From the Large Hadron Collider (LHC) to farmers: how society will reap the benefits of the second NGIatlantic.eu Open Call results

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A CloudBank service contributing to the scientific programme of the Large Hadron Collider, a cross-Atlantic network solution via GEANT, a decentralized data ecosystem for the Open Blockchain for Asset Disposition Alliance (OBADA), a peer-to-peer and trusted community to protect population, a platform to provide farmers with transparent and fair information: in the second NGIatlantic.eu open call, 5 EU-US projects have been selected to contribute to the Next Generation Internet.

The main goal of the NGIatlantic.eu Open Calls is to incentivize **EU – US NGI teams to carry out experiments using EU and/or US based experimental platforms** through funding provided via an Open Call process for the EU counterparts of the teams.

NGIatlantic.eu proudly announces the results of the Second Open Call: 5 winning projects comprising 15 EU/US partners and with a total budget of € 634.483 will contribute to the Next Generation Internet thanks to the experimentation across the priority coverage areas of the NGIatlantic.eu 2nd open call:

- **EU – US Experimental Platforms interconnection** - this topic invited established designers and facility providers of experimental infrastructures, testbeds, and platforms enabling experimentation in the NGI areas on both sides of the Atlantic to interconnect with each other, to offer their facilities on a continuous basis to its community of experimenters and application developers in other NGI topics.
- **Privacy and Trust enhancing technologies** – experimentation of NGI results to develop robust and easy-to-use technologies to help users gain improved trust and greater control when sharing their personal data, attributes and information.
- **Decentralised data governance** - experimentation leveraging distributed open hardware and software ecosystems based on blockchains, distributed ledger technology, open data and peer-to-peer technologies with particular focus on ethical, legal and privacy issues, as well the concepts of autonomy, data sovereignty and ownership, values and regulations.

- **Discovery and identification technologies** - experimentation related to new methods of search, discovery, and access of large heterogeneous data sources, services, objects and sensors, devices, multimedia content, etc. providing contextual querying, personalised information retrieval and improved quality of experience.

Each project was evaluated by members of the External Pool of Evaluators, a pool of independent NGI experts selected via an Open Call, to guarantee impartiality and transparency. The entire Open Call workflow was managed via the NGIatlantic.eu Grants Platform (visit this page for more insights on the applications received for the 2nd NGIatlantic.eu Open Call).

Here are the testimonials from our 5 winning projects!

1. CloudBank EU NGI Experiment

CERN, the European Organization for Nuclear Research | University of California San Diego

"We propose to pilot the use of the CloudBank service to provision services from multiple cloud providers and deploy a series of challenging use-cases in the domain of Artificial Intelligence (AI) and Machine Learning (ML) **that are contributing to the scientific programme of the Large Hadron Collider.** The experiment will determine if CloudBank can be successfully used by Europe's research community as part of a global research activity. The experiment will address technical, financial and legal challenges to determine if such an approach can be applied in a European setting".

2. Integrating OpenIreland and COSMOS testbeds for delivering a cross-Atlantic Open Networking Solution

Trinity College University of Dublin | Polytechnic University of Milan | University of Arizona | Rutger University

"A dedicated 10G link across the two institutions will be provided for 2 years,

through GEANT for delivering a cross-Atlantic Open Networking Solution. This will be funded jointly by CONNECT and the NSF COSMIC project, which provides US funding for COSMOS to build an international collaboration of testbeds from around the world. The link will be maintained, after these two years, through maintenance fees charged to other projects wishing to use the testbed (including future NGI-Atlantic applications)."

3. Decentralized data ecosystem for the Open Blockchain for Asset Disposition Alliance

Universitat Politècnica de Catalunya | OPEN BLOCKCHAIN FOR ASSET DISPOSITION ALLIANCE - OBADA | University of Reno

"The experiment will allow to verify and adjust the features expected by the OBADA stakeholders to integrate and interoperate with the eReuse testbed, test, measure and optimize the functional and non-functional properties of the system, validate with pilot users the OBADA services with an API and data model adapted to our testbed, and explore replicate/expand the eReuse permissioned blockchain with a set of new OBADA blockchain nodes."

4. Responsibility to protect population through peer-to-peer and trusted community (P2PR2P)

Danaïdes | Sciences Po Toulouse - Laboratoire des Sciences Sociales du Politique /LaSSP) | Clemson University - The Holcombe Department of Electrical and Computer Engineering

"Danaides is a French NGO that supports civil society actors in challenging environments. Through partnership with Clemson University and Sciences Po Toulouse, Danaides built an integrated EU-US team to build P2PR2P (Peer-to-Peer Responsibility to Protect) software, a resource distribution tool that secures user-driven requests and offers, matches and dispatches knowledge, relationships, and other aid or content. P2PR2P applies a trust economy model where coordination is decentralized using local trusted hubs to

coordinate small networks that have the same goals. It empowers victims of conflicts to coordinate minimization of harm by coordinating local and remote teams that can donate and/or receive mutual aid as needed."

5. NextDE – Enabling the Next Generation P2P/Data Economy

[Flanders Research Institute for agriculture, fisheries and food (ILVO)](#) | [Insurechain SL](#) | [IdPlizz Inc.](#) | [University of Central Florida](#)

"in order to fully reap the benefits of digital farming, sharing data between different partners in the agro-food chain must be conducted fairly, transparently, and in a trustworthy way. Farmers and businesses still need more 'trust' to fully share their data and therefore create a collective and individual benefit.

It is essential to incorporate and experiment with trust and transparency mechanisms, and also tackle proactively some barriers and fears from farmers and Farm Management Systems concerning the use of data. To tackle these barriers, and provide farmers with a platform where information is easily managed in a transparent and fair way, we propose to experiment with two technologies: IdVerification and Smart Contracts within DjustConnect, and via two experiments: 1. authentication and 2. data transactions. By using AI technology and biometric recognition (IdPlizz platform) in DjustConnect, the platform will have an unforgeable sign-in-method. By implementing and experimenting with this feature, we will ensure that farmers know who is using their information. By implementing Smart Contracts in DjustConnect, we will be able to create an e-auction system and automate data exchanges".

Take the next chance!

The **3rd Open Call** is currently open and will close on **26 February 2021**. NGIatlantic.eu facilitates the creation of the teams thanks to the [Twinning Lab](#), the free space dedicated to researchers that allows the interested applicants to share their ideas and find matching partners by creating their organisation's profile and specifying their research domain area.

About NGIAtlantic.eu
Started on 1 January 2020, over its 30 month lifetime, NGIatlantic.eu aims to promote collaboration between EU and US around the technical challenges posed by the vision of a more human-centric, Next Generation Internet, with a total 2.8 million Euros budget dedicated to funding a set of five 3rd party open calls for EU – US proposals. The funding is available for European organisations with a

US-based counterpart, willing to bring the results of high-quality research & innovation activities onto NGI experimental platforms.

The whole Open Call process was entirely managed via the NGIatlantic.eu Trust Grant platform, from the selection of the **External Pool of Evaluators (EPE)** (continuous open here) to the overall **Open call** application process, evaluation assignments, and monitoring of the selected projects.

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