





# **Expression of interest**

# **Contact details**

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# Short description of the organisation/researcher/research group

ARGEDOR is a leading technology company specializing in delivering cutting-edge data analytics and blockchain solutions to businesses and end-users. Our expertise lies in the realms of Web3, Metaverse, Big Data Analytics, and Artificial Intelligence technologies, allowing us to provide innovative and customized SaaS solutions that fully leverage the power of data analytics and blockchain technology.

Our comprehensive portfolio includes DeFi applications, Payment Solutions, Metaverse applications, GameFi applications, digital wallet solutions, centralized or decentralized exchange platforms, DAOs, and dApps. Designed to enable end-users and businesses to embrace the potential of blockchain, our products create a fairer and more decentralized world.

We are experts in assisting businesses in utilizing the complete potential of blockchain technology to create efficient and secure products. With extensive expertise in blockchain development across various industries, we cater to businesses at all stages. Whether you require smart contract assistance or are starting from scratch to build a new app, ARGEDOR is committed to ensuring your success. Our cutting-edge digital solutions combine technology, innovation, and expertise to serve clients of all sizes, from startups to large-scale enterprises, throughout the entire process from ideation to final execution.

Our vision is to build a decentralized future where individuals and communities have the power to govern their own digital assets and shape their destinies. We firmly believe that decentralized technology, particularly blockchain, has the potential to democratize access to resources, information, and economic opportunities. To realize this vision, we are dedicated to developing the tools and infrastructure that empower people to take control of their digital lives.

At ARGEDOR, our mission is to provide easy-to-use, accessible, and secure decentralized solutions for everyone, from individuals to enterprises. We strive to create a more equitable and decentralized world by enabling anyone, regardless of their technical expertise or financial resources, to participate in the digital economy.

In the realm of Big Data Processing, our expertise lies in handling large-scale and complex datasets. Key features of our big data processing capabilities include:

- Scalable Infrastructure: Our robust architecture allows for efficient data ingestion, storage, and processing, handling the volume, velocity, and variety of data involved in criminal investigations.
- Data Cleansing and Preprocessing: We excel in advanced data cleansing techniques, ensuring high-quality and reliable data by eliminating noise, inconsistencies, and outliers.







- Distributed Computing: Leveraging frameworks like Apache Hadoop or Apache Spark, we
  parallelize data processing tasks across clusters of machines, resulting in reduced processing
  time and optimal resource utilization.
- Stream Processing: Our experience in implementing stream processing systems enables realtime analysis of continuous data streams, allowing for prompt detection and response to critical events and anomalies.

When it comes to AI Solution Development, our team of skilled developers specializes in creating innovative solutions for various domains. Our AI solutions offer the following distinguishing features:

- Deep Learning Models: By leveraging cutting-edge deep learning architectures, such as convolutional neural networks (CNNs) and recurrent neural networks (RNNs), we extract valuable patterns and insights from complex and unstructured data sources like images, videos, and text.
- Anomaly Detection: We develop anomaly detection algorithms that identify unusual behaviors, suspicious patterns, or emerging trends within large datasets, enabling early detection of criminal activities and proactive intervention.
- Predictive Analytics: Our AI models employ advanced techniques to forecast potential crime hotspots, identify high-risk individuals, and predict the likelihood of future criminal events. These predictive capabilities aid law enforcement agencies in resource allocation and strategic planning.
- Explainable AI: We prioritize the interpretability of our AI models, ensuring transparent decisionmaking processes. Our explainable AI solutions provide insights into the reasoning behind predictions or recommendations, facilitating the legal and ethical aspects of the investigative process.

Partnering with ARGEDOR means gaining access to a leading technology company at the forefront of blockchain innovation, data analytics, and AI. Together, let's pave the way towards a decentralized future, where the possibilities are limitless, and control is in the hands of individuals and communities.

# AREAS OF EXPERTISE

At ARGEDOR, we have a diverse range of expertise across various cutting-edge technologies and solutions, including:

- Blockchain Technologies:
  - DeFi Solutions: We specialize in developing decentralized finance (DeFi) solutions that revolutionize traditional financial systems, enabling secure and transparent transactions, lending, and yield farming.
  - GameFi Solutions: Our expertise extends to GameFi solutions, combining blockchain technology with gaming to create immersive experiences, in-game asset ownership, and play-to-earn opportunities.
  - Payment Systems: We design and implement blockchain-based payment systems that offer fast, secure, and cost-effective transactions, reducing reliance on traditional intermediaries.
  - Digital Wallets: Our team develops digital wallet solutions that provide users with secure storage and management of their digital assets, enabling seamless and convenient transactions.
- Al/Deep Learning/Machine Learning: Our experienced team leverages artificial intelligence, deep learning, and machine learning techniques to build intelligent systems that automate processes, enable predictive analytics, and facilitate decision-making.







- Big Data Analytics: We excel in extracting valuable insights from large and complex datasets. Our expertise in big data analytics allows us to identify patterns, trends, and correlations, empowering businesses to make data-driven decisions and gain a competitive edge.
- Business Intelligence: We offer comprehensive business intelligence solutions that help organizations gain meaningful insights into their operations, customers, and market dynamics. Through advanced analytics and data visualization, we enable informed decision-making and drive business growth.
- Data Mining: Our team possesses strong data mining capabilities, utilizing advanced algorithms and techniques to extract valuable knowledge from vast datasets. We uncover hidden patterns, relationships, and trends to drive innovation and strategic decision-making.
- Cloud-Based Platforms: We design and develop scalable and secure cloud-based platforms that enable businesses to leverage the benefits of cloud computing. Our solutions provide flexibility, cost-efficiency, and seamless collaboration.
- Data-Driven SaaS/PaaS Applications: We specialize in developing data-driven Software as a Service (SaaS) and Platform as a Service (PaaS) applications. Our solutions leverage data analytics, AI, and blockchain technologies to deliver efficient, customizable, and secure applications that meet diverse business needs.

At ARGEDOR, we combine our expertise in blockchain technologies, AI, big data analytics, business intelligence, and cloud-based platforms to drive innovation, transform industries, and help businesses thrive in the digital era.

# Specific skills and proposed activities related to the topic

# **HORIZON-CL5-2024-D2-01-02:** Non-Li Sustainable Batteries with European Supply Chains for Stationary Storage (Batt4EU Partnership)

Our keen interest in this Horizon call "HORIZON-CL5-2024-D2-01-02" project stems from our commitment to sustainable practices and our belief in the potential of advanced technology to drive environmental, social, and economic benefits. We recognize the importance of addressing high-risk/high-return technologies to accelerate the transition to a climate-neutral future, aligning with the EU's climate and energy targets.

At Argedor, we're pioneering blockchain technologies to address critical challenges in the energy storage sector. Our focus revolves around the development of Digital Product Passport (DPP) systems and advanced supply chain management platforms, driving innovation that actively contributes to reducing CO2 emissions and monitoring environmental impacts.

Our commitment aligns with the imperative for credible, cost-effective energy storage solutions. By 2030, we envision achieving storage costs below 0.05 €/kWh/cycle, especially for applications requiring up to 8 hours of storage duration. Through blockchain-powered transparency and traceability, we're building a European-based supply chain that reduces reliance on critical raw materials. Instead, we emphasize the use of abundant, non-toxic, inherently safe raw materials, ensuring supply chain resilience even in the face of international trade disruptions and customs tariffs.

To demonstrate the feasibility of our solutions, we aim to operate systems under end-user conditions for at least 3,000 hours. Our projected product cycling life of 5,000 cycles, in conditions typical of selected applications, attests to the reliability and durability of our battery storage technology. Moreover, our







solutions are designed to function safely and efficiently across a wide range of ambient conditions, ensuring adaptability and versatility.

Our commitment to sustainability extends to circular manufacturing practices. We have a well-defined concept for achieving highly sustainable, circular manufacturing for the selected battery type. Sustainability, in our context, encompasses recognized economic, environmental, social, and ethical metrics, ensuring that our solutions align with comprehensive sustainability goals.

Argedor is dedicated to harnessing blockchain technologies to create a greener and more sustainable future. By reducing CO2 emissions and monitoring environmental impacts, we are making a significant contribution to the energy storage landscape, promoting transparency, resilience, and environmental responsibility in this critical sector.

# References

# SAMPLE INTERNATIONAL R&D PROJECTS

HORIZON 2020 - N4C, Nature Based Solutions (NBC) for Re-Naturing Cities: Knowledge diffusion and decision support platform through new collaborative models: This project has received funding from the European Union's Horizon 2020 research and innovation programme. N4C consortium consist of 25 partners from 9 countries (France, Spain, Luxembourg, Hungary, Turkey, Italy, Austria, United Kingdom, Netherlands).

The project aims to create a web-based platform as a means to circulate knowledge on NBS, to serve as a decision-helping tool for NBS projects developers, and to enhance the links between the stakeholders of NBS projects, from citizens to local authorities to NBS solutions providers. Develop an integrated analysis framework, develop/adapt technologies for urban nature data acquisition and management.

**HORIZON 2020- OptEEmAL, Spatial Ontology Language for multimedia Information Modelling:** The OptEEmAl has received funding from the European Union's Horizon 2020 research and innovation programme.The OptEEmAL consortium consists of 13 partners from 8 countries (Spain, France, Italy, Greece, Turkey, Germany, Ireland and Sweden). The main project objective is the development of an Optimised Energy Efficient Design Platform to improve the energy behaviour of a districting addition to development of the project. This project will develop an optimisation module with the aim of automating the decision making process to obtain the optimal design for an energy efficient retrofitting plan at district level.

**ITEA3- Medolution, Medical care evolution:** The project is supported by ITEA (Information Technology for European Advancement). The consortium consists of 19 partners from 5 countries (Canada, Turkey, France, Germany, Netherlands). The project aims to apply long-term monitoring and real-time decision support in smart environments to integrate professional and user-created data. This leads to relevant information to support patients and healthcare professionals in their decision making on diagnosis, treatment and further monitoring; from reactive to preventive.

**ITEA2 – INSIST, Integrated service delivery for citizens' safety and comfort:** The project supported by ITEA (Information Technology for European Advancement). The consortium consists of 6 partners from 2 countries (Finland, Turkey). The INSIST project proposes an integration of these sensor based







systems into a wider perspective by developing a smart connected ecosystem for public spaces, where the sensor data provided by the different INSIST sensor systems can be efficiently used for not only the proprietary infrastructure services but also to offer value added services based on data fusion from multiple sensor systems in the business areas of smart lighting, surveillance, traffic management, advertising and atmosphere, business intelligence and building management.

# ITEA3 - I-DELTA, Interoperable Distributed Ledger Technologies

Distributed Ledger Technologies (DLT) has become one of the most promising and impactful innovations in decades. It has gained broad notoriety as the technology that underpins cryptocurrencies. That said, cryptocurrencies are just the tip of the iceberg; DLT has significant utility as a revolutionary fabric for any digital application; from internet to enterprise use.

I-DELTA project aims to support new concepts of adaptation of DLT in smart communities, cities, enterprises. While adapting DLT into daily and business life. We also focus on IoT integration and interoperability between DLTs.

# SOME OF OUR PRODUCTS

**GAMEWIZZ.IO** - "Create your Web3 games with our all-in-one, no-code platform that supports NFTs, tokenomics, wallets, and more!"

Gamewizz.io is a fully equipped wizard for game developers. With Gamewizz.io, an integrated platform is offered for Metaverse and Web3 Game developers. This platform provides you with a database, server -side APIs, and all of the Web3 features as NoCode as you develop your games. It also provides detailed game analytics for monitoring the performance and interaction of your games. Thanks to the features provided by Gamewizz, game developers can focus on game designs, development, and improving their games. In other words, game developers can use all their energy on the client side to develop better quality and up -to -date games. The platform also provides all the Blockchain services required for games, making it possible to develop a complete Web3 game.

**DAOXY.IO** - "Empower DAOs with Daoxy.io - the Web3 platform for easy creation with customizable templates, automated governance, analytics, community support, and DeFi/NFT integration."

Daoxy.io is an impressive and useful solution for Decentralized Autonomous Organizations (DAO). This platform facilitates the process of establishing and managing DAO and provides a flexible, adaptable structure where all its members can participate equally and democratically. With Daoxy.io, users gain the advantages of making all critical decisions in a decentralized structure. The platform facilitates critical operations such as the creation of DAO assets, the identification of wallets, and the initiation of voting, providing players with a secure, efficient, and easy DAO management tool.

**SUPPLYWIZZ.IO -** "Blockchain-Powered Excellence in Supply Chain - Experience Efficiency, Security, and Transparency with Supplywizz.io"

Supplywizz.io is a SaaS wizard based on Blockchain technology, designed to ensure the efficiency, reliability and security of all supply chain and production processes. It provides the necessary







infrastructure for organizations to monitor the movement of goods, automate key processes, and improve security and authentication end-to-end in Supply Chain processes. Blockchain technologies are based on Smart Contracts as infrastructure. Smart contracts are self-executing contracts in which the terms of the agreement between the buyer and the seller are written directly into the lines of code. Supplywizz.io technology similarly uses smart contracts to automate the tracking and movement of goods in a supply chain from the point of origin to the final destination. Supplywizz.io also enables the creation of a Digital Product Passport (DPP) for products. DPP is a concept that refers to the use of Blockchain technology to create a digital record of a product's history and features. DPP allows manufacturers, retailers, and consumers to access a product's origin, manufacturing process and other relevant information.

**PLAYERWIZZ.IO** - "Level up your gaming with Playerwizz.io - the ultimate crypto wallet for gamers. Easily manage your assets, securely store rewards, and buy and sell NFTs with seamless integration. Join now and unleash the power of crypto in gaming!"

Playerwizz.io revolutionizes the gaming experience by offering a comprehensive suite of features that enhance convenience, security, and enjoyment for gamers. With effortless crypto asset transfer between games, secure storage, and easy in-game payments, players can seamlessly navigate the gaming world while managing their digital assets. The platform also provides opportunities to store and access rewards, customize personal profiles, explore detailed game information, and connect with a vibrant user community. With its intuitive NFT management capabilities, players can effortlessly manage, buy, and sell NFTs, further enhancing their gaming experience. Playerwizz.io truly revolutionizes the gaming landscape, offering a holistic solution that empowers gamers to maximize their enjoyment, securely manage their assets, and connect with like-minded individuals in the gaming community.

# PAYWIZZ.IO - "Unlock the Power of Cryptocurrencies with Paywizz.io - Safe, Fast, and Easy Payments"

Paywizz.io is the most advanced and innovative payment gateway wizard for cryptocurrencies. Paywizz.io Crypto Gateway solution is designed to provide a fast, secure and easy-to-use experience. Paywizz.io supports all cryptocurrencies and is compatible with multiple payment methods. With Paywizz.io, users can easily use cryptocurrencies and quickly perform many transactions around the world. In addition, Paywizz.io protects cryptocurrencies that are stored securely and offers end-to-end encryptions for all transactions. Users can also convert cryptocurrencies to fiat currencies through this technology solution and switch between their wallets thanks to multi-wallet support. With Paywizz.io, you can fully exploit the potential of cryptocurrencies. You will also have safe, fast and easy-to-use payment experience for all the transactions you will make.

Related articles

Project acronym / starting date / Programme (H2020, national etc.)	Main objectives	Main activities	Role in the project
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H2020 OptEEmAL will deliver a The main project 680676-OPTEEMALobjective is systemic platform to Optimised Energy development of design energy efficient Efficient Design **Optimised Energy Efficient** retrofitting projects at Platform for Design Platform to improve Refurbishment at building with a high the energy behaviour of a District Level potential of districting addition The OptEEmAl has implementation across development of the project. funding received Europe in order to from the European This project will develop an Union's Horizon accelerate the optimisation module with 2020 research and deployment of the aim of automating the innovation decision making process to integrated solutions fully programme.The obtain the optimal design OptEEmAL quantified in terms of for an energy efficient consortium performance objectives 13 retrofitting plan at district consists of with compliance with partners from 8 level. regulation and user-(Spain, countries Italy. France. oriented expectations Turkey, Greece. and constraints to Germany, Ireland significantly improve the and Sweden). daily life of the European Communities, increase sustainability the of buildings and improve the energy and resources efficiency while reducing the GHG emissions in urban areas. It is realistic to estimate a market penetration of at least 5% in the sector of designing retrofitting projects. OptEEmAL will enhance the utilisation of innovative and existing solutions in a holistic integration and technology transfer such smart and ลร ecoefficient solutions.

OptEEmAL will make use of the latest innovations introduced bv the partners, as well as the recent most developments in the running projects funded by the EeB PPP Initiative, where most of the involved. partners are Innovation will he achieved providing by stakeholders with an advanced platform for the design process that will ensure the presence of innovative solutions through ECM the catalogue. The OptEEmAL Platform will automatically provide optimized and advanced design solutions for refurbishment of buildings and districts through a 4step process integrating knowledge collected in existing successful interventions. The definition of scenarios and their optimization will be based on an advanced Energy Conservation Measures catalogue, information containing about their design, construction, operation and maintenance. This platform will be connected to existing and validated catalogues and data sets. These feasible solutions will be based in key indicators calculated innovative through integration of tools and methods, ensuring their interoperability, to provide consistent and reliable data.

# HORIZON EUROPE





Grant Agreement	N4C consortium consist	N4C will take advantage of	N4C will take advantage of
number: 730468 —	of: • 2 leading industrial	the experience of its	the experience of its
Nature4Cities —	organizations in	consertum partners in this	consertum partners in this
H2020-SCC-2016-	infrastructure	field and of the resources	field and of the resources
2017/H2020-SCC-	development, civil eng.	offered by the most	offered by the most
NBS-1stage-2016	and energy efficiency	relevantorganization	relevantorganization
Amendment	(ACC, DAPP); • 8 SMEs	supported by the Europen	supported by the Europen
Reference No AMD-	with expertise in	Commission and the	Commission and the
730468-	innovation &	building industry to provide	building industry to
46 <b>HORIZON 2020 -</b>	exploitation	on advanced constructed	provide on advanced
N4C, Nature	management (R2M),	and well presented	constructed and well
	environmental	catalogue of nature based	presented catalogue of
	assessment (EKO),	solutions for the city. The	nature based solutions for
(NBC) for Re-	citizen participation and	project work plan as well as	the city. The project work
Naturing Cities:	stakeholder engagement	communication ,	plan as well as
Knowledge	(IIL, DW), urban	dissemination and	communication ,
diffusion and	modelling, satellite	explotation activities are	dissemination and
decision support	imaging and IT solution	structed in a delibrate	explotation activities are
platform through	(ARG, TRS, COL), green	manner to align the project	structed in a delibrate
new collaborative	infrastructure (G4C); • 5	within a strategic research	manner to align the
models: This	leading Research and	and innovation context and	project within a strategic
project has	Technology	to make the project results	research and innovation
received funding	Organizations bringing	scalable, replicable and high	context and to make the
from the European	expertise in urban	impact. Some of industry to	project results scalable
Union's Horizon	planning and governance	use as a by-products in	,replicable and high
2020 research and	(NBK, TEC), urban		impact. Some of industry
innovation	monitoring and image	development of low	to use as a by-products in
programme. N4C	acquisition (EUT),	environmental impact	different processes,
consortium consist	decision support and	techniques ,	development of low
of 25 partners from	financial modelling (LIST,	ecological, agriculture and	environmental impact
9 countries	CAR); • 4 universities	optimization of processes	techniques ,
(France, Spain,	that embrace	within the food industry .	ecological, agriculture and
Luxembourg,	engineering (ENSA),		optimization of processes
Hungary, Turkey,	vegetation and soils		within the food industry .
Italy, Austria,	reconstruction (AO,		
United Kingdom,	SZTE) and social research		
Netherlands).	(METU) with a major		
	focus on market uptake		
	of their research results;		
	1 stakeholder		
	association and 1		
	clusters of stakeholders		
	(P&C, MUTK) bringing		
	the view and expertise of		
	the full range of		
	stakeholders from		
	municipalities to urban		
	planning and landscape		
	firms. • 4 cities (CKY,		
	SZEG, CMM, ADH)		
	SZEG, CMM, ADH)		







providing pilot sites	
facing real problems to	
be solved through N4C &	
NBS; The partnership of	
the industrial sector,	
SMEs/technology	
companies, RTOs, cities	
as end users and	
stakeholder	
associations/clusters will	
ensure that the N4C	
project combines	
business and end-user	
perspectives enabling	
the cutting edge of	
innovation in the area to	
be combined with the	
realities of the business	
and user's context. The	
implementation in pilot	
cities in	
southern/eastern	
Europe and Turkey and	
the involvement of	
various partners in key	
associations and	
platforms will ensure a	
wide replication	
potential of N4C	
outcomes. Project	
coordinator NBK, has a	
wide experience in	
successfully managing	
EU projects currently	
coordinating four	
Horizon 2020 projects	
(similar size consortia to	
N4C): E2VENT &	
BUILT2SPEC (2014-EeB),	
HIT2GAP (2015-EeB),	
INNOQUA (2015-Water).	
Consortium partners	
bring multiple skill sets	
to the project which	
enables the N4C	
consortium to group	
experts from the diverse	
disciplines which are	
required to meet the	
-	
project's objectives	







which include: i) Citizen's	
engagement, behaviour	
monitoring &	
stakeholder	
participation (DW, IIL,	
MUTK, P&C, ENSA); ii)	
Social acceptance &	
environmental	
psychology (METU,	
ENSA); iii) Data	
acquisition & processing	
(COL, EUT, TRS); iv) ICT /	
Technology providers	
(CAR, IIL, EKO, ARG, TRS,	
COL, DAPP); v) Life-cycle,	
sustainability & risk	
assessment (DAPP, EKO,	
LIST); vi) Urban planning,	
landscaping, modelling &	
thermal comfort (NBK,	
TEC, ENSA, P&C); vii)	
Green & normal	
infrastructure (DAPP,	
ACC, G4C); viii) Business,	
financial & governance	
models of NBS &	
environmental justice	
(DW, COL, TEC, LIST, ACC,	
METU); ix) Vegetation,	
soils, water, climate &	
environmental expertise	
(ENSA, AO, SZTE); x)	
Technology transfer &	
exploitation (R2M); xi)	
Communication &	
dissemination (P&C,	
R2M, MUTK, G4C, NBK	
other partner through	
their PR); xii) Urban	
planning departments of	
municipalities (ADH,	
CMM, CKY, SZEG). Field	
testing N4C indicators,	
tools & platform in	
operational	
environments together	
with partner cities' urban	
planning departments	
will be directly backed up	
by project partnerships	







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from local technical		
corresponding "pairs":		
Cankaya: EKO (N4C field-		
test manager); Milano		
Metropolitan Area: R2M;		
Szeged: MUTK; Alcala de		
Henares: TEC. The		
expertise demanded by		
the N4C requires a		
strong consortium with		
diverse skill sets required		
to meet its objectives		
impossible to find in a		
single country including		
(section 1.4):		
technological expertise		
and knowledge of		
various NBS needs and		
markets, country-related		
policies and regulations		
along with social science		
expertise to address		
citizen's engagement		
0		
perspective enabling		
broad exploitation of		
N4C results. Middle East		
Technical University ;		
Determination of the		
factors/barriers for		
societal acceptance of		
NBS and consumer		
citizen's behaviour		
regarding NBS		
consumption ?		
Innovative governance,		
business and financing		
models for NBS projects		
? Elicitation of		
stakeholders		
requirements Personnel		
. University of Szeged;		
definition of a typology		
of NBS and building of a		
NBS database •		
Participation in WP2 :		
definition of urban		
performance indicators,		
urban climate and bio-		
 climate modeling,		







	contribution to expert	
	modeling toolbox and	
	simplified performance	
	assessment tool	
	Personnel	
	The project aims to	
	create a web-based	
	platform as a means to	
	circulate knowledge on	
	NBS, to serve as a	
	decision-helping tool for	
	NBS projects	
	developers, and to	
	enhance the links	
	between the	
	stakeholders of NBS	
	projects, from citizens to	
	local authorities to NBS	
	solutions providers.	
	Develop an integrated	
	analysis framework,	
	develop/adapt	
	technologies for urban	
	nature data acquisition	
	and management.	
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