



Deliverable 3.3:

Progress Report

D 3.3

30 September 2020

Deliverable

PROJECT ACRONYM	GRANT AGREEMENT #	PROJECT TITLE
DLT4EU	No. LC-01349961	DLT4EU

DELIVERABLE REFERENCE NUMBER AND TITLE

D3.3

Progress Report

Revision: 1.0

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Funded by the Horizon 2020 programme of the European Union
Grant Agreement No. LC-01349961

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- ✓ **P** **Public**
- C** Confidential, only for members of the consortium and the Commission Services

Revision History

REVISION	DATE	AUTHOR	ORG.	DESCRIPTION
v0.1	15.05.2020	Alice MacNeil	MET	First draft
v0.2	23.09.2020	Pierre Baisle	DC	First review
v0.2	23.09.2020	Anna Higuera	IFC	First review
v1.0	29.09.2020	Liz Corbin	MET	Final review

STATEMENT OF ORIGINALITY

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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Progress Report

1. Programme Introduction

DLT4EU aims to stimulate the development of cutting-edge Distributed Ledger Technology (DLT)-based applications that address pressing social and environmental challenges and drive positive change for the public good.

The DLT4EU accelerator programme is built upon the 'Virtual Field Lab' (VFL) concept of bringing together DLT developers alongside Challenge Owners - public and social sector organisations - to create Proof-of-Concept prototypes. The selected candidates will develop their applications within a VFL: a virtual space for DLT experimentation curated to an appropriate real world challenge.

Each VFL will have a 'Challenge Owner' who will scope, guide and define the problem, alongside a network of mentors, subject matter experts, as well as a designated VFL Coach from the DLT4EU Consortium.

Each VFL will benefit from a curated accelerator programme covering specialist topics such as business model refinement, lean product development, and other techniques for rapid learning.

Over the course of the accelerator, three intensive bootcamps will be hosted by each DLT4EU Partner, with specific specialist topics explored via workshops and mentoring sessions. The bootcamp locations and their lead partners are: Amsterdam (Metabolic), London (the Digital Catapult), and Barcelona (Ideas for Change).

As a result of the programme, Venture Teams will have developed Proofs-of-Concept (PoCs) - in the form of functional prototypes - that will demonstrate the value of DLTs in the public good sector.

These PoCs will be assessed by an Evaluation Committee with three to five applications awarded follow-on funding.

2. Scope of D3.3 Progress Report

The purpose of this document is to provide a mid-term progress report on the DLT4EU Accelerator and its Virtual Field Labs, using the monitoring framework developed in WP6.

Additional to reporting on this monitoring framework, and to give more insight into the development of the accelerator, this report also provides an overview of the following:

- Each Virtual Field Lab, the Challenge Area, Challenge Owner, Venture Team and the initial Proof-of-Concept idea and how this has developed;
- The Amsterdam (Virtual) Bootcamp and outputs;
- The DLT4EU Event Launch;
- The London (Virtual) Bootcamp and outputs;

- The Support Resources available to Virtual Field Labs;
- And finally the Risk Identification and Mitigation Strategy for the Virtual Field Labs.

3. Progress Report on the Key Performance Indicators

The progress of the Accelerator is tracked by the following KPIs in Table 1 (as part of WP6 and WP7). In Table 1, the status of each KPI target is given in the “Progress - September 2020” column, a status of either ‘completed’, ‘on track’ or ‘needs focused attention’. To highlight priority areas, the colour green for if the KPI has been met, orange for ‘on track’, and red for indicating a need for renewed focus by the DLT4EU Consortium.

For more information on these monitoring frameworks, refer to D6.1 Communications and Dissemination Plan and D7.1 Impact Assessment Framework.

The data analytics for specifically the DLT4EU Public Launch Event is provided below in Section 7.

Table 1: WP6 Monitoring Framework & WP7 Programme-Level Impact Assessment

WP6 Monitoring Framework & WP7 Programme-Level Impact Assessment			
Objective	Description	Key Performance Indicator (KPI)	Progress - September 2020
1	Rigorously understand the present and foreseeable challenges facing the social and public sectors in the EU.	15-20 studies synthesised	On track
		15-20 experts consulted	On track
		Per challenge: 2-3 experts aligned on the key challenge identified	On track
2	To map the framework conditions for the successful utilisation of DLT by EU public and social sectors.	A minimum of 15-25 experts consulted	On track
3	Build meaningful and sustainable relationships between DLT developers, beneficiaries within the social and public sectors, and social impact investors. These relationships must form the bases of DLT experimentation and development in ways that closely tether venture development and	Per challenge: 2-3 experts aligned on the key challenge identified	On track
		10-15 beneficiaries engaged	On track
		5-7 social impact investors engaged	Needs focused attention
		8-10 projects co-initiated by developers and beneficiaries	On track

	investment to real-world challenges and impact.	3 projects supported by impact investment	Needs focused attention
		500+ attendees reached by events	Needs focused attention
4	Leverage synergies between existing initiatives and projects across the fields of DLT, digital social innovation and social impact investment; coupling existing knowledge with innovative ideas and frameworks.	10 existing initiatives and networks connected to DLT4EU	On track
		50 external references made about DLT4EU	Needs focused attention
5	Prototype new DLT applications and initiatives that are capable of addressing existing and foreseeable challenges in the social and public sectors, and validated by a robust impact assessment framework.	5-10 proof-of-concept prototypes made within the DLT4EU Virtual Field Labs	On track
6	Develop a robust impact assessment framework that can judge the potential impact of DLT applications before they are piloted.	5-10 experts consulted in framework development	On track
		5-10 expert peer-reviews of framework	On track
		5-10 concepts validated	On track
7	Develop highly scalable, impactful and resilient DLT applications that address the most pressing public, social and environmental challenges across the EU. And to foster their adoption through piloting proof-of-concept experiments.	5-10 pilots initiated with public or private actors	On track
		3-5 services expanded in public sector	On track
		70% of DLT4EU projects receive follow-on funding	Needs focused attention
8	Support DLT applications that, given their social and public targets, do not fit easily within commercially driven schemes to scale up through mentorship, business development, and funding opportunities.	5-10 partnerships with public organisations	On track
		3-5 non-profit and/or public applications developed	On track
9	Foster a strong and vibrant DLT ecosystem for social and public good across the EU, and maximise its engagement, outcomes, and impacts beyond this ecosystem.	20-30 active organisations within the DLT4EU ecosystem	Needs focused attention
		1000 people subscribed to newsletter	Needs focused attention
		10-15 media articles	On track
10	To increase the capacity of EU	30-50 actors reached within	Needs focused

	social and public sectors to take up DLT-based solutions and to equip intermediaries to support them.	government and NGOs	attention
		50+ knowledge sharing activities across policy-makers and public sector supporters	Needs focused attention
11	To develop an effective Virtual Field Lab model for those who wish to run similar incubation schemes.	1000 downloads and views of the DLT4EU Accelerator Report in which the VFL model is detailed	Needs focused attention
		5-10 VFLs occurring across the EU	On track
12	To drive positive social change through capacity building: providing a forum for knowledge exchange and strategic guidance between DLT experimentation, digital social innovation, and policy initiatives.	50+ knowledge sharing and outreach activities	Needs focused attention
-	-	Traffic on the dlt4.eu website	On track
-	-	Followers on dlt4eu Channels	Needs focused attention
-	-	Number of contacts made by people interested in participating in the challenges	On track
-	-	Number of individuals, communities and organisations, Research centres, associations that engage	On track
-	-	Number of interactions with posts on social media	On track
-	-	Consortium & Partner News	On track
-	-	Project mentions on media: TV, magazines, newspapers, online-only media portals.	On track
-	-	Number of accepted talks at conferences and similar events	Needs focused attention

4. Introduction to the Virtual Field Labs (VFLs)

As a result of the Open Call Process, the DLT4EU Accelerator has accepted 8 Virtual Field Labs (VFLs) to participate, out of the original 12 identified in the challenge development phase. For more information on this process, please refer to D2.2 Open Call Report.

The 8 Virtual Field Labs accepted to the DLT4EU accelerator are:

1. Ereuse (Spain) will be addressing the 'Collaborative E-waste Management' challenge with the City of Sant Boi;
2. Convergence Tech (Canada) will be addressing the 'Track and Trace: Supply Chain Transparency' challenge with the UNDP AltFinLab and UNDP Morocco;
3. Prosume (Italy) will be addressing the 'Peer-to-Peer (P2P) Energy Solutions' challenge with the UNDP AltFinLab and UNDP Serbia;
4. Acren (Germany) will be addressing the 'Digital Impact Coins' challenge with the UNDP AltFinLab and UNDP Lebanon;
5. DisCO (Spain) will be addressing the 'Citizen-Powered Circular Textiles Sector' challenge by the CTO Amsterdam, WAAG, DYNE, and REFLOW OS;
6. AID:Tech (Ireland) will be addressing the 'Data Sovereignty for all Citizens' challenge with the City of Helsingborg;
7. Alice.Si (United Kingdom) will be addressing the 'Charitable Aid Accountability for Humanitarian Agencies' challenge with Digital Future Society and the Vodafone Foundation;
8. CiSe (the Netherlands) will be addressing the 'Shared E-Mobility' challenge with the Greater London Authority and the Olympic Park / London Legacy Development Cooperation.

Four challenge areas did not successfully move into the DLT4EU Accelerator. They were: 'Trees as Infrastructure' and 'A Smart Commons Platform' with Dark Matter Labs, 'The Digital Social Market' and 'Sustainable Energy Management Systems' with the Greater London Authority and Sharing Cities. This was due to a lack of high-quality applications to these challenges.

There has also been one change in Venture Teams since the beginning of the accelerator. Due to a change in the geographical scope of the Challenge Area with the UNDP AltFinLab and UNDP Morocco, Everledger was unable to continue to participate. However, as the second

ranked applicant from the Open Call Process, Convergence Tech was able to join the accelerator, starting 1 September 2020.

Additionally, the Vodafone Foundation has joined the accelerator as a co-Challenge Owner to the 'Charitable Aid Accountability for Humanitarian Agencies' challenge working with Alice.Si.

5. Virtual Field Lab Profiles

The following profiles provide an overview of each Virtual Field Lab, covering the Challenge Area description, Challenge Owner, Venture Team, the proposed Proof-of-Concept from the Open Call applications and how this has developed over the first three months of the accelerator.

5.1 Virtual Field Lab #1 Collaborative e-Waste Management

The Challenge Area

The global race to lower costs is contributing to a competitive and counterproductive mindset whereby valuable materials and resources are relegated as waste far before they reach the end of their useful life. DLTs can facilitate new open and symbiotic economic models between public organisations and public/private partnerships alike that lead to significant reductions in CO2 emissions, effective resource reuse and recycling, and the creation of new circular economy jobs.

There is an urgent need to rethink the current electronic equipment consumption model. Most equipment ends its short life cycle as e-waste, and evolves into circular and collaborative electronic equipment consumption solutions, extending the life and the value of the equipment and providing social and circular economy improvements.

The ecological damage caused by e-waste is massive: for example, Europe generates 12 million tons of waste per year from electrical and electronic equipment (WEEE), corresponding to 16.6 kg on average per inhabitant.¹

The City Council wants to benefit from technology to foster local policies such as recycling and job placement of people at risk of social exclusion. For this reason, the aim is to promote a circular consumption model for electronic equipment - at present mainly computers - extending their life cycle and value, and promoting reutilisation - where vulnerable people can be trained to work in the repairing and delivery for reutilisation.

The municipality is looking to understand the potential role for DLT in promoting the circularity of electronic equipment, and how this would enable traceability in a way that non-DLT solutions cannot provide. They are thrilled to see practical demonstrations to help inform future infrastructure decisions.

¹ Baldé, C. P., Forti, V., Gray, V., Kuehr, R., Stegmann, P., 'Global e-Waste Monitor: Quantities, Flows, and Resources', (2017), p. 72.

This experience is a testbed with great potential for replicability across multiple European cities. The resulting model could be applicable in multiple circular economy environments related to reverse supply chain circuits, and very useful for mostly every large producer of waste electronic materials.

The project is a first step on a longer run: the aim is to extend this model to other stakeholders in the near future, extending the life of the e-waste generated by citizens, industries, shops and academic institutions all over the city and beyond.

As part of this challenge area:

- The initial solution is encouraged to address computer equipment in public possession;
- The City Council currently manages local 'Green Points' in which e-waste is finally discarded;
- The City Council has some early ideas regarding models to incentivise successful re-utilisation;
- Promote broad vendor and citizen inclusivity, and open infrastructure.

Additional aspects are also encouraged:

- Ensure the equipment finishes its life-cycle at a Green Point;
- Understand the potential benefits of receiving information on the use that is being given to the 'renewed' equipment by the end user: how long it has been used, etc.

The Challenge Owner

Sant Boi de Llobregat City Council provides all the public facilities and services that contribute to meet the needs of the community such as citizenship participation, self-organisation, local identity and representation, environmental sustainability, territory management, social cohesion, connectivity, communication and mobility infrastructures, energy and economic resources management.²

The Venture Team

eResue is a coalition that works to empower the creation of local ecosystems for reuse of electronic devices, by optimising collection, refurbishment, reuse, recycling and ensuring accountability and management in the reverse supply chain. eReuse currently works on multiple public initiatives, such as with the City Council Barcelona and City Council Sant Quirze del Vallès, and private organisations such as Abacus Cooperativa, and Nestlé.³

The Proof-of-Concept

In their Open Call application, eReuse proposed to carry out a pilot starting from disposal, refurbishment, resale or donation to initiatives to support digitally excluded citizens, and simulate their disposal on a City Council Green Point. eReuse wants to provide the City of Sant

² 'Collaborative e-Waste management to reduce disposal and foster circular consumption in the City of Sant Boi', DLT4EU website, [<https://www.dlt4.eu/sant-boi>], Accessed 29 September 2020.

³ eReuse, [<https://www.ereuse.org>], Accessed 29 September 2020.

Boi with an autonomous, open, and fully functional infrastructure to trace disposed devices in the reverse-supply chain and an understanding of the circular and social benefits of 'renewed' equipment by the end user.

Since the beginning of the accelerator, eReuse has focused the scope of the PoC to equipment sourcing, training courses, and demand assessment for the City. The PoC has two objectives: first to enable the reuse of thirty computers from the Challenge Owner by vulnerable families, and second to use a DLT to record and account for the use of the service.⁴

5.2 Virtual Field Lab #2 Track and Trace: Supply Chain Transparency

The Challenge Area

Tracking the provenance of materials, components, and products throughout supply chains can enable anyone along the way to account for their validity and circularity – from the moment they are first extracted or created, all the way through their many life cycles.

Together, the UNDP AltFin Lab and FairChain Foundation have created 'The Other Bar' - a traceability programme that tracks production from source to end product. Additionally, via a DLT-enabled token, consumers are incentivised to re-invest in this production chain beyond their purchase. For example, with The Other Bar chocolate bar, consumers can reinvest in farmers who brought them their chocolate bar by contributing to the purchase of cocoa trees. This includes the ability to track when and where the cocoa tree gets planted.

The Other Bar has tested the hypothesis that consumers will reward sustainable business practices and brands over those less sustainable. Additionally, it was proved that customers are likely to pay a premium price on a product that is: based on a sustainably managed natural resource; clearly contributes to the livelihoods of farmers/producers; is traceable to respond to specific consumer needs of transparency (verification/proof of origin), and provides options for reinvestment and customer engagement with the natural resource and a producer.

The opportunity here is, firstly, to develop the one-module infrastructure for a track-and-trace solution and, secondly, to pilot the solution with one of the following use cases:

- Food Production / Agriculture: Helping to realise resilient business models and supply chains for smallholder farmers;
- Textiles - enabling the traceability of material flows for textiles.

The Challenge Owner

The Alternative Finance Lab (AltFinLab) of the United Nations Development Programme (UNDP) is an internal innovation team focused on experimenting with new financial mechanisms and technologies to progress the Sustainable Development Goals (SDGs). AltFinLab's portfolio

⁴ David Franquesa, VFL Introduction for eReuse, DLT4EU Public Launch Event, [<https://www.dlt4.eu/public-launch-event>], Accessed 29 September 2020.

includes successful pilots with Distributed Ledger Technologies such as CederCoin, TreeCoin, and The Other Way.

For the piloting of the Proof-of-Concept, this VFL will also partner with or UNDP Morocco as the lead beneficiary.⁵

The Venture Team

Convergence Tech is a digital transformation company, who work with a diverse set of organisations - from governments, to humanitarian agencies, to corporations - on their digital strategy and solution implementation. Convergence Tech has two main products relevant to the programme: the traceability platform Backbone and digital identity tool Trybe.id.⁶

The Proof-of-Concept

Due to a change in the geographical scope of the challenge area, Convergence Tech are now working with UNDP Morocco on a traceability solution for sustainable argan oil produced by women's cooperatives in the south western region of Morocco.⁷

5.3 Virtual Field Lab #3 Peer-to-Peer (P2P) Energy Solutions

The Challenge Area

In pay-per-use models, users pay for the use of a product instead of possession. This product-to-service model creates incentives for products that last, stimulates value chains to work together, and places more responsibility on producers for the collection, processing, and reuse of products. Facilitating civic exchange networks can help to reduce overall dependence on public services and utilities and thus improve the accessibility of such services to vulnerable and minority communities.

A key area of pay-per use models is the development of infrastructure that enables asset trading within communities and/or cooperatives, of utilities - such as off-grid renewable energy markets. These new platforms are driven by individuals or communities who actively generate their own electricity (known as prosumers) from domestic sources and trade it locally with their neighbours, while retaining value generated within the community. These civic-driven models play an important role in the European Commission directive for decarbonising the energy sector and European economy.

Despite the prioritisation of decarbonisation by European economies, there remain key regulatory barriers to realising P2P energy trading. Furthermore, even when the regulatory environment is open to new innovations, there are technological implementation issues, as simple as, for example, the lack of households who have smart meters. There are, however, multiple examples of successful small-scale implementations in Armenia, Bahrain, and Panama,

⁵ 'Track and Trace: Supply Chain Transparency', DLT4EU website, [<https://www.dlt4.eu/track-and-trace>], Accessed 29 September 2020.

⁶ Convergence Tech [<https://convergence.tech>], Accessed 29 September 2020.

⁷ Erik Zvaigzne, VFL Introduction for Convergence Tech, DLT4EU Public Launch Event, [<https://www.dlt4.eu/public-launch-event>], Accessed 29 September 2020.

alongside the proliferation of DLT-based startups working to help incentivise renewable energy adoption.

Potential use cases for this challenge area include:

- Enabling citizen co-investments in renewable energy infrastructure, whether those are community microgrids or public-owned renewable energy park;
- Creating tradable renewable energy certificates which verify the provenance of energy supplies and thus facilitates the shift of energy production and usage to renewable energy;
- Development of a marketplace that connects and incentivises buyers - whether individual households or utility organisations - to renewable energy supplies.

The Challenge Owner(s)

The Alternative Finance Lab (AltFinLab) of the United Nations Development Programme (UNDP) is an internal innovation team focused on experimenting with new financial mechanisms and technologies to progress the Sustainable Development Goals (SDGs). AltFinLab's portfolio includes successful pilots with Distributed Ledger Technologies such as CederCoin, TreeCoin, and The Other Way.

For the piloting of the Proof-of-Concept, this VFL will also partner with UNDP Serbia as the lead beneficiary.⁸

The Venture Team

Prosume is a team that wants to promote new energy community models, where consumers can buy and sell energy from renewable sources at a cheaper price, rather than through a traditional utility model. Their current 'Prosume' platform enables not just peer-to-peer (P2P) energy models, but also real-time billing, automated payments, and grid balancing.⁹

The Proof-of-Concept

Prosume proposed a solution for this challenge that could be adopted by different third party providers. A solution that would ensure energy is easily accessible to anyone, ensure data accuracy and transparency, as well as allow a smart contract functionality.

Since the start of the accelerator, this Virtual Field Lab will now focus on a pilot as part of an already-existing project in Italy - GridAbility - and then develop a masterplan for UNDP Serbia to adopt the solution in a pilot programme in 2021.¹⁰

5.4 Virtual Field Lab #4 Digital Impact Coins

⁸ 'Enabling Peer-to-Peer (P2P) Energy Solutions', DLT4EU website, [https://www.dlt4.eu/enabling-peertopeer], Accessed 29 September 2020.

⁹ Prosume, [https://prosume.io], Accessed 29 September 2020.

¹⁰ Alex D'Elia, VFL Introduction for Prosume, DLT4EU Public Launch Event, [https://www.dlt4.eu/public-launch-event], Accessed 29 September 2020.

The Challenge Area

Public innovation projects often suffer from the major risk of demotivating civic participation. This can be due to a lack of accessibility and accountability for both citizens and participating organisations. Within public and social sectors, DLT interventions can support flexible civic-centered initiatives and decentralised platforms for the collaborative economy and as well as promote decentralised digital infrastructure that facilitates increased participation in complex, multi-actor decision-making, ownership, and consensus forming.

A digital impact coin can serve as an economic incentive model mechanism, and thus encourage positive engagement for public benefits. This mechanism also encourages a long-term relationship that can be extended across ecosystem members who share common values, as well as be passed between community generations. This model can also integrate well into faith-based economic investment models. Examples of digital impact coins include CedarTree and TreeCoin, which link citizens to environmentally-positive actions and investment.

The UNDP AltFinLab's Digital Impact Coins challenge is focused on developing a solution for European beneficiaries, with the opportunity to test the use case with the Tadamon Community and other UNDP programmes.

The Challenge Owner(s)

The Alternative Finance Lab (AltFinLab) of the United Nations Development Programme (UNDP) is an internal innovation team focused on experimenting with new financial mechanisms and technologies to progress the Sustainable Development Goals (SDGs). AltFin Lab's portfolio includes successful pilots with Distributed Ledger Technologies such as CederCoin, TreeCoin, and The Other Way.

For the piloting of the Proof-of-Concept, this VFL will also partner with UNDP Lebanon as the lead beneficiary.¹¹

The Venture Team

Acren is a university spin-out, developing a framework that will enable a non-profit organization to create its own Digital Impact Coin to stimulate civic action and engagement. Acren currently has a decentralized, transparent, and secure donation platform for funding and implementing agri-environment projects, where multiple stakeholders gain value from the platform.¹²

The Proof-of-Concept

Acren proposed to apply their current platform and development of a digital impact coin to a localised use case for UNDP Lebanon, to encourage the use of solar energy by local communities.

¹¹ 'Digital Impact Coins', DLT4EU website, [<https://www.dlt4.eu/social-impact-network>], Accessed 29 September 2020.

¹² Acren, [<https://www.linkedin.com/company/acren/>], Accessed 29 September 2020.

Since the start of the accelerator, the PoC pilot has been affected by the explosion in Beirut in August 2020. To respond the Acren team have worked with UNDP Lebanon to focus on helping local communities access much-needed solar powered energy. The project name has changed to 'Social Impact Network' (SiNetwork), and encourages individuals to purchase SiTokens that are used to invest in energy projects in emerging countries.¹³

5.5 Virtual Field Lab #5 Citizen-Powered Circular Textiles

The Challenge Area

The City of Amsterdam has adopted a new circular strategy with the vision to be a thriving, regenerative and inclusive city for all citizens, while respecting the planetary boundaries. Achieving this vision will require deep systemic transformation, far beyond the cities' borders and sphere of influence. A key area of focus for the city and its partners is to create a more circular, transparent and inclusive textiles sector for both citizens and businesses alike.

As part of this, the City is exploring ways to extend producer responsibility, create higher levels of recycled content in products, and more dynamic methods for monitoring supply chains. The REFLOW project is a cornerstone initiative within Amsterdam's circular textiles strategy. Within the project, the City of Amsterdam is collaborating with Waag Society and DYNE to develop REFLOW OS: a decentralised cryptographically secure network that enables economic exchanges among actors and the tracking and tracing of materials. With REFLOW OS, the partners aim to:

- Increase the volume of textiles collected by citizens and brought back into the loop;
- Increase the demand for recycled textiles and their use in new products;
- Increase the role of citizens and SMEs within the circular textiles industry;
- Enable new mindsets, behaviours, and business models for circular textiles.

REFLOW OS will be shared using an open-source license so other developers and cities can replicate, customize, and fork the software for their own needs.

Today, the textiles sector in Amsterdam is far from circular. The ecological, human, and social impacts are large and untenable, and although demand for recycled materials is growing the general commercial uptake remains low.

While cities like Amsterdam have the ambition to improve the collection, sorting and treatment of textiles towards a circular economy, they cannot transform this chain alone; it requires organisation and cooperation at the local and national, European and global level, with citizens and SMEs playing an ever-increasingly integral role. With this challenge, the City of Amsterdam and its partners aims to break this cycle, by changing the way textile waste is collected, treated and re-processed thereby extending its life and bringing it back into the loop for new uses.

REFLOW OS is currently under development and has been designed to target a professional network of producers, retail outlets, and waste management utilities. Citizen engagement and

¹³ Social Impact Network, [<https://social-impact.network>], Accessed 29 September 2020; Nikola Markovic, VFL Introduction for Acren, DLT4EU Public Launch Event, [<https://www.dlt4.eu/public-launch-event>], Accessed 29 September 2020.

facilitation is a key gap of the current design. To this end, the city of Amsterdam and its partners are looking for a venture team that can expand the current REFLOW OS design and develop new modules that enable citizen-lead textile cycling and exchange.

Through this challenge, the City of Amsterdam and its partners are interested in exploring the development of:

- Product passports that enable citizens to log valuable information about a textile garment throughout its various use- and life- cycles;
- A physical and digital tagging system that facilitates the tracking of materials and products throughout points of exchange;
- A tokenised exchange system that incentivises effective sorting, collection and cycling of textiles while at the same time fairly distributes value between citizens, producers, and retailers;
- An accessible and inclusive UX / UI that caters to the needs and preferences of citizen groups.

The Challenge Owner

The Chief Technology Office (CTO) of the Municipality of Amsterdam collaborates with all departments from the municipality to make innovation happen in the city. They work on themes, such as: e-health, circular economy, smart mobility, sharing economy, cooperation with start-ups and innovative procurement.

Based in Amsterdam, Waag Society operates at the intersection of science, technology and the arts. Their work focuses on emergent technologies as instruments of social change, and is guided by the values of fairness, openness and inclusivity and the ambition to empower people to become active citizens through technology.

DYNE is a non-profit foundation and free software foundry based in Amsterdam dedicated to the development of reliable software products. DYNE supports broad access to technology, recycling and freedom of expression by developing socially responsible tools, applications and community platforms.

As a consortium, the partnership offers a deep understanding of DLTs inclusive of its potential and limitations within the context of Amsterdam's circular textile economy.¹⁴

The Venture Team

Distributed Cooperative Organisations (DisCO) applies cooperative, commons-based, feminist economic approaches to Distributed Autonomous Organisations, where human care and equality are at the centre of solutions. DLTs are then used to enable the automation and enforcement of the cooperative governance structures.¹⁵

¹⁴ 'Enabling a Citizen-Powered Circular Textiles Sector', DLT4EU website, [<https://www.dlt4.eu/enabling-a-citizenpowered-circular-textiles-sector/>], Accessed 29 September 2020.

¹⁵ Distributed Cooperative Organisations (DisCO) Manifesto, [<https://disco.coop/manifesto/>], Accessed 29 September 2020.

The Proof-of-Concept

DisCO proposed the co-development of a governance model to ensure the fair distribution of value to those contributing to the challenge area - such as thrift stores, citizens, makerspaces and the challenge owners - as well as software tools to make these contributions visible as a complement to the REFLOW OS module.

Over the course of the accelerator, DisCO has moved from an initial idea of a textile material passport to producing an algorithmic system to quantify community value. The pilot of the PoC will be hosted by Waag's Textile Lab, where a target user group and the challenge owners will come together to test the solution.¹⁶

5.6 Virtual Field Lab #6 Data Sovereignty for all Citizens

The Challenge Area

Citizens are increasingly using devices to collect and share data both in proprietary and open platforms. Often, this data is an exchange for a "free" service from a private provider, or locked within public and research institutions who are unable to open up the data for public good. Within public and social sectors, such DLT interventions can support citizen data ownership and management, and the use of predictive data models for improvements in public service provision.

However, there are common barriers for many cities, and regional and national governments across Europe wanting to implement data sovereignty solutions.

Opening up data flows within the city will enable the opportunity to develop services from shared citizen data, using tools like predictive analytics to improve and develop new services. Additionally, there is an opportunity here to develop a platform, service, or set of standards that can be scaled across Europe - dovetailing with the necessary European legislation, such as GDPR (General Data Protection Regulation) and eIDAS (electronic IDentification, Authentication and trust Services), and attention to the development of EBSI (European Blockchain Services Infrastructure) and ESSIF (European Self-Sovereign Identity Framework) to avoid duplication of infrastructure. Future interoperability with European backbones should be ensured early in the design of any solution.

The Challenge Owner

Since 2011, the City of Helsingborg (Helsingborg Stad) has worked actively – together with residents, businesses, and academia – to develop new welfare solutions that improve quality of life in the city. In 2018, a decision was made by the City Council to invest in innovation with a stated goal to become one of Europe's most innovative cities by the summer of 2022, and this

¹⁶ Stacco Troncoso, VFL Introduction for DisCO, DLT4EU Public Launch Event, [<https://www.dlt4.eu/public-launch-event>], Accessed 29 September 2020.

year Helsingborg is one of the finalists in the contest to become the European Capital of Innovation 2020.¹⁷

The Venture Team

AID:Tech develops identity-focused solutions that enable people to own, control, and manage their own data. AID:Tech currently has a Decentralised Digital Identity solution which acts as a gateway for users to digital services. The DID is stored on a blockchain along with a DID document containing the public key, any other public credentials the identity owner wishes to disclose, and the network addresses for interaction.¹⁸

The Proof-of-Concept

AID:Tech has proposed to develop a platform that will empower users to decide what to do with their data including: who to share it with, complete control over access, potential to “loan” their data, and use their Decentralised Digital Identity as a verified credential to access government and local services including welfare, healthcare etc.

Since the start of the accelerator, AID:Tech has worked with the City of Helsingborg to refine the scope of the Proof-of-Concept to build an API for the already-existing local citizen application, to be integrated with their digital wallet for citizen personal data - whether that is pension, financial, or health information.¹⁹

5.7 Virtual Field Lab #7 Charitable Aid Accountability

The Challenge Area

Well-designed, appropriate humanitarian aid programmes bring greater choice, dignity, privacy, and protection to beneficiaries, while enabling humanitarian entities to more efficiently and effectively meet the needs of the most vulnerable populations.

However, allocating charitable aid - whether by humanitarian agencies, grantmaking processes, or public service providers - can involve a complex task of ensuring all donations are recorded, verified, and justified to comply with regulation and guidance from local public administrations. These recording, verification, and justification tasks are sometimes done on paper, mostly due to legal requirements, and then manually entered into a technology system.

Due to this, one of the largest management costs for many humanitarian agencies is the personnel hours spent compiling, verifying, and justifying how the charitable aid has been allocated and spent by the beneficiary - while also ensuring that data protection, beneficiary privacy, traceability, transparency and a fair process are upheld.

¹⁷ ‘Enabling data sovereignty for all citizens’, DLT4EU website, [https://www.dlt4.eu/enabling-data-sovereignty], Accessed 29 September 2020.

¹⁸ AID:Tech, [https://www.aid.technology], Accessed 29 September 2020.

¹⁹ Joseph Thompson, VFL Introduction for AID:Tech, DLT4EU Public Launch Event, [https://www.dlt4.eu/public-launch-event], Accessed 29 September 2020.

It is becoming increasingly important to enable better transparency and accountability within public service provision and humanitarian development activities - especially those that affect vulnerable and minority communities.

Solutions using Distributed Ledger Technologies have the potential to enable greater access to funds by most vulnerable groups while incentivising greater accountability against impact metrics. DLTs can enable the scale up of innovative finance models that widen the scope and impact potential of charitable aid. Furthermore, greater accountability and transparency can facilitate humanitarian agencies to engage with more people beyond beneficiaries and shift finance models from donations to a long-term investment horizon, as well as a lever of change against administrations and legislators.

As part of the charitable aid activities of the Spanish Red Cross, the organisation is currently facing barriers with the reporting, verification, and justification processes of how charitable aid is distributed and used by beneficiaries. These issues are common to different types of organisations across Europe responsible for the movement and verification of grants, charitable aid, as well as the provision of public goods and services.

The potential use cases for this challenge area are:

- Enabling the conversion of data (e.g from purchases made with charitable aid card / ticket used by Red Cross beneficiaries) to a digital format to enable the traceability of humanitarian aid in the whole "end to end" process (including all the participants in the life cycle of the delivery of goods: AAPP, Red Cross, trade), and its integration into automated records;
- Supporting the Red Cross to map its workflows related to resource allocation by enabling digital traceability of services for specific processes (ie donations, local support services, etc.);
- Enable automatic reporting of resource allocation (in which categories allocations are being spent) to help support the Red Cross's resources and services management;
- Enabling the integration of charitable aid partners, such as in-person and online retail stores, where beneficiaries can freely use the charitable aid they receive, through a marketplace / platform model which connects different types of support and beneficiary groups.²⁰

The Challenge Owners

The Instant Network Schools was set up by the Vodafone Foundation, UNHCR, the UN Refugee Agency in 2013. The purpose of the programme is to provide young refugees and their teachers in Africa access to digital learning content and infrastructure.²¹

Digital Future Society is a programme of the Spanish Ministry of Economy and Business in collaboration with Mobile World Capital Barcelona that seeks to build an inclusive, equitable and

²⁰ 'Charitable aid accountability for humanitarian agencies, DLT4EU website, [<https://www.dlt4.eu/charitable-aid-accountability>], Accessed 29 September 2020.

²¹ Instant Schools Network, [<https://www.vodafone.com/about/vodafone-foundation/focus-areas/instant-network-schools>], Accessed 29 September 2020.

sustainable future in the digital era. The programme engages policymakers, civic society organisations, academic experts and citizens to respond to the challenges of the digital age.²²

The Venture Team

Alice.Si is a decentralised platform for the social finance sector, helping impact investors, governments, and nonprofits to cut transaction costs and share verified impact data.²³

The Proof-of-Concept

For this challenge area, Alice.Si proposed the use of their Alice™ product - a decentralised impact funding and measurement platform that enables citizens, corporates, and governments to quantify the impact of funding. A key outcome of the solution is transparency and accountability of services for citizens and communities.

Since the start of the accelerator, Alice has worked with the new Challenge Owner - the Vodafone Foundation Instant Network Schools - to focus on a PoC that will automate impact reports for the organisation, and so support in the reporting of the long-term impact of the Network.²⁴

5.8 Virtual Field Lab #8 Shared e-Mobility

The Challenge Area

Vehicle sharing is an instrument which provides a local community with an alternative mobility service for their daily or occasional commuting, reducing the number of private vehicles in the city and improving the lives of its citizens.

The electric mobility market is fairly new and has potential to develop in many different ways, also thanks to many different revenue sources. Findings from analysis into early EV market developments show that the availability of chargers emerged as one of the key factors for contributing to the market penetration of EVs. Additionally, integration of smart parking sensors at EV charging platforms increases the service efficiency.

But e-mobility isn't limited to traditional vehicles. Future bus services, cycle hire, scooters, and e-logistics will need to be integrated into a shared and interoperable infrastructure to deliver a seamless end-to-end solution for all citizens. There are many touch-points and stakeholders to align across such a future ecosystem to ensure sustainability and circularity, and citizen-centric digitisation is critical to success.

The Challenge Owner

Sharing Cities is a major international smart cities project funded through the EU's Horizon 2020 programme (Grant Number 691895) to address some of the most pressing urban challenges

²² Digital Future Society, [<https://digitalfuturesociety.com>], Accessed 29 September 2020.

²³ Alice.si, [<https://alice.si>], Accessed 29 September 2020.

²⁴ Areti Kamyli, VFL Introduction for Alice.Si, DLT4EU Public Launch Event, [<https://www.dlt4.eu/public-launch-event>], Accessed 29 September 2020.

facing today's cities through replicable solutions. Sharing Cities is formed of a group of 34 European partners from across the private, public and academic sectors, which is testing smart solutions in our Lighthouse cities Lisbon, Milan, and London .

Sharing Cities is built upon a collaborative and scalable framework, in which governments and citizens co-design and deliver more efficient, sustainable, and inclusive living environments using smart technology, and transfer knowledge and tools to other cities looking to replicate similar solutions.

The primary Challenge Owner is the Greater London Authority, working in close partnership with the Royal Borough of Greenwich, and the municipalities of Lisbon, and Milan.

The GLA is working with DLT4EU to see what opportunities are presented by decentralisation. Currently the vehicles can use smart parking spaces in the borough, which are equipped with sensors integrated into the road surface and which communicate occupancy in real time (either available or occupied) to a local network via a communication hub installed on a smart lamppost. The data is sent to the London Datastore.

Greenwich's standard charger supplier operates the charge points and receives all revenues, and points are integrated into the wider Source London network.

In addition to the car sharing scheme, six electric vans were added to Greenwich council's fleet. These vehicles are in regular use carrying out Council business on Greenwich's streets. They are used by a number of council services, including: waste advisors, disability and home improvement, enviro-crime enforcement, and wardens.

- How can DLT/blockchain change or improve the way multiple European cities can provide common digital infrastructure focused on e-mobility (e.g. EV charging points, cycle hire, e-logistics)?
- How do the impacts of centralised ownership and control over citizen mobility data compare against self-sovereign data stores held by citizens?
- What new business models emerge from operating shared digital infrastructure co-owned by multiple city stakeholders (e.g. the various boroughs of London), or different European cities?²⁵

The Venture Team

CiSe is a Community of Practice with members from the Sustainable Finance Lab, Circle Economy, Nederland Circulair, Bundles, Rabobank, Allen & Overy, ABN AMRO Bank, ING, DLL Leystromen, Unc Inc, and the Sustainable Finance Lab. The CiSe platform is a technical-administrative infrastructure for managing value in circular networks, and offers a pay-per-use functionality for users.

CiSe propose to build on their existing solution through testing a specific public transport use case with the Greater London Authority and a partner London borough.

²⁵ 'Shared eMobility', DLT4EU website, [<https://www.dlt4.eu/shared-emobility>], Accessed 29 September 2020.

The Proof-of-Concept

Since the start of the accelerator, CiSe has refined their scope to the development of a platform that helps the Olympic Park / London Legacy Development Cooperation offer equipment-as-a-service to users of the Olympic Park.

The PoC itself will automate the administration required in using public transport - namely the payment and identify functions. The PoC is based on a smartphone ID wallet that can be filled with certified data such as a passport or driving license.

The CiSe team also hope this PoC incentivises manufacturers to produce equipment with longer lifecycles and / or the potential to be recycled.²⁶

6. The Amsterdam Bootcamp

The DLT4EU Accelerator launched on the 1 July 2020, with the first bootcamp. Due to the global COVID-19 pandemic, the DLT4EU Consortium decided to deliver the Amsterdam Bootcamp virtually, which ran from the 1-7 July (excluding the 4 and 5 July).

The focus of the Amsterdam Bootcamp was to onboard participants into the accelerator programme and provide the support needed to concretise their application concept and development timeline. Virtual sessions were held where accelerator teams can meet challenge owners and mentors for strategy and feedback sessions.

The objectives of the Amsterdam Bootcamp were to:

- Facilitate a common understanding of the challenge area and what success could look like between Venture Teams and their Challenge Owners as part of their VFL;
- Equip Venture Teams and Challenge Owners with the necessary knowledge and tools to successfully work together over the coming few months, including:
 - A communications and collaboration platform (i.e. Slack, Miro);
 - Frameworks and approaches to foundational topics (i.e. Innovative Finance);
- For Venture Teams and Challenge Owners to produce their first three-month sprint plan, including all working sessions, milestones, sub-deliverables, and check-ins;
- To introduce all participants to the Accelerator Core Team, and the Subject Matter Experts they can receive mentoring from.

6.1 Onboarding

Prior to the Accelerator, the Venture Teams and Challenge Owners each attended an onboarding call, which:

²⁶ Henk Kuipers, VFL Introduction for CiSe, DLT4EU Public Launch Event, [<https://www.dlt4.eu/public-launch-event>], Accessed 29 September 2020.

- Introduced the Programme schedule, and specifically the Amsterdam Bootcamp schedule;
- The Proof-of-Concept deliverable;
- Ensured access to all the necessary VFL tools (i.e. Slack, Miro, Shared Google Drive);
- Introduced to the Subject Matter Experts available for mentorship;
- Reviewed the DLT4EU Collaboration Agreement and Project Budget;
- Covered the GDPR Data Protection Policy from D8.2 Data Management Plan;

6.2 Bootcamp Masterclasses

The Amsterdam Bootcamp was designed as a foundational week for all participants, and included masterclasses and outputs on:

- **DLTs for Public Good Masterclass** delivered by Jaya Brekke from the University of Durham, Mara Balestrini from Ideas for Change, and Liz Corbin from Metabolic, and included:
 - An introduction to the opportunities and challenges of DLTs for public good;
 - Deep-dives into the themes of the Circular Economy and Digital Citizenship;
 - Provision of use cases on each theme to encourage provocations for challenge scoping;
 - Provision of tools, techniques, and frameworks for VFLs to use in their challenge scoping.
- **DLTs for Public Good Masterclass - Challenge Owners**, delivered by Jaya Brekke, which:
 - Encouraged Challenge Owners to share previous experiments and insights with DLTs;
 - Established a common DLT glossary to enable learning and clarity on key aspects of DLTs.
- **Virtual Field Lab Challenge Scoping**, delivered by Marloes Pomp and Koen Hartog from the Dutch Blockchain Coalition, which focused on:
 - The facilitation of a common understanding of the challenge issues and what success could look like per VFL;
 - Bringing together the Challenge Owners and their Venture Teams together for the first time and identify key issues, opportunities, and ways of working;
 - The sharing of best practices of collaborating with the public and governmental sectors, from the prior experiences of the Dutch Blockchain Coalition.
- **Pentagrowth Masterclass**, delivered by Ideas for Change, which took VFLs through the full methodology of developing business models with anticipatory thinking based on internal and external abundance.
- **Value-Sensitive Design Masterclass**, delivered by Martijn de Waal from the Amsterdam University of Applied Sciences, which focused on:
 - An introduction to the Value-Sensitive Design framework, as an approach to foregrounding human values;

- The six Design Dilemmas common to DLT development;
 - The production of a Value-Sensitive Design Map for their Proof-of-Concept by each VFL, using Miro.
- **Legal and Regulation Masterclass**, delivered by Primavera de Filippi, from the Berkman Klein Center, which introduced VFLs to the different legal and regulation considerations in DLT development, including:
 - Privacy, including the topics of GDPR and data integrity, proof-of-existence, and credential management;
 - Legality, including the topics of property rights and smart contracts;
 - Regulatory Compliance, including the topics of proof-of-process and proof-of-provenance;
 - Blockchain Governance, including the topics of tokenisation, impact coins, Initial Coin Offerings (ICOs);
 - Open Source Licensing, covering the different typologies of licenses (i.e. Copyleft, Jelurida Public License etc.).
- **Innovative Finance Masterclass**, delivered by Seadna Quigley from Metabolic and Iulia Tudor from the Digital Catapult, which introduced the VFLs to:
 - Alternative sources of financing, including venture philanthropy and impact bonds;
 - New forms of governance that ensures impact is folded into the company structure, such as 'Steward Ownership';
 - The production of an Innovative Finance Canvas by each VFL, using Miro.
- **VFL Sprint Planning**, lead by the VFLs with the support of their VFL Coaches, and focused on:
 - The production of a plan for the next three months (until London Bootcamp) for the VFL team (i.e. milestones, deliverables, monthly calls etc.);
 - Creation of a scope of the Proof-of-Concept - what it will do, how it will function, and the pilot through which it will be tested;
 - Agreement of a plan and approach for participating in the DLT4EU Launch Event;
 - Production of a budget estimation of the funding for Venture Teams;
 - One-on-one mentoring by Subject Matter Experts as part of the sprint planning, covering technical, product development, and business planning topics.

7. The DLT4EU Public Launch Event

The DLT4EU Public Launch Event was hosted online on Thursday 17 September in partnership with Mobile World Capital. The Event was delayed from July (M07) due to the impact of the COVID-19 global pandemic.

The objectives of the Public Launch Event were to:

- To explore the role of public sector innovation, and how DLTs can contribute to new and / or improved citizen experiences, and public and social good initiatives;

- To introduce the DLT4EU Programme to the relevant ecosystem(s);
- To establish the future agenda of the emergent DLT4EU ecosystem;
- To introduce the participants of the programme to a wider audience for the first time;
- To catalyse strategic members of the ecosystem to engage and provide support to DLT4EU.

The Public Launch Event had two main sections. First, an expert panel discussion on the topic of **'DLTs for Public Good: Opportunities and Challenges for the Social and Environmental Good'**. This was followed by a VFL pitch session where each Venture Team introduced their challenge area, challenge owner, Proof-of-Concept idea, and intended impact.

7.1 The Expert Panel

The expert panel discussion was moderated by **Alexandre Pólvora** a Researcher and Policy Analyst with the European Commission's **Joint Research Centre**, at the **EU Policy Lab** and the Competence Centre on Foresight.

The Panelists were:

- **Piret Tonurist, Innovation Lead at the OECD**, who spoke to the different roles of the public and social detectors in digital innovation and the importance of ensuring solutions are inclusive of how citizens experience their community;
- **Indy Johar, Co-founder and Executive Director of Dark Matter Labs**, who spoke to the potential opportunities and challenges of DLTs application in civic innovation, and the need for new, radical forms of governance;
- **Ludovic Courcelas, Government Strategy Lead ConsenSys and Project Lead for the EU Blockchain Observatory and Forum**, who spoke to the practical implications of DLTs and how to ensure the "future-proofing" of any solution.

7.2 The VFL Pitches

VFLs were provided with guidance on what topics they could cover in their three-minute introduction pitch for the Event:

- **Challenge Area and Key Problem**
 - Which Challenge Area are you addressing?
 - Who is the Virtual Field Lab team? For example, Venture Team members and the Challenge Owner;
 - What urgent social need underlies the idea of the proposed solution? Is it related to the Circular Economy or Digital Citizenship themes?
- **The Proof-of-Concept and Lead Beneficiaries**
 - Who is the lead beneficiary of the solution? Explain the type of users that would benefit from the solution, or who will be part of the pilot;
 - Explain the solution, what problem does it solve, and what is the intended user experience.
- **Intended impact of the PoC**
 - Sectors and beneficiaries empowered;

- Specific impact targets.

The Venture Team representatives who delivered the VFL introduction pitch were:

- Joseph Thompson, CEO of AID:Tech on behalf of AID:Tech and the City of Helsingborg;
- Areti Kampyli, COO of Alice.Si on behalf of Alice.Si, Digital Future Society, and the Vodafone Foundation;
- Dr. Nikola Markovic, Co-Founder of Acren, on behalf of Acren, UNDP AltFinLab, and UNDP Lebanon;
- Erik Zvaigzne, VP Product of Convergence Tech, on behalf of Convergence Tech, UNDP AltFinLab, and UNDP Morocco;
- Henk Kuipers, Innovator from CiSe, on behalf of CiSe, the Greater London Authority, and Olympic Park / London Legacy Development Cooperation;
- Stacco Troncoso, Co-Founder of DisCO, on behalf of DisCO, CTO Amsterdam, Waag, and DYNE;
- Alex D’Elia, President of Prosume, on behalf of Prosume, UNDP AltFinLab, and UNDP Serbia,
- And David Franquesa, Director of eReuse, on behalf of eReuse and the City of Sant Boi.

7.3 Data Analytics for the DLT4EU Public Launch Event

Table 2 below sets out the results of the website and social media analytics for DLT4EU channels due to the Public Launch Event.

Table 2: DLT4EU Public Launch Event Data Analytics

DLT4EU Public Launch Event Data Analytics		
Key Performance Indicator (KPI)	Measurement	Result of Public Launch Event
Traffic on the dlt4.eu website	Google analytics + click rate	305 unique page visits; 202 event registrations;
Activity on dlt4.eu Channels	Clicks, Views, Postings, Likes, Community growth rate; impressions	835 Twitter page visits; 34 Twitter new followers; 39 Twitter mentions; 6000 Tweet impressions; 11 Instagram new followers

8. The London Bootcamp

Like with the Amsterdam Bootcamp, due to the continuation of the global COVID-19 pandemic, the DLT4EU Consortium decided to deliver the London Bootcamp virtually, which ran from the 28 September to the 2 October 2020.

The London Bootcamp marks the mid-term point in the accelerator, where participants, Challenge Owners, and other stakeholders came together to expedite the progress of their Proofs-of-Concept.

VFLs first presented the progress of their concept up to that point in a Demo Day to a panel of external experts, their Challenge Owners, and the other VFLs. The main objective of this Demo Day was to help VFLs identify the priority areas of development for the next three months of the accelerator and for the Barcelona Bootcamp in November. Additionally, the Demo Day was the opportunity for VFLs to start to learn how best to pitch their PoCs to external stakeholders and secondary beneficiaries of the programme.

VFLs then benefitted from two days of mentoring sessions with external experts on key topic areas, followed by sprint planning sessions with their Challenge Owners.

8.2 The Demo Day

The first day of the bootcamp was a Demo Day, where VFLs had 15 minutes to present progress to date on their PoC. The presentation was then followed by 15 minutes of feedback from an external panel of experts, covering the topics of technical development, business model innovation, public sector innovation, design thinking, product development, and innovative finance (Table 4). Challenge Owners and observing VFLs were then able to provide their feedback on the Demo.

VFLs were given guidelines in advance on the topic areas they must cover in the Demo, aligned to the final Evaluation Criteria (D4.1 Evaluation Criteria), provided below in Table 3.

Table 3: Demo Day Evaluation Criteria

Demo Day Evaluation Criteria	
Evaluation Criteria	Description
Challenge Area Relevance	<p>Technology-challenge fit and product-market fit. How does their solution solve the key problems identified by the challenge owner, including the specific fit of the solution with the challenge from a market, technology, user and value proposition perspective?</p> <p>Additionally, has the demo covered what impact targets have been set and how their solution will achieve them?</p>
User Journey / User Experience	<p>Explanation of the intended user experience of the Proof-of-Concept, as well as supporting visuals of the UX/UI to support the explanation.</p> <p>Explanation/insight on intended user testing and/or any planned</p>

	pilots they intend on undertaking as part of the development of the Proof-of-Concept .
Business Model	Explanation of the intended business model (if identified), lead beneficiaries/target users(s), and possible revenue model (if identified).
Open Source Approach	Explanation of the open source approach (if identified), such as the license type.

Table 4: The Demo Day Panel of Experts

The Demo Day Panel of Experts			
Pod 1: Digital Citizenship 10:00 - 13:00 (CET)		Pod 2: Circular Economy 12:00 - 15:00 (CET)	
Expertise	Name & Organisation	Expertise	Name & Organisation
Facilitator	Imogen Hyde (Digital Catapult)	Facilitator	Alice MacNeil (Metabolic)
Finance	Baptiste Cota (LeadBlock Partners)	Finance	David Chreng (LeadBlock Partners)
Finance	Seadna Quigley (Metabolic)	Finance	Iulia Tudor (Digital Catapult)
Technical	Haischel Dabian (Kryha)	Technical Implementation	Martijn Bolt (Independent)
Technical	Robert Learney (Digital Catapult)	Technical	Sarah Meiklejohn (UCL)
Business Model/ Strategy	Theo Felgett (Independent)	Design Thinking	Martijn de Waal (HvA)
Public Sector Innovation	David Altabev (Independent)	Business Model/ Strategy	Jennifer Rosen (FullTilt)
Public Policy and Innovation	Alex Polvora (JRC)	DeepTech / ClimateTech	Ben Tincq (Good Tech Lab)
Product	Claire Whittaker (Digital Catapult)	Public Policy and Innovation	Anna Hakami (JRC)

The VFLs were split into two “pods” to better facilitate peer learning within the themes the Circular Economy and Digital Citizenship.

The Panelists provided feedback at three key moments:

1. Verbal feedback per panelist after the Demo;
2. Written feedback in a template per Panelist, with an additional section as per area of expertise;
3. A written scoring by each Panelist of 0-4 per criteria in accordance with the scoring guidelines.

The output scorecard per VFL has been compiled and included in Appendix 1.

8.3 Mentoring Days

After the Demo Day, VFLs were able to benefit from mentoring sessions (1.5hrs per mentor) with external experts to expedite progress on their PoC. These sessions were often undertaken with the Challenge Owners and VFL Coaches (see Section 9.1).

The priority topic areas and mentors were identified through a reiterative process that took into consideration not only the development areas identified in the Demo Day, but also feedback from each VFL on their progress and surveys conducted after the Amsterdam Bootcamp.

Table 5 lists all of the Mentors who were available to support the VFLs over the course of two days.

Table 4: London Bootcamp Mentors

London Bootcamp Mentors	
Expertise	Name & Organisation
Finance	Iulia Tudor (Digital Catapult)
Innovative Finance	Seadna Quigley (Metabolic)
Technical / Product	Haischel Dabian (Kryha)
Technical Implementation	Martijn Bolt (Independent)
Technical	Robert Learney (Digital Catapult)
Technical	Sarah Meiklejohn (UCL)
Technical	Samer Hassian (Harvard)

Technical	Matt Dean (Digital Catapult)
Business Model / Strategy	Theo Felgett (Independent)
Business Model / Strategy	Alexander Enthoven (Kryha)
Design Thinking	Martijn de Waal (HvA)
Public Sector Innovation	David Altabev (Urban Frontiers)
Public Sector Innovation	Jaya Brekke (University of Durham)
Legal and Regulation	Francesco Rampone (Italian Blockchain Association)
Product	Claire Whittaker (Digital Catapult)

8.4 Sprint Retrospective and Planning

Two sprint sessions were designed and hosted for the London Bootcamp: a sprint retrospective and sprint planning. These sessions were designed by the Product Development team from Digital Catapult using feedback from the VFLs and DLT4EU Consortium.

The Sprint Retrospective session was set as a review of the progress that each of the teams has made over the previous months since Amsterdam. This session was a key opportunity for the VFLs to reflect on the successes and challenges of development. The session also was a key input for the Consortium to improve the focus of the mentors and accelerator resources. A Miro board was provided to each VFL to record outputs of the session, and each VFL Coach attended their respective VFLs' session to support facilitation.

The Sprint Planning session was the opportunity for VFLs to undertake dedicated planning on the PoC for the next three months, including the Barcelona Bootcamp. The focus of the session was on identifying and mapping out PoC personas, the Minimum Viable Product, and therefore backlog for technical development. Again, a Miro board was provided to each VFL to record outputs of the session, and each VFL Coach attended their respective VFLs' session to support facilitation.

8.5 In-depth Sessions

Additional to the main agenda of the London Bootcamp, the DLT4EU Consortium have identified topics that need an in-depth session for all VFLs. These sessions will be delivered online shortly after the London Bootcamp, and will cover:

- **DLT Governance Workshop:** A workshop exploring and developing the core governance concepts required to enable distributed ledger to serve their place in our future economic infrastructure, delivered by representatives from Outlier Ventures and Baker Mackenzie.
- **Open Source Licensing and Business Models:** A workshop providing a practical overview of how to choose an open source license and an complementary business model, delivered by representatives from WIPRO and the Italian Blockchain Association.
- **DLTs for Challenge Owners:** A follow-on workshop specifically for Challenge Owners on the benefits, opportunities, and adoption considerations (i.e. organisational design) when experimenting with DLTs, delivered by the DLT4EU Consortium partners, with support from public sector innovation specialists.

9. VFL Support Resources

Across the duration of the accelerator programme, the following support and resources have been made available to Challenge Owners and Venture Teams to ensure each participant (including the DLT4EU Consortium) can contribute to the success of the programme:

- **Curated Accelerator Programme:** Rich content and formats to facilitate VFL development and progress across a full spectrum of topics: from challenge scoping, to design thinking, impact models, innovative finance, technical development, and business strategy;
- **Subject Matter Experts:** Mentors who are empowered to problem-solve with VFLs on key areas;
- **VFL Coaches:** Assigned from the DLT4EU Consortium;
- **Accelerator Resource Planning:** Helping the Challenge Owners and Venture Teams to identify the needed resources (skills / experience / subject matter expertise) in advance of key events (i.e. Amsterdam Bootcamp);
- **Data Requirements:** Helping Venture Teams carry out their first data request from Challenge Owners, and empowering Challenge Owners to identify and carry out activity;
- **Training:** Specific training sessions for VFL participants in core knowledge / capability gaps (i.e. agile development);
- **Facilitation** of VFL sprints / working sessions beyond Bootcamps and VFL Support provision.

The next two sections will give further detail on two key support resources: VFL Coaches and Subject Matter Experts for mentoring.

9.1 VFL Coaches

In recognition of the greater need for VFL support from the DLT4EU Consortium, identified in the run up to the Amsterdam Bootcamp, the DLT4EU Consortium has put in place an additional

support resource to those described in D1.1. Accelerator Report - the VFL Coach.

A VFL Coach is a member of the DLT4EU Consortium. The core objective of each VFL Coach is to be a consistent point person and steward for the VFL throughout the accelerator. The full scope of the role is:

- Consistent consortium contact point for the VFL;
- Fostering the CO and venture team relationship;
- Joining all relevant bootcamp and VFL sessions:
 - Amsterdam bootcamp: Bootcamp challenge scoping and sprint planning sessions;
 - London bootcamp: Progress update / demo sessions and sprint planning sessions;
 - Barcelona bootcamp: Progress update / demo sessions and sprint planning sessions;
 - VFL: bi-weekly VFL virtual check ins;
- Ensuring the developed plan is adhered to and all deadlines are met;
- Ensuring that the Venture Team complete the Monthly Venture Acceleration Report;
- Continuous risk manager - pre-identifying any risks relating to the VFL and raising them with Metabolic;
- Pre-identifying the needs of the VFL - what additional resources and / or mentorship do they need - and raising this with Metabolic.

9.2 Subject Matter Expert Mentors

A key resource for all Virtual Field Labs in the programme is access to Subject Matter Experts (SME) for mentoring outside of the Amsterdam, London, and Barcelona Bootcamps.

Each SME will provide expertise on a topic area from the list below. We expect these topics to have different moments of emphasis across the duration of the accelerator. The subject matter areas covered by mentors will be:

- **Public Sector Innovation:** Sharing expertise in sector-specific innovation pathways and problem-solving approaches;
- **DLT Technical Development:** Tackling specific topic areas with DLTs including development operations, platform choice, codebase reviews etc.;
- **Legal & Regulation:** Topic areas on the barriers / considerations of DLT and EU-specific legal and regulatory considerations, such as GDPR Privacy by Design and Open Source Licensing;
- **Value-Sensitive Design / Design Thinking:** Covering specifically the Value-Sensitive Design framework presented by the University of Applied Sciences Amsterdam, as well as Design Thinking frameworks to ensure that impact and the user voice is folded into product / service design from the beginning;

- **Pentagrowth Business Model Innovation:** Covering specifically the Pentagrowth framework delivered by Ideas for Change;
- **Business Strategy and Planning:** Topics such as market identification and sizing, operations, HR, marketing, strategy etc.;
- **Innovative Finance:** Covering financial planning, seeking financing from alternative sources, and ownership models.

Each month, VFLs will be able to book a one-hour mentoring slot, per subject matter expertise. VFL teams will be expected to book the slot at least two-weeks in advance, and provide any questions or preparatory work for the Mentor at least 48hrs in advance of the session. Mentoring slots are booked via Calendly - a free, online, scheduler that integrates with most email clients.

10. VFL Risk Identification and Mitigation Strategy

Over the course of the accelerator, a Risk Register (Table 6) has been updated as new risks emerge.

Each risk has been classified with an impact level to understand the potential effect on the objectives of the DLT4EU Accelerator:

- LOW - defined as negligible negative impact
- MEDIUM - defined as minor negative impact
- HIGH - defined as considerable negative impact

Additionally, each risk has also been ascribed a 'likelihood' level, which indicates the probability of that risk occurring.

All DLT4EU participants have a responsibility of reporting risks to the DLT4EU Programme Manager and Project Coordinator. As the WP3 Lead, Metabolic, and specifically the DLT4EU Programme Manager, will continuously update the risk register of reported risks (Table 6) develop an appropriate mitigation strategy, and communicate updates in the Core Accelerator Team Meetings and the Consortium Bi-Weekly WP Lead Meeting.

When there are risks that concern specific Challenge Owners, the DLT4EU Project Coordinator and Programme Manager will work with the Consortium Lead Partner to resolve the risk.

Table 6: DLT4EU Accelerator Risk Register

DLT4EU Risk Register				
Risk	Cause(s)	Likeli-	Impact	Mitigation

		hood	Level	
Withdrawal of Challenge Owner and / or Venture Team from accelerator	<p>Organisation-specific issues (i.e. funding, change in leadership)</p> <p>Negative experience during Accelerator</p>	MEDIUM	MEDIUM	<ul style="list-style-type: none"> • DLT4EU Collaboration Agreement which secures rights for the DLT4EU Consortium to recoup funding and sets notice period and termination terms; • Monthly Check-in for VFLs with DLT4EU Programme Manager; • Participant Feedback Surveys sent out after AMS, LDN, and BCN Bootcamps; • Clear and agreed guidelines on Challenge Owner and Venture Team Engagement to ensure positive working relationship and communication channels for raising grievances.
Failure of Venture Team to deliver workable prototype (PoC)	<p>Fundamental technical issues</p> <p>Poor challenge scoping</p> <p>Lack of Challenge Owner mentorship / guidance</p>	LOW	MEDIUM	<ul style="list-style-type: none"> • Challenge Scoping Session at AMS Bootcamp, facilitated by experts in public sector innovation and DLTs; • Provision of planning templates to focus VFL teams on key questions, clarity and pragmatism; • Monthly Check-in for VFLs with DLT4EU Programme Manager; • Clear and agreed guidelines on Challenge Owner and Venture Team Engagement to ensure positive working relationship; • Recognition in Proof-of-Concept submission requirements of the importance of clear documentation; • Provision of DLT Technical Expertise via Bootcamps and Mentorship additional to Challenge Owners.
Withdrawal of external Delivery Lead and / or Mentor	<p>Individual-specific issues (i.e. sickness)</p> <p>Negative experience during Accelerator</p>	LOW	MEDIUM	<ul style="list-style-type: none"> • DLT4EU Collaboration Agreement which secures rights for the DLT4EU Consortium to recoup funding and sets notice period and termination terms; • Participant Feedback Surveys sent out after AMS, LDN, and BCN Bootcamps; • Digital Delivery Guide sent at least two weeks in advance of session to support their planning; • 1hr virtual check-in booked with leads / mentors at least a month in advance to discuss and agree content, format etc. with DLT4EU Programme Manager.
Major alteration in the programme delivery	COVID-19 global pandemic	LOW	HIGH	<ul style="list-style-type: none"> • Early as possible communication in the change of content and delivery to all participants, stakeholders, and European Commission; • Purchase of online tools to facilitate virtual sessions (i.e. Miro, Zoom etc.); • Testing of content and format in advance of events (i.e. bootcamp) to ensure high-quality; • Provision of additional events to

				<p>participants to ensure offline value can be replicated / replaced - for example, online networking;</p> <ul style="list-style-type: none">• Reallocation of travel and accommodation budget to increase provision of online content and services (i.e. mentoring).
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Appendix 1: Demo Day Scorecard Results

As part of the Demo Day for the London (Online) Bootcamp, each Panel Expert provided a score against each criteria for each Venture Team on how well the team demonstrated the criteria in the Demo.

Table A.1 below summarises the median score per criteria for each Venture Team, from all of the scoring given by the Panel Experts.

Table A.1: Demo Day Scorecard Results

Demo Day Scorecard Results (median score per criteria, per venture team)				
	Challenge Relevance	User Journey / User Experience	Business Model	Open Source Approach
Prosume	2	1	2	0
Acren	3	3	2	0
Alice.Si	2	3	3	2
AID:Tech	3	3	3	1
CiSe	2	2	2	2
eReuse	3	2	2	3
Convergence Tech	3	2	1	1
DisCO*	tbc	tbc	tbc	tbc

Demo Day Scorecard				
0	1	2	3	4
Not Demonstrated	Poorly Demonstrated	Suitably Demonstrated	Well Demonstrated	Excellent Demonstrated

**DisCO was unable to participate in the Demo Day due to unexpected circumstances, and will instead undertake a Demo at the end of October.*