	KPI:
Project website	accelCH	All stakeholders	M1-M36	200 visitors per month, dedicated portfolio activities area

The PEARL-DNA website is a tool for reaching all stakeholders informing them about the key project information, advancements and outcomes. As described in the Deliverable D6.1 – Project website and logo, the website was set up by accelCH with input from all partners and launched before the beginning of the project, in September 2023. The content is being continuously updated as new project outcomes appear. Figure 11 and Figure 12 below illustrate how the website menu will evolve with time.

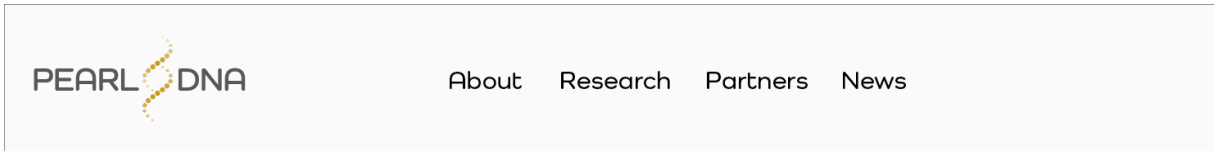


Figure 11. Current website menu.

Figure 12. Future website menu.

The website has been designed using a responsive template, where the content automatically adapts to fit any screen size as shown in Figure 13.

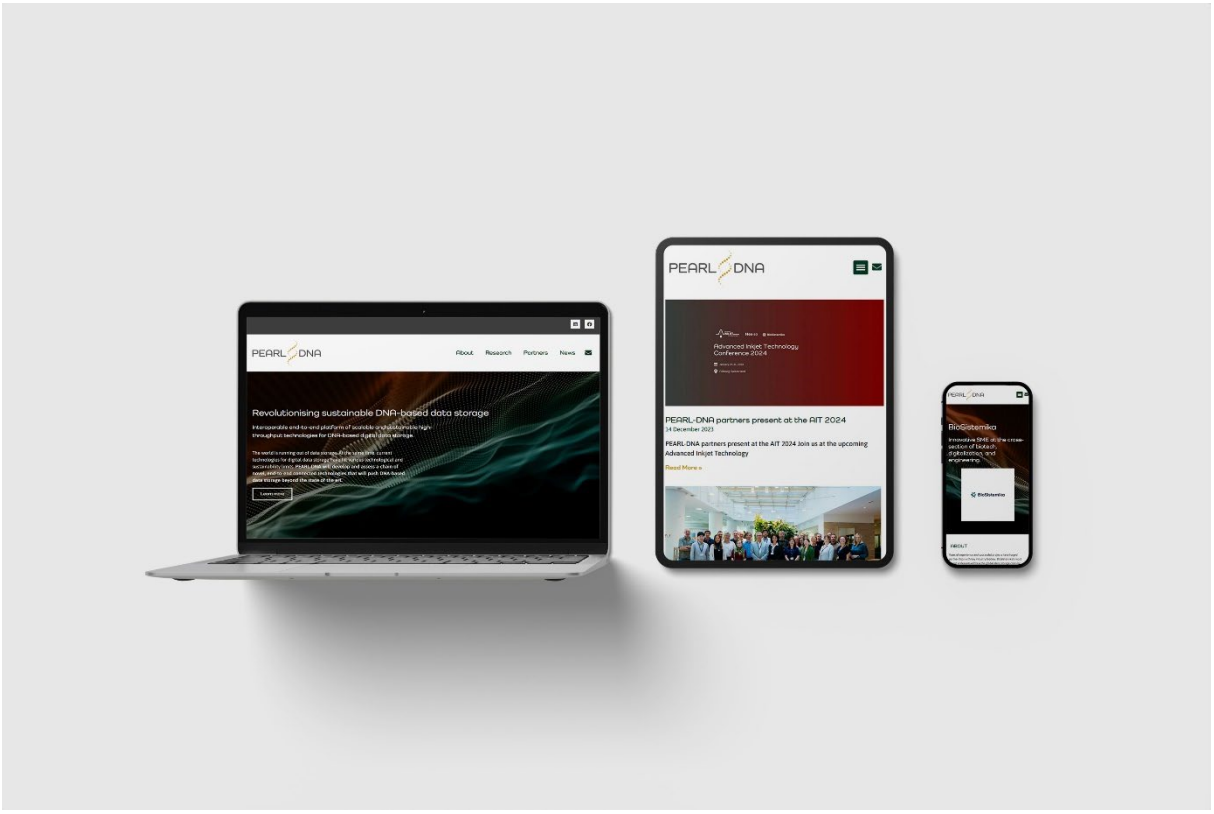


Figure 13. PEARL-DNA website on a range of devices.

The project website serves as the primary source of public information about PEARL-DNA. It also helps raise awareness about the project and share findings efficiently. Therefore, the landing page has been updated with key information on the project and simple navigation. This has been implemented in order to retain the visitors and provide the most important information with the least amount of clicks possible. Furthermore, adding alternative text to every visual improves website accessibility.

For highly innovative projects such as PEARL-DNA that are working to deliver proof of concept of cutting-edge technology, it is key to communicate the importance of the research, the initial challenge and the proposed technological solution. Therefore, the scientific content will be adapted and where possible represented visually to be appealing to a wider audience.

Activity:	Lead:	Target group:	Timeline:	KPI:
News posts	accelCH	All stakeholders	M1-M36	1 news post per month

News posts: PEARL-DNA stakeholders will be kept updated on the noteworthy advancements in the project through short news articles published on the project website. All partners will continue contributing to the website content in the form of text, photo and/or video materials. accelCH is responsible for preparing and publishing the materials using the input from the PEARL-DNA consortium.

3.1.2 Social Media

Activity:	Lead:	Target group:	Timeline:	KPI:
Social media management	accelCH	All stakeholders	M1-M36	300 followers across all platforms (cumulative)

A strong presence on social media is essential for innovative projects to engage with their audience, foster community interaction, and showcase their groundbreaking advancements. PEARL-DNA partners have made a decision to create and manage the following social media channels:

@pearl-dna

LinkedIn is a professional social media network. It is most suitable for projects such as PEARL-DNA that aim to stay connected with industry representatives and other innovative and scientific projects. It is expected to have the majority of interactions through LinkedIn.

@pearldna.eu

Facebook is one of the world's most popular social media platforms to reach a wider audience. The partners do not expect to have a high level of interactions through this platform but find it important to be present and available for the public reach.

@pearl-dna

YouTube is a highly useful platform for sharing video content. Moreover, the videos uploaded to and hosted on YouTube are easily embeddable in other platforms including the project website. PEARL-DNA partners do not expect a high level of public interaction through the YouTube channel directly but will reshare the content hosted on YouTube on other platforms.

accelCH in collaboration with all PEARL-DNA partners and is responsible for creating content for social media channels and adapting the posts to the specifications of each platform. There are several content types and topics planned to promote the project including informative yet easy-to-understand for non-experts "Good to know" posts, introductory posts "Meet the team" and content featuring news and events related to the PEARL-DNA project.

- **Good to Know Series**: informative posts including key facts about the technology, explaining the need for new storage solutions, and describing how the DNA storage technology works. This will increase awareness on current data storage solutions limitations within all types of stakeholders.

Figure 14. Example of a social media campaign.

- **Meet the Team**: social media posts featuring real people's faces often generate higher engagement. Therefore, accelCH has developed a series of posts introducing the people behind the PEARL-DNA project.

- **News & events**: social media channels are an effective way of communicating about any project updates and events. All partners will inform accelCH about any event participation and social media posts will be created.

Figure 15. Meet the Team post.

Apart from creating new content, PEARL-DNA social media channels will also repost content published by partners and vice versa. This will enhance the visibility and discovery of the channels and increase the audience. Furthermore, many posts will be designed as an invitation to discover more details and further information about a specific subject and will include links to the main project website where the content is stored in the form of a page, news piece or event. This strategy will help increase the website traffic and foster engagement with our audience.

Utilising hashtags in social media enhances project visibility, reaching broader audiences and fostering community engagement. Therefore, PEARL-DNA social media posts will employ popular and custom hashtags including #DNADataStorage #Innovation #HorizonEurope #EICpathfinder.

3.1.3 Press releases

Activity:	Lead:	Target group:	Timeline:	KPI:
Press release	accelCH	All stakeholders	M1-M36	3 press releases

Press releases serve as a tool to inform the media about the groundbreaking results of the project and talk to the public. PEARL-DNA has already issued the first press release at the beginning of the project including the project insights and goals for overcoming the state of art technological limitations in data storage. This press release has been circulated with all partners and translated into local languages including German and Slovenian. Two more press releases are expected to be issued by the end of the project. accelCH is responsible for producing this type of communication activity with input from all partners. Consortium members must inform accelCH of any noteworthy advancements and events.

Figure 16. PEARL-DNA first press release.

3.1.4 Newsletter

Activity:	Lead:	Target group:	Timeline:	KPI:
Project newsletter	accelCH	Public, industry	M8-M36	15 newsletters, 60 newsletter subscribers

PEARL-DNA will regularly publish a newsletter informing interested audiences about the latest news and updates. The content will spread across all areas of the project including scientific discoveries, knowledge management and IP, communication activities, and more. accelCH is responsible for generating a newsletter recipients list through a “subscribe” action button on the project website. The signup forms and data records will be GDPR-compliant. All partners are to contribute content for the newsletter, while contributions from portfolio members and other experts will also be welcome. The newsletter will be first published in M8 and will continue to be released bi-monthly.

3.1.5 Digital, print and audio-visual materials

accelCH will design promotional materials adapted to reach all stakeholder groups. It is crucial to ensure that the communication activity is supported by promotional material as it increases the memorability of the project and provides a source to discover further information. accelCH is responsible to creating such materials with support and feedback from all partners.

Activity:	Lead:	Target group:	Timeline:	KPI:
Print materials	accelCH	All stakeholders	M1-M36	1 poster, 1 roll-up banner, business cards, 2 flyers. Materials used in minimum 8 events.

Figure 17. PEARL-DNA flyer.

Communication materials are essential for raising awareness about the project in digital and physical spaces. As described in sections 3.1.4 and 3.2.2, partners will actively participate in various local and international events where the use of **print materials** can be valuable. accelCH has already prepared business cards, flyers, and presentation templates to support partners during these endeavours and will create additional materials during the length of the project including a roll-up, poster, and materials for children and young pupils to be distributed at school events.

The designs prepared for print are available to all partners on the common cloud system, each partner can use the available designs and print the materials locally or request editing and adaptation from accelCH to tailor their events.

Activity:	Lead:	Target group:	Timeline:	KPI:
Video materials	accelCH	All stakeholders	M1-M36	3 video interviews, 1 video demonstration

Video materials: partners have shown interest in creating video content including interviews with the partners and technology demonstrations. Creating video **interviews** with project participants serves several important purposes. They will allow project members to share their expertise, experiences, and passion for the project in a personal and relatable manner, allowing for a stronger connection with the audience.

Partners have shown interest in demonstrating their technologies in the video format once all necessary patent applications are filed. This will be reassessed later in the project once the technologies are developed and if relevant considering the intellectual property status at the time. All videos will be uploaded on the PEARL-DNA YouTube channel and shared through the website and social media channels.

Activity:	Lead:	Target group:	Timeline:	KPI:
Infographics	accelCH	Public, all stakeholders	M1-M36	3 infographics

Infographics: for innovative interdisciplinary projects such as PEARL-DNA, it is crucial to represent complex pieces of information in the form of infographics making it easier to understand and more memorable for viewers. Infographics are a multi-use communication tool that will be placed in other materials including the project website, flyers, posters, news posts, and newsletters. Furthermore, infographics are highly shareable on social media platforms and other digital channels, increasing the likelihood of reaching a wider audience and driving engagement with the project. Before the start of the project, an infographic of the PEARL-DNA data storage pipeline had already been created and used in other communication materials. Partners plan to create further infographics as more research results become available.

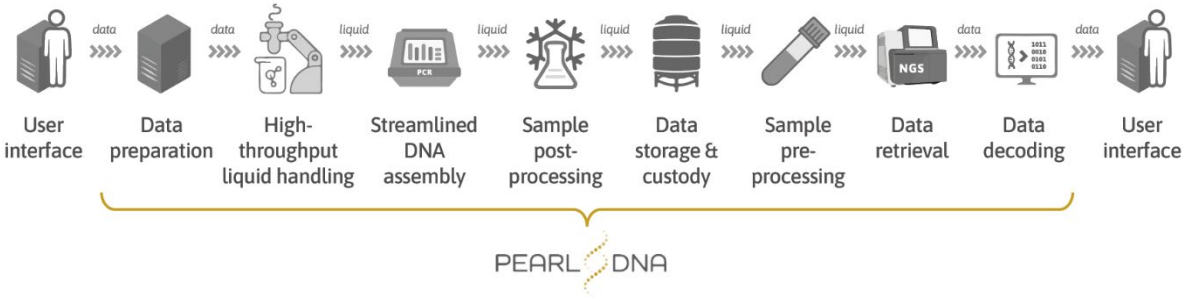


Figure 18. PEARL-DNA data storage pipeline.

Activity:	Lead:	Target group:	Timeline:	KPI:
Scientific poster	accelCH	Scientific community	M1-M36	Scientific poster template in landscape and portrait format

Scientific poster: partners intending to participate in scientific conferences will benefit from a standardised design template for PEARL-DNA research outcomes. accelCH will create a template for a scientific poster in PowerPoint format that will allow easy use and adaptation for partners with various levels of design skills.

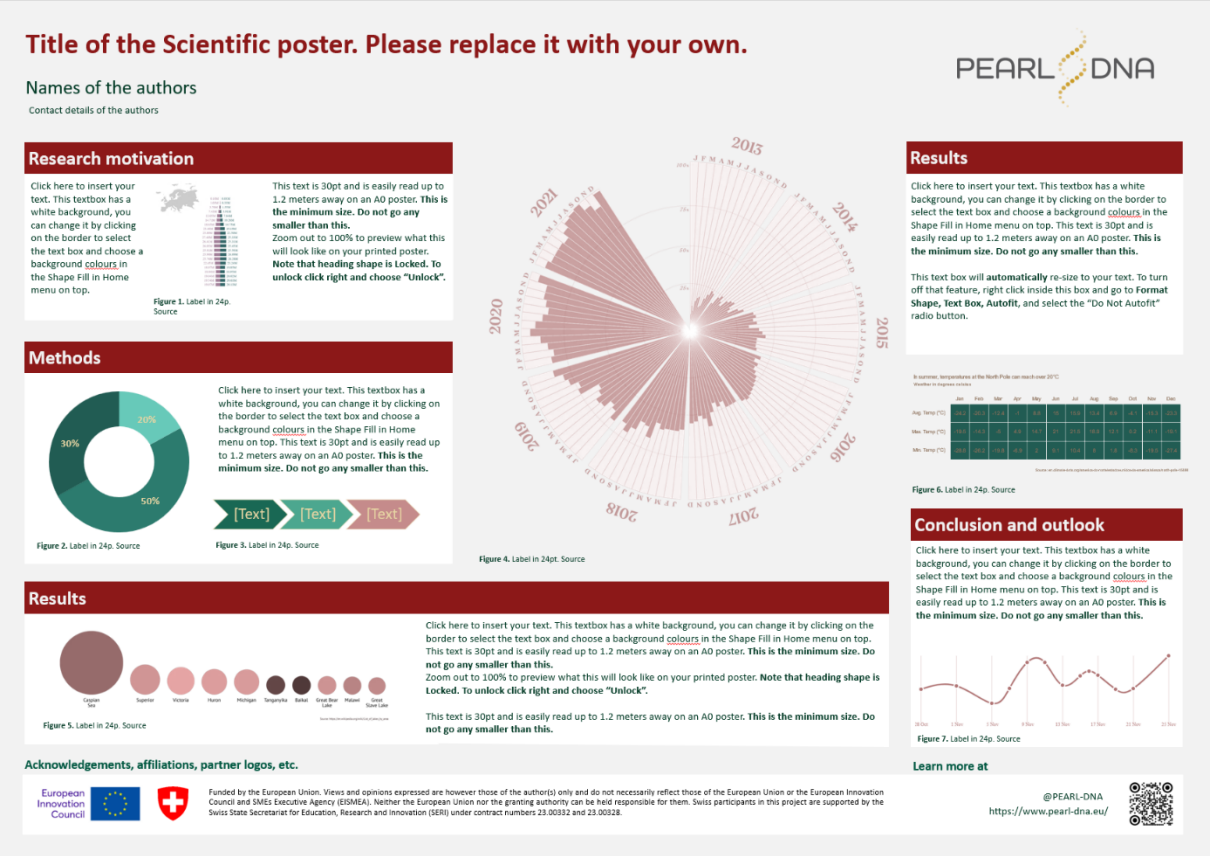


Figure 19. Scientific poster template.

3.1.6 Public engagement

Activity:	Lead:	Target group:	Timeline:	KPI:
Participating in public events	All partners	Public	M1-M36	3 public engagements & 100 persons reached per year

Partners at PEARL-DNA have set to attend multiple events per year to reach various audiences. Section 3.4 visually illustrates the possible events to engage with diverse stakeholders.

Academic and non-academic partners at PEARL-DNA display big interest in engaging with young audiences. BioSistemika actively participates in **job fairs** across Slovenia annually. In 2024, they have already attended EESTEC – job fair for electrical engineering and computer science students in March 2024, Ljubljana and plan to participate in BioFair – job fair for students in biotech, chemistry, pharma, medical, and related industries.

iPrint team will participate in the Open Doors by HES-SO with a technology demonstration or presentation to the public and possible future students, depending on the advances of the project and the IP protection strategy.

LUH will participate in the local Girl's and Boy's Day in April 2024 where they will present PEARL-DNA project to the young audience using materials specially designed for children between 11-15 by accelCH.

PEARL-DNA will be addressed in the respective lectures by THWi and will be further expanded. This includes the study programme "Biosystems technology / bioinformatics" for a master course in Molecular biotechnology and a bachelor course in Microbiology. Furthermore, BioSistemika will deliver a guest lecture at the Faculty of Chemistry and Chemical Technology at the University of Ljubljana.

To reach a local audience, BioSistemika is planning to attend and showcase PEARL-DNA at a minimum of one local event organized by SPIRIT Slovenia depending on their invitation. LUH will be interested in participating at events by local economic development community such as Hannoverimpuls, if a suitable opportunity arises.

Figure 20. BioSis at a EESTEC job fair in March 2024.

3.1.7 Popular science outlets

Activity:	Lead:	Target group:	Timeline:	KPI:
Communicating through popular scientific outlets	All partners	Public, industry	M1-M36	3 activities, 300 impressions

Building on their scientific publications, PEARL-DNA partners will also communicate their results to a wider audience outside of the scientific community. For this, partners have identified several popular science outlets including Binaire magazine, Wirkstoff Radio, Slovenia Times. Partners will also utilize their own dissemination resources, including BioSistemika's Medium channel.

3.1.8 EIC-Pathfinder Challenge portfolio public event

Activity:	Lead:	Target group:	Timeline:	KPI:
EIC-Pathfinder Challenge portfolio public event	BioSis, accelCH	Portfolio projects, policy, scientific community	M36	50 participants including 15 representatives from all portfolio projects

The final **public portfolio event** for PEARL-DNA in M36 will be organised by BioSis with the support from accelCH as a platform to share results sharing from each portfolio working group. This event will bring together EIC-Pathfinder Challenge portfolio members and other interested representatives of the scientific community, industry and regulatory stakeholders to provide a platform for sharing project outcomes, research journeys and experiences, as well as discussing the future of DNA-based data storage.

The public portfolio event can be combined with one of the General Assembly meetings of the portfolio that are planned to be held once a year physically. Members from other projects and partners will be invited to participate, which will facilitate the collaborations towards a strong European network.

3.2 Dissemination activities

Dissemination is the public disclosure of results through relevant mediums to the target audience, as defined by the EC. In the context of PEARL-DNA, dissemination activities primarily focus on engaging the scientific community and align with T6.3 – Dissemination of research and innovation results, as outlined in the DoA. It is the responsibility of each partner to identify dissemination outlets suitable for their expertise and present their findings accordingly. Partners may engage in dissemination activities independently or collaboratively with other PEARL-DNA partners.

3.2.1 Scientific publications

Activity:	Lead:	Target group:	Timeline:	KPI:
Publications in scientific journals	LUH, IMG, HES-SO, THWi	Scientific community, industry	M5-M36	5 gold open access publications in peer-reviews journals

Scientific publications are one of the key ways of sharing the project achievements. Presenting the research results through scientific publications not only contributes to the advancement of the state of the art but also allows other researchers to go a step forward, as outlined by the EC. Academic as well as non-academic consortium members of the PEARL-DNA project plan to disseminate their research results through high-impact journals.

Partners have identified the following journals as target publishers: Micromachines or Journal of Micromechanics, Microengineering by IOPscience IEEE Transactions on Information Theory, Bioinformatics, BMC Bioinformatics, Scientific Reports, Communications Engineering, and Nucleic Acid Research. Per the GA section 1.3.3 and the Open Science principles described in section 2.5 of this document, every partner of PEARL-DNA will strive to maximise the impact of their results by ensuring that all articles published in peer-reviewed journals will have OA.

3.2.2 Scientific conferences and events

Activity:	Lead:	Target group:	Timeline:	KPI:
Scientific conference participation	All partners	Scientific community	M4-M36	Contribution to 7 conferences

Besides knowledge sharing, dissemination through scientific conferences also keeps the consortium up to date with the current technological advancements in their respective fields and provides a platform for dialogue to facilitate synergies and collaborations. Consortium members, including academic and non-academic partners (BioSis), have set the goal of attending scientific conferences and

presenting their research in the form of oral presentations and scientific posters. Partners will hold solitary presentations as well as together with other partners, potentially filling a whole session in a suitable conference.

Each partner is responsible for identifying relevant scientific events, applying and delivering the content, while accelCH will assist with materials preparation such as print promotional materials or a poster template. High-impact scientific events relevant for PEARL-DNA partners include ISMB, ECCB, DCC, RECOMB, and AIT as platforms for updating the community about the advancement of the project.

3.2.3 Industry and collaborative events

Activity:	Lead:	Target group:	Timeline:	KPI:
Industry and collaborative events	All partners	Industry, portfolio projects, policymakers	M5-M36	5 event participations

As an innovative interdisciplinary project, PEARL-DNA will highly benefit from participating in collaborative activities with other industry representatives, scientists, other EU-funded initiatives and policymakers. Such events present an excellent opportunity for the project partners to build a network and plan potential future synergies.

For the duration of the project, the consortium members are set to participate in five collaborative activities including industry fairs participation, workshops and roundtables. Furthermore, project partners (IMG, BioSis) are active members of the DNA Data Storage Alliance in two working groups on Data retention and Interoperability and have previously presented for the members of the alliance. Therefore, PEARL-DNA partners will actively monitor events organised by the DNA Data Storage Alliance to present project results.

PEARL-DNA partners are already receiving invitations to participate in industry-leading collaborative events including the workshop “Les journées MoleculArXiv” in May 2024 by the PEPR MoleculArXiv (IMG) and Pathfinder Challenges Info Day at the EIC Summit 2024 (BioSis). Other industry events that might be of interest to the partners include GS1 Global Forum, BIO international annual trade fair, and CES annual trade fair.

3.2.4 PEARL-DNA Workshop

Activity:	Lead:	Target group:	Timeline:	KPI:
Workshop	LUH	Scientific community, industry, media	M15-M36	1 in-person workshop event, 20 participants

Workshops and other collaborative events: apart from participating in well-established international scientific conferences, PEARL-DNA will also organise its own event informing about the project results and co-creating with the community. LUH contributes to technology standardisation initiatives by pushing to-be-developed technology into industry-led initiatives. Therefore, in the period M15-M36

they will co-organise a collaborative event in the form of a workshop or roundtable involving various groups of stakeholders depending on the project's progress.

3.2.5 End of Project Symposium

Activity:	Lead:	Target group:	Timeline:	KPI:
End of Project Symposium	BioSis, all partners	Scientific community, industry, media	M30-M36	30 attendees

End of Project Symposium: Towards the end of the project, accelCH with support from all partners will organise an End of Project Symposium. During this event, stakeholder representatives including the scientific community, industry, and media will be informed about project results and discuss best practices as well as investigate potential future collaborations. Other portfolio projects will also be invited to participate in this physical event to join efforts and ensure participation from direct stakeholders of the project.

3.2.6 EIC-Pathfinder Challenge portfolio webinars

Activity:	Lead:	Target group:	Timeline:	KPI:
EIC-Pathfinder Challenge portfolio webinars	accelCH, all partners	Portfolio projects, policy, scientific community	M9-M36	4 webinars, cumulative participation from all portfolio projects

Having a systematic method of knowledge sharing with interested stakeholders and networks of portfolio partners is crucial. Therefore, accelCH, with support from all partners and portfolio projects, will organise bi-annual **webinars** to facilitate knowledge transfer between the portfolio projects. The format of this activity will include presentations by the partners and invited speakers, panel discussions and Q&A sessions. The webinars will be recorded and made available at the dedicated area on the PEARL-DNA website.

3.3 Summary of activities

This section serves as a reference guide for monitoring concrete communication and dissemination activities and KPIs.

Table 3. PEARL-DNA communication and dissemination activities summary.

Activity:	Lead:	Target group:	Timeline:	KPI:
Communication activities				
Project website	accelCH	All stakeholders	M1-M36	200 visitors per month, dedicated portfolio activities area
News posts	accelCH	All stakeholders	M1-M36	1 post per month
Social media management	accelCH	All stakeholders	M1-M36	300 followers across all platforms (cumulative)
Press release	accelCH	All stakeholders	M1-M36	3 press releases
Project newsletter	accelCH	Public, industry	M8-M36	15 newsletters, 60 newsletter subscribers
Print materials	accelCH	All stakeholders	M1-M36	1 poster, 1 roll-up banner, business cards, 2 flyers. Materials used in minimum 5 events.
Video materials	accelCH	All stakeholders	M1-M36	3 video interviews, 1 video demonstration
Infographics	accelCH	Public, all stakeholders	M1-M36	3 infographics
Scientific poster	accelCH	Scientific community	M1-M36	Scientific poster template in landscape and portrait format
Participating in public events	All partners	Public	M1-M36	3 public engagement & 100 persons reached per year
Communicating through popular science outlets	All partners	Public, industry	M1-M36	3 activities, 300 impressions
EIC-Pathfinder Challenge portfolio public event	BioSis, accelCH	Portfolio projects, policy, scientific community	M36	50 participants including 15 representatives from all portfolio projects

Dissemination activities				
Publications in scientific journals	LUH, IMG, HES-SO, THWi	Scientific community, industry	M5-M36	5 gold open access publications in peer-reviews journals
Scientific conference participation	All partners	Scientific community	M4-M36	7 participations through oral presentation or scientific poster
Industry and collaborative events	All partners	Industry, portfolio projects, policymakers	M5-M36	5 event participations
PEARL-DNA Workshop	All partners	Scientific community, industry, media	M15-M36	1 in-person collaborative event, 20 participants
End of Project Symposium	BioSis, all partners	Scientific community, industry, media	M30-M36	1 event, 30 attendees
EIC-Pathfinder Challenge portfolio webinars	accelCH, all partners	Portfolio projects, policy, scientific community	M9-M36	4 webinars, cumulative participation from all portfolio projects

3.4 Timeline

A detailed timeline has been created illustrating all dissemination and communication activities planned for the project PEARL-DNA in the form of a GANTT chart. This timeline not only provides a comprehensive overview of the project's strategy but also serves as a reference guide to the partners as well helping them to track their performance and stay up to date with the responsibilities and leads for each activity. Should there be any changes in the plan, the GANTT chart will be updated accordingly.

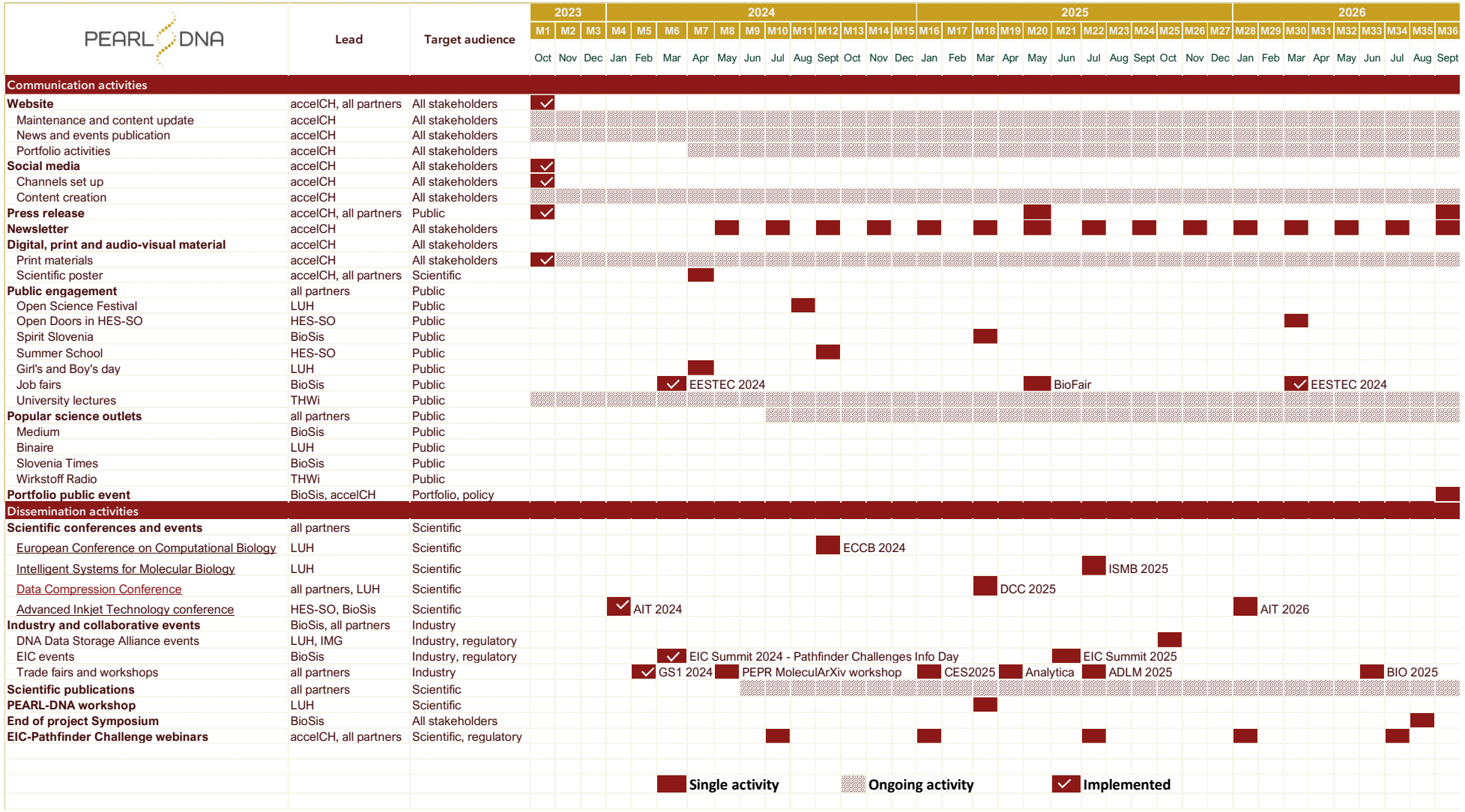


Figure 21. PEARL-DNA dissemination and communication timeline.

4 Stakeholder engagement and feedback

There are several channels for stakeholder feedback available. General requests can be submitted by email, the address info@pearl-dna.eu can be found in the main navigation of the project website. accelCH is responsible for the main project's inbox and will sort out requests before forwarding them to the corresponding partner. Otherwise, specific requests can also be sent to partners directly, as their contacts are published on the corresponding pages of their consortium.

Furthermore, stakeholders can contact the project partners through social media platforms such as LinkedIn, Facebook, and YouTube by sending a direct message or commenting on existing content.

Live collaborative events also provide a platform for engagement and feedback. Partners will communicate in advance regarding communication and dissemination activities planned and whether these are open for participation from other stakeholders.

5 Future work

While this plan covers activities for the whole duration of the project, the performance will be continuously evaluated according to the KPIs set in this document. Due to the sensitivity of the technology being developed by the project partners and depending on the IP status, certain planned dissemination or communication activities might not be implemented. All necessary adjustments will be covered in the D6.4 – Interim report: Plan for dissemination and communication activities in M18 and in the D6.5 – Final report: Plan for dissemination and communication activities in M36.

6 References

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