BLOCK START

D4.2: BlockStart DLT solutions portfolio - 2nd version

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PP	Restricted to other programme participants (including the EC Services)	
RE	Restricted to a group specified by the consortium (including the EC Services)	
CO	Confidential, only for members of the consortium (including the EC)	

BlockStart Consortium			
Participant Number	**Participant Organisation Name**	**Short Name**	**Country**
1	Bright Development Studio, S.A.	BRPX	PT
2	UAB CIVITTA	CIVT	LT
3	F6S Network Limited	F6S	UK

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1. Introduction

This report compiles the DLT solutions developed in BlockStart's open call #2 Prototype and Pilot stages, which took place from December 2020 until June 2021.

The Prototype stage included 10 teams (ComeTogether, IBISA, isLucid, Knowtary, LoanXchain, Motoblockchain, MyLime, Sensefinity, Sixphere, Stonize).

5 of those teams (ComeTogether, IBISA, Knowtary, LoanXchain, Motoblockchain) were selected to the Pilot stage, implementing their solutions in 16 end-user SMEs.

The 10 DLT solutions developed in BlockStart's open call #1 are showcased both in this report (included in the Deliverables section of our website), and under section Our Startup Developers from BlockStart's website.

2. DLT solutions portfolio

2.1 ComeTogether

2.1.1 Company

ComeTogether (cometogether.network) provides infrastructure for event ticketing, fraud and scalping prevention along with secondary market revenue management. EOSIO blockchain ticketing engine controls the entire lifecycle of a ticket.

Developed BackTogether – COVID-19 Passports (COVID and antibody test status) when the events industry shut down during lockdowns. Functionality has been integrated into ComeTogether, adding a health component to the tickets, to enable safe restart of events.

2.1.2 Prototype solution

The scanner native app can scan QR codes representing tickets. On every scan it invalidates a ticket on the EOSIO blockchain and provides ticket status validation. The app works under low bandwidth and low battery consumption as well as in offline mode. The company managed to achieve the aforementioned goals by using MQTT protocol and MongoDB realm sync. The app is also working concurrently for many scanner devices with real time sync among those devices for events with multiple entrances.

For example, as soon as a validator scans a ticket for a specific event on one device an update occurs to all other scanner devices that are connected to this event. The app is intended to be used by the ticket validators in the entrance.

BackTogether is a COVID-19 health passport solution providing archival and status validation for COVID-19 tests (rapid/RT-PCR), antibody tests and vaccinations. The application can be interoperable with any other health passport solution (from the public or private sectors) that is required.

The health status validation is targeted for access control to sensitive or crowded places (eg., nursing homes, hospitals, airports, live events, theaters, etc.).The access control rules are customisable, with the possibility to set which tests or vaccines will be accepted, for how much time tests are considered valid etc. Therefore, making it really adaptable to ever changing government or local regulations.

2.1.3 Technical development during Prototype stage

During the development of ComeTogether and BackTogether, the following technical developments have taken place:

UI/UX updates on BackTogether app

Developed new BackTogether features as requested by the clients (e.g., ID scanning, refactor of our model architecture – added superadmin, added photos on QR scanning)

Launched BackTogether app on iOS – https://apps.apple.com/us/app/emergencyhelp-passports/id1538164399

Finalised the QR code scanner native app. More specifically:

- Deployed an MQTT Aedes broker to an AWS EC2 instance. At the broker level of the system, the company developed all the logic around the invalidation of the tickets on the Blockchain and the distribution of the information to all the stakeholders. Using MQTT helped the team satisfy the request made by one of their partners (Eightball) who asked for the scanner to function under low bandwidth circumstances. ComeTogether tested the solution in a relevant environment with bandwidth up to 70Kb/s and all the tests passed.
- It also implemented the MongoDB realm sync functionality which enables the app to work offline. This feature was requested also by some partners.
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Next 12 month roadmap:

- Integrate BackTogether into ComeTogether
- Ticket wallet app
- Integrate seating into ComeTogether
- Resales
- Organizer dashboard

2.1.4 Business development during Prototype stage

During the development of ComeTogether and BackTogether, the following business developments have taken place:

Updates on both ComeTogether and BackTogether decks

Talks with Attica region in Greece about BackTogether integration

The company progressed on closing a deal to pilot BackTogether with Iaso Thessalias

Published three press releases and demonstrated BackTogether solution in the Greek national TV

Secured a new contract with Tickets For Good

Attended ILMC virtual event where they met one potential German Business developer and one potential UK partner operating in merchandise as well as made other connections – e.g., in China

Joined SAFE hackathon where they boosted networking

Created ‘Mazi.live’ initiative to bring back live events in Greece – got the approval to pilot a live event with 400 people in Greece (May 2021)

Got selected by Qatar SportsTech accelerator to provide innovative solutions for major international sports events, such as the FIFA World Cup 2022

Hired 2 medium level software developers and almost closed a German Business developer

Also progressed on their fundraising – had talks with investors in Greece, as well as with the Qatar Development Bank

Within the next 6 months, ComeTogether is planning to hire two more medium level software developers and one business developer. Additionally, the company plans to onboard more health service providers with BackTogether app and event organizers with the ComeTogether app. In addition, they want to pilot more live events throughout Europe and Qatar. Finally, the company wants to close a Qatar Stars League team as a beta user of either BackTogether or ComeTogether and fundraise a minimum of 200.000 euros

Efforts to validate ComeTogether's market/fit:

Reached out to more than 10 event organizers

Reached out to more than 4 health service providers

One UK ticketing company committed to a contract for both of the company's solutions

Some of the biggest event organizers in Greece have shown trust for both of the company's products (Mazi.live)

They will pilot a live event of 300-400 people in Greece in May 2021

2.1.5 Pilot stage implementation

Here is a video summarizing ComeTogether's pilot implementation: https://www.youtube.com/watch?v=xz7Ib8WasHM

In BlockStart, ComeTogether implemented its "BackTogether" product in 2 SME adopters:

Pilot no. 1 with Tickets for Good:

During the Pilot stage, we released the 'Tickets For Good' Web App where the purchase of the blockchain tickets can take place and the Ticket Wallet App where the tickets are represented by a dynamic QR code. The apps can be used by Tickets For Good's customers for a more advanced ticketing experience.

Main KPIs included the:

- Finalisation of ComeTogether's primary ticketing solution as a whitelabel
- Technical set up of the whitelabel solution and modifications making it applicable for Tickets For Good's requirements

Release of the 'Tickets For Good' Web and Ticket Wallet App

All KPI's were successfully executed. As a result we have a fully functional product under Tickets For Good's own branding.

Pilot no. 2 with Emergency Help:

During the Pilot stage, we made updates on the 'Emergency Help' Health Certificate App on both Android and iOS Platforms. The App was also used for the issuance and storage of Covid-19 test results for Emergency Help's customers. This was a great way to get customer feedback on the product.

Main KPIs included the:

- Update of the App
- Issuance of Covid-19 tests in the App

Of course, constant communications and feedback with Emergency Help were crucial in order to make things work properly and according to their needs.

2.1.6 Testimonial

"We are very excited to have been given the opportunity to collaborate with experienced mentors who provided valuable advice in many aspects of our business. They helped us to pay attention to the things that had the most value for our growth. In addition, we got a lot of support/sponsorship for attending industry events, where we increased further our networking. Last but not least, the funding provided by the programme enabled more team members to come back and work full-time once again."

Efstathios Mitskas, Co-founder & Head of Product, ComeTogether

2.1.7 Public profile

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

https://www.blockstart.eu/portfolio/come-together/

2.2 IBISA

2.2.1 Company

IBISA is a tech platform for insurance actors to unlock the agriculture microinsurance market worldwide. IBISA designs innovative weather-based index products and provides a platform to distribute and manage them in a cost-efficient and automated way using Earth Observation and blockchain technologies.

2.2.2 Prototype solution

Despite the investments on satellite infrastructure and ground infrastructure to exploit Earth Observation Satellite data, the access, dataset selection and use reminds highly technical. It requires specific expertise in both, Earth Observation data analysis and software programming. Yet, this data is not immediately actionable.

Nowadays many businesses could benefit from the power of satellite Earth Observation data: smart-farming, agriculture advisory, agricultural production buyers, agricultural sellers (seeds or fertilizer),

banks and micro-finance institutions but only big players can afford it and develop the required expertise, knowledge and tools to leverage correctly this technology.

The problem IBISA is solving with Minorka is that SMEs today don't have access to valuable satellite data for their business.

Minorka can leverage IBISA's knowledge and the technology the company has developed for IBISA's loss assessment platform to democratize the use of satellite data and open the access to all actors, even the smallest, to its benefits.

Creating a distributed platform to leverage IBISA's crop failure crowd-sourced assessment tool opens the opportunity to other businesses to use this technology and benefit from the power of the technology and the community the company has built.

2.2.3 Technical development during Prototype stage

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

Minorka prototype is an Ethereum Dapp that can trigger the IBISA Earth Observation platform directly. IBISA has selected Ethereum because this is, in their point of view, the standard when it comes to public decentralized application, with a very rich toolbox for developers and users (Truffle, Etherscan, uPort, etc.). By selecting this standard, they hope their solution can be easily integrated or enriched by external users that are able to connect or consult directly IBISA's services.

IBISA's long-term vision is to transfer all its remote loss assessment platform on Ethereum, where IBISA is just a client of Minorka and the los assessment, but that other services / business can be built on this tool.

The solution is built around 2 main functionalities: Request an assessment and consult the result of an assessment once it is done. The assessment in itself is also a key element of the solution. But for this, IBISA capitalizes on its existing infrastructure, and reuses it as is.

Thus, the company developed 4 main features in the context of BlockStart project: Login creation, Assessment request, Status update and Consult assessment status.

2.2.4 Business development during Prototype stage

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

During prototype stage, IBISA defined its go-to-market strategy, developed and refined a commercial presentation and defined and started socializing a pricing model.

They target directly crop consultants, advisors and SMEs developing farm management information systems to integrate Minorka into their offering. These are the company's channel for agriculture retailers and farmers. It is a B2B model.

They engaged with 5 potential SME adopters that brought two different opportunities:

Direct work with farmers: two Malaysian SMEs that bring the needs at farmer level and help IBISA understanding farmers needs and priorities. This is helping the company to measure the value of the assessments and other required products additions.

Complement of an existing service: introduce Earth Observation actionable data as part of IBISA's SMEs partners portfolio towards their customers.

The current pricing is based on pay-per-use and the company defined a tiered model.

To validate the company's market/channel fit:

IBISA engaged with 5 potential adopters

Out of the 5, 2 are the type of target customers the company is looking for.

The 5 potential adopters tested the solution for farms in Malaysia, Spain, The Netherlands and Poland.

2.2.5 Pilot stage implementation

Here is a video summarizing IBISA's pilot implementation:

https://www.youtube.com/watch?v=z5Pp8GJtwdg

In BlockStart, IBISA implemented its "Minorka" product in 2 SME adopters:

Pilot no. 1 with SmartREM:

Minorka was used for the purpose of fire damage as well as recovery assessment on agriculture area by vegetation assessment in specific months. It showed that it is well-designed tool for such an analysis.

Successful use case for Minorka. Assessment completed.

Pilot no. 2 with SmartREM:

Minorka was used to assess the damage caused by hailstorm in specific area in Spain last year. It shown that in particular months when the harvesting or start of the dry season occurs Minorka can have some difficulties with such an assessment.

Lesson learned – problem with specific assessment, recommendations received.

Pilot no. 3 with BioDAC:

Minorka was used to create initial analysis for potato yield forecasting by analysis of current and historical vegetation condition in such places. It shown that it is a good tool to create such a requests for various months and spots and it can used effectively in such a project.

Minorka is suitable for initial analysis requests. Recommendation – more indices possible to request with Minorka.

2.2.6 Testimonial

"BlockStart is a commercial focused program where DLT startups can prototype new ideas, test and improve them hand in hand with the users. It is a great format to do a full product cycle fast from ideation to commercialization."

Maria Mateo Iborra , Co-founder, IBISA

2.2.7 Public profile

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

https://www.blockstart.eu/portfolio/ibisa/

2.3 isLucid

2.3.1 Company

isLucid was born from the need to capture details of verbally created items. Once the solution combining transcription and connectors to existing Project Management software is made, companies understand the traceability of tasks and approvals, which are important once action points are identified. isLucid is addressing this need using Azure Blockchain DLT.

2.3.2 Prototype solution

Companies that need traceability of actionable items made in conference calls can now easily store information in a secure and traceable way with Microsoft Azure Blockchain. In regulated sectors e.g., Automotive, MedTech, FinTech use the ease of mind and focus on conversation, while actionable items (created in real-time from transcription) are stored in your PM software with an evidence of participants, items information and storage location within the Blockchain. Balanced for Account Managers, great for Product Owners, Project Managers and other managers with cross functional teams.

2.3.3 Technical development during Prototype stage

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

isLucid created flexible smart contracts, enabling to store different information independently from the project management software used. These smart contracts are created using the Blockchain Wrapper API service by isLucid. This enabled isLucid team to support multiple different platforms, not locking the solution only to Microsoft ecosystem.

Updated records creation together with newly introduced project scope enabled to chain records based on meetings, meeting participants (with connection to Azure Active Directory unique and traceable user IDs), retrieve this records and validate against records entered during the original

meeting. It is a common thing in industry to update tasks, descriptions after the meeting, while current implementation lets to actually confirm what was discussed during the meeting and what was altered (potentially) without the consent of all stakeholders.

2.3.4 Business development during Prototype stage

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

During the programme isLucid identified sectors in which lack of traceability hurts the most. The company adjusted the target customer position to Account Manager, Head of Account Management within heavily regulated industries, e.g., Helthcare, MedTech, Automotive, Finances.

Based on the feedback isLucid received from companies interviewed, messaging was also adjusted to focus more on gains brought by the traceability.

The company plans to hire 2 more sales people and 2 developers.

Number of potential adopters reached out: 50+ | number of potential adopters met: 7

Number of interesting prospects/leads you acquired during Prototype stage: 3 | number of pilots committed: 5+ | number of clients committed: 5+

2.3.5 Testimonial

“We joined this project with a will to bring traceability feature around the blockchain implementation. We leave with an understanding on how to market a product enabling users in regulated industries to have a trusted recorded evidence which meets regulatory requirements. All the learning and navigation from feature to product mindset happened with the help of BlockStart”

Vytenis Pakėnas, CEO, isLucid

2.3.6 Public profile

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

https://www.blockstart.eu/portfolio/lucid-agreements/

2.4 Knowtary

2.4.1 Company

Knowtary digitally supports any entity that examines contractual agreements, signatures, land registry documents, and gives the requestors their public document certification or signature/stamp that such registry/transaction is verified. Knowtary exists to reduce environmental costs and paper waste caused by excess document bureaucracy, and to make the integration of notarial processes in all Europe, promoting SMEs’ productivity.

2.4.2 Prototype solution

Azzur needed a digital identity authentication solution to connect and validate multiple requestors' documentation and contracts for a State Pandemic Subsidy Form Submission.

Knowtary customized the analogue into digital form, validate the documentation and provided a simple to use mobile interface.

For security and data protection purposes, the platform separates data custodians, GDPR complaint personal data stores (off-chain), and multi-stakeholder metadata.

2.4.3 Technical development during Prototype stage

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

The prototype is a progressive web app (PWA) – deployed using a custom framework based on IONIC. It is responsive, meaning it can work both on mobile and desktop (larger screen). This service is hosted on Google's Firebase. The Backend uses PHP and SQL Server for a database. This is hosted on Microsoft Azure. The current version of the prototype is targeting the first subset of our customers described here. In particular, some SMEs are participating in the BlockStart competition.

This version features the creation of dynamic document templates that can be filled with information and sent via a link to a receiver and this person can fill in the information, sign it, and then the whole document is notarized on the blockchain. The software has been developed with multi-language support (Currently it supports Portuguese, Spanish, and English – this last one being the default).

2.4.4 Business development during Prototype stage

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

Our basic model is to charge a monthly fee + tiered transactions to our end clients. The pricing model is Freemium. So, the client can test some transactions in exchange for feedback and after 3 transactions the model changes to the first level of paid SaaS. The basic version of the software is free, and the improved version of the software is $9 per month per company. The tiered transaction has an incentive to move up the pricing model to achieve economies of scale. Additionally, Knowtary will charge a monthly subscription from OEM clients and charging fees. At the same time, it should provide free analytics and insights, forecasts, KPIs, and connectors. The company's focus is on stable clients, established companies that have the incentive to pay Knowtary a monthly subscription to achieve higher efficiency of legal and notary services.

In the past months of the BlockStart programme, we were in contact with the following accelerations/potential investors: ANI – Agência Nacional de Inovação – this is the Portuguese national innovation agency that promotes IP-based businesses. The meeting with a board member was to determine the level of financing these deep tech ventures would attain from public funding. Knowtary is expecting to get more updates in the following months.

Knowtary has also establishing contacts via LinkedIn with Angel and VC to nurture a relationship to advance into a firm interest based on the results of the pilots. Additionally, it is modeling the solution

to have Notaries as owners/investors of the blockchain network where each notary would own a node and would pay setup fees as well as royalties for transaction fees.

Additionally, Knowtary has engaged with multiple advisors (technical, business, legal, and academic). Guido Santos is one of the team's technical advisors with extensive experience in blockchain implementations. At the same time, Armando Ferreira (with extensive knowledge in notarization) supports legal advice. Prof. Avelino Zorzo (with an extensive technical background in Security, Digital Forensics, Blockchain and Prof. Catarina Ferreira da Silva (with an extensive technical background in Interoperability of IS, Semantic Web, Ontologies, and Service-Oriented Computing) are supporting Knowtary's blockchain development with their knowledge and experience.

Knowtary is also recruiting another computer programmer to assist in the development of client solutions which should be implemented beyond the Pilot stage

Presently, they have two SME adopters committed to the Pilot in an advanced stage of development. The team's business development activities are mostly focused on past client references as well as referrals from existing pilot companies (Azzur and Plastic Free Certification). Additionally, the SME adopters it has reached out other than Azzur and PFC, are Volvero, e-swissolar and Global & Local

2.4.5 Pilot stage implementation

In BlockStart, Knowtary implemented its "Knowtary" product in 5 SME adopters:

Pilot no. 1 with Azzur Portugal:

Custom app where the company could create document templates and digitally sign then on the blockchain.

Full pilot deployed with document signing and blockchain notarization.

Pilot no. 2 with Plastic Free Certification:

Custom app that allow the company to create folders where certification documents issued by auditors are signed and notarized on the blockchain.

Basic Pilot deployed with document features.

Pilot no. 3 with E Swissolar:

Started the definition of the technical scope for the implementation of a prototype.

Preliminary step. Collecting the documents and deliberating about the SMEs goals.

Pilot no. 4 with Volvero:

Started the definition of the technical scope for the implementation of a prototype.

Preliminary step. Collecting the documents and deliberating about the SMEs goals.

Pilot no. 5 with Global and Local:

Started the definition of the technical scope for the implementation of a prototype.

Preliminary step. Collecting the documents and deliberating about the SMEs goals.

2.4.6 Testimonial

"Like a professional egg incubator, BlockStart knows what they are doing. From the right room temperature (support process, startup ecosystem and mentoring aid), to the follow up process approach that kept our team aligned with the solution development, all was in place at the right time."

Rui Serapicos, CEO, Knowtary

2.4.7 Public profile

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

https://www.blockstart.eu/portfolio/knowtary/

2.5 LoanXchain

2.5.1 Company

LoanXchain, the first digital secondary loan marketplace in Europe, answers people's need by tackling the financing gap emerged after the financial crisis. It empowers a cooperative lending ecosystem, where resources smoothly flow from savers and investors to families and corporates thanks to revamped lending capability. This spurs growth in the real economy and generates more resources which flow back to savers and investors.

2.5.2 Prototype solution

LoanXchain is the first multilateral loan marketplace powered by blockchain, AI and API.

It enables dynamic management of loan warehouse integrating originate-and-hold, originate-to-distribute and originate-to-share models and industrialises investment in loans thanks to digitisation of due diligence and sale processes, both direct sales and securitisation.

LoanXchain answers market' needs increasing liquidity, transparency, speed and participation and enriches the marketplace with an entire value-added services ecosystem.

2.5.3 Technical development during Prototype stage

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

LoanXchain is a B2B web-platform with architecture open and easy to integrate.

The hybrid architecture provides both access to the platform in blockchain as a service for smaller players and the possibility to have full Corda node on promise for bigger institutions.

The platform can be integrated in the Italian banking blockchain infrastructure ABILabChain.

2.5.4 Business development during Prototype stage

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

Thanks to BlockStart programme, the company met relevant SME adopters having the chance to present its solution and perform platform demos. Out of the SME adopters met, three provided declarations of interest in collaborating with LoanXChain in BlockStart's Pilot stage.

Therefore, LoanXChain is planning the following pilot:

Object: exchange of up to € 3 million of loans on platform

Players involved: two Italian specialized lenders (and one international specialized investor)

The platform will be used by the SME adopters on behalf of the lenders and the investor

Metric measured:

✓ easiness to use of the platform
✓ completeness of the process modeled on the platform
✓ capability to convert loan data from legacy system to platform database
✓ capability to manage relevant amount of loans (which are put on Corda DLT)
✓ speed of transactions

In addition, during the programme, the company refined its company presentation and business plan as well as its fundraising strategy. It also further developed its product to make it ready for the pilot phase.

2.5.5 Pilot stage implementation

In BlockStart, LoanXchain implemented its "LoanXchain" product in 3 SME adopters:

Pilot no. 1 with B4Bi:

A pilot transaction on LoanXchain platform with one of its main customers (a financial institution) as loan seller.

Results achieved:

- Integrate the institutions IT systems
- Onboard the institution
- Sale auction launch
- Loan transaction simulation

Pilot no. 2 with Innova Solutions:

A pilot transaction on LoanXchain platform with one of its main partners (an institutional investor) as loan buyer.

Results achieved:

- Onboard the institution
- Sale auctions participation
- Loan transaction simulation

Pilot no. 3 with Innova Hoop srl:

A pilot transaction on LoanXchain platform with one of its main partners (a financial institution) as loan seller.

Results achieved:

- Onboard the institution
- Sale auction launch
- Loan transaction simulation

2.5.6 Testimonial

"BlockStart enabled us to leverage a thriving environment of mentors and SMEs to improve our product and pull off a successful pilot. This experience provided us real value for our business, both from a technical and business perspective."

Mattia D'Alessandra, Co-founder & CEO, LoanXChain

2.5.7 Public profile

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

https://www.blockstart.eu/portfolio/loanxchain/

2.6 Motoblockchain

2.6.1 Company

Motoblockchain provides to motorcycle's owners the infrastructure to create the Motorcycle Digital Identity and to the buyers the possibility to access the history of the motorcycle they want to buy.

Owners can upload the proofs of any investment done in taking care of their motorcycles: invoices, mileage, revisions, tuning, accessories, etc. By accessing this information, the buyers are now willing to pay the right price for the motorcycle, as well as for the modifications, tuning and accessories.

Thanks to the MOBD additional system, the motorcycle can now autonomously upload recorder data into the Digital Identity, while the mechanic can remotely access the motorcycle and warn customers about dangerous failures detected by our system.

2.6.2 Prototype solution

MOBD: Motorcycle On Board Diagnostic connected system

The MOBD (Moto OBD) is an IOT system connected to the OBD (On Board Diagnostic Port) of the motorcycle.

It is connected directly to the motorcycle OBD and it is able to read information form the OBD, as well as to use internal onboard sensors to register additional data about motorcycle performance and behaviors.

It can provide several functionalities focused on complementing the Digital Identity service provided by the company's application, but also on improving the safety of the motorcycles and their riders.

1. Motorcycle Autonomous Digital Identity Creation

Once connected to the motorcycle and configured by the user, the MOBD is constantly reading information coming from OBD and form his own IOT sensors. This information is sent to the Motoblockchain server and it can be added to the Blockchain certificates.

Thanks to that, Motoblockchain can improve the range and quality of data saved into the Blockchain Digital Identity: the data choose by the user is now autonomously sent by the motorcycle to the Digital Identity and it is going to complement the data added manually by the user.

2.Remote Failure Detection & Accident Prevention

The MOBD gives to the mechanics the possibility to be always connected to user's motorcycle remotely.

Mechanics are warned in case of any motorcycle failure, they can first diagnose the failure, and later proactively contact the users to warn them, so preventing accidents and avoiding negative consequences for mankind.

3.GPS Alarm & Remote Tracking for stolen Motorcycles

The MOBD is able to detect bumps, vibrations and movements of the motorcycle with engine turn off.

It can warn the user and it can also offer an on-time follow up of the motorcycle position.

4.[Coming soon: Accident detection and automatic Emergency Call: eCALL]

This functionallity will be available later on.

The MOBD will be able to detect any accident and it will be able to automatically call the emergency number to help the rider in receiving medical support as soon as possible.

The Market

B2C: any single Motorcycle user can directly buy the MOBD and use it in conjunction with our Digital Identity service.

B2B: At the same time, any company related with motorcycles can take advantage of it by using on their motorcycles or by reselling to their users who owns motorcycles.

2.6.3 Technical development during Prototype stage

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

During Blockstart programme, Motoblockchain was able to develop the first version of the MOBD prototype. It offers the below functionalities in an MVP version:

Motorcycle Autonomous Digital Identity Creation

Remote Failure Detection & Accident Prevention

GPS Alarm & Remote Tracking for stolen Motorcycles

The company's prototype is now ready for the first beta testing phase with the four early adopters that responded to the Blockstart SME Open Call upon Motoblockchain's advice. They are willing to test the company's prototype and to use it in combination with the Motorcycle Digital Identity because the MOBD design was done following lean startup methodology and it comes directly form the needs of Motoblockchain's B2C users (motorcycle owners) and B2B users (mechanics). This is only a first step in the development but the company is happy to have reached an MVP that is ready for the beta testing phase with early adopters in only 4 months.

The company learned few important lessons during the development phase and took advantage of them by designing the MOBD V2: they are actually working on a more advanced prototype that will be the production version of the MOBD. Theur next step is the MOBD technical testing phase in the Dekra Autonomous vehicle testing circuit and laboratory located in the Technological Park of Malaga. Thanks to the Adalucía Open Future acceleration programme, Motoblockchain received a free access to Dekra laboratory that guaranteed them a complete CE testing with the aim to have the product ready for the CE certification in the future. They are now evaluating the possibility to accelerate the MOBD V2 development and do the testing directly with the production version. In April 2021, they plan to end the Blockchain architecture and to integrate it with the MOBD.

In May 2021, Motoblockchain plans to develop the front end application for the MOBD configuration (for motorcycle owners) and for the remote failure detection services (for the mechanics). In June, it plans to start the go-to-market with the Digital Identity platform, while in September it will focus on the go-to-market of the first MOBD version.
They are working with the EU development group to define the eCALL standards: as soon as the document is ready, they will be able to also implement the eCALL fucionality.

Motoblockchain's long term objective is to develop a Big Data architecture, based on AI and ML, with the aim to discover behavior patterns, singularities, trend calculations and to provide useful recommendations to its -customers.

2.6.4 Business development during Prototype stage

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

One very important advantage that Motoblockchain received by participating in the BlockStart programme was the push to enter in contact with possible early adopters in a phase were the product was only an idea. This offered them the possibility to present the company's vision of the MOBD and to collect important feedback about the functionalities to be prioritized. Thanks to that, the company was able to design a short-term development roadmap and to focus their effort in an MVP that could be ready for the testing in only four months development time.

They had the pleasure to work with Diego Markich form Markich Design: an experienced Electronic Engineer who found the Motoblockchain project really interesting and accepted to be in charge of the development of the MOBD. The company took advantage of his extensive experience and dedication to the project.
In parallel, CEO Simone Brighina was leading the development of the application including the blockchain layer inside the Blockpool programme, with the aim to integrate the MOBD with the Motoblockchain Application and the Blockchain Architecture and make all the information flow into the Motorcycle Digital Identity.

Motoblockchain is now ready to test the prototype with four early adopters that cover different types of motorcycle riders' expertise and that are spread in two different countries: Italy and Spain, the first countries the company wants to tackle with its go to market strategy.

The company also received another important gift from Blockstart: they were contacted by another SME (not presented by them to the programme) focused on electric bicycle renting that was attracted by Motoblockchain's solution. The team analysed their requirements and discovered that a simplified version of they MOBD can be built in order to bring the Digital Identity advantages to this new sector. They are now focusing their efforts in the go to market strategy for the motorcycle sector, but already have in their agenda the possibility to reuse the technology in order to offer a dedicated service to the electric bicycle renting companies.

2.6.5 Pilot stage implementation

In BlockStart, Motoblockchain implemented its "MOBD" product in 4 SME adopters:

Pilot no. 1 with Co.Mo:

The MOBD V2 was delivered with dismounted battery and installation instructions. It was correctly mounted including the GPS external antenna. They were able to complete the installation and configuration process. It was left connected on the motorcycle for two days: during that time it recorded valuable information from the IOT sensors.

Results achieved:

1. Installation process, Bluetooth and WIFI pairing process completed successfully
2. GPS Routes and motorcycle usage data recorded successfully
3. Data sent to our server by 4G network
4. Data was ready to be added to a Blockchain certificate

Feedback retrieved:

1. Improve internal Battery capacity
2. Add WIFI network key in the manual

3. Add manual input option for VIN number (if not automatically detected)

Pilot no. 2 with Anaya MX Moto:

The MOBD V2 was delivered with dismounted battery and installation instructions. It was correctly mounted and connected, it was able to detect some of the required parameters, but not all of them. Our engineer assisted them onsite in order to debug the problem. We agree to repeat the test once the problem will be solved or a new prototype version will be available. We collected valuable feedback about the installation process and possible improvements for the design of the V3 version.

Results achieved:

1. Installation process and Bluetooth pairing completed successfully
2. Motorcycle usage data recording was working, but not all data were recorded and sent to our backend server

Feedback retrieved:

1. add eternal connection for a battery charger
2. add on-off button in order to leave the battery mounted

Pilot no. 3 with BMS Racetech:

The MOBD V2 was delivered with dismounted battery and installation instructions. Test was repeated on two different motorcycles. The MOBD was correctly mounted, but the on-site connection process cannot be completed due to a bug. Our engineer assisted them remotely in order to debug the problem. The MOBD was correctly transmitting data, but the mechanic was unable to receive the SMS due to the problems during on-site pairing process. We agree to repeat the test once the problem will be solved or a new prototype version will be available. We collected valuable feedback about the installation process and possible improvements for the design of the V3 version.

Results achieved:

1. Product correctly mounted, BLE paring process cannot be completed, no information was sent to the mechanic.
2. Data was correctly recorded and sent to our backend server.

Feedback retrieved:

1. Improve installation manual by adding missed information
2. Add battery charger option
3. Debug motherboard design needed to solve connection problems

Pilot no. 4 with Slick Eixample:

The MOBD V2 was delivered with dismounted battery and installation instructions. It was correctly mounted, but the on-site connection process cannot be completed due to a bug. Our engineer assisted them remotely in order to debug the problem. The MOBD was correctly transmitting data, but the mechanic was unable to receive the SMS due to the problems during on-site pairing process. We agree to repeat the test once the problem will be solved or a new prototype version will be available. We

collected valuable feedback about the installation process and possible improvements for the design of the V3 version.

Results achieved:

1. Product correctly mounted, BLE paring process cannot be completed, no information was sent to the mechanic.
2. Data was correctly recorded and sent to our backend server.

Feedback retrieved:

1. Improve BLE connectivity by providing the BLE function inside our proprietary app to avoid configuration issue with 3rd party app
2. Debug motherboard design needed to solve connection problems

2.6.6 Testimonial

"Blockstart acceleration programme offers us a huge support in the development of our MOBD solution. We received training focus on improving our Blockchain and market knowledge, we were supported with amazing mentorship sessions, we gained access to people able to share their experience with us and to help us in taking the right decision. We also found really useful to work with strict deadline: it helped us in reaching the goal as stated in our roadmap in time.

The negative side was that we had to found the funds to cover the development by ourselves because no advance payment was done, but this led to a positive final effect: we are now in the position of receiving the EU funding with the MVP already developed and so we can now invest it in additional development or in a marketing campaign for the product lunch.

It was decisively a great positive experience that supported us during these four months, but it also leaves to us an established networking that we will use to improve our product and our market penetration. A big thank you to all the team behind Blockstart Programme!"

Simone Brighina, CEO & Co-Founder, Motoblockchain

2.6.7 Public profile

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

https://www.blockstart.eu/portfolio/motoblockchain/

2.7 MyLime

2.7.1 Company

MyLime operates B2B2C in the luxury market, supplying a platform for the registration of product meaningful information, stored in blockchain. The developed platform collects data and related media contents (audio, video, photo,scanned documents)from the value chain, thanks to the integration of

a specific sensor in the product. Data visualization and updating, during the product lifecycle are possible through interfaces for supplier, manufacturer, dealer and app for the product owner.

2.7.2 Prototype solution

During the Prototype stage, MyLime developed a new and easier web interface for the company's users. All the UI and UX were redefined and there was the creation of different pages in order to reach in an easier way the most important information: tag associated with the product/asset, list of assets, events connected to each asset, owner associated to assets. In each different page mentioned before, the entire workflow was standardized and made more perceivable.

2.7.3 Technical development during Prototype stage

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

The orchestration part, the core activity of MyLime platform, manages the information flow defined according to the following main objects: assets, tags, owners, events, events confirmations defining who writes and who approves each event type, types and quantity of media contents per each event.The following steps of the product roadmap will involve:

app android development

app iOS adjustments

2.7.4 Business development during Prototype stage

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

Thanks to the many video calls and demos performed during the Prototype stage, MyLime had the opportunity to collect feedbacks regarding the solution and the business model, changing some aspects of the latter.

During the Prototype stage MyLime achieved the following KPIs:

No. of potential adopters reached out to: 13

No. of potential adopters met: 4

No. of interesting prospects/leads acquired during Prototype stage: 4

No. of pilots committed: 1/2

No. of clients committed: 1/2

2.7.5 Testimonial

"During the Prototype stage it was very useful to share our technology and business model with external experts in order to assess their validity."

Elena Moglia, CEO, MyLime

2.7.6 Public profile

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

https://www.blockstart.eu/portfolio/mylime/

2.8 Sensefinity

2.8.1 Company

Is your company fully digitalized? Sure, front, and back office probably are. But what about your logistics? Do you know where your products are always? And in which conditions? Temperature, Humidity? Did someone steal it or broke it? Whenever it is vaccines, organic food, or luxury products you need to monitor closely the location and conditions. Sensefinity offers a complete blockchain-based real-time sensor solution. Let's make Logistics visible!

2.8.2 Prototype solution

This is the century of consumers. They demand that products have quality but also are produced with high standards for ethics and within a sustainable process. To make sure that the food we have on our plate don't come from deforestation farms or from heavy environment exploitation we must monitor food production and distribution. Sensefinity developed a set of sensors and trackers that allow to register the location and the conditions of transportation of biologic products.

Since there are many stakeholders, there's a need to guarantee that such registration of food transport conditions is immutable and auditable. This is where blockchain shines: all the information is impossible to change and accessed to all authorized partners thus creating a trust and secured information share. All stakeholders in the "food chain": producers, 3PL operators, retailers and even other startups in the agritech space can benefit from Sensefinity's platform.

2.8.3 Technical development during Prototype stage

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

The prototype had 3 technical dimensions:
1 – Select and setup a blockchain infrastructure
2 – Integrate with Sensefinity's platform
3 – Access blockchain data through a Web GUI

First Hyperledger was selected as the blockchain infrastructure to use since it's open source and available as a managed service in most cloud computing platforms. This will allow Sensefinity's solution to be vendor agnostic. For the purpose of Sensefinity's prototype in the scope of BlockStart, only 1 Hyperledger instance was installed and with 1 single channel. When used in a commercial

scenario each stakeholder should have its own copy of the ledger and it is possible to setup several channels with different access permissions per stakeholder.

Once Hyperledger was up and running, it was integrated with Sensefinity's platform through a data replication service. This way the company can guarantee that all the data from sensors and trackers stored in Sensefiny's DB is the same that is recorded in blockchain and at the same time.

Finally, although each stakeholder can have its own copy of the Hyperledger, it still needs a friendly way to access the information. For that purpose, a Web GUI was developed which provides a nice UX access to the Hyperledger's information. Sensefinity also developed an API to read from the ledger.

In the compan's product roadmap two main features are planned:
1 – Develop a Data Management System: an administration system with a Web GUI that will allow customers to define themselves which data they want to record in blockchain (blockchain is not to be used as a transactional database but as a source for truth instead; customers should select the key data they want to store in the ledger).
2 – Triple A (authentication, authorization, and accountability) management system. A service and its GUI to allow customers define which stakeholders can have a local copy of the Hyperledger and setup roles and privileges for data and Hyperledger channel access.

2.8.4 Business development during Prototype stage

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

The biggest outcome of Sensefinity's participation in Blockstart was the update of its value proposition and its impact on the company's business: they got access to new markets and customers. Although the company manafuctors Trackers and Sensors, it is not a hardware company. Meaning that they are in the business of producing data that makes supply-chains visible. That data is generated by Sensefinity's devices but is transformed into information and insights by its cloud services. It's only when that information materializes as real-time alarms, analytics reporting and ML predictions that the true value emerges. Adding blokchain to Sensefinity's platform enables to add a new layer of value: it's not just another feature but a new dimension. The source of truth dimension. With this updated value proposition, the company can enter a new world of markets and opportunities such as food provenance, luxury assets as art collections and identify certification for logistics operations. Such value proposition update reflects on Sensefinity's business model. The company created a new service offer and its respective price thus generating a new revenue stream. It also increased its target market, growing its total market, which will also impact fundraising opportunities. In fact, the company has updated its pitch deck to reflect it.

Sensefinity is now promoting its new commercial offer through its website (https://www.sensefinity.com/blockchain).
Besides the SMEs the company interacted with during Blockstart, they are now performing extensive business development to other companies, pitching their blockchain offer: either updating the commercial offer that they already had (e.g., to their biggest retail partner in Turkey) or by opening new business opportunities (e.g., the recent contract Sensefinity signed with one of the biggest telecom operators in Europe).

Sensefinity is also expanding its business development in Brazil where they are just landing two pilots with Sensors and Blockchain. The company can safely say that blockchain positively changed its 2021 commercial landscape.

2.8.5 Testimonial

"Blockchain was always on Sensefinity's radar but as a startup there's so much to do that some ideas just sit forever on the "To Do" list. However, for us, blockchain is not just another "feature". It's a revamp of our value proposition that will allow us to enter new markets. Blockstart was key in pushing us into developing a blockchain offer. Not only the grant that funded the development but also the awesome mentoring we had guiding us on value proposition, business model, and GTM. The SMEs were also a ton of value: talking with SMEs you get to know real use cases and adapt your development to market' needs, achieving PMF.

Participating in blockstart took us from zero offer on blockchain, to develop a prototype, engage with SMEs and other startups to the final result: an update on our value proposition that led us to 3 new customers! We started as a logistics monitoring company and evolved to an asset certified provenance business!

Although the program is finishing this is not the end. The strong network of mentors, cohort startups and SMEs will continue to push us forward in our vision to be the number 1 company for asset provenance based on blockchain."

Tiago Andrade, CMO, Sensefinity

2.8.6 Public profile

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

https://www.blockstart.eu/portfolio/sensefinity/

2.9 Sixphere

2.9.1 Company

Sixphere is a team focused on helping its clients in their ways through the digitalization processes. The compay is specialized in industrial digitalization providing Polaris Tx as a platform to perform that digitalization on production control, quality control and supply chain control contexts.

Best solutions for digitalization projects, aligned with business strategies, is the core Sixphere provides to its clients, using innovation and technology.

2.9.2 Prototype solution

Polaris Tx tries to solve very simple problems: you need to register, together with partners, your business transactions, providing your own data schemes, and integrating your existing systems for massive operations.

This is done using blockchain and IPFS to build a trustworthy network, using JSON-LD to build your own data schemes and semantic interoperability, and APIs and Kafka to build an integration layer.

These aspects are very common in huge supply chains and manufacturing industries. Sixphere provides it as a service.

2.9.3 Technical development during Prototype stage

Polaris Tx is composed of these items, most of them have been developed during the prototype stage of blockstart program.

Web application. This is the main interface of the system. These are the main features a user has available:

Users and organizations management. Users can create and manage organizations and their members.

Schemas management. Users can create and version their own information schemas. Those schemas can be public and shared with other users.

Transactions management. Users can exchange information with other users through registering business transactions based on the owned schemas.

Signing. Business transactions can be sent to be signed by more than one user. The transaction is not completed until a signing quorum is reached.

Integration layer. Streaming channels via Apache Kafka are available to connect external systems for a massive operation. There are available bidirectional channels to set subscriptions to integration error logs.

API endpoints. A complete API REST is available as well, not only for the connection among the internal components but also for external systems connections too.

Core services. This is a set of microservices designed to be deployed on Kubernetes clusters. This condition will allow us to scale the system in the future. This is the layer in which the business logic is developed. One of the most important services in the core is the cache and indexation service. This service will allow us to implement high-performance features for the public, for example, to verify transactions.

Jobs engine. This is another essential feature that will allow us to scale the system. Every action in the system is handled by an asynchronous job that is executed in time by several parallel processors.

Ethereum. A business transaction is composed of a header in which owner, type, body hash, and signatures fields are deployed. This header is pushed and stored in an ethereum blockchain using smart contracts.

IPFS. The body of a business transaction, its attached documents, are stored off-chain using IPFS. The hash code of a body is stored in the header of the transaction, on-chain.

2.9.4 Business development during Prototype stage

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

Sixphere has changed its business focus. The company thought technologies were the important points in its project, and although they are, the team realized that the solution it provides is more important than blockchain. It's the teams' main learned lesson. Thanks to this, Sixphere's main change has been the pricing model: before it was based on pay per transaction, now it is a subscription based model. This helps to mitigate one of the biggest problems when a company tries to adopt blockchain, the misunderstanding, as they usually do not know about transactions, tokens, decentralization, etc., they just need to pay for a service.

To implement the business plan, Sixphere plans to hire 4 new developers this current year. With them, the company aims to support its first version and develop the features it has in the backlog.

For now, Sixphere is focused on validating the first version of its solution. Thanks to the BlockStart programme, the company has met 6 potential adopters, at least 3 of them very interesting for the company's solution. Additionally, Sixphere has just launched a marketing campaign in order to prospect more leads to help them validate the solution during the beta period. Currently, almost 100 leads have been engaged.

2.9.5 Testimonial

"Our drive through BlockStart programme has allowed us to finish the first version of our solution with the invaluable help of awesome mentoring and continuous feedback from programme members and potential adopters. The opportunity to get opinions and help from potential customers is an essential asset provided by this programme. This is something you can use to work out the final details of your solution."

Jesús María Jurado Núñez, Business and Sales Manager, Sixphere

2.9.6 Public profile

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

https://www.blockstart.eu/portfolio/sixphere-technologies/

2.10 Stonize

2.10.1 Company

Stonize is a digital platform making securitisation simple, cost-efficient, and transparent. The platform combines eIDAS digital identities and permissionless blockchain technologies, enabling a fast and reliable workflow. Thanks to the digital securitisation, originators can seamlessly get liquidity from a portfolio of assets on a non-recourse basis, while institutional investors can access a diverse pool of assets with an attractive risk-return profile and make well informed decisions based on extensive and trusted data.

2.10.2 Prototype solution

Stonized started the Blockstart programme with a single product and during the prototype phase it also launched a second product called Flow, leveraging the knowledge that it got from Stonize in terms of privacy, security and use of blockchain technology.

Product 1: Stonize has a mission to make securitisation accessible and transparent. It is a digital platform for securitisation workflow management. It guarantees 10 times faster procedures and enhanced data integrity. The platform covers 3 areas: the onboarding of the involved players, the transfer of the assets pool, and the related reporting. It leverages 2 enabling technologies: eIDAS compliant digital identities and the Algorand permissionless PoS blockchain.

Product 2: Flow has a mission to connect people through voice. It is the easiest way to hang out online with friends and new buddies. In particular, it allows users to interact while listening to the same audio content, like if they are in the same room. It's not just a simple audio chatroom, it's an immersive experience where one person (called Flower) picks an audio content (e.g. a music or podcast from YouTube, or something they recorded for themselves) and puts it into the flow so that everybody can listen to it at the same time; then everyone can interact on top of it by talking and reacting through sounds effects. You can see a flow as the online audio version of living rooms, bars or shows.

2.10.3 Technical development during Prototype stage

During the development of Stonize and Flow, the following technical developments have taken place:

Product 1:

We worked on the Self-onboarding and Trusted automation features.

The former allows users to onboard on the platform on their own. We integrated the trusted services to enable a legally binding onboarding and we started the accreditation procedure to become an authorised service provider for the two Italian eIDAS-compliant digital identities: SPID and CIE. We developed the MFA, the self-onboarding workflow and we integrated the SPID standard access framework.

The Trusted automation allows users to generate legal contracts based on templates and custom input data and to easily verify the integrity of the legal contracts. We developed the microservice

architecture, the engine to produce XHTMLs files, and we implemented the open source standard to produce PDF/A from XHTMLs files. We also integrated the digital signature workflow.

In the medium term we plan to finish the accreditation procedure to become an authorised SPID and CIE service provider and to go live with a new licensing contract. This requires the integration with the client IT systems.

Product 2:

We worked on the Interaction and Synchronised audio content features.

The former allows users to talk and react through sounds effects. We developed microservices to manage authentication, authorisation, virtual rooms and real-time communication, and we implemented P2P voice communication and emoji sounds. We also developed a Progressive Web App for Android and desktop OS.

The Synchronized audio content allow users to listen to the same audio content at the same time. We developed an individual and synchronised audio streaming service and we integrated YouTube for the audio content sourcing.

In the medium term we plan to enable features to improve the security for the users and the experience for the creators.

All the features were defined, designed and developed thanks to the interaction with users and potential adopters.

2.10.4 Business development during Prototype stage

During the development of Stonize and Flow, the following business developments have taken place:

For both products we outperformed the goal of the market validation area. Specifically:

Product 1:

We engaged with 21 companies and we got 3 declarations of interests

With regards to the business area we released a demo, and we accomplished a good result in terms of definition of the use case, sales process, commercial deck and short demo video

Product 2:

We got 4 declarations of interests by content creators

With regards to the business area we released a demo that helped us for the user interviews we run, we defined the use case, released an MVP with the new brand and created a pitch deck

2.10.5 Testimonial

"The Blockstart programme was a great experience! We got a tailored support and advice from the community of mentors about go-to-market, funding and programme execution."

Alessandro Ranaldi , CEO, Stonize

2.10.6 Public profile

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

https://www.blockstart.eu/portfolio/stonize/