

D2.1: Technical and business support service design
Sept/2019



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 824509.

Author(s)/Organisation(s)	Christopher Brewster, Zygimantas Zabietas, Andreas Papadakis		
Contributor(s)	TNO, CIVITTA, INTRASOFT		
Work Package	WP2 – CATALYSE: Technical and Business Support Services for beneficiaries		
Delivery Date (DoA)	30/09/2019		
Actual Delivery Date			
Abstract:	This deliverable describes the business and technical support that will be provided to SMEs and start-ups participating in the Block.IS open calls and their different phases. The report provides details of business support services and how they integrate in the Experiment and Commercialisation phases, and details of the technology support and how this will be archived in the project website.		

Document Revision History				
Date	Version	Author/Contributor/ Reviewer	Summary of main changes	
24/06/2019	0.1	Christopher Brewster	Outline of deliverable	
27/08/2019	0.2	Zygimantas Zabieta	Text of Section 2 Business Support	
10/09/2019	0.3	Christopher Brewster	Intro, text of Sec. 3 Tech support	
16/09/2019	0.4	Andreas Papadakis	Revisions, additions and comments.	
19/09/2019	0.5	Oskar van Deventer	review	
25/09/2019	0.6	Zygimantas Zabieta	Revised diagrams and minor corrections	
25/09/2019	0.7	Christopher Brewster	Final text for review	
30/09/2019	0.8	Babis Ipektsidis/Christopher Brewster	Revised after review	
30/09/2019	1.0	Antonio Damasceno	Final Check	

Dissemination Level				
PU	Public	Х		
PP	Restricted to other programme participants (including the EC Services)			
RE	Restricted to a group specified by the consortium (including the EC Services)			
СО	Confidential, only for members of the consortium (including the EC)			



Block.IS Consortium				
Participant Number	Participant organisation name	Short name	Country	
1	F6S NETWORK LIMITED	F6S	UK	
2	INOSENS DOO NOVI SAD	INO	RS	
3	INTRASOFT INTERNATIONAL SA	INTRA	LU	
4	INTERNATIONAL DEVELOPMENT IRELAND LIMITED	IDI	IE	
5	POSLOVNO UDRUZENJE VOJVODJANSKI IKT KLASTER	VOICT	RS	
6	FEDERACION EMPRESARIAL DE AGROALIMENTACION DE LA COMUNIDAD VALENCIANA		ES	
7	R-TECH GMBH	IT-Log	DE	
8	EUROPEAN DIGITAL SME ALLIANCE	DSME	BE	
9	FINTECHSTAGE LTD	FTS	UK	
10	UAB CIVITTA	CIVITTA	LT	
11	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	TNO	NL	
12	SYNELIXIS LYSEIS PLIROFORIKIS AUTOMATISMOU & TILEPIKOINONION ANONIMI ETAIRIA	SYN	EL	

#### **LEGAL NOTICE**

The information and views set out in this application form are those of the author(s) and do not necessarily reflect the official opinion of the European Union. Neither the European Union institutions and bodies nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein.

Funding Scheme: Innovation Action (IA) ● Theme: H2020-INNOSUP-2018-01-two-stage Start date of project: 01 May, 2019 ● Duration: 32 months

© Block.IS Consortium, 2019 Reproduction is authorised provided the source is acknowledged.



## **Table of contents**

1	lı	ntrod	uction and Scope	6
	1.1	Ir	ntroduction	6
	1.2	S	cope and Relation to other Work Packages	6
2	В	Busine	ess Support Services	7
	2.1	O	verview	7
	2.2	А	ctivities of the Experiment Phase	7
	2	2.2.1	Launch of Experiment Phase	8
	2	2.2.2	Business Coaching	9
	2	2.2.3	Webinars	10
	2	2.2.4	Evaluation #1	11
	2	2.2.5	Progress & experience sharing webinars	11
	2	2.2.6	Bootcamp	12
	2	2.2.7	Joint participation in the events	14
	2	2.2.8	Evaluation #2	14
	2.3	А	ctivities of the Commercialise Phase	14
	2	2.3.1	Webinars	15
	2	2.3.2	Coaching sessions	15
	2	2.3.3	Pitch trainings	15
	2	2.3.4	Evaluation	16
	2.4	Ir	ncubation Facilities & Helpdesk	16
	2	2.4.1	Incubation Facilities	16
	2	2.4.2	Business Helpdesk	16
3	Т	echn	ical Support Services	17
	3.1	O	verview	17
	3.2	R	epository of technological knowledge and resources	17
	3	3.2.1	Blockchain Enablers	18
	3.3	O	ther Tech Training and Support	19
	3	3.3.1	Forum	19
	3	3.3.2	Frequently Asked Questions	20
	3	3.3.3	Webinars	20
	3	3.3.4	Bootcamps Technology Mentoring	20
4	C	Conclu	ısions	21



## **List of tables**

Table 1 Examp	ale schedule of or	line mentoring me	etings (hoth husiness	and technology)	9
I abic T Evallir	ne scriedule oi oi		Etilika Inotil naailless	and technology,	

# **List of figures**

Figure 1 The Block is Phases	7
Figure 2 Experiment Phase	8
Figure 3 Launch of the Experiment Phase	8
Figure 4 Mentorship periods during the Experiment Phase	9
Figure 5 Webinar sessions of the Experiment Phase	10
Figure 6 Evaluation 1 of Experiment Phase	11
Figure 7 MVP building part of the Experiment Phase	11
Figure 8 Bootcamp of the Experiment Phase	12
Figure 9 Bootcamp agenda	13
Figure 10 Evaluation 2 of the Experiment Phase	14
Figure 11 Commercialise Phase of the Block.is project	15

List of Abbreviations and Acronyms				
FAQ	Frequently Asked Questions			
ICT	Information and Communication Technology			
MVP	Minimum Viable Product			
QA	QA Question Answer (session)			
SME Small and Medium Enterprises				



## 1 Introduction and Scope

#### 1.1 Introduction

The vision of the Block.IS project is to build an open and collaborative cross-border, cross-sectoral innovation ecosystem that fosters the use of blockchain technology in three sectors: agrifood, logistics and finance. In order to achieve this, a key objective is to provide a strong supporting framework for our target audience of SMEs both on the business side and on the technical side. This document provides a description of what will be offered to participating SMEs.

Block.IS is one out of five European INNOSUP-1-2018 - Cluster facilitated projects for new value chains projects. The project started on 1st of May 2019 and will distribute in total 2.8 million euros to pan-European start-ups and SMEs and empower new cutting edge blockchain solutions. The Block.IS Open Call #1 has been launched in the beginning of September 2019. 12 partners from 10 European countries (led by F6S from Ireland) teamed up to value innovative ideas of start-ups and SMEs and to introduce easy-to-join procedures to market trendsetters and boost better collaboration among clusters in Europe.

The Block.IS accelerator aims to support the innovative blockchain-based solutions that will benefit 3 important European sectors: agrifood, fintech and logistics. SMEs and start-ups can join the equity-free funding program (up to 60K euros per start-up/SME), learn more about ground breaking blockchain technology, explore possibilities our blockchain enablers' offer and benefit from the comprehensive business support program.

The purpose of this deliverable is to provide a description of the supporting framework that the consortium plans to offer to SMEs. On the one hand, business support services will be provided to guide and encourage SMEs to undertake new business ventures using blockchain technologies in the three industrial sectors of agriculture, finance and logistics. Equally on the technology side, support will be provided to SMEs, to navigate the range of available technologies (many of which are open source) so as to be able to use them in the development of new products in these sectors. The objective of this deliverable is both to outline what will be offered, but also to provide an account that can be shared in part or whole with SMEs interested in participating in the cluster missions. This will help SMEs understand what kind of support they will receive as a result of participating in the programme.

## 1.2 Scope and Relation to other Work Packages

This deliverable provides details of the business service support and the technical information and guidance which the consortium partners will be offering to mission participants. It is a public deliverable and as such complements Deliverable D1.2 "Cluster Missions Guidebook" and the corresponding call text for the Cluster Missions. Here, we will describe the planned scope and range of content to be provided, while the majority of the actual content, including webinars, technical guides and other material generated as detailed below, will be located in a suitable location on the project website. Moreover, this deliverable is complimentary to Deliverable D2.2 Block.IS Enablers which provides details of the technical enablers that SMEs will be able to use.



The Deliverable is structured as follows: Section 2 provides details of the business support services, Section 3 provides details of the Technical Support services.

# 2 Business Support Services

#### 2.1 Overview

Twenty-three SMEs and start-ups that pass the first part of the selection process at the Innovate Phase will be provided with a wide range of business support services, tailored to boost the businesses from their blockchain ideas to a successful minimum viable product (MVP). The programme combines business coaching, distant learning webinars, business and tech Bootcamp, experience sharing sessions, co-participation in international events and additional support services such as a business helpdesk.

The main goal of the business support services is to help the innovators grow, build innovative blockchain solutions, and create new ecosystems in the industries they are participating in. After a two-stage Experiment Phase, ten winners will participate in the final two-month Commercialise Phase to pitch the idea to the selection jury, consisting of blockchain and start-up experts, representatives of agrifood, logistics, and fintech clusters, investors and potential customers.

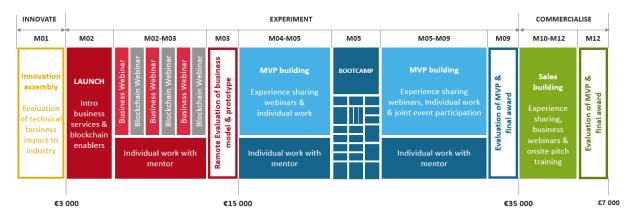


Figure 1 The Block.is Phases

## 2.2 Activities of the Experiment Phase

The overall goal of this phase is to guide participating SMEs and start-ups throughout business plan development, prototyping, and MVP building stages and provide them with the necessary methodological, theoretical, and practical support. The Experiment Phase is arranged as a two-stage acceleration programme carried out over 34 weeks.

The goal of the first part of the Experiment Phase programme is to help SMEs and start-ups to build their business model and prototype design for the blockchain solution in agrifood, fintech or logistics industries by providing business and technical blockchain webinars for the participating teams. Each SME or start-up that delivers a business model and prototype design, and that is evaluated successfully, will receive a "Business plan completion" reward of €15 000 equity free funding.



The goal of the second stage is to help teams to build their MVP. It will start with experience sharing webinars and will be followed by an onsite business and tech Bootcamp. After participation in the Bootcamp, teams will continue with individual work, as well as experience sharing sessions. At the end of the second stage of the Experiment Phase, teams will gather at an event, where teams which have developed a successful working MVP, as judged by external evaluators will be awarded €35 000.

INNOVATE EXPERIMENT COMMERCIALISE M01 M02 M02-M03 M03 M04-M05 M05 M05-M09 M09 M10-M12 M12 ВООТСАМР MVP building MVP building Remote Evaluation of busir LAUNCH model & prototype uation of MVP award final services & olockchair Eval Individual work with Individual work with Individual work with mentor mentor €15 000 €35 000

**Figure 2 Experiment Phase** 

### 2.2.1 Launch of Experiment Phase

The launch event will be held in a form of an online webinar during the first week of the Experiment Phase. The aim of this launch webinar is to present the programme, the entire concept of the upcoming programme and the schedule. Besides the programme introduction, SMEs and start-ups will present their business and team in the form of 2 ½ minute pitches. Furthermore, the participants will be introduced to blockchain enablers and the technical support facilities.

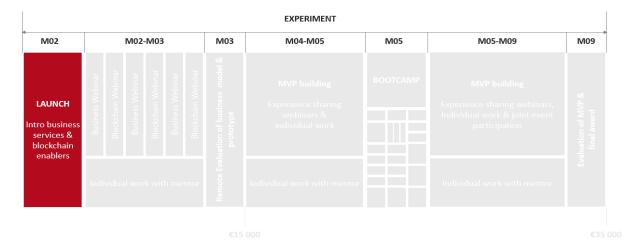


Figure 3 Launch of the Experiment Phase

Finally, teams will be matched with the mentors who have the experience that could be the most useful for the participating SME or start-up.



### 2.2.2 Business Coaching

The main task of mentors is to guide the teams during the programme, share their knowledge, and experience with mentees. Also, the mentor will suggest relevant partnerships and introductions to specific companies, people, events to attend and other business development opportunities that would help to commercialise the product. Each SME or start-up can expect to receive up to 20 hours of individual business mentorship during the 8-month programme (separately from technology mentorship and support). Technology mentorship will occur at the same time and is described further in section 3.

MO2 MO2-MO3 MO3 MO4-MO5 MO5 MO5-MO9 MO9

LAUNCH Intro business services & blockchain enablers

Individual work with mentor

EXPERIMENT

MO2 MO2-MO3 MO3 MO4-MO5 MO5 MO5-MO9 MO9

MVP building Experience sharing webinars, individual work & joint event participation

Individual work with mentor

Individual work with mentor

Figure 4 Mentorship periods during the Experiment Phase

Mentor and mentee will work together to come up with an agreed individual work plan. In this process the teams will be provided with a suggested exemplary schedule which can be adjusted during the project according to the different phases of the product development cycle.

Table 1 Example schedule of online mentoring meetings (both business and technology)

Week	Duration	Activity		
W1	1.5 h	Introductions, assessment of needs, preparation of individual meetings schedule		
W2-W6	4 x 1.5 h	Individually planned sessions: building the business model		
W7	1 h	Preparation for submission of business model		
W9	1.5 h	Feedback session after the first Evaluation		
W10-W33	6 x 1.5 h	Individually planned sessions: building the MVP		
W33-W34	1 h	Preparation for submission of MVP and final pitch		



Mentoring hours will be held online on an online teleconferencing platform. Mentors can also meet mentees face-to-face, but it is up to the agreement of both sides to do so or not. For general inquiries the FAQs and the forum will be available.

#### 2.2.3 Webinars

Webinar sessions will consist of six weekly webinars starting in the second week of the Experiment Phase.

Figure 5 Webinar sessions of the Experiment Phase

Business and blockchain technical topics will be covered that will help prepare a business model and prototype design, followed by QA sessions in the end of each webinar. Upon completing all the webinars, teams will prepare the business plan presentation, which is to be evaluated by experts.

#### **Business webinars**

There will be three one-hour long business webinars followed by 30-minute questions and answers session each. The main topics that will be covered:

- Value proposition
- Customer and market definition
- Go-to-market strategy

Participation in webinars will not be obligatory, but teams that do not attend the webinar will not have a chance to participate in QA sessions.

All three webinars will be uploaded to YouTube and will stay accessible throughout the project lifetime. They will also be accessible via the dedicated areas of the project website. Feedback sessions will be private.

#### Technology webinars (described in 3.3)

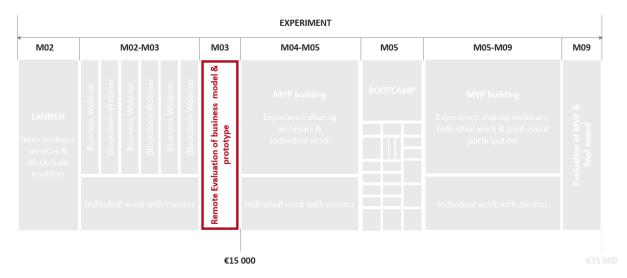
Webinars about Blockchain technology will be presented by the technology partners on a bi-weekly schedule as well.



#### **2.2.4 Evaluation #1**

Participating teams are expected to submit the **Deliverable 1** by the end of the seventh week. The deliverable will include (1) an elaborated business model canvas and (2) a technical implementation roadmap.

Figure 6 Evaluation 1 of Experiment Phase

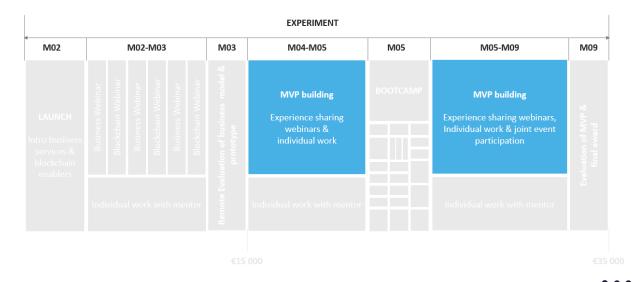


During the eighth week, the submitted deliverable will be evaluated remotely via a teleconference platform (e.g. Skype or WebEx) by two external experts with business and technical blockchain background and a Block.IS consortium member acting as moderator. SMEs and start-ups will receive the evaluation reports with acknowledgements of whether their performance and deliverable are satisfactory. Finally, the teams will be given €15 000 in case they pass the evaluation criteria.

### 2.2.5 Progress & experience sharing webinars

The second part of the Experiment Phase is when SMEs and start-ups build their MVP and get support along the way in a form of peer-to-peer experience sharing seminars, the Bootcamp and joint participation in various events. There will be 6-8 seminars distributed from the 9th to the 34th week.

Figure 7 MVP building part of the Experiment Phase



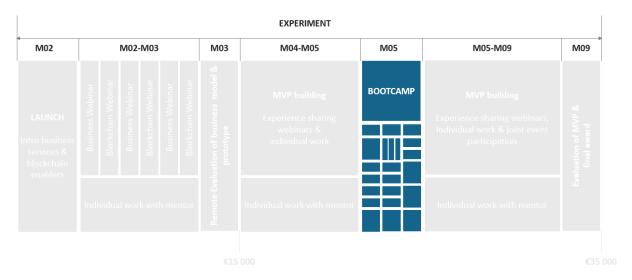


These seminars will take the form of online webinars, in which the SMEs and start-ups will present to each other their progress in building the MVP, ask peers for feedback and have a questions and answers session to clarify the presented information. The moderator will keep track of each team progress and facilitate peer-to-peer learning by encouraging teams to share their experience of how they tackled the same or similar challenges. Each team will be advised not to disclose any information that would be the subject to Intellectual Property Rights.

### 2.2.6 Bootcamp

The Bootcamp is a 3-day programme aimed at helping teams to be better prepared, to have more structured concepts and to increase their chances of success by providing external feedback and insight. It will consist of business, blockchain technology, agrifood, fintech and logistics workshops, feedback sessions and networking events.

**Figure 8 Bootcamp of the Experiment Phase** 

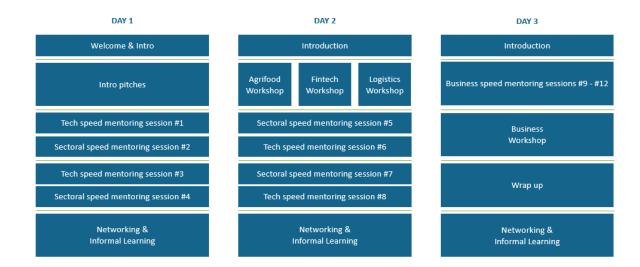


The three-day event will be organized in the 16th week of the Experiment Phase, and it will be obligatory for teams to participate. Each SME or start-up will be presented with an individual schedule including a special set of one-on-one meetings with agrifood, fintech, logistics, business, and blockchain experts.

The agenda consists of several contact hours per team over 3 days plus networking time. The SMEs and start-ups will be offered six hours of consultations with 12 experts and four hours of workshops.



Figure 9 Bootcamp agenda



#### Workshops

The Bootcamp will start with each team's intro pitches of 150 seconds to get to know each other's projects. The covered topics on the first day of speed mentoring sessions will be blockchain (by technology experts) and sector specific expertise. The second day will start with topical 2-hour workshops with the experts representing three different sectors - agrifood, fintech, and logistics. The experts will present the challenges and opportunities of blockchain implementation they face in each sector. Each workshop will also feature a 30-minute facilitated discussion among the participants since it is expected that each innovator has significant knowledge to share and contribute to each other's education. Second day speed mentoring sessions will also include blockchain (technical) and sectoral coverage.

The third day of the Bootcamp is dedicated to the business topics. However, the topics for the workshop will be decided based on the evaluation results of the first part of the Experiment Phase. The analysis of the evaluation will reveal the actual need and the most relevant topics to be delivered during the business workshop.

#### **Speed mentoring**

We will use speed dating to allow each team to meet a large number of different experts in a short period of time. Each SME and start-up will have six hours of individual work with experts divided into 12 sessions of 30 minutes. Each team will meet two experts representing the relevant sector, four blockchain experts and four business experts, ten experts in total. This programme will involve multiple experts who will provide mentoring over the three days.

#### **Networking events**

Two networking events in the evenings of day-1 and day-2 will be organised to facilitate peer-to-peer experience sharing and informal learning. Teams will be matched either by sectors, common issues or level of business maturity. The networking event of the first day will be exclusively for the Bootcamp participants, project partners and involved experts. The second networking event will include international and local start-up ecosystem builders from the hosting country, representatives of agrifood, fintech and logistics clusters, entrepreneurs, policymakers, and other invite-only guests.



### 2.2.7 Joint participation in the events

The teams will have an opportunity to explore synergies with SMEs and start-ups supported by other EU H2020 projects and initiatives (NGI Ledger, Blockchers, BlockStart, etc.) through joint participation at workshops and conferences that the consortium will define as relevant for the participating teams. The list of events will be provided to the teams with specific recommendations to each team separately.

The events will be selected according to the teams' current needs, but the focus point will be on blockchain solutions, agriculture, fintech and logistics events. Clustering with peers in the events, will help to cut costs and build relationships between the innovators.

#### **2.2.8 Evaluation #2**

At the end of the Experiment Phase a 2-day Demonstration event will be organised for SMEs and teams to present their MVPs - Demo Day. The MVPs evaluation is going to be organised alongside an international blockchain conference or a similar event. The Demo Day is intended to take place on the 34th week of the Experiment Phase.

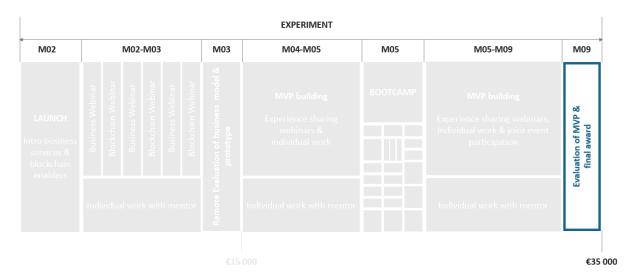


Figure 10 Evaluation 2 of the Experiment Phase

On the first day of the Demo day each SME will have a face-to-face meeting with the review committee. The evaluators' team will consist of 3 different stakeholders of the project - a Block.IS consortium expert with a business background, one with tech experience and an external evaluator. On the second day of the event, SMEs will have an opportunity to make a 10-minute pitch in front of the audience to present their solution and MVP to the public. A committee of three external experts will be invited to grade and decide on the best performing team. Lastly, all the teams which will demonstrate an MVP built according to the requirements will receive the aforementioned funding (cf. page 7). Clusters, policymakers, investors, and other stakeholders will be invited to the pitching event and will get an opportunity for face-to-face interactions with programme participants.

#### 2.3 Activities of the Commercialise Phase

The last part of the acceleration programme is a 2-month Commercialise Phase. The 10 SMEs and start-ups that scored the highest grade in the Demo Day of Experiment Phase will be invited to



participate in three coaching meetings, two webinars, two experience sharing events, one onsite pitch training and the pitching event - Demo Day of Commercialise Phase, where teams will be awarded with maximum of €7 000 (given that this does not exceed the maximum value of 60.000€ that each and any SME may receive from Block.IS).

Innovation assembly Evaluation of technical business impact to industry

| NOT | NOT

Figure 11 Commercialise Phase of the Block.is project

#### 2.3.1 Webinars

The Commercialise Phase will start with the online seminars on further business development and funding attraction. The experts will present two webinars:

- Business growth hacking and sales.
- Attracting investment.

These webinars will focus on facilitating the participating teams' growth on their own knowledge after the acceleration programme is finished. These webinars will occur in Months 10-12 and will each last 1½ hours including a Q/A session.

## 2.3.2 Coaching sessions

The SMEs and start-ups will meet the new business coach who will help the teams to grow their skills in attracting new customers and increasing sales after the Block.IS acceleration programme is finished. At the beginning of the Commercialise Phase, each team will have a one-hour one-on-one online session with the coach. During the session, SMEs and start-ups will present their case and discuss key challenges. The coach will provide his or her opinion on the issues, share insights, link to the relevant cases or propose connections from his or her own network. With the assistance of the coach, the teams will define their new KPIs and milestones for the following two months.

In the second month of the Phase, two experience sharing sessions for all 10 participating teams will be organised. The teams will present their progress on commercialisation of their products and the peers will provide feedback.

## 2.3.3 Pitch trainings

A day before the Demo Day, participating teams will have an 8-hour pitching training session. All the teams will be guided by the coach on how to create a professional pitch presentation. Afterwards, teams will practice their pitches and receive feedback from each other. Additionally, the coach will provide individual feedback, present the best examples and pitching techniques to get teams ready for the final Demo Day.



### 2.3.4 Evaluation

Finally, during the Demo Day event, finalist teams will pitch in front of the jury of blockchain and start-up mentors. The pitching event will attract representatives of agrifood, logistics and fintech clusters, investors and potential customers. In the Q&A session that will follow the pitch, the jury together with these representatives will ask questions and provide immediate feedback.

The Demo Day will create conditions for the innovator to attract publicity, new customers or funding from third parties. As a result of the Demo Day participation teams will receive the maximum of €7 000 and continue developing products/services on their own.

## 2.4 Incubation Facilities & Helpdesk

#### 2.4.1 Incubation Facilities

The Block.IS team has extensive connections with incubators and accelerators in Europe. The team will find the most suitable premises and services for each SME or start-up to scale up their business. Upon request, a list of incubation facilities will be provided for each of the 23 innovators selected for the Experiment Phase. The incubation facilities will be chosen in accordance with the location of each SME with the intention to cluster the businesses in case their locations match (e.g. three companies are based in Berlin will be recommended one incubation facility). This service is intended for those innovators that do not have office spaces or are interested in clustering with peers.

### 2.4.2 Business Helpdesk

The business helpdesk services will be provided using a dedicated area integrated into the Block.IS website. This will serve as a single point of contact for companies to communicate: teams will be able to access a knowledge repository, FAQs, and a forum for troubleshooting and other support. Teams will be able to register the tickets with the questions and considerations 24/7, and requests relevant to the programme will be answered usually within 24h. Meanwhile, to increase peer-to-peer learning and collaboration, teams will be connected through business messaging platform Slack.

All webinars and other material used in the acceleration process will be made available on the dedicated support area of the website and will be accessible to all participants.



# 3 Technical Support Services

#### 3.1 Overview

This part of the deliverable describes technical support provided to SMEs and should be read as complimentary and fully integrated with the Business Support described above. The objective of the technical support services and the associated material that Block.IS will make available to SMEs and start-ups is to help bridge the gap between their (possibly) vague knowledge of Blockchain and future product development. We plan to provide a sufficiently clear understanding of the technology so as enable the SMEs to identify new product or service opportunities. Nonetheless, all levels of blockchain expertise will be supported. The education and training will be provided (as noted above for the business services support) by means of a series of lectures (delivered as webinars) by the technical experts made available to the consortium from the two technical partners (INTRASOFT and TNO); a repository of technical knowledge as well as FAQ, and one to one mentoring on the technology level to selected SMEs (those that progress to the second stage of the missions).

All outputs will be available directly on the project website (<a href="https://blockis.eu/">https://blockis.eu/</a> in a suitably signposted subarea (<a href="https://blockis.eu/tech-support/">https://blockis.eu/tech-support/</a>) or else links will be provided to other locations for relevant content including software (for example if code or code examples reside on GitHub (<a href="https://github.com/">https://github.com/</a>) or Gitlab (<a href="https://gitlab.com/">https://gitlab.com/</a>) (BLOCK.IS enablers will be accessible via <a href="https://gitlab.com/block.is-enablers">https://gitlab.com/block.is-enablers</a>). This Technical Support page will provide a wealth of information on the (mostly) technical aspects of Blockchain technology by including not just material developed by the Block.IS partners but also links to a variety of useful information sources across the Internet. The structure and categories of this repository of technical knowledge is described in the next section.

## 3.2 Repository of technological knowledge and resources

This includes material under the following headings:

- 1. Introductory tutorials: Here a series of basic documents and tutorials will be provided from publicly available material, covering basic blockchain technology concepts. These concepts include:
  - 1.1. Origins of Blockchain Technology in Bitcoin
  - 1.2. Blockchains and distributed ledgers
  - 1.3. Consensus algorithms
  - 1.4. Smart Contracts
  - 1.5. Blockchains and cryptocurrencies
  - 1.6. Current existing blockchain platforms
- 2. Blockchain Technology Assessment: TNO will provide an up to date overview of current technology offerings in the blockchain space. This also has links to relevant code snippets for trying out the platforms/systems described.
- 3. Publications and Whitepapers: We will catalogue and link to a selection of core papers (including some classic whitepapers) which represent a core body of knowledge. This will be for people needing a deeper understanding of the technology.

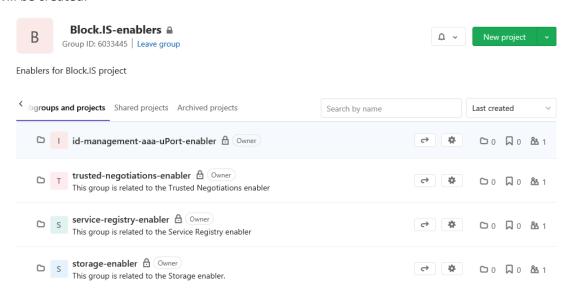


- 4. Presentations and webinars (external): Here we will link to a suitable selection of presentations (e.g. on SlideShare) and videos or webinars which in our view are particularly useful and informative.
  - 4.1. Block.IS Webinars: Here the end user will find the dedicated webinars that will be given as part of the activities of the Experiment phase (see Section 2.2 above).

#### 3.2.1 Blockchain Enablers

Short descriptions will be provided of the blockchain enablers the consortium is making available to participants, together with links to the more detailed descriptions and documentation which will be provided in a dedicated Gitlab space (https://gitlab.com/block.is-enablers). In each case documentation provided includes a description that makes clear the utility of the enabler from a business product perspective, links to technical documentation, dynamic self-documentation services (open source Swagger framework where applicable), docker images and recipes.

Regarding the GitLab, we have created a group ("block.is-enablers") and therein a group is created for each of the enablers (e.g. "storage-enabler"). For each one within the relevant group a project will be created.



Most of this material is derived from the descriptions and documentation provided as part of Deliverable D2.2. The currently planned enablers are as follows:

- 1. The *Identity Management with AAA (Authentication, Authorization and Accounting) support based on uPort* enabler is providing services related to the administration of the user identity, supporting authentication and authorization. The enabler implements AAA and trust-management based on the uPort framework.
- 2. The Storage enabler allows the user to encrypt and store files (consisting of e.g. text, photos and videos) in a distributed file system (Interplanetary File System, IPFS) which collaborates with the Blockchain infrastructure, registering all activities (IPFS file system, 2019). The information exchanges, during the file exchanges, are permanent, immutable and traceable, while the files are kept encrypted in the file system. As the files are stored in the file system, their size is not limited (by limitations of the Blockchain infrastructure).
- 3. The Service Registry enabler implements an entity, service and smart contract registry directory where the entities participating in the Block.IS ecosystem can register (and advertise) themselves as well as the services and smart contracts they offer based on keywords (tags). This



- way finding services and smart contracts in Block.IS is facilitated. The services registered in the Service Registry enabler are not necessarily using Blockchains.
- 4. The *Trusted Negotiations* enabler supports and enhances (in terms of integrity, authentication and non-repudiation guarantees) the critical (key) operations taking place during the interactions with a Marketplace. With the concept of "critical operations" we refer to operations related to registration of information. These operations include the making of an "offer", a "bid", as well as the establishment of bilateral agreements between parties that are already registered in the Block.IS-enabled platform.
- 5. Self-Sovereign Identity (Business Process Management) allows answering the question "which party has signed any given (financial, logistic or agrifood) transaction" without revealing more information about that party than strictly needed. For example, a fruit grower that needs to prove that he is located in Spain can get proof from its municipality, revealing just the address of the orchard and no personal information about the owner.
- 6. Semantic Ledger (Structured data and smart contract functionalities) provides a data-sharing platform that facilitates the implementation of a transparent and immutable supply-chain ecosystem. The platform supports transactional confidentiality and ensures it is not obvious which parties interact through the platform. Semantic Ledger utilizes semantic technology to achieve data interoperability within the ecosystem. By semantically structuring the data, it is possible to refer to any other data within or outside the system, given this data is also semantically annotated and referenceable.

For each enabler, the documentation includes:

- 1. The basic concepts, including the added value and the objectives of the enabler
- 2. The high-level architecture and the interactions foreseen during the usage of the enabler
- 3. The open API describing the usage of the enabler and instruction for its installation and management

The documentation is included in D2.2 and the Gitlab repository.

# 3.3 Other Tech Training and Support

The technology support will also cover a number of other facilities both online and face to face including the following:

#### 3.3.1 Forum

A forum is provided (<a href="https://blockis.eu/support/forum">https://blockis.eu/support/forum</a> )to enable participants in the various phases of Block.IS both to pose questions to the community and to get expert advice. The forum is structured with dedicated spaces for Business related questions (cf. Section 2.4 above) and Technical Support questions with dedicated sub areas for discussion topics around specific enablers the project provides and more general topics. The forum will be very much user driven, even if Block.IS project experts will be actively involved on a daily basis. For the technology related aspects, we foresee the following areas:

- Added value and implications for applications when using Blockchains: This section can include discussion on the aspects of data integrity, authenticity and non-repudiation. Performance penalties and complexity implications can be included as well.



- Discussions on the usage of the Blockchain enablers offered by the project and the 3<sup>rd</sup> party tools they use (such as the Ethereum infrastructure).

The discussions taking place in the forum will be closely monitored so that apart from the day-to-day operational aspects, some kind of intelligence will be pursued in the adoption of this technology and specifically of the Block.IS artefacts. Complementary activities will also take place to leverage this knowledge, e.g. recurrent questions will be extracted and placed in the FAQ.

### 3.3.2 Frequently Asked Questions

An FAQ will be constructed which will cover business related support questions, basic blockchain technology related questions as well as more specific questions regarding the enablers or other aspects. This FAQ will be seamlessly integrated into the "business helpdesk" functionalities described above (Section 2.4). Recurrent questions posed to team members or on the Forum will be captured for inclusion on the forum. There are a variety of existing FAQs on the internet and we do not try to re-invent the wheel here but either link or copy to well-structured answers provided by outside experts (obviously giving full credit and requesting permission for reuse if appropriate).

#### 3.3.3 Webinars

As noted in Section 2.2.3 above, webinars form a key support and training activity in the Experiment Phase. For technology support and training, the webinars will be run covering the following topics:

- Tech Webinar 1: General introduction to Blockchain Technology and its utility in the applications areas of agrifood, finance, and logistics. Existing examples of Blockchain applications in these areas. Available videos and best practices.
- Tech Webinar 2: Technical Introduction to Enablers 1-3 (Authentication and Authorization, Storage, Service Registry) (API discussion, usage of the API and application building)
- Tech Webinar 3: Technical Introduction to Enablers 4-6 (Trusted Negotiations, Self-Sovereign Identity, Semantic Ledger)

The webinars will be recorded and made accessible in a dedicated section of the tech support area of the Block.IS website. The webinars will also include links to the relevant documentation and examples.

## 3.3.4 Bootcamps Technology Mentoring

Technology support will be provided for the bootcamp in the Experiment Phase (Cf. Section 2.2.6 above) which means that the technology experts will be available for mentoring the SMEs who are exploring how to further develop their project ideas. Furthermore, the workshops on the domains (agrifood, finance, logistics) will be actively supported with appropriate technology experts. Mentoring will be provided to all selected SMEs and start-ups totalling approximately 20 hours combining both technical expertise and domain expertise.



## 4 Conclusions

This report has provided a description of planned business and technology support which will be provided to SMEs participating in the Block.IS open calls. Materials will be provided by the consortium partners and they will take a variety of forms. The Block.IS website will act as a central repository for end users to find (and re-discover) all the materials developed or collated to enable the SMEs to adopt blockchain technology in their new products and services. To participate on the call, follow the instructions here (<a href="https://blockis.eu/apply-now/start-ups-smes/">https://blockis.eu/apply-now/start-ups-smes/</a>) and read the instructions and guidelines.

Starting with the  $1^{st}$  open call we expect to gather the experiences and the lessons learnt from the potential adopters in order to further enhance and improve the business and technical services. The continuation of the present deliverable is expected to take place in the forthcoming WP2 deliverables namely D2.3 (Block.IS technical and business support service design – v2) and D2.4 Block.IS (technical and business support service design – lessons learnt).

