



BLOCK START

D1.8: Beneficiaries dataset – 3rd call

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3	F6S Network Limited	F6S	UK

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1. Introduction

This report compiles the Open Dataset containing the list of beneficiaries, project description and funds of BlockStart's open call #3 (Ideation Kick-off, Prototype and Pilot stages), which took place from July 2021 until February 2022.

All profiles of the 23 DLT Developers who participated in Ideation Kick-off (10 of them also participated in Prototype stage, and 6 of them took part in Pilot stage) are included on this section of BlockStart's website: https://www.blockstart.eu/our-startups/?sfm_open_call=Open%20Call%203

All profiles of the 24 SME Adopters who participated in BlockStart open call #2 (10 in the Ideation Kick-off, and 21 took part in Pilot stage - with 7 participating in both the Ideation Kick-off and the Pilot stage: Advanced Microturbines, Applied Research Solutions, Atfield Technologies, Binaré, D-Visor, Harddiskmuseum, Horizer) are included on this section of BlockStart's website: https://www.blockstart.eu/our-adopters/?sfm_open_call=Open%20Call%203

2. DLT Developers

2.1 AgeVolt

2.1.1 Company

Our vision is to accelerate vehicle transition by making charging accessible and convenient whilst achieving optimal energy distribution. Our mission is to create a comprehensive EV charging digital ecosystem for open collaboration and contribute towards climate action.

2.1.2 Prototype solution

The specific objective of the prototype is to bring a new blockchain solution for creating a “White Label Loyalty Tokens” for the owners of EV Charging Points (EVCP). This will allow EVCP owners in AgeVolt charging ecosystem to create and generate a branded loyalty token and assign it to a specific customer or employee ID as a key to specific conditions when charging the EV.

2.1.3 Technical development during Prototype stage

During the development of AgeVolt Loyalty Token, the following technical developments have taken place:

The first most important milestone was to run our Blockchain network and to be able to deploy smart contracts to our freshly setup network. Prototype is based on Hyperledger Besu blockchain network. Currently, it is a private permissioned network with Proof of Authority consensus mechanism; with 4 validators in our network with open possibility or option for joining our future partners as additional validators in our network to ensure the network decentralization. The “White Label Loyalty Tokens” implementation is based on Ethereum community standards (modified ERC-20 standard).

Key features and functionalities:

Dashboard Analytics – The Customer (AgeVolt customer from hospitality business) is able to see basic token transaction analytics

Tokens – The Customer is able to setup a token specific for their business defining token name, ticker, description, logo and most importantly the price coefficient

EV Fleet management – The Customer is able to assign the number of tokens to a specific employee using employees email address

Code Printing – The Customer is able to generate PDF version of QR code, containing the defined amount of loyalty tokens for their customers

Direct Token Minting – The Customer is able to mint tokens directly to their customers using customer email.

API – Customer is able to connect their loyalty system or receipt printer with AgeVolt platform and directly with their on-going marketing campaigns along with other functionalities.

Prototype functionalities and improvements have been implemented iteratively following every interview with potential SME adopter. Since our focus is to build the great EV charging solution and digital products, our duty was to listen to the customers and mix it with inspiration from existing loyalty marketing solutions and bring it into EV charging ecosystem. We conducted interviews with the 13 potential SME adopters, which resulted in enhancements functionality for example functionality to define the conversion rate between tokens and kWh of energy. In the original version, we wanted to implement 2 types of tokens – tokens for free charging and tokens for discounted charging. SME adopter feedback resulted in creating only one type of token with implemented coefficient that is defining the price rate between kWh of energy and average expenses.

2.1.4 Business development during Prototype stage

During the development of AgeVolt Loyalty Token, the following business developments have taken place:

We ran a digital marketing campaign on social networks, including BlockStart to find the appropriate SME adopters. We were looking for the SMEs from Slovakia and Czechia for the logistics reasons of EV charger installation. The campaign was run by team of 6 members from AgeVolt digital marketing, sales and BlockStart team in September & October 2021. Following the campaign we had interest from 13 interested and eligible companies from Slovakia.

Sales and BlockStart team established the process of contacting and interviewing each company. Process ended with a shortlist drawn of 4 eligible SME adopters who have since applied for the Blockstart programme.

The remaining 9 eligible companies, whilst were not interested in Blockstart programme, have however expressed interest in AgeVolt's EV charging solution and our sales team is in the process of completing sales orders.

We also had interest from 3 non-eligible companies from retail and post office for implementation of this solution for Q1-Q2 2022.

Hirings

In time of starting the prototype stage we took the opportunity to hire additional team member, capable of being initiated into blockchain technology – Jakub – junior blockchain developer. Prototype stage been a good opportunity not only for us but also for our new junior developer to try hands-on blockchain technology and see it in action and all advantages for the future.

In next 6 months we are planning to expand our team – currently our team setup is – two backend developers, one frontend developer and blockchain development lead together with blockchain junior developer. We are strong in backend development but our future hirings will be focused on frontend development and infrastructure administrators.

2.1.5 Pilot stage implementation

In BlockStart, AgeVolt implemented its "AgeVolt Loyalty Management Token" product in 3 SME adopters:

Pilot no. 1 with Maravar:

Hospitality business – especially case of Penzion (guest-house) Mara – is ideal case for implementation of loyalty token solution. Our client has access to the loyalty portal, where he can manage his own loyalty tokens, assign tokens directly to his customers or create his own fleet of EV drivers with assigned balance of tokens. After minting, these tokens are assigned to user wallets in portal.agevolt.com web application, where users/customers are able to use these tokens in exchange for the charging of their EV's. Loyalty tokens play the role of literally being the loyalty points that customers can exchange for charging of their E-vehicles and as well as the motivation to come back and visit the hotel again.

The main goal of this pilot solution was not only development and real-life test of loyalty portal and loyalty token solution, but the implementation of loyalty token as a payment solution on AgeVolt Portal – the web portal for EV charging and successful process from minting tokens directly to user wallet to using it as a payment method, when charging the electric vehicle. The main takeover was the satisfaction of SME adopter and fruitful discussion with ideas for improvement and cooperation into the future.

Pilot no. 2 with Letmellor - Spillenberg House:

Spillenberg House is an interesting use case for a loyalty token solution. This client is renovating one of the oldest houses in central EU and this was a great opportunity to create synergy between the history and present technologies – the historical building and EV charging solution of the future. This house will be serving as a multifunctional building hosting cafes, restaurants, and offices, therefore this is the place where rentiers can charge their EV's and use loyalty tokens of Spillenberg House in exchange for a charging on daily basis.

The main goal of this pilot solution was not only development and real-life test of loyalty portal and loyalty token solution but the implementation of loyalty token as a payment solution on AgeVolt Portal – the web portal for EV charging and successful process from minting tokens directly to user wallet to using it as a payment method when charging the electric vehicle. The main takeover was the satisfaction of SME adopter and fruitful discussion with ideas for improvement and cooperation into the future.

Pilot no. 3 with Villa Severka:

Hospitality business – exactly the same case as with Penzion Mara – this is another ideal case for implementation of loyalty token solution. Our client has access to the loyalty portal where he can manage his own loyalty token, assign tokens directly to his customers or create his own fleet of EV drivers with assigned balance of tokens. After minting, this tokens are assigned to user wallets in portal.agevolt.com web application when users/customers are able to use this tokens in exchange for a charging of their EV's. Loyalty tokens plays the role of literally being the loyalty points that customers can exchange for charging of their vehicles and as well as the motivation to come back and visit the hotel again.

The main goal of this pilot solution was not only development and real-life test of loyalty portal and loyalty token solution but the implementation of loyalty token as a payment solution on AgeVolt Portal

– the web portal for EV charging and successful process from minting tokens directly to user wallet to using it as a payment method when charging the electric vehicle. The main takeover was the satisfaction of SME adopter and fruitful discussion with ideas for improvement and cooperation into the future.

2.1.6 Testimonial

“Our experience of the Blockstart programme so far has been amazing. It provided AgeVolt’s team a unique opportunity to take a concept from an idea to the prototype stage. This enabled us to validate our hypotheses in the market and now we are ready to commence the Pilot project with the interceded SME adopters. Furthermore, we will launching the white label loyalty token in Q1 2022. The mentoring and guidance provided has been extremely beneficial to shape prototype development.”

PARAG GOGATE, Chief Revenue & Operations Officer, AgeVolt

2.1.7 Funding

Total funding received under BlockStart: €20,000 (€1,000 for Ideation Kick-off, €15,000 for Prototype stage and €4,000 for Pilot stage)

2.1.8 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/agevolt/>

2.2 Apio

Apio define itself as Venture Builder building solutions and innovative products from the know-how acquired in IoT, Blockchain and A.I. Among its customers, the largest Italian and European companies such as Acea, Samp, VarGroup, Enea, A2A and Indra. Today, Apio teams is composed by 12 employees.

Apio will test and validate the following blockchain-based solution in the scope of BlockStart:

Trusty

trusty.id

Trusty is a Direct to Consumer Channel based on Trust and transparency that uses traceability information timestamped on blockchain captured from the agri-food supply-chain. Trusty is composed of a Dashboard, RestAPI and a Customer Engagement page, it permits food producers to tell the quality of products by sharing all the media, automating data entry in the traceability process, building

direct customer relationships and acquiring analytics on customers behaviour. All the data inserted are notarized on public/permissioned blockchains.

APIs are based on the GS1 traceability standard and can be used to automate the traceability process. The APIs can be integrated with ERP, CRM, MES or Internet of Things Platforms. Customer Engagement page can be reached through a QR-CODE printed on the product (We have a partnership with Bizerba that enables QR-Code printing during the production process). This page is automatically generated from the information inserted by the producers through API or through the Dashboard. In this way the Customer can access all the information about a product and a single lot.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/apio/>

2.3 B2B Pay

Oftex is a consulting internationalization firm, which helps SME's to sell their products abroad, it has 20 years of experience and it has launched a spin-off B2B Pay, S.A as a solution of a payment problem between companies.

B2B Pay will test and validate the following blockchain-based solution in the scope of BlockStart:

B2B Pay

b2bpay.eu

This new payment platform is oriented to companies that trade goods within the EU and with third countries. It pretends to substitute the old (200 years), slow, bureaucratic and expensive payment method of bank documentary credit (letters of credit). It will close a buy-sell agreement instantly instead of months and connects buyers and sellers directly and without the need of intermediaries like banks but offering the same trustworthiness and safety.

The platform uses blockchain Smart Contracts for encrypting the Buy-Sell Agreements with all the conditions in order to gain confidence and transparency in the process. For the payment we use an escrow account so it is fair for the buyer and the seller. This is an open platform that decentralizes payments between companies.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/b2bpay/>

2.4 Barterkind

Barterkind is an online community & alternative economy based on barter & self-sufficiency. We're connecting like-minded people & allowing them to exchange their skills, earning tradeable tokens for their time. Our mission in this uncertain economic climate, is to move away from transactional money norms & make services more accessible to all. Barterkind puts in place a structure to protect individuals & businesses, with the ethos that being cash-poor shouldn't be a problem as long as you're skill-rich.

Barterkind will test and validate the following blockchain-based solution in the scope of BlockStart:

BARTERKIND

Barterkind is an online exchange, based on community, barter & self-sufficiency. We aim to move away from transactional money norms & make services more accessible to all. Following the financial doubt brought since Covid, with this project we want to put in place a structure to protect both individuals & businesses: an alternative, & circular economy.

Barterkind combines the old & the new, barter & blockchain technology. We're digitising & tokenising the oldest form of commerce, with modern concepts like liquidity pools & potential to earn yielding. Our algorithms will connect like-minded people & let them offer their services all over the world, in exchange for other services, or income – in the form of tokens.

We initially intended on a B2C model, serving individuals who needed a novel way of accessing services. Think of those unemployed, or in countries where not everyone's entitled to work, or to own a bank account, Barterkind lets them utilise their skills, and earn rewards. This'll provide opportunity to education/upskilling, so there's a social return on investment as well as financial.

On market research we realised there's a need for barter amongst businesses too. With small businesses decimated every day & many on budgets, owners need an economic way of outsourcing tasks. In bartering they can save both money & time, with this system potentially benefitting any company in any sector – as long as they provide a service.

With Barterkind, we aim to create a convenient seg-way for the average person into the cryptocurrency world, allowing as many people as possible to benefit from decentralised finance. We want to provide people with a new way to exchange value quickly, potentially revolutionising the service industry.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/barterkind/>

2.5 BITBLOCKS

BITBLOCKS S.r.l. is an innovative startup based in the incubator / accelerator of the Manufacturing Project of Trentino Sviluppo S.p.A. (Rovereto, Trento – Italy).

BITBLOCKS Srl, offers B2B vertical solutions for Agrifood, ESG, Fintech, Supporter and Employee Engagement sectors.

We believe that blockchain technology is a tool at the service of the community and sustainable ecosystems that BITBLOCKS helps to build.

Bitblocks will test and validate the following blockchain-based solution in the scope of BlockStart:

SUPPORTER IS MORE

We want to solve the problem of low capacity of supporter engagement to generate and expand new revenue generation models for clubs and new benefits for local community and no-profit associations.

Our “SUPPORTER IS MORE” platform (SIMP) is a ecosystem based on Blockchain technology, at the service of all primary stakeholders: clubs, supporters, workers, sponsors, athletes and local communities.

Our solution, first in Europe, is aimed at these five sports: rugby, volleyball, handball, basketball, ice hockey.

Our platform will create this innovative virtuous path: 1) clubs will subscribe to SIMP; 2) tokens will be issued in the first instance to supporters, sponsors, athletes, local stakeholders; 3) revenues from the offer of tokens will be automatically redistributed to clubs, local communities and territory.

This virtuous path is developed by means of 4 tools that use blockchain technology: 1) supporter engagement, 2) club governance, 3) tokenized personal seat licenses (TPSL), 4) digital collectibles and memorabilia.

Total funding received under BlockStart: €2,000 (for Ideation Kick-off 2 and Ideation Kick-off 3)

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/bitblocks-2/>

2.6 BlockFrauds

2.6.1 Company

BlockFrauds helps insurers tackle insurance fraud more efficiently and effectively, helping cut \$billions of costs that result in higher premiums which prevent the most vulnerable people getting their

protection. Cutting edge technologies including AI and proprietary algorithms help detect fraud, and private blockchain is used to share the anonymised intelligence seamlessly and compliantly, like a Fraud Bureau, to spot fraudsters and multiple claims whilst the AI learns faster and more widely.

2.6.2 Prototype solution

Insurance fraud is a massive issue: >\$40bn per year in US Property & Casualty alone, passed on as higher premiums meaning billions of the most vulnerable people worldwide cannot afford the protections they provide whilst everyone gets worse customer service due to the fraud checks.

BlockFrauds helps insurers detect fraud more efficiently and effectively, whether in automated systems or direct interactions. It helps form an ecosystem of the insurer's chosen data and tools, for maximum detection opportunities. It applies cutting-edge technologies including AI and proprietary algorithms to further detect fraud. The anonymised intelligence is then shared seamlessly and compliantly on a private blockchain, acting like a Fraud Bureau. Frauds, fraudsters and multiple claims are better detected whilst the AI learns faster and more broadly from the wider intelligence, helping it keep pace with fraudster evolution.

Insurance claims handlers get initial and updated Claim Credibility Scores and Claimant Reputational Scores to help prioritise their investigations. All insurers can benefit, including SMEs who don't have the advantage of large proprietary datasets for cross-checks, whilst end customers get better value and service with the chance of lower premiums and more innovative products.

2.6.3 Technical development during Prototype stage

During the development of BlockFrauds, the following technical developments have taken place:

The Corda sandpit has been built ready for pilot. Corda is the leading enterprise blockchain software, enabling the private permissioned access that ensures only trusted participants can contribute intelligence and train the model.

The solution has been designed to facilitate connectivity, with APIs easily created alongside the potential for related AI. Private nodes are scoped on AWS.

Two initial fraud detection solutions have been developed for the pilot. Digital Speech DNA detects any suspicious changes in speech, or speech characteristic of fraudsters. Frequency and modulation analysis helps voice recognition and any changes, whilst text mining such as looking for a particular phrases or/and words using NLP (Natural Language Processing) to help review characteristics, and sentiment analysis to capture specific view. The results are anonymised algorithms which are unique to each person and each communication, enabling cross-checks. Digital Image DNA converts images to algorithms to check multiple use, even if inverted or filtered or showing the same subject from a different angle.

The Claim Credibility Score algorithm has been created, using 2 deep learning AI and 2 shallow learning ML.

The pilot will involve connecting to Claim Technology's platform to prove the functionality, start seeding the data and training the model. MVP development will then include scaling the Corda protocol, adding out-of-the-box connectivity and AI for additional popular links, training and

enhancing the models, and determining any improved libraries and speech processing tools. Subsequent steps will expand the connectivity, further scale the protocol, and start introducing non-English European language capabilities. Nymiz will provide compliance support and scope future collaboration benefits.

2.6.4 Business development during Prototype stage

During the development of BlockFrauds, the following business developments have taken place:

BlockFrauds has received investment from CV Labs, part of the CV (Crypto Valley) VC family based in Zug, Switzerland, including participation in their incubator batch_03. This provides excellent support across a range of topics including blockchain, other technologies, markets, regulators, and practical advice, and is an excellent complement to its existing investor, Outlier Capital, and the BlockStart programme support.

BlockFrauds has also rebranded to reflect its focus on fraud detection, having previously partnered with a key industry player to take a different solution to MVP ready for multi-party trials in winter 2020/21.

During the prototype phase, extensive review of potential SME partners found many excellent candidates, eventually settling on two that were preferred for the pilot phase requirements. Claim Technology (UK) is a gateway platform providing simplified APIs, no-code design tools and an award-winning virtual agent app to help insurers more easily embed best-in-class insurtech solutions into their offering, both in the customer front end and behind-the-scenes processing. They are ideally placed to partner on the pilot and can provide marketing support and access to a wide range of their existing customers, including SMEs. Nymiz (Spain) are focused on compliance and can provide support in that area as well as exploring some identified collaboration benefits.

As well as the validation via Claim Technology, insurance sector contacts have also given strong support for the solution concept, with a plan to secure involvement in trials and data to seed and train the model at appropriate stages.

The updated go-to-market now assumes building on the pilot with Claim Technology for MVP launch on their platform, before extending the option for independent supply or routes such as other platforms or as a plug-in. The business model remains B2B SaaS. The pilot and initial trials are likely to be free, as the data is seeded, moving to pay-per-use as it becomes established, then more mature models such as monthly / annual licenses, value-sharing and services.

The business plan assumes team expansion as technical and financial milestones are met, including specific technical, fraud and customer-facing roles.

Marketing work will escalate during the pilot phase, following the rebrand. Soadad already spoke at CordaCon2021 on “Understanding the true value of DLT in insurance.” Events are being planned through CV, Outlier and Claim Technology as well as independently, and applications are being made to other accelerators and competitions.

2.6.5 Pilot stage implementation

In BlockStart, BlockFrauds implemented its “BlockFrauds” product in 2 SME adopters:

Pilot no. 1 with Claim Technology:

Install BlockFrauds onto Claim Technology platform and achieve suitable technical performance.

Test images and/or speech and achieve target fraud detection performances.

BlockFrauds is integrated on Claim Technology's platform. Image functionality confirmed and met KPI targets. TRL7 achieved.

Claim Technology platform is now capable of handling voice data. Further integration testing is underway. Speech functions remain good off platform and meeting KPI targets.

Discussions entered with third party for speech trials.

Pilot no. 2 with Nymiz:

Discussion and opinion of BlockFrauds' compliance with GDPR.

Note of any relevant factors differing between UK and Spain.

Discussion of possible Nymiz blockchain use-cases.

Opinion that the BlockFrauds appears compliant with GDPR (consistent with validation from independent UK lawyer), and wider discussion of common challenges.

No significant differences to Spain.

Possible Nymiz use-cases for blockchain discussed.

2.6.6 Testimonial

"BlockFrauds has had an amazing journey with BlockStart. It has been invaluable to plug into such an experienced and truly helpful group of mentors, on everything from technology and regulation to marketing and investment. BlockStart helped us find great growth opportunities with SMEs to complement the big enterprise segment, and the profile helped secure a great new investor. We even rebranded along the way!"

ROANNA DOE, Co-founder & CEO, BlockFrauds

2.6.7 Funding

Total funding received under BlockStart: €20,000 (€1,000 for Ideation Kick-off, €15,000 for Prototype stage and €4,000 for Pilot stage)

2.6.8 Public profile

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/blockfrauds/>

2.7 Blockpulse

2.7.1 Company

Blockpulse is a tokenization based equity management platform. Through a unique legal and technical approach, our mission is to disrupt the way companies manage their operations and their shareholding today, to become the infrastructure of all the unlisted market tomorrow. By managing financials flows linked to the operations, we are able to handle the whole legal and financial aspects of the companies shareholding management in a fully digitalized and automated environment.

2.7.2 Prototype solution

The prototype is the continuation of our current software which aims to propose a full digitized legal infrastructure to handle tokenized shares lifecycle (issuance, management, transfers). The prototype is focus on the transfer part.

2.7.3 Technical development during Prototype stage

During the development of Blockpulse, the following technical developments have taken place:

We needed to comply with actual context of the company to understand the legal rules which applies to transfer of shares within a company. First task was to understand the context, second was to enable any shareholder to propose its shares to sell by defining price and quantity. Third was to invite potential seller to onboard, kyc, accept offer, pay and sign related documentation. Fourth, was to notify issuer to take action on the deal and inform the issuer on the steps to comply with. Fifth, was to automate delivery vs payment of the transfer to delete risk of counterpart. Sixth was to automate reporting of such operation for the company (update of captable, register of shares).

2.7.4 Business development during Prototype stage

During the development of Blockpulse, the following business developments have taken place:

Integrate the pilot to our current product and to communicate on new possibilities to our current leads and clients.

We've launched several open calls on startups to address the use cases we were looking for and receive around 20 applications. The result of this open call was that capital incentive to drive community engagement was the winning use case in terms of demand.

Regarding our available band with for Blockstart, we decided to experiment this pilot with one startup having already a community of thousand engaged people (Flint Media). The pilot will enable to distribute equity as an engagement program within a year and let shareholders to buy/sell equity on the dedicated secondary market to materialize value of their engagement.

2.7.5 Testimonial

“BlockStart’s program helped us to accelerate on a POC with some incentive for potential SME adopters. The BlockStart team was competent to challenge our goals with this POC along the program, I recommend!”

THIBAUT INGELAERE, CEO, Blockpulse

2.7.6 Funding

Total funding received under BlockStart: €16,000 (€1,000 for Ideation Kick-off and €15,000 for Prototype stage)

2.7.7 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/blockpulse/>

2.8 BlockTac

2.8.1 Company

BlockTac is a factory of trust: BlockTac fights fake consumer products and data with our certificates and single-use digital seals registered with Blockchain technology, designed for brand protection and consumer engagement. And with our Blockchain-of-things devices, that communicate directly with IoT sensors, encrypt the data, and store it in a public Blockchain. The information now becomes trusted and traceable, impossible to change, truly linked to its source.

2.8.2 Prototype solution

Our devices are autonomous Single Board Controllers (SBC) that collect information directly from IoT sensors or machines, encrypt the data, and store it in a public Blockchain. The information now becomes trusted and traceable, impossible to change, truly linked to its source. Privacy is fully protected, and potential scammers are immediately identified. We name these edge computers “Blockchain-of-Things” devices. This approach makes it impossible for third parties to amend or impersonate the real producers of the data, therefore protecting the training of AI systems, and reducing energy consumption. Our competitive advantage is unique and based on the high computing power, low size, and cost of the SBCs, with full compatibility and functionalities.

To further increase the security of our IoT devices, we have implemented a decentralized Key Management System (KMS) also based on Blockchain technology. The goal is to store key sensitive data in a decentralized and encrypted manner outside the device.

Our software may be used by third-party IoT platforms or SBC developers and is easily deployed through the use of Docker and Kubernetes.

This solution will protect IoT platforms and AI systems against data poisoning from cyberattacks. It may be applied in many industries: Automotive, Energy, Healthcare, Smart manufacturing, Smart Retail, Smart Buildings, Smart Homes, and Smart Cities.

2.8.3 Technical development during Prototype stage

During the development of Blockchain of Things Devices, the following technical developments have taken place:

Hardware developments: We have been working on scaling down the SBC's firmware to achieve a faster, real-time capability of processing, slicing out unnecessary Linux capabilities. We have been able to optimize the firmware to execute specific scripts, run fewer services, and achieve faster and real-time capability of processing. This is now a more versatile device capable of serving solutions adequate to different applications, especially to Smart cities and Industry 4.0. This optimization also avoids sending data to an intermediate server for processing before registering the data in Blockchain. We have tested the functionalities that we need to implement and operate our devices: installing Python, SQLite, MQTT (broker and client), SSH availability, Bluetooth... All functions are working now correctly. We have achieved even higher optimization than expected and in smaller but equally powerful devices. We have been able to install the programs and fulfil all the requirements.

Decentralized key management: To increase the security of our IoT devices, we have implemented a decentralized Key Management System (KMS) that also uses Blockchain technology. The goal is to store sensitive data in a decentralized and encrypted manner outside the device. This allows us not to have passwords, private keys, addresses, IPs... stored in the device and be well protected. In addition, we may give permissions to the devices and specify which devices can perform certain functions.

Deployment and working with Docker: Our software may be deployed with Docker and Kubernetes. Docker is an open-source project for the deployment of software or applications inside "containers". This provides a layer of encapsulation. Everything needed is installed and run inside this container, without affecting other software installed on the device or machine. In addition, it is also useful for software maintenance and portability.

2.8.4 Business development during Prototype stage

During the development of Blockchain of Things Devices, the following business developments have taken place:

Participating in the program has helped us to focus our efforts on the SMEs' industries interested in the implementation of our solution: Smart cities and Smart Manufacturing. Accordingly, new materials and commercial presentations have been developed that will facilitate coming commercial activities in these industries.

The simultaneous opportunity of interacting with development teams specialized in IoT devices and Blockchain technology from the University of Arizona has allowed us to advance more quickly than expected in the optimization of the firmware of our devices and in the encrypting and registration processes of the data on the Blockchain. Some difficulties that would have taken longer to resolve in solitary have benefited from the cooperative work in an international context.

The companies interested in developing pilot projects with our devices are:

Atfield Technologies: Delivers solutions for the data-driven management of vineyards. Their platform combines advanced data modeling with tailor-made hardware to address the key challenges in sustainable viticulture.

Applied Research Solutions: Expertise in the industrial automation field, participating in projects in sectors such as oil and gas, automotive, food industry, chemical industry, urban utilities.

Advanced Microturbines: Manufacture autonomous microturbines for natural gas and water pipes. The microturbines for natural gas allow the real-time monitoring and control of gas networks reducing costs and CO2 emissions.

Qonteo: A data mining company using AI systems. Their solutions work in different industries: Accommodation and Food Services, Construction, Finance & Banking, Mining, Retail, Security, Smart Cities, Telecommunications, Tourism, Transportation.

We had the opportunity to carry out tests with data files of those companies. The encrypting, blockchain registration and verification processes have proven their viability. The mode of integration with their own devices or into their software platforms is part of the work to be developed in the pilot project phase.

From the go-to-market point of view, the introduction of any innovative and disruptive technology always faces the difficulties of capturing the attention of potential users. Participating in the BlockStart program has given us access to SMEs from different European countries, which can promote the faster implementation of pilot projects. This will contribute to greater visibility for our solution and will simplify the market entry processes. After the pilot project we will jointly enter in sales activities with partner SMSs in order to reach:

System Integrators (IBM, Accenture, Siemens)

Network Providers (Cisco, Verizon, Ericsson, AT&T)

Product Vendors (Eaton, Honeywell, ABB, Schneider, Siemens)

Service Providers (IBM, Serco, SAIC, Infosys)

2.8.5 Pilot stage implementation

In BlockStart, BlockTac implemented its “Blockchain of Things Devices” product in 3 SME adopters:

Pilot no. 1 with Advanced Microturbines:

Manufacture autonomous micro turbines for natural gas and water pipes. The microturbines for natural gas allow the real time monitoring and control of gas networks reducing costs and CO2 emissions. The microturbines for water allow the pressure monitoring and control, reducing water

losses and pipe mechanical stress. Both elements use the energy of a water, gas or air pressure drop. This energy is captured by the microturbine and converted into electricity. The microturbine is composed of a micro expander integrated into an electric microgenerator and of the electronic control unit.

BlockTac devices attached to the microturbines would collect the data at the pipe source and register the information in Blockchain, providing the necessary protection and authentication for normal operation or decision-making purposes. This will prevent attacks similar to the one suffered by Colonial Pipeline in May this year.

Technical KPIs:

We sent to Advanced Microturbines the R-Pi 4 and they tested the connectivity with the IoT devices to secure the data.

The SME Adopter have been able to test the communication between two devices through MQTT with the IoT data that they want to protect and encrypt with Blockchain.

We also offered to the SME different ways to send data and communicate the devices given the adaptability that BoT-d

Business KPIs:

We are working with the SME to present the solution to 10 potentials customers on the market through a joint presentation.

In addition, we have created a short video explaining the Pilot and posts in social networks to make the solution known.

We aimed to continue the cooperation beyond the BlockStart Pilot Stage 4 months.

Pilot no. 2 with Atfield Technologies:

Delivers solutions for the data-driven management of vineyards. Their platform combines advanced data modeling with tailor-made hardware to address the key challenges in sustainable viticulture. Their sensors, easily installable, fully automated, wireless, and powered by solar energy, measure individual tracking of conditions at a configurable number of microsites.

BlockTac may collect all the information at the source and registered the data in Blockchain, providing the protection and authentication that their client will highly value. This can be done on our devices or updating or complementing the firmware of their own devices.

Technical KPIs:

The Pilot with Atfield Technologies has been tested the communication between a device or machine through HTTP using APIs, in order to write the data to Blockchain.

In addition, BlockTac has develop a solution to simulate the communication between a IoT device and R-Pi with MQTT without the R-Pi. The solution consists in sending the IoT data from the device in the same way that we will do if we would have a R-Pi in the field but running MQTT on a server.

Business KPIs:

We are working with the SME to present the solution to 10 potentials customers on the market through a joint presentation.

In addition, we have created a short video explaining the Pilot and posts in social networks to make the solution known.

We aimed to continue the cooperation beyond the BlockStart Pilot Stage 4 months.

Pilot no. 3 with Applied Research Solutions:

Expertise in the industrial automation field, participating in projects in sectors such as oil and gas, automotive, food industry, chemical industry, urban utilities. Also develops didactic equipment related to approved programs of study, considering the current technological level encountered in main industry sectors.

The portfolio includes didactic equipment for specific technical fields, integrated laboratories mainly for technical universities as well as for companies acting in the industry, training sessions for students or postgraduate courses for professionals in the industry.

Trustworthy validation of inputs and outputs of an industrial data science pipeline through the adoption of blockchain/DLT technologies:

- Input: Anti-tampering validation of the input datasets that might come from both trusted or unknown third parties.
- Output: Securing the prediction model structure and inference results against malicious actors across the analysis and processing chain

Technical KPIs:

The Pilot with Applied Research Solutions has been tested the communication between a device or machine through HTTP using APIs, in order to write the data to Blockchain.

Applied Research Solution has been able to secure the data that they used in machine learning models (AI) in order to validate the inputs and outputs of an industrial data science pipeline.

Business KPIs:

We are working with the SME to present the solution to 10 potentials customers on the market through a joint presentation.

In addition, we have created a short video explaining the Pilot and posts in social networks to make the solution known.

We aimed to continue the cooperation beyond the BlockStart Pilot Stage 4 months.

2.8.6 Testimonial

“We faced two challenges at the start with our Blockchain-of-Things devices. The first had to do with the Deep Tech nature of our solution. Such innovation does not find an easy entry on the market and the prospect to interact with SMEs and to identify opportunities to implement Pilot projects had proved to be difficult. The second challenge was to select the best industries for a diligent market entry, given the crosswise nature of our solution.

As a result of our participation in the BlockStart program, we had the opportunity to meet SMEs interested in implementing our solution to add higher value to their offers and eager for a joint entry into specific industries. We have been able to improve our solution to better accommodate their needs and be ready to access the market in the following industries: Industry 4.0, Smart Cities, and Healthcare.”

FRANCISCO J. GUILLÉN MARTÍNEZ, CEO, BlockTac

2.8.7 Funding

Total funding received under BlockStart: €20,000 (€1,000 for Ideation Kick-off, €15,000 for Prototype stage and €4,000 for Pilot stage)

2.8.8 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/blocktac/>

2.9 Blue Room Innovation

2.9.1 Company

We are a young start-up focused on new technologies; our core team are high skilled developers specialized in blockchain. We have a proven track record on developing solutions using blockchain. We also have a strong relationship with the research Centre Easy of the University of Girona, leaders in Artificial Intelligence and blockchain’s research. We view technology as a fundamental enabler to achieve the sustainability goals of the Green Deal.

2.9.2 Prototype solution

Identity has been a pervasive issue in the art world for decades. Determining the authenticity of a piece of art is quite a challenge, and crucial, too, since the identity of the author often determines the price. Provenance is one of the most difficult aspects of the art world. NFTs raise even further doubts about authenticity, because in the digital world, who can really tell who’s behind the keyboard, or if the link to a particular internet address is the real piece, or a copy of it. The solution to this conundrum

is the integration of NFTs with Self-sovereign identity (SSI). By linking NFTs with a digital ID, it becomes possible to trace any one art piece, and verify the piece's authenticity and legitimate author. Because SSI is built for blockchain-based identities, it is the perfect solution to bring identity to NFTs!

Our extension of the NFT ERC 721 – SCENTS – will solve some of these problems by providing a unique self-sovereign identity to each piece of art based on its real track record in expositions and its relevance for the audience which with SCENTS have the permanent bond with its favourite piece of art and stays connected to them independently of the property ensuring collectors are paying for the quality of the art which with its followers and lovers a part of the quality proof based on the fame of the artist. SCENTS fine tracks the exposure of pieces of art as a proof of value and as a ground for measuring exposure shares for creators and owners.

2.9.3 Technical development during Prototype stage

During the development of Blue Innovation Room, the following technical developments have taken place:

In our NFT extension, the artist creates a digital identity for each artwork. This identity is set into the NFT and under control of creator address. The artwork identity uses the W3C standard Decentralized Identifiers (DIDs) v1.0 that is resolved in a public DID document. This document contains a set of data describing the artwork including mechanisms, such as cryptographic public keys, that the artist can use to authenticate itself and prove its association with the DID.

The cryptographic public keys are also used to create the Verifiable credentials issued by exhibitors using the W3C standard Verifiable Credentials Data Model 1.0. At any time, the artist can collect the different credentials received and create a public credential presentation. This public presentation can be verified by anyone using the cryptographic public keys set in the public DID document.

The SCENTS platform provides the required tools for artist and exhibitors to control the artwork identities, create credentials and public representations.

With the web client, working as an encrypted wallet, the artist can create and control the digital identities. Our solution is interoperable, any identity provider could be used in our standard. For this pilot we use the KILT parachain network. All DID Documents and credentials proofs are stored in the Polkadot blockchain.

To create NFT with our standard we provide a Metamask integration. Artists that have used NFT marketplaces will easily create NFT using our standard.

After BlockStart our future planned activities for the upcoming 12 months will be:

A5 – Development of the oracles for working with expositions, social media, and streaming. Make it decentralised oracles with WITNET.

A6- Tokenomics – create the SCENTS instrumental token SCT for the parachain and make it exchangeable and interoperable with ETH, DOT and other tokens through a UNISWAP 3 protocol to fuel the Witnet, Polkadot, Ethereum implementations. No tokens for ID but ID code will be incorporated.

2.9.4 Business development during Prototype stage

During the development of Blue Innovation Room, the following business developments have taken place:

Business model: to estimate our financial plan, we have fine-tuned our predictions according to the growth of the NFT sale market and the possibilities for expansion. Due to the uncertainty that still surrounds this market, we have forecast until 2027 in different scenarios: realistic, optimistic and pessimistic. For the calculations, only the realistic scenario has been taken into account, where we expect to have the first project income will come at the beginning of 2023 (once SCENTS reach TRL 9) 22,910 EUR and we estimate to reach 997,647 EUR by 2027, which it would mean having achieved 7% of the NFT sales market within the NFT segment.

Commercialisation strategy

Phase 1 (2022 – 2023): Once our solution will be successfully tested and piloted in small NFTs marketplaces and digital museums such as HDM and Art.Army – which we already have agreed pilot our solution and we will address to our direct ecosystem created during prototyping phase: ESAT and Baró Gallery have signed letters of Support.

Phase 2 (2023 – 2024): Once our solution will be consolidated in small platforms and SCENTS begins to be widely used in our close ecosystem, thus Early adopters have been achieved we will address our efforts to bigger players to cross the Chasm and go for the Early Majority segment, since our revenue model will be fee-based, a critical mass of users will be required in order to obtain profitability from SCENTS so this phase will be essential for the sustainability of the project. Our main target platforms will be: Opensea Rarible Superrare Mintable, Nifty Gateway and Foundation

Phase 3 (2024 – 2026): We will diversify our solution and adapt to other segments which are working with NFT and digital identity such as video games/ers; personal branding; influencers; designers, etc. In this sense fashion segment is showing a great acceptance of NFT since some early adopters such as The Fabricant sold their Iridescent dress NFT for around 10,000 EUR. Artist Danit Peleg sells clothing patterns for 3D printers as NFTs. In addition Nike is supposedly working on NFT sneakers that might be released this year. Thus, several markets are widening their approach to NFT and more are upcoming, the opportunities for developing standards according different needs are broad and BlockStart will allow us to deeper understand this technology to adapt it for these needs.

Funding: as a profitable company we blend our finance funding with our own resources and public funding, searching for new opportunities to apply our know-how in different industries, especially those related to sustainability. In this sense it should be noted we are exploring other uses case for applying SCENTS for Green Economy since waste management has similar problems to digital art: track the ownership of each batch residue and increase traceability on its journey to proper identify it has been recycled or landfilled. Therefore, SSI will be highly desired for the involved stakeholders, and we will increase our scope of actions while developing synergic projects in a priori completely different market segments.

2.9.5 Testimonial

“Participating in BlockStart has been a great experience since we have related to several companies focused in blockchain whether they were adopters or DLT providers. In addition, through mentoring sessions, our own development and tests performed in our adopter Hardddisk museum we have developed a MVP which will turn out in a new strategic business line for our company. Finally, it has to be highlighted this programme is ideal for those companies which are aiming to start a new project since BlockStart will provide not only funding for ideate and prototype the solution but will provide relevant training sessions and a rich ecosystem to increase exponentially your network.”

DENISA GIBOVIC, CEO, Blue Room Innovation

2.9.6 Funding

Total funding received under BlockStart: €16,000 (€1,000 for Ideation Kick-off and €15,000 for Prototype stage)

2.9.7 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/blueroominnovation/>

2.10 Brickken

Our comprehensive solutions allow digitization and tokenization of assets like real estate, equity, and other illiquid investment offerings, which allow retail investors to buy and sell the representing tokens in markets that are open 24/7, making our platform a tool for alternative financing schemes, and for investors a new form of generating revenue. Furthermore, we have an API, so third parties can integrate our technology in their applications and make use of our proven technology.

Brickken will test and validate the following blockchain-based solution in the scope of BlockStart:

A Decentralized Application (dApp) to issue Security Token Offerings without intermediaries

brickken.com/dapp

Brickken’s objective is for anybody to be able to issue their own Security Token Offerings, without the need for intermediaries to intervene in the process. This will allow the world to be tokenized, as the technology will be readily available for anybody to use it, while staying legally compliant.

Using a dApp, means that a STO can occur in a truly decentralized manner, where Brickken itself does not have to be part of the issuance process, and will allow companies to issue their STOs how they

best deem fit and from any country they want. This will reduce frictions, costs and will make it more accessible for companies interested in using STOs as an alternative form of finance.

By doing so, investments can be democratized, since it will be possible for retail investors to invest in different class of assets, create their portfolio and be engaged in markets that are open 24/7. Tokenization is all about reducing entry barriers to allow anybody to invest, and we can now look now into a world where people will be able to invest in assets such as real estate, art, scarce and valuable resources like they never imagined before.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/brickken/>

2.11 Comunitaria

2.11.1 Company

Comunitaria works to make communities more prosperous and economically sovereign by promoting the local economy with social currencies.

2.11.2 Prototype solution

"Rooftop that Feeds" use donations to buy solar cells for the rooftops of deprived neighbourhoods, the electricity produced is then sold to the local commerce, the local commerce pay this electricity (to neighbours) using a digital community currency (instead of Euros), neighbours use the digital token to buy fresh food at the local commerce. Donation has a recurrent production (in local fresh food) equal to the lifespan of the solar cells.

2.11.3 Technical development during Prototype stage

During the development of Rooftop that Feeds, the following technical developments have taken place:

As MVP, solar panels were already installed on top of the Candelaria Church and an open-source power meter to measure photovoltaic power produced was installed (IotaWatt)

Also our IoT hub device (PATIO) was installed that runs a service that periodically reads the smart meters's logs and publishes the measured data to our SaaS and to IOTA's DLT. Our purpose is to save data as close as possible from where the energy exchanges were generated, without being manipulated by third parties. The service running in the PATIO device is open source and publicly available.

Our BlockStart challenge is to be able to invoice the merchants with the electricity produced in ILLAs (our local community currency).

2.11.4 Business development during Prototype stage

During the development of Rooftop that Feeds, the following business developments have taken place:

Local shops are willing to try out the consumption of electricity from the energy produced on the rooftop of the Candelaria Church (our MVP). The key to build trust in us by the local shop it's been a year of dealing with our community currency, so it's a battle tested customer adoption test.

SMEs interested in testing the solution in Pilot stage

Photovoltaic providers: SME (Grupo Cuerva) who is an EPC (engineering, procurement and construction) photovoltaic plant and also a seller (marketers) and an SME (Barter Energy) specialized in "Energy communities" creation, both will help finance the installation of solar panels.

HOAs (Homeowners Associations): They're the KEY SME ADOPTERS for us, they're the ones validating the business case: use their rooftop to receive a local currency to buy at the local commerce.

Charities: The local church La Candelaria: they're already having a discount in their electricity bill, we want them to accept ILLAs as payments for the electricity their rooftops is providing.

Local shops willing to contract the energy produced at the rooftops of the neighbourhood: the other KEY SME ADOPTERS as they need to be willing to change their electricity provider and pay partly their electricity with our local currency.

Lessons learned: the project needs donations or public finance for the installation of solar panels. The premium risk for privately financing the installation in a deprived area is so high (65%) that makes the project non viable otherwise. Thankfully our neighbourhood of "Los Pajaritos" (inside the Cerro-Amate District of Seville) is likely to be included as "Entorno Residencial de Rehabilitación Programada (ERRP)" and therefore able to receive funds from the aid programmes for residential rehabilitation and social housing of the "Plan de Recuperación, Transformación y Resiliencia" from the Next Generation EU funds, meaning that it can receive up to 100% of CAPEX cost.

Product roadmap – After pilot: Develop a dashboard to be able to manage various HomeOwners Associations (energy producers) together with various local shops (energy consumers) for different neighbourhoods.

Business roadmap/go-to-market strategy – After pilot:

Replicate the MVP of Church "La Candelaria" in the 4 aligned homeowners associations in calle Celestino López Martínez. (4 months from completion)

Look for Next Generation EU funds for the energy rehabilitation of the entire neighbourhood. (6 months from completion)

Replicate in other Sevillian neighbourhoods (9 months from completion)

Replicate in other Spanish areas (12 months from completion)

Replicate in a low income EU Country neighbourhood. (24 months from completion)

2.11.5 Pilot stage implementation

In BlockStart, Comunitaria implemented its "Rooftop that Feeds" product in 7 SME adopters:

Pilot no. 1 with CACTUS:

Cactus is the company in charge of installing solar panels in the Los Pajaritos neighborhood.

As he already made the first installation of solar panels in the church of "Candelaria", now he will also be in charge of making another installation in the church of "Blanca Paloma".

Pilot no. 2 with Bar Cautivo:

The bar will be one of the buyers of solar energy within the energy community.

We are looking into the possibility that the facility can be one of the buyers of solar energy within the energy community. This would require an expansion of the solar panel installation.

Pilot no. 3 with TuComunidadAhorra:

Thanks to the participation of an owner's community manager, we will be able to get that they are interested in our project, since they are an important figure in the creation of an energetic community in the neighborhood.

Our goal with them is to get the first community of owners interested in participating. We are currently waiting to set up a meeting with the owners.

Pilot no. 4 with Cuerva:

A company so specialized in the energy area can offer us a wide variety of services to help us in our project.

After doing some tests, Cuerva is designing an energy measuring device with which we will be able to measure the energy produced, consumed and sold.

Pilot no. 5 with Association 3 Barrios:

The Association 3 Barrios helps us to contact the neighbors of the neighborhood so that they can try to buy fresh food with our social currency and so we can have different opinions from the people of the neighborhood.

The objective we have with them is that they ask the neighbors if they are satisfied using the illas to buy food in local stores and so for now they are quite satisfied using it.

Pilot no. 6 with Pescadería Juan Antonio:

They form an important part of the project in the process of transforming solar energy into illas, as they are in charge of purchasing the energy with illas.

In the pilot stage, we have managed to get the Candelaria church and the fish shop to sign agreements to share energy. Now we have to wait for the fish shop to pay its first bill in Illas.

Pilot no. 7 with Thunder Hunter:

The company related to the energy sector in which it offers its customers energy savings is a great ally for our project.

We want to create a "donate energy" program with them, so that part of the savings of their customers can be donated to the installation of solar panels in a poor neighborhood. We are validating how this could be done.

2.11.6 Testimonial

"We are delighted that BlockStart has promoted the search for partners who want to test our blockchain solution to fight malnutrition and poverty through solar energy. This is the highlight of the programme, which is very well mentored, helping you to think about the practical side of your developments with stakeholders who may be interested and involved."

ELENA SILVA, COO, Comunitaria

2.11.7 Funding

Total funding received under BlockStart: €20,000 (€1,000 for Ideation Kick-off, €15,000 for Prototype stage and €4,000 for Pilot stage)

2.11.8 Public profile

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/comunitaria/>

2.12 Corporra

Corporra is your Blockchain-based all-in-one corporate governance platform to digitalize and automate the entire equity management as issuing, tracking, compliance, options, board/investors relations with enabled corporate smart contracts and digitalized shares.

Imagine a world where shares are completely digital and compliance to contracts and regulations ensured automatically so everything you need to deal with company&shares is enabled through a reliable, secure and transparent platform.

Corporra will test and validate the following blockchain-based solution in the scope of BlockStart:

Corporra

corporra.com

Corporra is your Blockchain-based all-in-one corporate governance platform to digitalize and automate the entire equity management as issuing, tracking, compliance, options, board/investors relations with enabled corporate smart contracts and digitalized shares.

We thrive on representing some clauses of corporate contracts as smart contracts, tokenizing shares and providing tools to make corporate contracts self-enforceable and share dealing fully digitalized. So, via the platform shareholders, investors, directors can manage shares&options, corporate contracts, which are controlled&executed by smart contracts. We also provide voting, board and meeting management tools to make Corporra a hub for all corporate matters.

As a result, shares are not just numbers on digital/regulatory register, but fully digitalized and easily dealt assets. Contracts' clauses are not just papers, but automated and self-executable terms.

Imagine a world where shares are completely digital and compliance to contracts and regulations ensured automatically so everything you need to deal with company&shares is enabled through a reliable, secure and transparent platform.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/corporra/>

2.13 Deed

Deed® is a deep tech company active in the wearable device sector since 2016, whose team was able to create a HW and SW smart system integrator platform that is extremely scalable and competitive. Get® stands out for its pionieristic ID acquisition method, higher security standards, c-less payments and a revolutionary user experience. Thanks to the above-mentioned groundbreaking characteristics the solution reaches different sectors such as: fintech, cyber security, insurtech, healthcare etc.

Deed® will test and validate the following blockchain-based solution in the scope of BlockStart:

get®Exchange

The first version of our solution is a hybrid multi-factor authentication through ECG. The OTP generation tool will create the secret, if and only if, the ECG pattern is satisfied. The OTP generation tool is developed in the get®App, as Google Authenticator. Moreover, the positive output will be notarized in Bitcoin blockchain for a proof-of-existence (POE), through Open-Timestamp Standard.

The second version of our solution is a total multi-factor authentication through ECG. The OTP generation tool is developed directly into the wearable get®. Also in this version, the positive output will be notarized on the Bitcoin blockchain. Moreover, this version can also allow the “persistent authentication” and “identification alert”: since the user is wearing the bracelet, the trading account knows that you are the one that can operate in time $t + 1$.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/deed/>

2.14 Digital Village

2.14.1 Company

Digital Village (DV) is a recomposition of social media, gaming, and e-commerce. DV is the first real-time sustainable Multiplayer Metaverse connected to its Social Marketplace, which merges the physical and digital world with its social graph blockchain interface, Village Protocol, and allows real utility of digital assets.

2.14.2 Prototype solution

The prototype product implemented brings clients closer to their communities and customers. Digital Village offers the Marketplace and the Metaverse. Customers are able to rent or buy land in one of our zones. At DV, we are collaborating with our clients to meet their needs, this is possible thanks to our 300 3D artists and designers, collaborating with us. Events hosted on DV could include fashion weeks, E-games, conferences and overall interactions.

The Village Protocol focuses on decentralizing data instead of monetizing user interactions. Village Protocol is an interface to show their blockchain data in a way consumers understand easily.

The market potential is increasing globally, as our clients and end-users. DV is soon enabling real-time audio chat within the Metaverse, combined with AR/VR functionalities. Furthermore, we are aiming towards launching Metaverse mobile access in the near future.

2.14.3 Technical development during Prototype stage

During the development of Digital Village, the following technical developments have taken place:

DV’s frontend development is connected to the implementation of our database and API system. Currently, within DV, we are setting up consistent team meetings every week – to check in, evaluate and set new goals. Thus far, we are on track with our timeline and in fact 5 month ahead, in terms of

easy access to the Marketplace, and all relevant aspects of the website, visible for the public starting in Q2 2022.

With our current prototype we enable an easy sign-up process, easy client onboarding, seamless log-in from our Marketplace to the Metaverse, Product Creation, and viewing. We are blockchain agnostic and currently support Ethereum and VeChain.

The Metaverse, currently platform agnostic, combined with AI/AR/VR functionalities enables users to have utility to their digital assets in real-time, socialise via positional audio chat, create video and photo content directly from the Metaverse. Furthermore, we are aiming towards launching Metaverse mobile access in the near future.

2.14.4 Business development during Prototype stage

During the development of Digital Village, the following business developments have taken place:

We have not fully implemented our PR/Marketing strategy – we will have it running step by step whilst our beta version evolves and enables users to enter the Marketplace and finally, the Metaverse. The market potential is increasing globally and so do our clients and end-users.

We see the size of companies using our service could be anything from minor design studios to major/world leading organizations or brands.

2 is an ideal number of SMEs adopting DV to test the platform. This number is to enable DV and the SME to work closely together and take advantage of the experience to experiment and implement R&D for the DV products. The small number of SMEs would also enable DV and the SMEs to push the boundaries and innovation further, potentially discovering new solutions and improvements.

5 is the maximum number of SMEs for adopting DV. At this early stage of Web3, it is vital to educate the customers about the concept and opportunities of Web3, Blockchain, Metaverse, NFTs and so on. We believe in quality over quantity and would prefer to take our time with each SME to result in success stories, helping the SME, and turning them into long term clients of DV.

2.14.5 Pilot stage implementation

Here is a video summarizing Digital Village pilot implementation:

<https://www.youtube.com/watch?v=k7lnlZ-YwAY>

In BlockStart, Digital Village implemented its “Digital Village” product in 4 SME adopters:

Pilot no. 1 with VERTLINER:

Vertliner and Digital Village’s pilot collaboration has included consistent follow up meetings, and strategic planning for future collaboration, after the Blockstart program. Both parties have gained renewed visions of their product’s implementation areas as well as customer base.

Data strategy/roadmap collaboration with Digital Village.

Vertliner will send DV their collected data and existing 3D assets, thus store those on the DV marketplace.

The roadmap will showcase future possibilities and the long-term benefits of both safety aspects and user value.

Pilot no. 2 with D-Visor:

By regularly following up on the KPIs agreed upon, D-Visor and Digital Village has come up with mutual value in terms of pilot implementations. Together both parties have found ways to connect physical and digital event whilst considering safety and future collaboration aspects.

The collaboration aims to connect physical events with digital and enable communities to interact all year around.

Together, DV and D-Visor will create a roadmap on technologies and data collection, use-case, roadmap, and identifying future possibilities.

Security solutions (IRL and URL).

Analyzing data to understand to meet visitors' needs in the digital space.

Pilot no. 3 with Binaré:

Binaré and Digital Village has mutual interests, which will lead to development for both parties. Technical perspectives have been the main focus as Binaré is focused on areas of cyber security. Therefore, Binaré has met with DV's technical team to create future use-cases/roadmaps for future long-term collaboration.

Binaré will find the best ways for their platform (aiming towards the security of IoT/ devices/software) to automatically help the cybersecurity of Digital Village blockchain/ metaverse implementation. Binaré will apply "expert services" (as in "human expert" review of the technical and safety aspects of Digital Village).

Pilot no. 4 with Harddiskmuseum:

Harddiskmuseum and Digital Village's collaboration has been a fast process as both parties shared a mutual vision from the very beginning. Digital Village is currently building a museum for HDM in the DV Metaverse that will enable visitors to experience visiting a museum including exhibitions - in a digital shape. Entering as avatars.

Harddiskmuseum will set up their profiles on the DV Marketplace, and upload videos and static images/artworks to DV. Either for each user, or under the same domain. Around 10 artists will be exhibiting.

DV and HDM will collaborate on creating a museum in the DV Metaverse, where the represented artists' assets will be shown to DV and HDM users/visitors.

2.14.6 Testimonial

“The DV journey really accelerated after we joined the BlockStart programme. The organization and its network are amazing. We have gained really valuable mentorship and experience from the programme as well as partners and raised over 2m since joining.”

EVELYN MORA, CEO & Founder, Inventor and strategist, Digital Village

2.14.7 Funding

Total funding received under BlockStart: €20,000 (€1,000 for Ideation Kick-off, €15,000 for Prototype stage and €4,000 for Pilot stage)

2.14.8 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/digitalvillage/>

2.15 HODLNG

2.15.1 Company

Our solution tracks the outcome on GHGs with granularity and traces a carbon-neutral cargo’s compensation activities and status. We unlock the possibility of splitting the task of reaching an LNG carbon-neutral cargo by providing a solution for multi actors to decarbonize (offset a volume of GHG) on a cargo. The users can claim the delivered offset actions. An audit or third party can access for verifying the details of compensation activities. Throughout the transaction’s lifetime, the system collects fees redistributed to NGOs, local communities, or associations vetted by the stakeholders.

2.15.2 Prototype solution

The overall concept is to track and record the GHG, CO₂, and other related polluting gas, emission, consumption, and savings in parallel biogas production by a biogas plant. Based on savings, a corresponding number of credit tokens will be created and awarded to the biogas producer. A third party interested in offsetting its emission can connect to the solution and request to buy (or swap against other activities) some credit tokens that will be delivered together with a proof of origin of the compensation activities. The original owner of the credit tokens will receive a payment or an equivalent compensation (e.g., a service or the supply of material).

Following further investigations of the ecosystem and our discussions with several stakeholders, we consolidated the concept by extending it toward a comprehensive view that integrates all the supply chains in the biogas production process. The idea now considers the source of the material (e.g., feedstock, organic waste) used for biogas production and estimates the amount of emission or savings

depending on both the source and the biogas production processes. By comparing the generated gas emissions with or without using the primary source in biogas production, we can assess the savings vs. the costs without biogas production. This will also highlight further the difference between using waste vs feedstock. Then during the biogas production process, some non-biogas gas may also be filtered and separated for being reused in other industries. This will also account for specific savings. This improved concept enables, in addition, distribution rewards to the savings parties along the supply chain.

Note that at this stage, all savings/costs are mainly based on general estimation, but it is foreseen to rely on the existing probes in the system to measure them when possible.

Finally, additional features related to data sharing and auditing capabilities will be planned in the future. It was emphasized the value of allowing additional stakeholders (e.g. auditors) to use the solution, as will benefit from the information collected by the solution.

2.15.3 Technical development during Prototype stage

During the development of Biogas TX, the following technical developments have taken place:

Most of the blockchain and database management building blocks rely on our MVP's existing back-end architecture, and thus can be considered ready (modulo small adaptation to be made during pilot phase)

A fundamental building block is the set of smart contracts that will support the GHG/CO2 credit, offset and reward functionalities.

Test of several design concepts for the smart contracts and tokens to be implemented. Part of the internal tests made is based on preliminary concepts of carbon credit tokens tried during several hackathons by HODLNG blockchain developers (cf. an extract in Annex).

2.15.4 Business development during Prototype stage

During the development of Biogas TX, the following business developments have taken place:

The main lessons learned from the iterative validation meeting with biogas stakeholders conducted with prospective customers have underlined a paramount curiosity by biogas producers into the idea to tokenize the level of negative CO2.

The interest in adopting new technology has aroused much attention, on the one hand, but also more commitment than we had expected.

Receiving support of compensation for their activities has highlighted the need to be less dependent on public financial resources and the need to relaunch a virtuous dynamic to encourage the development of biogas.

HODLNG successfully achieved KPIs

prospected 76 biogas producers within LinkedIn and generated 54 leads surpassing 14 of the expected KPIs (KPI/40) of the initiation of consumer interest or inquiry into products or services of our business. We achieved approximately more than 70% of our prospects.

We converted 9 of our Marketing qualified leads (MQL) to the discovery calls to collect functional needs.

We proceeded at in-depth talks focused on product functionalities and tech interactions with 7 companies. (KPI/4)

In the end, we came up with 7 declarations of interest for pilot (3 Eligible +4 Non-Eligible) (KPI/3)

We expect 3 SMEs to join if there are no administrative barriers: (KPI/1)

2.15.5 Testimonial

“Thanks to the Blockstart programme, HODLNG’s team has got the opportunity to apply our solution to liquified natural gas to one for biogas sector. We had this idea in mind since a while, and it’s become a reality throughout the program. The added value of the programme lies in its two-sided involvement, which allows us to approach the users rapidly and efficiently.”

JEAN-CHRISTOPHE FINIDORI, CEO & Founder, HODLNG

2.15.6 Funding

Total funding received under BlockStart: €16,000 (€1,000 for Ideation Kick-off and €15,000 for Prototype stage)

2.15.7 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/hodlng/>

2.16 HOPU

2.16.1 Company

HOPU brings innovation through the latest technologies such as AI, IoT and Data-Quality. We are there to support decisions for environmental assessment and digital transformation through data-powered tools with dashboards, decision support tools and our genuine IoT devices to monitor (Smart Spot). It promotes platforms as FIWARE promoting on top of this added-value via data quality, cost-effective solutions and services to monitor gases, toxic substances, odors (VOC) and emissions from industry.

2.16.2 Prototype solution

The prototype developed consists of an industrial emissions monitoring system, conceived as a Policy Based Solution (PBF) via Blockchain, certified IoT for indoor air quality monitoring, other

heterogeneous data sources and visualisation tools (dashboard: dashboard example). The approach selected for the prototype is, specifically, to handle authentication and authorisation of carbon emissions through PBF in order to enable trustable and reliable data. Thanks to the proposed solution, customers will have an evidence-based value chain of their emissions: monitoring – certification – recording and regulatory compliance – compensation / monetisation.

The main technical aspect resides in the integration of an alert register service based on blockchain in the industrial ecosystem. In this approach, two security services will be enabled: Ethereum (public and private keys) and PBF. Moreover, other contextual data will be integrated, as each competent administration issues the allowance of emitting an amount of CO2 emissions consistent with its economic activity as well as the total amount allowed in the country (Paris Agreement).

Finally, it is expected that the SME adopters will implement the digitisation of their manufacturing processes for controlling their emissions via continuous monitoring and specific consultancy services to support them. By using the solution proposed by HOPU in BlockStart, companies will be able to finally generate Tokens / monetisation that ensure the reduction of their emissions as CO2 credits with an economic value on the market.

2.16.3 Technical development during Prototype stage

During the development of HOPU, the following technical developments have taken place:

Device and certificates onchain:

Translate off-chain certificates to on-chain. (In process)

Develop third party Certificates Smart Contracts.

Calibration process

Calibration Lab

Develop Device id Smart Contracts.

Internet of Things onchain:

Integrate IoT platform with Blockchain node.

Generate offchain rules for store onchain events.

Generate offchain rules for store onchain statistics.

Generate Grafana dataSource for Dapp.

Generate Grafana panels.

Test the IoT Minimum Viable Product (MVP):

Calibrate devices.

Emit certificate.

Deploy devices.

Validate device events.

Validate device statistics.

The main features of the solution were conceived after previous experiences in pilots with industries, where real-time indoor air quality monitoring was performed. Definitely, after several iterations, HOPU has been able to advance and provide added value to the solution in the Blockstart ecosystem, adapting the features towards a value chain that consist of monitoring – certification – recording and regulatory compliance – compensation / monetization, where customers can not only digitize their processes but also to optimize and become then in a more sustainable version by integrating the comprehensive proposed solution with the following features:

Certified measurement via IoT indoor monitoring devices

Real-time emissions monitoring via dashboards

Registration and management of emissions via Blockchain (digitization of industrial processes and certificates issuance)

Consulting services for assisting customers / users guidance (optional added value)

Access/ connection to third platforms to finally obtain sustainable tokens (monetization of carbon emissions reduction)

During the next 12 months HOPU expects to perform the pilots with Bersey and Horizer, as SMEs adopters and make a deep analysis of the performance. After the pilots stage, HOPU commits to continue collaborating with them in different ways:

Publication of success cases in different means of communications, blogs and journals at international level: HOPU will ensure the visibility of these companies as early adopters in terms of demonstrating the benefits they will obtain thanks to the integration of trustable and reliable IoT by integrating certification via blockchain.

Free use for the first year after performing the pilots to continue testing the solution and providing feedback.

Moreover, HOPU expects to launch to the market the proved MVP, which is expected to reach a TRL8 and:

Get in contact with stakeholders

Attend relevant events / fairs

Cold calls and emails

Design new dissemination materials to attract new potential customers

Schedule meetings with different stakeholders

2.16.4 Business development during Prototype stage

During the development of HOPU, the following business developments have taken place:

The target customers have been differentiated in two types: final adopters and intermediate adopters. The final adopters are large scale industries that individually will purchase the solution and require directly our services because of their needs to certify their emissions and the current emissions regulations. On the other hand, intermediate adopters are small industries which have a low development of digitization of their processes but require our services due to their relationship with other large scale industries (they perform as suppliers) and are asked to integrate emissions certification of their processes to keep their relationship.

Revenue model and streams: our plan for generating the revenue is based on a B2C Business model supplying companies in the industry sector via direct sales and marketplaces, complemented with B2B to address market expansion via distributors/partners that integrate our solution as part of their offer.

The fundraising strategy is based on recurrent revenues as part of the added-value services provided by our SaaS for data analytics of environmental data, and the consulting services to customize dashboards, and integrating the data sources required to adapt the solution to every individual needs. Current income streams are based on the sale of the solutions and consultancy services, which as a baseline has a cost between 15-30k€ (with an ARR of 15k€ and taking into account that the average LTV per customer is 180k€, and is based on recurrent revenues as part of the added-value services provided by our SaaS for data analytics of environmental data to address climate change mitigation. In detail, HOPU is today in over 40 cities; with a turnover of over 1,2M€. HOPU is pursuing and promoting a scalable solution to take advantage of the SaaS and data economy as our major tractors.

The commercial presentation will be performed via different communication channels utilizing several marketing materials: on the one hand, potential customers will be identified in business databases by categories at regional, national and international scale and also will be reached via physical events and industrial clusters. HOPU will offer different audiovisual materials adapted to each target user: white paper (to raise their awareness and inform them in depth about the current issue related to carbon emissions and the offered solution), a video for a short presentation and leaflets to present the solution in general and, finally, live demonstrations via webinars.

3 new employees will be hired in January 2022 in order to boost the sales and marketing department at national level. The first profile will be focused on the LATAM market, the second profile will support our market entry strategy for Germany and, finally, the third profile will focus on the Arab region (as part of the Zakut programme in which HOPU is already participating).

Effort to validate your market/fit:

No. of potential adopters you reached out to: HOPU has reached 6 SMEs adopters from different industries in the Blockstart ecosystem to perform de pilot.

No. of potential adopters you met: as HOPU is already in contact with several industries at regional and international scale, 5 potential early adopters are currently interested in acquiring the solution.

No. of interesting prospects/leads you have acquired during Prototype stage: HOPU has been directly in contact with 3 SMEs: Bersey, Horizer and Advanced Microturbines.

No. of pilots committed: currently we have agreed to perform 2 pilots with Bersey and Hozier.

No. of clients committed: 3 clientes are currently highly interested and committed. Via Bersey, as consultants, they are directly in contact with potential customers, as the case of automotive industries. In this case, Volkswagen Barcelona's plant and SMEs that are their suppliers. On the other hand, Horizer has asked for further details of the solution in order to start not only implementing it in their use case but also offering as B2B2C solution to their customers-

HOPU is currently participating in the Tech & Innovation HUB Zakut, thanks to which we expect to scale our solution internationally.

EMUEGO: is a global blockchain technology company providing solutions for developers, startups, enterprises and governments. EMURGO develops enterprise-grade applications, builds developer tools, invests in startups and provides blockchain education and advises on Cardano's decentralized blockchain ecosystem.

Future Digital Awards 2022

IoT Solutions world congress. Track: blockchain solutions world. Barcelona, May 10th 2022.

HOPU will be attending and participating actively in events at national and international scale:

#ACCELERATERegTech2022 5th annual, The RegTech Association eco-system event.

AI4CITIES: Accelerating carbon neutrality STAVANGER event December 6th 2021.

Paris Blockchain week summit 13th April 2021

Reset Connect London 2022. The UK's largest sustainability ecosystem and ESG investment gathering will take place 28-29 June 2022 at ExCeL in London

2.16.5 Pilot stage implementation

In BlockStart, HOPU implemented its "Industrial emissions monitoring" product in 2 SME adopters:

Pilot no. 1 with Horizer:

CO2 emissions of token into a voluntary market based on the CO2 Marketplace guarantees the reliability and availability of data to all CO2 buyers.

Smart contracts. Monetization in form of Tokens system via carbon trading marketplace.

Pilot no. 2 with Bersey:

The solution provides specific recommendations to the user depending on the consumption in the consulted period.

A service has been created that monitors the average consumption of all data to date.

The user can search for the monitored data of interest in the history graph and check the exact value to which it corresponds.

Emissions control (regulatory compliance) via IoT air quality monitoring devices (context and real time data). Pollutant gases, noise, PM, temperature and weather. Emissions Reduction / Compensation.

2.16.6 Testimonial

“Thanks to our participation in this programme, HOPU has been able to evolve and land its final prototype focused on enabling emissions monitoring based on a Policy Based Framework (previous experiences via pilots allowed to reach a TRL 6). The ideation of the MVP, which initially focused on the need to monitor indoor air quality, has now evolved to a more comprehensive added value and trustable solution, adding other valuable data sources on carbon emissions and emissions rights exchange (monetization/credits) via blockchain / certification. Finally, after the ideation and prototype stages, together with the different mentoring sessions with Blockstart mentors and other support from external experts, such as Alberto Ezcurra, from Bersey, HOPU has finally improved and adapted the final prototype to different scenarios. These scenarios are based on real needs detected in different industrial environments and their issues related to emissions control, certification and emissions trading and compensation, which are subject to their national regulatory framework.”

ANTONIO J. JARA, CEO and R&D Director, HOPU

2.16.7 Funding

Total funding received under BlockStart: €20,000 (€1,000 for Ideation Kick-off, €15,000 for Prototype stage and €4,000 for Pilot stage)

2.16.8 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/hopu/>

2.17 Intakt

Intakt Group is a German software house and start-up incubator situated near Berlin. Starting 1995 with its first own developments, the company focused constantly on internet solutions. Today, Intakt operates different start-ups, among them touristic, insurance and real estate internet portals and develops web-based solutions which are integrating high-end technologies, from Blockchain to Virtual Reality. One of the groups start-ups, Intakt-Reisen, is well-known in the German touristic market.

Intakt will test and validate the following blockchain-based solution in the scope of BlockStart:

Voucherfy – Retail integration framework for a blockchain-based voucher platform

Contemporary retail platforms and solutions for digital voucher and coupon management do not exploit the full potential of DLT. Vouchers and coupons are not only permanently exposed to fraud, but the management of these assets is still performed in a centralized manner, yielding to significant costs. The aim of our project is to leverage the state-of-play in vouchers & coupons to a blockchain platform, which is based on an energy-efficient DLT-infrastructure for issuing, storing, and redeeming digital assets such as vouchers & coupons. Focus will be on extending platform features and integrating retail store chains. One of the key elements will be to facilitate the settlement of payments between business stakeholders through incorporating a highly cost-efficient ledger-based payment service – bringing fiat money to the blockchain. For the first time, an integration guideline of customer POS (Point-of-Sales) systems with a DLT infrastructure will be proposed as a de-facto standard

Voucherfy is suitable and attractive for any retail shop (online and offline) who have vouchers and coupons in their portfolio. Based on our preliminary experience and aligned business strategy, our target customers large retail shop chains from the hardware, furniture, and textile/fashion sectors, and shopping malls. Currently we are in the negotiation process with 2 major shopping malls in Germany to implement and integrate a pilot with them and their customers.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/intakt/>

2.18 LOADER

EV Loader app enables drivers identify and transact in charging stations in SE Europe. Owners of charging stations utilize EV Loader to list charging stations and attract drivers to their premises. After its launch in December 2020, the app now manages more than 50 locations in Greece predominantly in hotels. Charging stations under management are located in properties of large hospitality groups such as Holiday Inn and Crowne Plaza. EV Loader is currently forming partnerships with hardware OEMs and energy utilities to expand in SE Europe.

Loader will test and validate the following blockchain-based solution in the scope of BlockStart:

EV Loader token wallet for private transactions

EV Loader is a Quorum blockchain platform for securely managing data related to Electric Vehicle Charging Stations ("EVCS") transactions. It offers transparency for station availability and charge fees in real time, while it allows users to reserve charging stations in time slots in the future. Users can initiate and pay for charging sessions via their mobile phone. Owners of public charging stations use LOADER to attract more drivers, monetize their stations and streamline transactions.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/loader/>

2.19 Shipdetection

Belgian SME specialised in the analysis of Optical and SAR imagery together with AIS/VMS signals cross-referencing the Global Record of Fishing Vessels to detect and combat illegal fishing.

Shipdetection will test and validate the following blockchain-based solution in the scope of BlockStart:
DLT to accelerate marine intelligence

Lelieur BV builds systems to process live AIS vessel signals and very high resolution satellite imagery to provide a coherent view of vessel activity. The systems have been built using a distributed, containerised methodology that is especially robust and allows the quick alteration and replacement of subsystems. An API is being developed to retrieve additional vessel information from known databases such as the Illegal, Unreported and Unregulated fishing vessels list to identify the high risk vessels to provide a drone response.

By implementing distributed ledger technology Lelieur BV wants to facilitate the near real-time exchange of vessel and drone information including a publically available information section and a limited access section for protected information such as port inspection, enabling government agencies to have oversight of fisheries and drone operations in one GIS interface and efficiently deploy marine patrols and implement Port State Measures.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/shipdetection/>

2.20 Shipnext

2.20.1 Company

Imagine a platform that allows you with instant search of the best shipping for any cargo regardless its type, shape, quantity or destination? Shipnext is a solution that uses AI to help with instant freight search, shipping data management, email processing, trade and workflow automation.

2.20.2 Prototype solution

The Smart Contract, based on an electronic Bill of Lading, is a secure and reliable document. Electronic Bill of Lading, built on Shipnext, enables a unique mix of data-flows. While both Shipper and Ship Owner, as well as the intermediaries, such as Charter and Carrier, get involved in the contractual relationship on the shipping platform, Cargo and Ship data are logically streamed into the Bill of Lading – a document representing a receipt of goods, evidence of the contract of carriage, and document of title. Such Bill of Lading, based on online negotiation, also includes the link to the terms and conditions, which are sourced from the Contract of Carriage. Last but not least, the document is secured with digital signatures, satellite data and data sourced from operational data. Storage of this data on multiple nodes, facilitates tokenization and transfer of this document with the help of DLT-based ecosystem. This, in turn, serves as a method of seamless transfer of the Shipnext electronic bills of lading, representing the execution of the contract of carriage. Electronic Bill of Lading, and Smart Contract of Carriage, built using our prototype, can leverage Shipnext to enable the secure peer-to-peer transfer of eBLs, reducing costs, delays, risk and fraud.

2.20.3 Technical development during Prototype stage

During the development of Smart Contracting for Shipping and Transportation, the following technical developments have taken place:

Shipnext achieved the status of a digital shipping platform and a shipping marketplace.

Shipnext patented and launched the process of combining email processing and a digital shipping platform for freight-matching, freight negotiations and contracting.

Shipnext covers all sectors including dry-bulk, breakbulk, containerized, heavy and oversized cargo. Wet-bulk is still not covered sufficiently, but it is currently in process.

The main features include:

Trading Desk – a cargo-to-ship and ship-to-cargo matching solution, that includes features for cargo search, ship search, freight negotiations and contracting

Cargo Monitor – solution for tracking offered and received freights, contracted cargo and cargo tracking

Fleet Monitor – solution for ship search, ship tracking, compliance check

Freight calculator – automated freight calculation tool

Documents – data-base of contracts and bills of lading, with contract management tools

Port Data – solution for monitoring real-time port data

In 2022 Shipnext expects to build and launch the following functionality:

Messenger (Chat) with advanced features for internal communication, external communication and teams

Freight matrixes – a solution for the use of predictive analytics in freight market forecast

Supply Chain manager – a solution for supply-chain management and cargo tracking

Smart Contracts and interoperability with banks, P&I and insurance companies.

2.20.4 Business development during Prototype stage

During the development of Smart Contracting for Shipping and Transportation, the following business developments have taken place:

Shipnext is currently holding talks with several potential new partners, of whom the main ones are:

Senda – for email service integration inside Shipnext

Bolero – for interchange of electronic bill of lading data

Freightify – for exchange of container freights and shipping solutions

Shipnext is also planning to onboard 2 carriers onto online freight contracting, thus increasing the amount of contracts of carriage generated through the digital platform.

Among the currently expected customers, we expect breakbulk, dry-bulk and even tanker shipping companies to use Shipnext for email processing.

In January, in addition to the integration of its Electronic Bill of Lading in the Blockchain ecosystem, Shipnext will commence refactoring and the development of its advanced Messenger (chat). We believe that the use of a more advanced Messenger will help our users finally replace email services.

Our newly appointed CEO Nat Hutley plans to involve 6 C-level executives, from UK, Switzerland, Turkey, Singapore and USA as company's Advisors. Our current pilots with Agromond, Varamar, Solvay, Ifchor, and several other companies, would help us build the missing features that are related to all sectors of maritime trade. This way, by May 2022, we should have no functionality which is missing or requires work outside Shipnext to fulfil the daily chartering and commercial shipping activity.

Our current ambitions include onboarding:

5 large international brokerage firms

6 large shipping groups, including 3 in dry-bulk, 1 in breakbulk, 1 in taker and 1 in container shipping

10 large international trading firms, including coal, wheat, sugar, fertilizer, steel and chemical trades

In December 2021, Shipnext received one more patent, this time for Singapore. This patent, just like the other patents so far received, covers the process of combining a shipping platform with email and data processing, with the help of NLP, machine learning and big-data analysis, for freight-matching,

online freight negotiations and contracting. In January 2022 we plan to apply for Vlaio Fund, and the Y Combinator. In April 2022 we expect to finally receive USA and Chinese patents.

2.20.5 Testimonial

“Today’s end users, companies and governments begin to understand and, more importantly, feel the importance of international transportation and supply-chain. It’s important to see and feel that European Commission and the blockchain community in Europe give support to European companies that transform the transportation industry. This will help maintain the central role and key presence in international trade.”

ALEXANDER VARVARENKO, Founder & CEO, Shipnext

2.20.6 Funding

Total funding received under BlockStart: €16,000 (€1,000 for Ideation Kick-off and €15,000 for Prototype stage)

2.20.7 Public profile

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/shipnext/>

2.21 Smart Shaped

Smart Shaped Software makes enterprise software development faster, easier and more accessible. Through our low-code platform, AstraKode, we empower companies to develop and manage every phase of a software project’s lifecycle, from ideation to release. In 2019, by combining our values with our passion for blockchain technology, we ideated AstraKode Blockchain, an innovative platform that allows companies to design, build and test blockchain solutions in a very easy way, acting both as a playground for fast training and as an environment to build production grade solutions.

Smart Shaped will test and validate the following blockchain-based solution in the scope of BlockStart:

AstraKode Blockchain

astracode.tech

AstraKode Blockchain is an all-in-one low-code platform for network design, smart contract development, and cloud testing and deployment. The aim of the project is to facilitate enterprise blockchain solutions by decisively lower entry barriers and development costs. The platform is highly

adaptable to a wide range of use cases, and its low-code approach enables learning by doing and self-documentation and validation.

Key features:

Network Composer: visual environment (low-code) for the creation of custom blockchain networks;

Smart Contract IDE: visual development environment (low-code) for smart contracts;

Cloud Deployment: testing environment and integration with main cloud service providers to deploy and manage the networks and smart contracts created;

Community: the built-in community provides access to project discussion, peer support, and valuable learning content, both platform and technology related.

Total funding received under BlockStart: €2,000 (for Ideation Kick-off 2 and Ideation Kick-off 3)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/smart-shaped-2/>

2.22 Sofitto

The Sugi Card takes over the storage of your Bitcoins (BTC), Ethereum (ETH), Bitcoin Cash (BCH), Litecoin (LTC), Ripple (XRP) and ERC20 tokens. It holds all your private keys in order to enable secure, simple, and fast cryptocurrency transactions on the go via the dedicated Sugi Wallet mobile app.

Sofitto will test and validate the following blockchain-based solution in the scope of BlockStart:

OSDK – Open Sugi Development Kit. Open community platform for hardware blockchain wallet development. Build a hardware wallet that feel human in one day for your application

Many applications in health, FinTech, Mobility, Energy cannot implement wallets run directly on mobile or WEB. The constraints for available space, weight, power budget and cybersecurity require use miniature, not continuously powered hardware wallets. The requirements for price and user-friendliness further limit the use of the common Trezor or Ledger wallets.

Many startups are going again and again through this costly barrier, developing their hardware wallet solution. Limited in resources SMEs often rely on security through obscurity rather than benefiting from collaborative innovation, testing and open reputation gain.

OSDK will spark an open and free exchange platform for rapid hardware wallet prototyping. Smart card or NFC tag-based wallets will be used to track goods, serve as a ticket in transportation, being embedded into your smart meter, or create a purpose-oriented, simple to use, tap (pin) and pay solution for schools, refugees camps, local farmers communities, etc.

Total funding received under BlockStart: €1,000 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/sofitto/>

2.23 Traken

TRAKEN is a next-generation data tracking, asset management and exploitation tool for smart electrical grids that provides a distributed ledger to manage unique identities and product passports of smart meters. TRAKEN provides infrastructure to facilitate the encrypted, secure and transparent access to prosumer's smart meters and metering records that would serve as enabler for more flexible reconciliation on physical or financial levels in electricity grids, supporting mobility of user accounts and quicker settlements.

Traken will test and validate the following blockchain-based solution in the scope of BlockStart:

Traken

TRAKEN represents a next-generation asset management and data operation platform for smart electrical grids that provides a distributed ledger to manage unique identities and product passports of smart meters and metering records. System will structure and store metadata and provide access to metering records, ultimately creating protocol for creation of standardized product passport for each unique smart meter that would be hashed and written into Blockchain. Platform represents a DER registry, a form of KYC system for smart meters and other equipment assets, and would serve as enabler for more flexible reconciliation on physical or financial levels. In this way we can provide a flow for reporting of all stages of a contract lifecycle to interested parties (inception, signing process, completion of signing, expiry, renewal) in a selectively transparent manner, providing public access to hash commitments without compromising private information of signatories. TRAKEN aims to streamline and digitalize the entire customer journey by providing known environment with the known participants (matched identities of people and equipment), enabling digital onboarding and support services solutions that can be delivered remotely. Eventually this will simplify existing digital processes by reducing the number of steps or operations involved in order to streamline the entire customer journey: from the identification of the service all the way to the signature and delivery.

Total funding received under BlockStart: €2,000 (for Ideation Kick-off 2 and Ideation Kick-off 3)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/traken-2/>

3. SME Adopters

3.1 Advanced Microturbines

Our core business is energy harvesting, based on compact patented microturbines, ranging from 30 W (for IoT applications) to 50 kW (for energy recovery). Our microturbines can be installed on existing infrastructures with minor modifications and minimal maintenance.

We aim to make our Microturbines the standard solution for improving the environmental sustainability of pipelines.

Our technology is a self-powered gas and water grid IoT system that enables continuous remote monitoring, diagnosis, and management of gas and water assets through data-driven decisions.

We were keen on exploring the opportunities offered by blockchain technology to create additional value to our solution, that is based on a self-powered IoT system, supplying field sensors that monitor water assets in off-grid contexts.

Blockchain coupled to our IoT technology will pave the way to new business models.

Such trusted data could for instance be used to improve data security, support predictive maintenance algorithms, that could use trusted data, as well as enabling smart contracts.

During the pilot phase we partnered with BlockTac, leveraging their expertise in blockchain technology. In the Pilot stage we tested a solution where IoT data generated using a hardware set-up based on a Raspberry board by BlockTac, were secured with blockchain and transmitted to a cloud.

“BlockStart has provided us with the unique opportunity to explore the opportunities offered by the blockchain technology and how it could be applied to our business focused on energy harvesting solutions for water and gas pipelines.”

Emanuele Guglielmino, CEO

Total funding received under BlockStart: €4,500 (for Ideation Kick-off and Pilot stage)

This and further information is publicly available on the following webpage on BlockStart’s website:

<https://www.blockstart.eu/portfolio/advanced-microturbines/>

3.2 Applied Research Solutions

Applied Research Solutions provides data science software development alongside research and development consulting and training services for several customers. The mission of the company is to drive the adoption of data-driven innovations in mostly risk-averse and conservative industries from manufacturing, food processing, oil and gas, power generation and utilities. The focus area of the

company is thus on industry and energy applications in order to improve productivity, reduce waste and achieve energy efficiency.

We are constantly seeking to test and adopt new, state-of-the-art, technologies for our field of activity in the industry and energy domains. As there is a growing interest in blockchain, mainly related to cryptocurrencies, we were interested to go beyond this and try to find out firsthand if there is real value behind its usage in other application areas. This was also a learning experience to find out many technical details that would help us in the future to provide high level services to our customers. The interest of industry in blockchain solutions is growing and having a use case developed within the Blockstart program would allow us to present tangible results to potential customers, offer significant competitive advantages and develop the relation with the DLT/blockchain provider SME. Networking with partners of the Blockstart consortium and the other Blockstart ecosystem members was another important motivation. For the pilot stage, we envisioned that, as automated decision algorithms are being deployed at larger scales in safety-critical control systems, the trustworthiness of the input data needs to be validated beforehand and mitigate false data injection and data poisoning attacks. This increases the confidence in the machine learning solution with minimal computing and cost overhead and can drive end-user acceptance. With growing adoption of blockchain applications we also expect the number of suppliers of this technology to increase.

We develop and provide services based on a dedicated hardware solution. This is a pilot system for training and research and development of smart manufacturing solutions. It realises the complete production of a 3D printed part with current, Industry 4.0 enabled, automation technology. The five stages of production are covered by: pallet station, base piece, robot handling and assembly station, top piece station and storage station. The use cases of the flexible assembly line for training, research and application development are related to the following topics: PLC programming (Siemens S7-1200 and S7-1500 family IEC 61131-3 compliant PLC programming under the TIA Portal/Step 7 development environment), standard-based industrial communication (IO-LINK, CANopen, PROFIBUS, PROFINET, RFID, OPC-UA, MQTT), drive systems (AC and DC motors, synchronous and asynchronous motors, brushless motor), human machine interface (Siemens TP700/TP1500), robot programming and integration (ABB IRB120C) an energy monitoring and management (Sentron PAC3220).

In this context, by adding the DLT/blockchain solution as an additional data processing and validation layer on top of the existing system, we aim to present an enhanced case study that proves the security of process critical data that is subsequently used in automated decision making. Collaboration with the provider partner is also essential for future projects where this can be implemented in production together with the industrial automation solution.

We have added a blockchain data certification layer between the physical equipment and the algorithms for forecasting and anomaly detection that use the data generated for higher level tasks e.g., indirect inference of defects from the recorded energy traces at each station level. The flexible assembly line that we used for testing and validation is a five-station system which goes through all the steps of producing a sample product from individual parts, handling, and assembly and finally storage. This is a complete product which is delivered to customers, mainly technical training centers and universities. We also have one for research purposes at the university. One of the manufacturing stations, the robotic cell, can also be used as a stand-alone equipment for developing applications with Siemens S7 family PLCs and an ABB IRB120 robot. Besides from the plc and robot technologies, many types of industrial communication (rfid, io-link, profinet, opc ua, mqtt, etc.) are integrated as

well as sensors and drive systems. For this station, a digital twin model has been developed to enable rapid testing of various control strategies, using CIROS modelling software from Festo, which can be used also as synthetic data generator. Types of data include, digital sensor timestamps, reflecting the progression of the product pallet through each station, and energy readings from the robotic cell over multiple assembly/disassembly cycles. The blockchain layer can be deployed on a local embedded computing device, Raspberry Pi or Siemens Nanobox with Linux OS, or can be streamed in real time to a BlockTac system via mqtt.

"Participating in the BlockStart program helped us to better understand blockchain technology and discover relevant use cases in the industrial and energy domains that we focus on. Various preliminary meetings with blockchain solution providers enabled networking activities, including at the ideation event, and discovering highly innovative start-ups from all over Europe. Progressing to the piloting stage we were able to define the practical usage of blockchain technology to guarantee the integrity of industrial data collected from a flexible assembly line system thereby assuring the safety of the control actions and reliable predictions of machine learning operating on this data e.g., fault detection based on energy meter readings. Finally, the collaboration with BlockTac for piloting their solution was highly effective in validating the industrial blockchain use case in our smart manufacturing application."

Grigore Stamatescu, Research Scientist

Total funding received under BlockStart: €4,500 (for Ideation Kick-off and Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/applied-research-solutions/>

3.3 Association 3 Barrios

We are a neighborhood association that works to satisfy the collective needs of the neighborhood.

Vision: To be a space of socio-cultural, educational and labor reference for the residents of our neighborhood

Mission: Improve the general interests of neighbors to promote local and community development.

The implementation of a method that helps to improve the lives of people living in a poor neighborhood, such as the blockchain social currency that we use with Comunitaria.

This solution is a way for us to improve the image of the neighborhood and give it greater visibility and recognition.

We have been using Comunitaria's social currency for people to buy fresh food from local businesses and we have seen what impact it has on people.

"We are very excited that an association as small as ours can be participating in a European program. This experience has taught us a lot about new technologies that can improve a neighborhood. "

Salvador Muñiz Soto, President of the Association

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/association-barrios/>

3.4 Atfield Technologies

Atfield Technologies delivers solutions for data-driven management of vineyards. Our platform Winessense® combines advanced software modelling with tailor-made hardware to address the key challenges in sustainable viticulture. Established in 2017, by founders with decades of multidisciplinary experience across different industries, the company focuses on technologies enabling efficient growth of high-quality permanent crops.

Atfield has teamed with BlockTac to implement blockchain solution that would provide data immutability and pave a path toward food traceability, insurance agriculture and use of self-sovereign identities in agriculture/food production.

Atfield's main product Winessense® is microclimate-driven decision support system for viticulture. It is in commercialization and scale-up phase, currently being broadly deployed in Serbia and SE Europe, with ongoing pilot in Oregon/USA. We have identified 2 dilemmas: 1) How to verify activities taken at field? 2) How to allow sharing data from various providers and data sources?

Field data and historical data are of great importance for development and verification of digital twins of vineyards and orchards. Blockstart is our first field test of blockchain in agri-tech domain and we plan to further work on refining this solution into new agriculture-insurance tool.

BlockTac has enabled easy writing of our data to Ethereum blockchain with the help of BOT device. We've tested MQTT and Rest API communication protocols. To reduce the cost of writing to the public Ethereum network, in addition to increasing

a little bit more data security, we've use a tool that regulates the interval time of the IoT data that we have to write to Blockchain.

"Atfield as an agri-tech company approached BlockStart with primary goal to learn more about the latest blockchain from-the-edge solutions that could be applied in IoT scenarios. For us, the initial goal has been achieved after the two-day info session, on which we were in position to meet 23 companies and then organize 1:1 meeting 7 seven of these. It is hard to imagine more efficient way to meet new experts in field and explore potential cooperation. It was really on the level of high-quality conference. It turned out that our roadmap could be compatible with some of these companies, so we decided to

participate in the second phase. With great assistance from company BlockTac, we've managed to use public blockchain with good trade-off of costs. This helped us in shaping new technical solution for insurance agriculture."

Srdjan Tadic, CTO

Total funding received under BlockStart: €4,500 (for Ideation Kick-off and Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/atfield-technologies/>

3.5 Bar Cautivo

Bar where breakfast and lunch are served.

Vision: To be the bar with the best service inside and outside the neighborhood.

Mission: to offer quality service and food to our customers.

I believe that a technological and innovative solution can help to improve my business economically in the long term.

The consumption of solar energy to save on the energy bill of my store represents a significant savings in my business expenses. In addition to contributing to the generation of a social currency that benefits the people of my neighborhood.

Comunitaria have been studying my electricity bill to see how much I could save by buying solar energy generated in the neighborhood. Comunitaria is preparing to expand the installation of the solar panels before we can sign an agreement.

"I have been able to learn a lot from participating in this program. I have never done anything like this before, and I have found it a very good experience to improve my knowledge on how to use new technologies that have a social impact. "

Angel Clavero Ortega, Self-employed

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/bar-cautivo/>

3.6 Bersey

Innovation Consultancy Firm.

We believe that innovation is the tool capable of responding to today's economic, social, and environmental challenges. Innovation is complex, but at Bersey we are experts in its materialization and financing.

Our mission is to provide experts, time and space for organizations interested in developing innovation in their organizations to grow in a safe and sustainable way

Sustainability is a reality that companies are beginning to embrace. Moreover, authorities are pushing for measures to facilitate the achievement of the global targets set in relation to the increase in the average temperature of the atmosphere. Bersey, a company that offers services related to innovation, wishes to offer a new category of services to its clients, facilitating the exchange of voluntary carbon credits.

Bersey will position itself as a pioneer in offering value-added services related to sustainability. This will allow us to create a new business area, focused on providing innovation and sustainability-related services.

The objective was to develop a real and certified monitoring of CO2 emissions in industrial environments.

In collaboration with HOPU and in a structured manner, the following activities have been developed:

- We proceeded to the design of the service.
- A technological solution was designed.

Once these milestones were completed, we proceeded to the development of monitoring (x2) in industrial environments. For this purpose:

- A work team has been created with the technicians of the industrial facilities.
- Emission sources have been identified as well as a definition on how to estimate them.
- HOPU technology has been installed.
- Real-time monitoring of CO2 equivalent emissions in industrial areas has been carried out.
- The data has been analyzed and a calculation of the emissions in each facility has been made.
- The measurement has been certified, with the use blockchain technology.

Next steps:

This first certified measurement will make it easier for the company to assess the environmental impact of its processes on its products. To do so, the technical team will work on an action plan aimed at reducing the environmental impact of our processes.

"It has been a great experience for us, as it has allowed us to meet great travel companions. BlockStart has made it easier for us to introduce a disruptive technology like Blockchain in our company and apply it to new innovative services that we would not be able to provide without this technology."

Alberto Ezcurra, CEO

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/bersey/>

3.7 Binaré

Binare (binare.io) is a cybersecurity deep-tech spin-off from the University of Jyväskylä (JYU) (Finland), and boasts more than a decade of research vision, experience and international peer validation. It offers both automated solutions and professional advisory services to meet customer's needs for (IIoT/IoT/embedded) cybersecurity and digital privacy. Our professional advisory services leverage our unique feature rich SaaS platform and our team's top international expertise to offer cybersecurity services, such as penetration testing, detailed cybersecurity assessments and pre-certification readiness for IIoT/IoT/embedded devices, firmware and software.

Binare is a micro SME incorporated in Jyväskylä (Finland) that performed spin-off in Jul-Aug 2020. Co-founded by Dr. Andrei Costin (CEO, Senior Lecturer in Cybersecurity) and Mr. Vadim Bogulean (CTO, Solutions Architect), it got support from Unifund (JYU's investment branch) as a pre-seed investing shareholder. The origins of Binare start from Dr. Andrei Costin's more than half-decade of unique and innovative research in the lab (seminal paper on automated, large-scale, SaaS-based cybersecurity analysis of IoT firmware and devices), combined with the support from Business Finland "research to commercialization" TUTLI program where Dr. Andrei Costin was the Principal Investigator.

Binare is part of FISC.fi (Finnish Information Security Cluster), is currently aiming for the "Cybersecurity made in EU" label, and is being actively incubated and coached by Jyväskylä StartupFactory (Yritystehdas). The technology behind Binare has been validated in Silicon Valley through co-founders' participation in NIH (Nordic Innovation House) REACH acceleration program in Palo Alto (2018-2019).

Binare has been awarded one of the first ten EUHUBS4DATA EU projects, and was also a finalist in TechFounder's Batch #13 (Nov 2020) pre-qual pitching for Knorr-Bremse industrial project partnership: among 7 total finalists from 420+ applicants, and among the only 3 finalists focusing on cybersecurity

Metaverse is a concept that starts to have traction, and it will have huge application and impact on both personal and business lifestyles for years to come. Therefore, cybersecurity and digital privacy aspects of Metaverses need to be tackled and investigated as early as possible, preferably "by-design" beforehand and not as a "hot-fix patch" later.

As we aim to become a globally leading IoT cybersecurity company, that also develops and offers DLT/blockchain-based solutions for increased security and privacy of IoT deployments/devices, we are confident this BlockStart experience will help bootstrap our technology advance in the DLT/blockchain space, both in the advisory expertise offering as well as at the platform level implementation.

In this experiment, we develop for Binare.io an internal blue-print of expertise and business/technical services offering related to cybersecurity and digital privacy checks and assessments of DLT Metaverse solutions. At the same time, we offer, test, and perfect this blueprint with the collaboration of the DigitalVillage.io in close contact with their technical and non-technical teams.

This Pilot Project experiment should act as a spring-board for both sides into better and more mature and secure offerings of their services, platforms, and technologies.

"Binare.io is a deep-tech cybersecurity spinoff from University of Jyväskylä. We develop a totally unique and cutting-edge platform for automating security analysis and pre-certification of IoT devices in particular their firmware and software. We also possess and develop cutting-edge know-how, such as cybersecurity assessment of aerospace, space, and maritime systems.

DLT is and will be a cornerstone technology, and we think it has a lot of potential to help secure billions of IoT devices, hence BlockStart is a perfect opportunity to explore such R&D&I directions. Also, as we offer advisory services, this is a unique opportunity to shape our business and technical offerings related to blockchain security advisory services.

We are confident BlockStart will help bootstrap our technology advance in the DLT/blockchain space, both in the advisory expertise offering as well as at the platform level implementation."

Dr. Andrei COSTIN, CEO/co-founder

Total funding received under BlockStart: €4,500 (for Ideation Kick-off and Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/binare/>

3.8 CACTUS

We focus on energy efficiency and sustainability projects under the energy services modality, that is, CACTUS is not just an engineering company, not just an integrator and installer, not just a maintainer, but all at the same time, a comprehensive energy services company. .

We have no dependency, commercial or corporate relationship with energy trading companies, manufacturers or distributors of equipment, or installers or maintenance companies. This independence allows us to select the best solution for each project, taking only the needs of our clients into account.

We are committed to the development of an industrial fabric of small and medium-sized collaborating companies in the development of projects. In this way, it is possible, on the one hand, to optimize

customer service with resources close to and familiar with the problems of each project and, on the other hand, to contribute to business development and local employment as one more aspect of the sustainability of our proposals.

Getting involved in such an innovative project brings value to our company. That's why we wanted to offer our services and help create a sustainable energy community that helps reduce poverty.

This solution fits perfectly with the values of our company and brings us the learning of new technologies needed to improve our services.

Previously, we had made the first installation of solar panels in the church of Candelaria. Now we are going to make the second installation of panels in another church to collaborate in the creation of Comunitaria energetic community.

"It is a tool to ensure the accuracy of the information and prevent fraud. It also allows us to work with new technologies and new trends. It has been developed with SMEs in mind, but is also relevant to other types of entities. This method will also allow us to recognize our potential and participate in the potential of the rest of the members of the BlockStart program."

María Dolores Vélez Utrera, Commercial Director

Raquel Abad García-Rojo, Financial Director

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/cactus/>

3.9 Claim Technology

Claim Technology's insurtech marketplace provides API access to over 50 best-in-class insurtech providers, from quotes to claims.

We provide cloud-based software to help the insurance industry digitally transform their claims processes in the cloud. Our insurtech marketplace contains plug&play solutions and APIs from an ecosystem of 50+ best-in-class insurtechs, whilst our no-code/low-code design tools accelerate the shift from manually processed claims to zero-touch automation in the cloud.

Blockchain is well suited to a fraud bureau service where data from across multiple market participants can be shared anonymously in a de-centralised database.

Fraudsters are costing the insurance industry billions. Implementing more efficient and effective fraud detection technology can reduce premiums and improve end-customer value, service, and experience. In turn also providing better protection and cost savings for insurers.

BlockFrauds technology is changing how insurers detect and manage fraudulent claims. The technology enables voice files and images to be cross-checked against the same or similar digital assets being used on another claim with another provider, helping to identify potential fraud.

We have defined a set of API specifications that BlockFrauds can use to expose their service, enabling us to send voice and image media to the service and receive return results in near real-time, enabling us to automate claims processing with behind the scenes fraud checks.

"We have welcomed the opportunity to connect and integrate with companies via BlockStart, and look at how blockchain-based solutions can meet the need for the secure sharing of data between market participants to allow for faster and more automated claims settlement processes."

Michael Lewis, CEO & Co Founder

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/claim-technology/>

3.10 Cuerva

80 years of innovation looking for new, and better, ways to understand energy. We want to be the small-great company capable of taking energy to the next level.

We cover different areas of energy: commercialisation, distribution, O&M, generation and new services.

We want to be the small-great company capable of taking energy to the next level. That's why we strive to promote advances within our own sector and always think of the user as the centre of everything we do. We are a local, family-owned company with a global spirit. We are a company that is honest, close, collaborative and where companionship is in everything.

- User-centric in everything we do
- Promotion of developments within the sector
- Innovation as a fundamental part of our business model
- Understanding energy beyond its traditional use

Leveraging our experience in the energy sector and our knowledge of blockchain technology, we thought we could help in the creation of a sustainable self-consumption energy community where we can provide our services.

Our collaboration in this solution goes beyond our economic benefit, as we also think about the value and image that it gives our company to participate in a project with great social impact as Comunitaria.

Offering our services in something that will help many people and that will have a positive social and environmental impact in a underprivileged neighborhood is very satisfying.

During the pilot stage, we have reached an agreement with Comunitaria that we provide an energy measuring device that will allow us to measure the energy produced, consumed and sold.

"Thanks to the BlockStart programme, we had the opportunity to participate in this project in collaboration with a great team like Comunitaria. It has been a great experience.

The possibility to offer our services in something that will help many people and that will have a positive social and environmental impact in a underprivileged neighbourhood is very satisfying. We are getting closer and closer to achieving our goals.

We want to be the small-great company capable of taking energy to the next level, because innovation is a key and fundamental part of our business, and we understand energy beyond its traditional utility. That's why we strive to promote advances within our own sector and always think of the user as the centre of everything we do."

Alberto Sánchez, Head of Innovation at Cuerva

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/cuerva/>

3.11 D-Visor

D-Visor leverages cutting-edge AI-and blockchain tech for helping her customer base (mainly festivals) to improve the end-to-end security and safety of their social-cyber-physical offerings, synthesizing for example digital gatherings of festival goers long before the physical takes place.

We are willing to adopt the solution as it will complement our digital festival twin (D-GEM) that is used to monitor the safety and security at physical events, to the digital event space. Mechanism such as the NFTs for digital events etc can be infused in the D-GEM solution in this way.

Our clients will increasingly embark on digital events, either as a continuing meeting place for festival goers over the year or as a digital alternative to physical events to allow festival goers to immerse concurrently in the physical and digital event, increasing their experience and offering more convenience to them then ever before

We have had several sessions with the (business) developers and director of Digital Village to explore touch points, do digital storyboarding, and, deliver a solution design that could be implemented after this adoption phase. Furthermore we've created a road map

"Our experience in collaborating with other BlockStart teams has been truly rewarding. Of course, it took a while to get to know the other projects, and their (technological) offerings. However, after the initial on-boarding, our project has benefited not only from the other technologies, but also, from new collaborations with new people and teams. This has led to a cross-fertilization of ideas and techniques, and has proven to be very rewarding in terms of concept and business development."

Sandra Potten, CEO, strategic business analyst

Total funding received under BlockStart: €4,500 (for Ideation Kick-off and Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/d-visor/>

3.12 Harddiskmuseum

The harddiskmuseum aims to create a space for the cultivation of digital files, by bringing together different actors within the industry and creating a chain of value made up of artworks, experiences and collections. Given the history of the storage and cultivation of digital files, the museum has now developed its own marketplace in order to showcase and make available the works within the community. With this new platform the museum aims to create a multitude of mini art metaverses in order to establish its own metaverse, 100% dedicated to digital art.

We think that blockchain technology is the perfect fit to deliver our vision to the market, as well as acting as a perfect support for our business model and ownership solutions.

Thanks to Digital Village we are able to display a new immersive, interactive, globally accessible version of the harddiskmuseum.

1. graphic implementation of the virtual museum
2. conceptual, 3D development
3. adaptation of 3D assets
4. Designing of UX and interactivity
5. curation of the first exhibition
6. promotion

"By participating in BlockStart we were able to get an insider perspective of different companies in different sectors and how they use and implement blockchain technology in order to create value. By interacting with, and listening to other companies present, we were able to look at value creation from different angles as well as discovering new solutions which can be implemented on our own project. The process of matching developers and adopters has allowed us to expand our networks and establish key relationships with some of the companies that participated."

Total funding received under BlockStart: €4,500 (for Ideation Kick-off and Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/harddiskmuseum/>

3.13 Horizer

Horizer aims to fragment and democratize the energy market by providing every person with the means to have clean, mobile energy accessible, shareable, and tradeable anywhere.

Companies with a vehicle fleet and vehicle owners use Horizer's solar module and energy app to reduce fuel consumption, lower cost, and CO2 emissions.

We recognize the opportunity to join BlockStart as a partner to develop a blockchain solution that can help grow solar mobility as a transparent energy-producing, sharing, monitoring and performance enhancer for our business with a partner experienced in blockchain development.

Blockchain for Solar Mobility

By the possibility to share the information and make the property available to someone for a certain period of time, blockchain would greatly enhance our solar mobility solutions. It would be possible to use a vehicle as an energy generator, pay directly for the energy that the users in the network of vehicles, and solve problems such as electromobility by using intelligent contracts through the blockchain. So the costs, the property, and the use of everything could be distributed on the blockchain.

Especially in the complicated energy market, great progress could be achieved through the transparency and traceability of blockchain technology. This would make it easier for vehicle solar systems to charge, make energy tracking easier, facilitate asset management, and make it easier to issue certificates. This good regulation and transparent tracking should have a great influence on successful change, especially in the energy transition. Additionally, energy can be allocated to each vehicle individually, and then no matter where they charge or unload in the grid, for example, and thus facilitate billing.

The platform that the HOPU team has developed can monitor, in real-time, the values studied in detail such as energy, efficiency, power, average, normalised or voltage of the data provided by Horizer about the activity and gas emissions produced. On the one hand, the platform will recommend the user, depending on the consumption and emissions, the type of action according to the value obtained. On the other hand, the user will see the average values received to date and between specific dates to check the average consumption values obtained.

Finally, this platform will provide the user with a graph that informs about the historical values mentioned above, able to be downloaded in .TXT, .CSV or .JSON format at any time, and select any point in the history to know its exact value

"BlockStart program was extremely rewarding for Horizer team— greatly structured Program with in advance prepared all the material, templates and easy to follow guides on how to; accommodating Meetings and sharing of knowledge and proved experience; and most of all the Network. Meetings with the BlockStart experts in blockchain and entrepreneurial network helped us see around corners and were invaluable in helping to drive our adoption of blockchain technology."

Jasmina Ristic, Managing Director

Total funding received under BlockStart: €4,500 (for Ideation Kick-off and Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/horizer/>

3.14 Lagoon

Lagoon is a digital based fashion company focusing on circular economy solutions for secondhand clothing market.

Lagoon platform integrates offline & online channels to provide a better experience to the millions of buyers & sellers of preloved fashion. Buyers discover the fashionable clothes available in stores. Sellers get more bang for their buck faster. Unsold clothes are swapped with points. The cycle repeats.

Total funding received under BlockStart: €1,500 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/lagoon/>

3.15 Letmellor

Letmellor spol sro. To turn ancient property to socially relevant and commercial success.

Financial investment in ancient buildings is unsustainable unless they combine social connectivity with commercial viability. Commercially successful property management emphasises premium location and architectural features to enhance rental market competitiveness whilst phasing out dependency on maintenance grants.

EV adoption will continue to accelerate across the EU. Levoca is a UNESCO site and a prime tourist destination, but EV charging infrastructure is utterly inadequate for both the local population and

tourists. AgeVolt provided a turnkey solution which will be both easy to use and manage. Backed by blockchain, transfer and crediting of funds is secure and transparent.

EV charging infrastructure enhances the rental viability of holiday accommodation. Further for the local population and commercial/residential tenants, an additional EV charging station in the centre of the town will be increasingly useful.

Much cooperation was needed to complete grant applications, confirm charge station locations and the technical (electrical power) parameters of the property. As the building is in a UNESCO area, physical installation had to be discreet; this was done magnificently by AgeVolt. After installation, AgeVolt established the station on their portal and then advised on coin minting and use of their mobile applications.

"BlockStart provides flexibility and ease of use, this is critical to enhance EV uptake and adoption. Transportation methods are changing, and the project will meet the future needs of a property hosting tourists, residential and commercial tenants whilst enhancing local EV charging infrastructure. AgeVolt's EV charging solution was implemented sympathetically, in keeping with Levoca's World Heritage status."

Stephen Mellor, Owner

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/letmellor/>

3.16 Maravar

Maravar is a guest house with a beer wellness.

Our goal is to bring a unique relaxation experience. The "maravar" combines the home hospitality of a small family business with an exclusive beer experience. We brew beer in the traditional way in our small brewery. We prepare food from local ingredients. We are preparing a unique beer bath to relax body and soul.

We are big fans of Blockchain technology. We support the idea of decentralization and we are in favor of most systems working that way.

The very nature of the loyalty token service attracts the attention of our facilities as an innovator who is a leader in the industry. Our future guests will appreciate that they will receive something extra in addition to the services they actively use.

Together with AgeVolt, we have installed a charging point at our guest house. We tested the system of charging and allocating loyalty tokens. We are actively involved in simplifying the system. We regularly report improvements and work together to implement these adjustments.

"Maravar is a guest house with an exclusive beer wellness. Just as our focus on services is exceptional, we are happy to work with progressive projects. At BlockStart, we work with AgeVolt to create a loyalty system for charging electric cars. We are very happy to be a part of these projects from the very beginning."

Patrik Adamčiak, Marketing

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/maravar/>

3.17 Nymiz

Personal Data Anonymization Software based in AI.

Nymiz mission is to take care of peoples' privacy no matter where and when with the best AI-based solution. Nymiz mission is to become the state of the art on personal data protection in the industry worldwide.

A necessary technology that adds a plus on the anonymization process to guarantee the non reversibility of the anonymization

Helps trusting the anonymization process with traceability so it means more sales

Essentially Privacy consultancy and blockchain integration within our software tool

"What I like most from the Blockstart program is the easy way to connect different companies to join forces to reach a common goal.

I highly recommend this kind of programs to stay in touch with new technologies provided by the startups and is an interesting technology scouting technique that gets you closer to technology."

Oscar Villanueva, CEO

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/nymiz/>

3.18 Pescadería Juan Antonio

Sale of fresh fish at the food market.

Vision: To be the fish shop with the highest quality fish in the neighborhood.

Mission: offer my customers a quality product and service.

For the progress of my store, it is important to innovate and test new technologies that can add value to my service.

This solution increases the sales of fresh fish in my store, and also reduces electricity costs.

In the pilot stage with Comunitaria, we have been able to sign agreements to share the energy produced by the solar panels installed at the church of Candelaria, Los Pajaritos.

"I have been delighted to participate in this program, I have been able to learn a lot about technologies that I did not know and with which I have realized that they can bring a great value and efficiency to my small business."

Juan Antonio Campos Marino, Self-employed

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/pescaderia-juan-antonio/>

3.19 Protasis

IT technologies and communications are now changing cities, making them smarter. Every municipality and modern business is improving its services and is upgrading its infrastructure to the benefit of its citizens and its consumers.

They, therefore, need to be aware of and improve their energy footprint, applying smart service solutions, reducing the response time to requests, supporting the vulnerable groups of citizens, handling assets in the best possible manner and, thus, saving the relevant resources.

The term Smart City refers to the use of digital applications and ICT networks, aiming to a more efficient resource management and to the reduction of emissions for the improvement of life quality in the city.

More and more cities adopt technologies that can allow the smart use of transports, the correct use of water and the best possible waste management, while they apply more efficient solutions for lighting and heating.

Especially large municipalities seek for innovative applications that not only modernise the public utility services, but that, also, increase the safety of the citizens – even more so, in situations of a crisis.

Smart cities make extensive use of electrical sensors of all kinds, to collect data from users, devices, buildings and other infrastructures. The analysis of the data provides useful conclusions for energy saving, for the design of technical projects and the co-ordination of maintenance works.

PROTASIS recognises the needs of the modern Municipality and Businesses, developing solutions that decrease the asset management costs. Based on years of experience and expertise in the field of energy, we use the knowledge extracted by data, providing our customers with the tools to receive the most up to date decisions.

The philosophy of PROTASIS is the development of smart applications that provide the necessary information, to the right people, at the right moment.

Total funding received under BlockStart: €1,500 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/protasis/>

3.20 Pumacy

Pumacy Technologies AG is a leading specialist for Applied Knowledge Processing in the manufacturing industry. Because of its history as a spin-off of Technical University Berlin and Fraunhofer, the company still has a strong research. A portfolio of own solutions and value-added products is the basis for the practical implementation of sophisticated methods of knowledge processing. Due to the focus on compliance-relevant processes, there is very close collaboration with the customer companies.

Total funding received under BlockStart: €1,500 (for Ideation Kick-off)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/pumacy/>

3.21 Thunder Hunter

Energy consultancy specialized in optimizing the energy supplies of our clients. We get the best rate from the marketers that exist in the market and we take care of the whole process, offering our clients honesty, transparency and follow up in everything related to their supply point. We study monthly consumption and costs and we represent the client in a comprehensive way in front of the supplier.

Our approach to BlockStart, first of all, is motivated by the social character of the project in which we are collaborating. We would not have come so close to this technology if it were not for "Techos que alimentan". After a first look at the project in general, we realized that this is a great opportunity to approach blockchain and try to find innovation for our project. In a market as atomized and traditional as the one of energy traders, it is complicated to find solutions for our customers. A new world is opening up for us and we are going to take advantage of it, in addition to "Techos que alimentan", to be able to track our larger customers, integrating smart meters with the blockchain.

We are sure that we can provide a better service to our customers through these new technologies, even if it was not one of the initial approaches of the SME, but we cannot let it pass in order not to be left behind and to be able to expand our value proposition.

The blockchain approach is going to add value to our company in two ways:

Firstly, in the "Roofs that Feed" project, on the one hand, all the learning we have had to do to get fully into all the areas of the initiative. Also seeing the possibility of starting to implement corporate social responsibility policies, which in such a young SME, we had not yet had the possibility of joining a project of a social nature, so that we can make a positive impact on our environment and relate to other companies and citizens in another way and not in the pure framework of the work we do.

Secondly, and after the learning we have done, we have seen the possibility of integrating new forms of control and measurement in the energy supply points of our customers. Thus, in the near future, we will also be able to implement blockchain and all the advantages of traceability that it offers so that our customers can have all the real, accurate information and with all the security and privacy that this technology offers.

The main objective of this initiative is to be able to take advantage of the savings that our clients obtain through our work, and to take a part of that amount to donate it to the project. Thus, the beneficiaries of this initiative will be able to receive that "energy" that our customers are saving. How can we do this? Considering that the project is based on solar energy, although our donations cannot go directly to the users of that energy, they can be used for the installation of the solar panels.

In addition, as happens on many occasions, not all the energy generated is used directly in the consumption of the place that has installed, therefore, we also have to manage the surplus of that energy, which we will sell to some of the marketers with whom we have an agreement and will go to reduce the cost of energy to be used from the traditional electricity grid. At the moment, the use of batteries to store all this surplus energy is too expensive and this model of selling the exceeding energy is more interesting. We are working to get it up and running as soon as possible.

"This is the first time we have participated in a project of this nature and the experience has been excellent. Being able to work side by side with our colleagues from Comunitaria has been a very good learning experience. An SME like us, located in a very traditional section of the electricity market, never expected that in addition to our daily work we could include technology and innovation in our projects. One of the reasons why we decided to participate was because of all the social burden that the project has, what could be better than broadening our horizons by carrying out actions that leave good things in our environment? We insisted on this precisely because another of the reasons for getting fully involved in the project is that the impact is going to be in our own city. Being related to Seville is very important and is part of Thunder Hunter's DNA. On the other hand, BlockStart's project

management has made our work much easier, since we have been able to focus 100% on management and not on tons of bureaucracy. We are very grateful."

Francisco Montaña, Communication

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/thunder-hunter/>

3.22 TuComunidadAhorra

Effective management of homeowners' communities.

Mission: To give a personalized and efficient attention to my clients at a low cost.

Vision: Manage all the homeowners' communities in the neighborhood.

Great opportunity to develop an interesting development work in a marginalized area. Possibility to increase value in a depressed area and optimize the use of natural resources.

To add value to the management of my communities, offering them a way to save energy in which they can use a very efficient technology with multiple benefits for them.

We have been looking for a community of homeowners interested in being part of the energy community to be created in the neighborhood so that they can benefit from the use of the energy and the social currency used in the project.

"My company is very proud to participate in this program. I have learned the multiple uses that blockchain technology can have, and I am grateful to have had the opportunity to apply it to my clients."

Antonio Guillena, General Manager

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/tucomunidadahorra/>

3.23 VERTLINER

VERTLINER is a field-robotics startup developing autonomous robotic systems for the precise indoor assessment of building assets.

Mission: VERTLINER has as a mission to bridge the digital gap between the building assets and the with key stakeholders of the AEC industry, enabling remote access to any indoor areas of any infrastructure.

Vision: VERTLINER has the vision to automate the assessment activities in indoor environments, transforming any infrastructure into a smart mega-asset that encapsulates autonomous monitoring activities.

The problem is focusing on the low visibility of assessment activities around the MEP systems, as part of the building's core infrastructure. Such indoor application systems are crucial, because they are improving the quality of life within buildings.

We envision a DLT solution to be connected with our platform in order to streamline the supply chain process starting from the project site, moving to the factory, and extending it to an embedded form of digital assets that belong to the virtual replica of a Smart City.

VERTLINER is developing autonomous robotic systems enabling an end-to-end process capable of remotely connecting the main contractor of a building under development, with the service providers, and the manufacturers of MEP systems.

Succeeding to embed the digital twin of the asset within the digital form of the building as part of a virtual Smart City, would achieve safer operation for users, compliance for regulatory agencies, cost-efficiencies for facility managers, and transparency for manufacturers.

Furthermore, such integration is expected to reduce the frictional transaction cost between the contractor, facility manager, while generating digital assets that could potentially become subjects with incremental monetary value.

The KPI was defined according to the particular needs of VERTLINER's robotic solution.

Embedding the digital twin of the asset within the digital form of the building as part of new assets in a virtual form of Smart Cities.

"The participation of VERTLINER in the BlockStart program as an end-user SME, provided incremental value to the way the digital outcomes of our robotic operations could act as the connecting link to a digital representation of building assets that could exist as parts of the digital replica of Smart Cities, encapsulating digital operations as actually run in the physical world."

Michael Striligas, CEO

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

3.24 Villa Severka

Villa Severka is a family type apartment house located in attractive tourist area of the town of Stary Smokovec between Hrebienok and Jakubkova Luka in High Tatras.

Our customers are waiting long time for any benefits when staying longer – more than 3 days, they want to travel around, explore and they would like to use their EV cars. This solution is the dream come true for our apartment guesthouse guests.

Charging EV cars combination with loyalty points will bring more interest for our accommodation service. Since this date, we only give our returning customers voucher-plastic loyalty card for 10 % or more off from retail price. Now there is another reward that customers can use. Simply said, secure and modern way to charge EV vehicles and give more to loyal customers with blockchain loyalty system.

From finding a place where the solution will be operating to technical obstacles connecting the solution, we finally started to test our solution. We did test EV charger on tree user cases, and it worked just fine. But only real life of recuring customers will test the loyalty platform and we do hope for success.

"Impressive and high organised"

Peter Hubka, Founder, CEO

Total funding received under BlockStart: €3,000 (for Pilot stage)

This and further information is publicly available on the following webpage on BlockStart's website:

<https://www.blockstart.eu/portfolio/villa-severka/>