



Applying for EIC grants: EIC Accelerator Pilot & EIC Pathfinder

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EIC Regional Info Day, 8th June 2023

Who we are and what we do

- > BioSistemika is a laboratory digitalization company whose bread and butter is custom software development, development of laboratory software products and digitalization consulting.
- > The greatest advantage is truly interdisciplinary knowledge and experience.



Company ID: 3697045
Bisnode d.o.o. / 19.4.2021



Zlata nit 2022
ZMAGOVALEC IZBORA

Timeline



- 2014 – 1st application for SME instrument Phase 2
- 2019 – SME instrument Phase 1
 - Grant for Feasibility Study (50k€)
- 2020 – EIC Accelerator Pilot, TRL 6-8
 - Grant for **DATANA** (1,8 M€), May 2021 start
- 2022 – EIC Pathfinder Challenge Call „DNA Data storage“
 - Deadline: 19 Oct 2022, Results: 21 Mar 2023
 - Consortium: 3x SME, 3x Universities
 - GA preparations for **PEARL-DNA** (Grant of 5+ M€)



EIC Accelerator Pilot - DATANA

- > **Proposal preparation**
- > After successful completion of SME Instrument Phase 1
- > October 2020: Last call for EIC Accelerator in H2020 programme
- > November 2020: Invitation to Pitch
- > Two weeks time for **pitch preparation**
 - > Remote – Covid!
- > December 2020: invitation to GAP



EIC Accelerator Pilot – DATANA

> Proposal implementation

> May 2021: start of the project (24 M)

> August 2022: extending the project for 10 months (up to Feb. 2024)





> May 2023: 2nd Project Review ✓

> June 2022: EIC Pathfinder Challenge Call – DNA Data Storage

Building reputation



EIC Pathfinder - Partners Search

BIOSISTEMIKA, RAZISKAVE IN RAZVOJ DOO	
GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER	
IMAGENE	
TECHNISCHE HOCHSCHULE WILDAU	
HAUTE ECOLE SPECIALISEE DE SUISSE OCCIDENTALE	
ACCELOPMENT SCHWEIZ AG	



Preparing the EIC Proposal

- > **Split the role of admin (project office) and content supervisor**
 - > Almost mandatory for the coordinator even if working with a consultant
 - > Make sure there is **one** go-to person for each aspect in your team
- > **Consortium**
 - > Great support from EEN (SPIRIT), two University partners
 - > Jump on it **immediately**: search can and does take (too much) time
 - > Rejections or conflict of interests do happen
- > **Writing a proposal required more time & effort that we anticipated**
 - > Partners may not all be responsive and/or have clear ideas
 - > Target to have full application draft **at least two weeks before deadline**
 - > Internal reviewer

2.2 Innovation potential

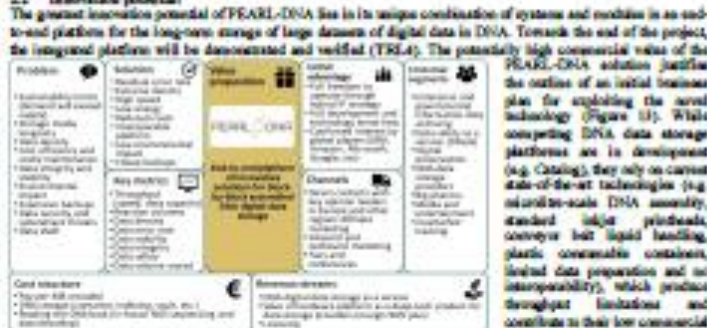


Figure 13: Perceived business plan of PEARI-DNA.

is all key aspects that govern the throughput capacity of the solution: in-air compressible-free liquid handling, sustainable DNA assembly, custom-built platform and a sophisticated data preparation system (error correction, compression and storage format). When combined, these technological breakthroughs will greatly increase the throughput of the solution by orders of magnitude compared to its competitors. Furthermore, the platform will be interoperable to maximize synergies with external tools and solutions.

Exploitation measures: Six exploitation measures are planned in the PEARI-DNA project to share and protect results and exploit them commercially, as well as non-commercially (Figure 14):

Patents	Business Models	Roadmap for Exploitation
Following the IP management plan on the 12th of February, the protection of IP will proceed according to the timeline and to the list of commercial potential of the shared knowledge by the partner lead business plan and this to include a patent strategy management including the following: PEARI-DNA Patent Strategy	Developing business models for intellectual property, business and platform patents will be an important non-revenue future development. PEARI-DNA Business Model Canvas , PEARI-DNA Business Model Canvas , PEARI-DNA Business Model Canvas	Following the IP management plan on the 12th of February, the protection of IP will proceed according to the timeline and to the list of commercial potential of the shared knowledge by the partner lead business plan and this to include a patent strategy management including the following: PEARI-DNA Patent Strategy
IC Model/Platform	Collaborative projects	Open-source software
During the project an advisory strategy on the IC Model/Platform will be developed to include information on all non-commercially available intellectual property (including patents, trademarks, copyrights, know-how) in order to protect the intellectual property of the partners and to avoid conflicts of interest.	During the project a quality will monitor and identify suitable funding opportunities for various projects, and help partner on IP creation and protection applications, as well as the IC Model/Platform development. PEARI-DNA Collaborative Projects	During the project a quality will monitor and identify suitable funding opportunities for various projects, and help partner on IP creation and protection applications, as well as the IC Model/Platform development. PEARI-DNA Collaborative Projects

Figure 14: PEARI-DNA exploitation measures

PEARI-DNA directly involves key actors who will be leading and participating in the above-mentioned exploitation measures, with the potential to lead the translation of new research into successful innovations. These include 1) early career researchers that will be recruited to advance their careers and subsequently build upon the project results in follow-up ventures; 2) experienced researchers, such as Prof. Deussen (TNT), Dr. Vinga (TNT), Prof. Bossert (IMG), Prof. Fontana (THW), Dr. Gökler (THW) and Dr. Raissa (FRS-BC), who are optimally positioned to lead the next breakthrough innovations in their fields; 3) innovative SMEs (Stella, IMG, scitech) that will aid translating research outputs into commercial and non-commercial opportunities. IP approach: PEARI-DNA will follow a hybrid approach, allowing its partners to follow an open science philosophy supporting collaboration with other DNA storage projects under the Federated Challenges portfolio while maintaining an active IP programme. To facilitate the implementation of such a hybrid IP strategy, the consortium has agreed on the following steps to handle existing and new IP: 1) **Background Knowledge:** A consortium agreement (CA) will formalise the access rights to all background knowledge that partners bring into the project and other agreements among the consortium members regarding IP aspects, which are to be signed prior to the project start. For certain parts of the background knowledge, free access will be granted to all partners for the purposes of PEARI-DNA, while some might be explicitly excluded. 2) **Foreground Knowledge:** The consortium will continuously contribute to generating new

knowledge that will be instrumental for shaping the expected project results, several of which may qualify for IP protection (Figure 15). Regarding this newly generated knowledge, the consortium has agreed on the following principles that will govern the IP terms in PEARI-DNA and will form the basis of the IP terms in the CA:

- **Jointly generated IP:** All intellectual property generated jointly during the project ("Jointly Generated IP") will be jointly owned by the generating parties and will be managed in accordance with the terms of a joint ownership and management agreement (JOA). The terms and conditions will be fair and reasonable.
- **Solely generated IP:** IP generated solely by an individual party will be owned solely by the generating party, with a first option for the project partners and a non-exclusive option to license foreground IP for commercialisation.

IP Management	Background Knowledge	Jointly Generated Knowledge	Intergenerational Knowledge	Solely Generated Knowledge
1.1 Background Knowledge	Shared access	1.1 Background Knowledge	1.1 Background Knowledge	1.1 Background Knowledge
1.2 Intergenerational Knowledge	1.2 Intergenerational Knowledge	1.2 Intergenerational Knowledge	1.2 Intergenerational Knowledge	1.2 Intergenerational Knowledge
1.3 Solely Generated Knowledge	1.3 Solely Generated Knowledge	1.3 Solely Generated Knowledge	1.3 Solely Generated Knowledge	1.3 Solely Generated Knowledge

Figure 15: Key Exploitation Goals

management support infrastructure, towards a sustainable pathway for exploitation. He will coordinate a set of exploitation measures, ranging from the development of the Exploitation Roadmap (DS.6) to the identification of patent filing opportunities (DS.4) and the creation of business models.

2.3 Communication and dissemination

The following key measures for communication and dissemination are planned to promote the project, increase its impact during and beyond its duration, facilitate the exploitation of the project results and collaborate within the ERC-Federated Challenges portfolio. It will help build trust among the project's stakeholders, paving the way for PEARI-DNA to tap into market opportunities and contribute to address the global challenge for data storage. An updated and detailed communication and dissemination plan will be submitted in MS at D1.2 (see Section 3, WPM), including strategy, key messages, target audiences and specific measures.

1. **Project website, social media, digital, print and audio-visual material:** scitech will develop a website as the key platform to engage different audiences with up-to-date information on the project and outcomes. A dedicated page to share collaborative results with other projects from the portfolio and to link to their respective websites is foreseen. Videos, digital material (e.g., infographics and flyers) and some texts will be developed and shared with the partners for distribution through their existing social channels and at conferences. A dedicated bi-monthly newsletter to which the portfolio can contribute will be set up and internet articles will also be shared via Stella's [Company Blog](#) (5,000 average monthly readers). Furthermore, their and other partners' significant scientific social media activities for LinkedIn (2.3k) and Twitter (1.5k) will help increase the audience of our project-related channels early on.
2. **Publications, science outlets, conferences and workshops:** A broad variety of methodologies, generated within PEARI-DNA, could potentially be shared publicly through publications after appropriate patent applications are filed. PEARI-DNA will contribute to popular national and international science outlets and magazines (e.g. [Science](#), [Scientific Times](#), [Wired](#), [The Atlantic](#) and [Scientific American](#)), publish open-access peer-reviewed publications in a variety of journals (e.g. [Journal of Cheminformatics](#) and [Molecules](#), [Aid Research](#)) and participate in conferences (e.g. [European Conference on Computational Biology](#) and [International Conference on Digital Preservation](#)). Additionally, we will present our results to the [DNA, Data Storage Alliance](#) working groups, where IMG is an active member, to foster science knowledge transfer and potentially influence their roadmap and standards.

Partners: 1,2,3. Target Groups: Inter-ERC community, Industry, regulatory policy, public impact. Awareness raising, including knowledge sharing activities and follow-up IP, 500 visitors per month, 7,000 downloads/view per content.

3. **Public engagement and educational material:** The public interest in DNA digital data storage and related topics, as well as the collaboration of different research areas, is crucial for innovation in this field. PEARI-DNA will engage with the public and particularly young researchers to foster a strong network of dedicated press and future researchers who are supported by an informed and interested general public. Throughout the project, our consortium will participate in local events to promote the efforts of our project and the portfolio to a young and diverse audience, such as [Globe Day](#) (THW), [Summer School](#), [Open Science Festival](#) (TNT), [Innovation](#) and [Puzzle on your Genome](#) (FRS-BC). THW will expand lectures on next generation sequencing in DNA digital data storage and introduce specified aspects in lab courses. After the developed methodologies are verified at the end of the project and appropriate patent applications filed, we foresee the following potential educational video demonstrations, which could be produced and disseminated publicly: protocol

EIC grant submission process

> **Mind the EIC guidelines and requirements**

- > All details must be addressed
- > Follow the instructions super closely, incl. terminology

> **Consultants**

- > It was a must (for us)
- > Choose wisely – the choice is huge and so is the price & quality spectrum
- > Ask for references – have a detailed discussion with the selected consultant upfront
- > Retainer vs. Success fee – range is enormous

> **Perfection**

- > Grant application must be close to perfection
- > Every detail matters
- > Pitch: practise, practise and practise!

> **Touch of luck**

EIC Pathfinder: Big moment

European Commission <EC-NO-REPLY-GRANT-MANAGEMENT@nomail.ec.europa.eu>

10:28 (7 minutes ago)



to me ▾

Europa / Funding & Tenders Portal notification

Dear Madam/Sir,

Congratulations. Your proposal has reached the stage of Grant Agreement preparation.

To view the evaluation results and the instructions on how to provide additional information and data required for the preparation of your Grant Agreement, log on to the Funding & Tenders Portal > My Proposal(s) (<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/myarea/proposals>) and click on Action > Follow-up.

Regards,
Grant Management Services

DNA digital data storage

- > DNA as a storage medium provides a promising alternative for keeping information at densities that are orders of magnitude higher than classical memories and stability for millennia rather than years.
- > Focus: high throughput, high capacity, super long term data storage (sustainable) with error correction and selective data retrieval
- > Open to work on specialized projects with experts



Thank you

