



Deliverable 7.3

# DLT4EU Final Programme Assessment

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#### DISSEMINATION LEVEL

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

# Revision History

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**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This deliverable contains original unpublished work except where clearly indicated otherwise.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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# DLT4EU Final Programme Assessment

## 1. DLT4EU 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 was built upon the 'Virtual Field Lab' (VFL) concept of bringing together DLT developers (Venture Teams) alongside Challenge Owners from the public sector, to create and trial Proof-of-Concept (PoC) prototypes in real-world scenarios over the course of a six-month accelerator.

Challenge Owners scoped, guided, and defined the Challenge Area that selected Venture Teams applied to solve. Venture Teams were sourced through an Open Call process wherein DLT developers were first evaluated by an Evaluation Committee and then shortlisted for final selection by the Challenge Owner.

The selected Venture Teams developed their applications within a VFL: a virtual environment for DLT experimentation curated to an appropriate real world challenge. Each VFL had a 'Challenge Owner' who scoped, guided and defined the problem, alongside a network of mentors, subject matter experts, as well as a designated VFL Coach from the DLT4EU Consortium.

Each VFL benefitted from a curated accelerator programme covering specialist topics such as GDPR Privacy by Design, Open Source Licences, impact-driven finance, Value-Sensitive Design (UX/UI), technical development, impact assessment, and the Pentagrowth Method from Ideas for Change.

Together each VFL collaborated to progress the DLT Proofs-of-Concept from the entry requirement of TRL3-4 to achieve TRL5-6, and ultimately scale-up the resulting applications through real-world use beyond the programme itself.

As a result of the programme, all eight Venture Teams have developed Proofs-of-Concept - in the form of functional prototypes - that demonstrate the value of DLTs in the public sector. These Proofs-of-Concept (PoCs) have been assessed by an external DLT4EU Evaluation Jury with three applications awarded follow-on funding.

DLT4EU was led by a Consortium of the Metabolic Institute (NL), Ideas for Change (ES), and the Digital Catapult (UK).

## 2. Scope of D7.3 DLT4EU Final Programme Assessment

This report provides the results of the Programme-Level Impact Assessment, as presented in D7.1 DLT4EU Impact Assessment.<sup>1</sup> The main purpose of this impact assessment was to track and assess how effective the DLT4EU programme was in realising key objectives, and help identify best practices for ensuring this impact for future programmes. In addition to the impact assessment results, this report also compiles feedback about the DLT4EU from the Venture Teams, Challenge Owners, and wider DLT4EU Ecosystem.

Overall, this report aims to answer the following questions:

- What are the results of the DLT4EU Programme Assessment?
- How effective was DLT4EU in achieving the core objectives of the programme?
- What are our recommendations for other organisations interested in replicating DLT4EU?

To answer the above questions, this report begins by revisiting the purpose of the DLT4EU Impact Compass and how it was developed (Section 3), then presents the results of the assessment (Section 4). Next, Section 5 discusses the insights of the impact assessment and makes recommendations for future programmes - feedback from Virtual Field Lab participants and the wider DLT4EU Ecosystem is included in this section.

## 3. Overview of the Programme-Level Impact Assessment: Objectives and Key Performance Indicators (KPIs)

The primary purpose of the Programme-Level Impact Assessment was to holistically track and assess the impact of the DLT4EU programme for its participants and the wider DLT4EU ecosystem. In particular, this Programme-Level Impact Assessment is a test of the ecosystem-based innovation model deployed in DLT4EU - wherein the Virtual Field Lab (VFL) concept and accelerator programme are key cornerstones of this approach.

Impact assessments are also an important tool for identifying the activities and practices that ensure a successful - and impactful - programme for future organisers. This is not necessarily specific to DLT experimentation and adoption in the public sector - we also see high relevance of this impact assessment for other emerging technologies, such as Machine-Learning and Artificial Intelligence.

Furthermore, impact assessments can be an important input for Venture Teams wanting to understand, and even predict, the value of an accelerator for their business and innovation

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<sup>1</sup> Coudard, A., MacNeil, A. and Corbin, L. (2020). 'D7.1 DLT4EU Impact Assessment Framework'.

activities. Collaborative research by NESTA, for example, has shown that most startups highly value an accelerator programme as a crucial contribution to their business - 64% of respondents attributed participation in an accelerator as important to their success.<sup>2</sup>

Undertaking an impact assessment as part of an accelerator, therefore, can not only support an impact-first approach, but also help future participants decide on which programmes could be most valuable for them. This also goes for potential Challenge Owners in the Virtual Field Lab model, who would like to understand and quantify potential impact-based outcomes of the approach.

### 3.1 Design of the Programme-Level Impact Assessment

The 'DLT4EU Impact Compass' was designed through an iterative process, starting with a literature review on relevant impact assessment guidance, followed by ideation and feedback by the DLT4EU Consortium and Joint Research Centre of the European Commission. Additionally, external subject matter experts were consulted to provide feedback on the framework design, KPIs, and data collection methods.<sup>3</sup> The Programme-Level Impact Assessment is one of two components of the 'DLT4EU Impact Compass'.<sup>4</sup>

The Programme-Level Impact Assessment has twelve overall objectives (Table 1). Under each of these objectives are a set of Key Performance Indicators (KPIs), enabling the measurement of how well each objective has been met. To do so, each KPI was set a specific quantitative target or range. For example, 'experts aligned on the challenge identified' had the target range of 2-3 experts aligned per challenge area.

Through carrying out the Programme-Level Impact Assessment, the framework was updated by the DLT4EU research team to include more specific definitions of select KPIs to better support the tracking of those KPIs. These definitions were agreed on by the DLT4EU Consortium and are provided in Appendix 1.

Table 1: DLT4EU Programme Objectives

DLT4EU Programme Objectives		
#	Category	Description
1	Challenges & Barriers	Rigorously understand the present and foreseeable challenges facing the social and public sectors in the European Union (EU)

<sup>2</sup> Bone, J., and Haley, C. (2019). 'The impact of business accelerators and incubators in the UK'. NESTA, the UK Department of Business, Energy and Industrial Strategy, London School of Economics, The Open University and Beauhurst.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.



<b>2</b>	Adoption	To map the framework conditions for the successful utilisation of DLT by EU public and social sectors
<b>3</b>	Ecosystem	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 investment to real-world challenges and impact
<b>4</b>	Ecosystem	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
<b>5</b>	Challenges & Barriers	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
<b>6</b>	Impact Assessment	Develop a robust impact assessment framework that can judge the potential impact of DLT applications before they are piloted
<b>7</b>	Challenges & Barriers	Develop highly scalable, impact 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
<b>8</b>	Adoption	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
<b>9</b>	Ecosystem	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
<b>10</b>	Adoption	To increase the capacity of EU social and public sectors to take up DLT-based solutions and to equip intermediaries to support them
<b>11</b>	Innovation Model	To develop an effective Virtual Field Lab model for those who wish to run similar incubation schemes;

12	Adoption	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
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Like with the D7.2 DLT4EU Proofs-of-Concept Assessment Reports, the Programme-Level Assessment spans four core ‘Impact Areas’ - Social, Environmental, Knowledge, and Economic.<sup>5</sup> These four categories enable a holistic overview of the different types of impact achievable through the DLT4EU programme. They are:

1. **Social** covered how the DLT solutions developed through the programme included civil society and increased access to public goods, public health, and basic services;
2. **Environmental** covered how the DLT solutions developed through the programme affected energy and material use, contributed to the protection of biodiversity, the management of common natural resources, and supported the monitoring and reduction of greenhouse gas emissions;
3. **Economic** regarded the extent to which the use of DLT created holistic value, met the defined needs of beneficiaries, and acquired validation and additional resources;
4. **Knowledge** focused on enabling new capabilities needed for public and private sector organisations to learn from these DLT pilots and the broader programme to adopt further strategic, policy, and innovation initiatives.<sup>6</sup>

Each DLT4EU programme objective and respective Key Performance Indicators contributed to at least one of the four Impact Areas – Social, Environmental, Economic, and Knowledge. However, it is worth noting that there is proportional spread of KPIs to the Impact Areas: 83% of the KPIs contribute to the Knowledge Impact Area, 76% to Social, 52% to Economic, and 10% to Environmental (Figure 1). This spread is a reflection of one of the key purposes of DLT4EU: to facilitate knowledge sharing, peer learning, and capacity building within and across the eight Virtual Field Labs (VFLs).

<sup>5</sup> Putri. A., MacNeil, A., and Singh., A. (2021). ‘D7.2 DLT4EU Proof-of-Concepts Assessment Reports’.

<sup>6</sup> Ibid.

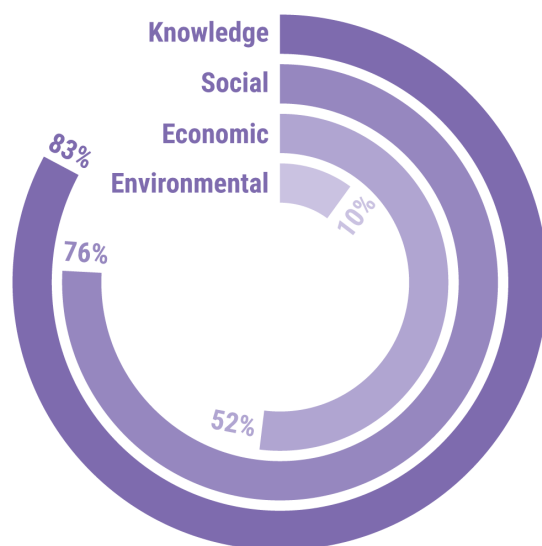


Figure 1: DLT4EU Programme-Level Impact Areas

There are also a set of KPIs that are not explicitly linked to any of the objectives and have no specific target or range. These KPIs were added to the Programme-Level Assessment to provide further insight on the composition of the DLT4EU ecosystem and its engagement with the programme, as well as assess the outputs of each Virtual Field Lab. Please refer to Appendix 1 for the complete overview of the Programme-Level Impact Assessment Objectives, KPIs, and Impact Areas.

Furthermore, it is important to recognise that there are impacts created via the programme that sit outside this Impact Compass, and which could not be measured easily through a framework. For example, despite knowledge sharing and capacity building being important objectives of DLT4EU, it was difficult to track the impact of activities that supported these objectives beyond event-based engagement of the ecosystem. This was both a research feasibility issue but also is an impact type that is likely to have a time lag between data collection and implementation of the knowledge gained via DLT4EU.

### 3.2 Data Collection and Analysis Method

Data collection on the Key Performance Indicators was carried out over the duration of the programme, using the monitoring methods set out in D7.1 and summarised in Appendix 3.<sup>7</sup> Examples of the monitoring methods used include the monthly Venture Acceleration Action Plans that Venture Teams completed to track progress on their PoC development, and research interviews conducted with the DLT4EU ecosystem at the end of the programme.

<sup>7</sup> Coudard, A., MacNeil, A. and Corbin, L. (2020). 'D7.1 DLT4EU Impact Assessment Framework'.

The selection of the monitoring methods was based on guidance from impact assessment literature review, detailed in D7.1, which highlighted the importance of being sensitive to data availability and data type.<sup>8</sup> The methods were also developed according to the EU General Data Protection Regulation.<sup>9</sup>

Additionally, the monitoring methods were aligned with the design of the Accelerator to ensure that data collection was timely and built into the running of the programme. Over the duration of data collection, each Consortium Partner was assigned a set of KPIs to lead on the reporting of, which were aligned to their Work Package(s) - this was to ensure accurate and high-quality data collection.

In order to assess how well each of the twelve objectives were met, the DLT4EU Consortium research team measured each KPI against its set target or range. After the data was completed, the research team then categorised the KPIs into three different buckets: 'unmet', 'met', and 'exceeded'. For KPIs that had a target range, the research team took the lower- and upper-range as the cut-off when the KPIs fell lower or higher than the target respectively. When the KPI fell within the range, the KPI was considered as 'met'.

**Table 2: DLT4EU Programme-Level KPIs Categorisation**

DLT4EU Programme-Level KPIs Categorisation		
Unmet	Met	Exceeded
Below the KPI target or range	Within the KPI target or range	Above the KPI target or range

## 4. Programme-Level Impact Assessment Results

Overall, the results of the Programme-Level Impact Assessment illustrate the importance of adopting an ecosystem-based model for stimulating the experimentation with - and adoption of - DLT applications by the public sector. This is because early experimentation with DLTs is a structured process that requires a diverse set of beneficiaries and stakeholders to be engaged throughout the innovation process, with an 'independent orchestrator' curating a de-risked programme of learning, training, network access, and piloting.

Furthermore, the results also show that the VFL model is an effective model to make sense of and experiment with new digital technologies, while lowering the pre-identified barriers to experimentation - the VFL concept also helps to build grassroots change within organisations around DLT experimentation and use.

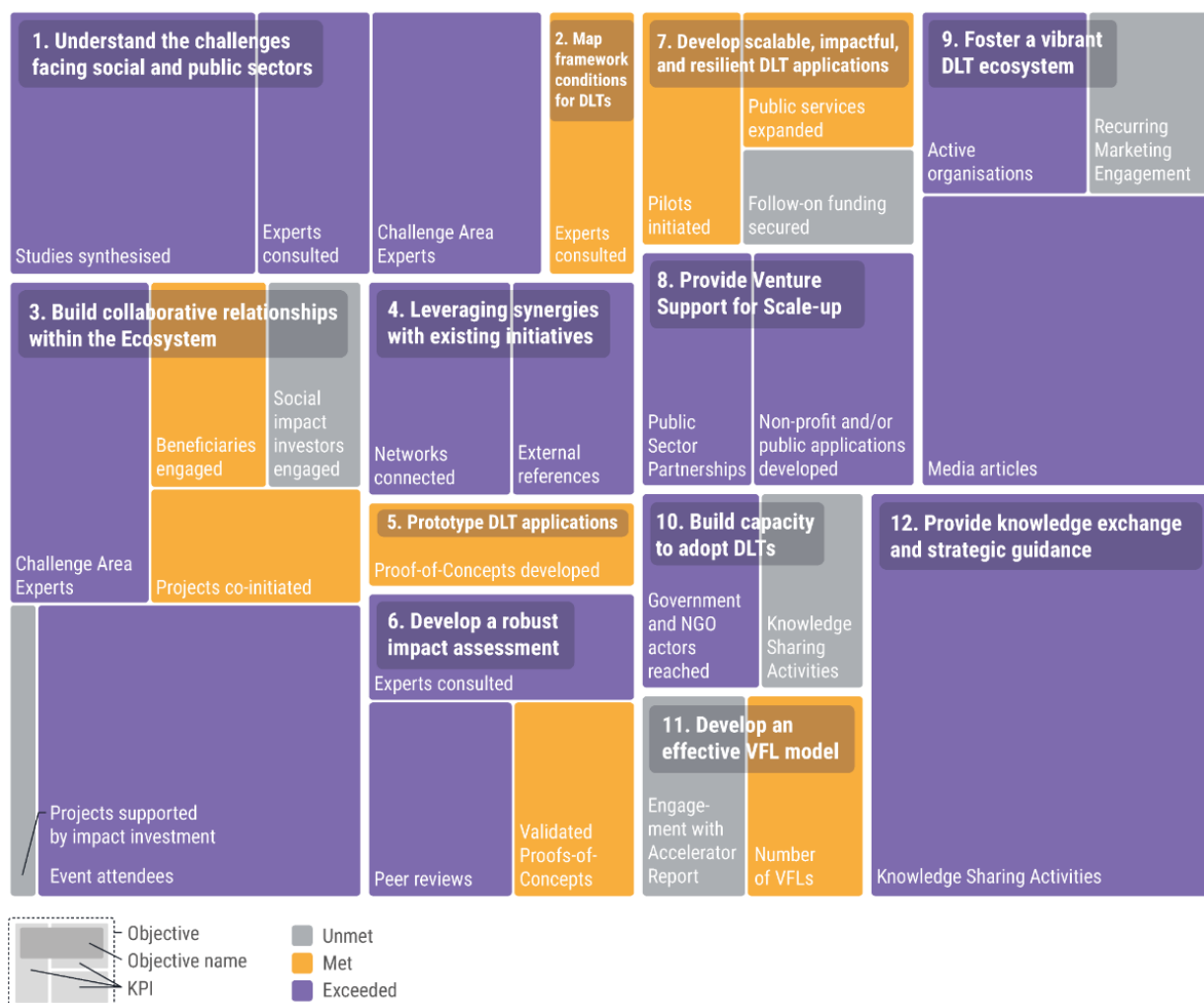
<sup>8</sup> Ibid.

<sup>9</sup> See MacNeil, A. (2020). 'D8.2 DLT4EU Data Management Plan'.

Importantly, the results of this assessment also highlight the complexity of some components of an ecosystem-model - for example, one area of KPIs that were more difficult to meet were around engagement of the traditional and impact-driven investment communities (Table 7). The need for timely access to non-equity financing was highlighted by all participants of DLT4EU as a key barrier to the successful experimentation and adoption of DLTs in the public and social sectors. This insight will be discussed further in Section 5.

The full results of the objective-led KPIs are provided in Table 3 and the results of the additional KPIs are provided in Table 4. Further insights and recommendations for future programmes are provided in the next section.<sup>10</sup>

Figure 2: Summary of DLT4EU Programme-Level Impact Assessment Results



<sup>10</sup> For a full discussion on the importance of programmes such as DLT4EU, please refer to MacNeil, A., Corbin, L., Putri, A., Singh, A., Learney, R., Basil, P., Hyde, I., Higuera, A., Ramierz, A. (2021). 'D6.4 DLT4EU Final Report'.

Table 3: DLT4EU Programme-Level Assessment Results

DLT4EU Programme-Level Assessment Results		
<b>Objective 1: Rigorously understand the present and foreseeable challenges facing the social and public sectors in the EU</b>		
<b>Impact Area(s): Social, Knowledge, Economic</b>		
KPIs	Target	Result
Studies synthesised	15-20 studies	54 studies synthesised
Experts consulted	15-20 experts	25 experts consulted
Experts aligned on the key challenge identified	2-3 per challenge area	45 experts aligned in total
<b>Objective 2: To map the framework conditions for the successful utilisation of DLT by EU public and social sectors</b>		
KPIs	Target	Result
Experts consulted	15-25 experts	25 experts consulted
<b>Objective 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 investment to real-world challenges and impact.</b>		
<b>Impact Area(s): Social, Knowledge, Economic</b>		
KPIs	Target	Result
Experts aligned on the key challenge identified	2-3 experts	45 experts aligned in total
Beneficiaries engaged	10-15 beneficiaries	14 beneficiaries engaged
Social impact investors engaged	5-7 social impact investors	4 social impact investors engaged
Projects co-initiated by developers and beneficiaries	8-10 projects	8 projects co-initiated
Projects supported by impact investment	3 projects	1 project supported
Attendees reached by events	At least 500 attendees	1,961
<b>Objective 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.</b>		
<b>Impact Area(s): Social, Knowledge, Economic</b>		
KPIs	Target	Result

Existing initiatives and networks connected to DLT4EU	10 existing initiatives	13 existing initiatives
External references made about DLT4EU	50 external references	56 external references
<b>Objective 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</b>		
<b>Impact Area(s): Social, Knowledge</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Proof-of-Concepts prototypes made within the DLT4EU Virtual Field Labs	5-10 Proof-of-Concepts	8 Proof-of-Concepts
<b>Objective 6: Develop a robust impact assessment framework that can judge the potential impact of DLT applications before they are piloted</b>		
<b>Impact Area(s): Knowledge</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Experts consulted in framework development	5-10 experts	12 experts consulted
Expert peer-reviews of framework	5-10 experts	12 peer-reviews by experts
Concepts validated	5-10 concepts	8 concepts
<b>Objective 7: Develop highly scalable, impact 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.</b>		
<b>Impact Area(s): Social, Economic, Environmental</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Pilots initiated with public or private actors	5-10 pilots	8 pilots
Services expanded in public sector	3-5 services	4 services
DLT4EU projects receive follow-on funding	70% of DLT4EU projects	50% of DLT4EU projects
<b>Objective 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</b>		
<b>Impact Area(s): Social, Economic</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Partnerships with public	5-10 partnerships	11 partnerships

organisations		
Non-profit and / or public applications developed	3-5 applications	8 applications
<b>Objective 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</b>		
<b>Impact Area(s): Social, Knowledge</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Active organisations within the DLT4EU ecosystem	20-30 active organisations	38 active organisations
Newsletter subscribers	1,000 subscribers	948
Media articles	10-15 articles	53 articles
<b>Objective 10: To increase the capacity of EU social and public sectors to take up DLT-based solutions and to equip intermediaries to support them</b>		
<b>Impact Area(s): Knowledge, Social</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Actors reached within government and NGOs	30-50 actors	96 actors
Knowledge sharing activities across policy-makers and public sector supporters	50+ knowledge sharing activities	43 knowledge sharing activities
<b>Objective 11: To develop an effective Virtual Field Lab model for those who wish to run similar incubation schemes.</b>		
<b>Impact Area(s): Knowledge</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Downloads and views of the DLT4EU Accelerator Report in which the VFL model is detailed	1,000 downloads and views	909 downloads and views
VFLs occurring across the EU	5-10 VFLs	8 VFLs
<b>Objective 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.</b>		
<b>Impact Area(s): Knowledge</b>		
<b>KPIs</b>	<b>Target</b>	<b>Result</b>
Knowledge sharing and outreach activities	At least 50	288



Table 4: Additional Key Performance Indicators

Additional Key Performance Indicators	
KPIs	Result
Number of public actors engaged with the Accelerator and Insights report, as well as during the challenge identification and refinement process	73 public actors engaged
Number of stakeholders joining or dropping out of the programme prior to its completion; number of public organisations who follow-up	<ul style="list-style-type: none"> <li>• 178 stakeholders have joined throughout the programme</li> <li>• 2 Challenge Owners did not receive applications for their Challenge Areas</li> <li>• 2 Challenge Owners did not complete the programme</li> <li>• 1 Challenge Owner dropped out at the Open Call stage</li> <li>• 5 Virtual Field Labs will continue developing their PoCs after the DLT4EU programme</li> <li>• 2 Virtual Field Labs may continue developing their Proof-of-Concepts after the DLT4EU programme</li> </ul>
Number and types of Sustainable Development Goals (SDGs) addressed in the entire range of the challenges	14 SDGs <sup>11</sup>
Number of engaged social policy government sectors and non-profit organisations	48 organisations
Number of engaged environmental policy government sectors and non-profit organisations	48 organisations
Number of public licenses, open or semi-open patents, and/or business models published by venture teams	All eight Venture Teams have released at least part of the Proof-of-Concept under an open source license of their choice
Skills development: Number and type of training provide to relevant stakeholders	14 training sessions delivered
Number and type of regulatory barriers identified at the EU and/or national policy level	5 regulatory barriers identified

<sup>11</sup> Please see Appendix 2 for a complete list of the SDGs targeted by the Venture Teams.

Maturation of business model based on Technology Readiness Level (TRL) development	<p>The TRL development of each Venture Team has been evaluated using the 'Technical Feasibility' criteria by the DLT4EU Evaluation Jury.</p> <p>Table 5 below provides the 'Technical Feasibility' average score of each Venture Team, and scoring rubric</p>
Number of new opportunities found for problem-DLT solution fit	<p>Eight new opportunities have been developed. The problem-DLT solution fit was evaluated by the Evaluation Jury using the 'Challenge-Solution Fit' criteria.</p> <p>Table 6 below provides the average score of each Venture Team, and scoring rubric</p>

**Table 5: Venture Team 'Technical Feasibility' Average Scores**

Venture Team 'Technical Feasibility' Average Scores	
The Proof-of-Concept has a high Technology Readiness Level (TRL) and progression rate	
<b>Scoring Rubric</b>	<p><b>5 to 4:</b> TRL level (6 or above) and "exceeded" their technical progress over the duration of DLT4EU.</p> <p><b>3 to 2:</b> TRL level (5 or above) and "met" their expectation of technical progress over the duration of DLT4EU.</p> <p><b>1 to 0:</b> Low TRL (below 5) and "missed" their technical progress expectation over the course of DLT4EU.</p>
Venture Team	Average Score
<b>Convergence Tech</b>	3.3
<b>Prosume</b>	3.3
<b>Acren</b>	4.3
<b>Alice</b>	4.3
<b>eReuse</b>	3.8
<b>CiSe</b>	2.8
<b>AID:Tech</b>	3.0

<b>DisCO</b>	2.3
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**Table 6: Venture Team ‘Challenge-Solution Fit’ Average Scores**

<b>Venture Team ‘Challenge-Solution Fit’ Average Scores</b>	
<p>The Venture Team has clearly demonstrated how their Proof-of-Concept (PoC) solves the challenge area set by the Challenge Owner and / or key components of the challenge.</p> <p>Additionally, the Venture Team has clearly articulated the intended impact of their PoC by setting appropriate impact targets and / or use established frameworks such as the Sustainable Development Goals.</p>	
<b>Scoring Rubric</b>	<p><b>5 to 4:</b> The Venture Team (VT) clearly demonstrates how their Proof-of-Concept solves the challenge area. There is a clear articulation of the needs of the end user of the PoC and the value proposition. The VT has communicated the intended impact of their PoC, and has set appropriate impact targets and / or referenced how they contribute to established frameworks (e.g. UN’s SDGs). Additionally, the VT has explained how their POC is not simply a one-off project, but has applicability to a broader environment and / or set of beneficiaries.</p> <p><b>3 to 2:</b> The Venture Team (VT) somewhat demonstrates how their PoC solves the challenge area, and / or the needs of the end user are not fully articulated. The VT has communicated the intended impact of their PoC, but may not have set impact targets.</p> <p><b>1 to 0:</b> The Venture Team’s explanation of how the PoC solves the challenge area is poor or inconsistent. The VT have not set impact targets for their solution.</p>
Venture Team	Average Score
<b>Convergence Tech</b>	3.8
<b>Prosume</b>	3.0
<b>Acren</b>	3.3
<b>Alice</b>	4.0

<b>eReuse</b>	3.2
<b>CiSe</b>	3.2
<b>AID:Tech</b>	3.2
<b>DisCO</b>	2.5

**Table 7: 'Unmet' Key Performance Indicators - Further Detail**

<b>'Unmet' Key Performance Indicators</b>			
<b>KPI</b>	<b>Target</b>	<b>Result</b>	<b>Further Detail</b>
Social impact investors engaged	5-7	4	Based on feedback provided by the Venture Teams and several investment advisors who had been involved in both Demo Days, there were two main barriers to fulfilling this set of KPIs.
Projects supported by impact investment	3	1	
DLT4EU projects receive follow-on funding	70%	50%	<p>The first was that most of the Proof-of-Concepts were considered too early-stage for investors to engage with the solutions. This was despite the often more open mindset of impact-investors, and their active participation in the Demo Days and Masterclasases. Second, the organisational models of several Venture Teams are not investable - either due to the legal structure of the Venture Team, or due to values held by the management team. Due to both cases, the Venture Teams were more interested in accessing non-equity financing, such as subsidies and grants.</p> <p>Based on this feedback, the originally planned 'Investor Day' from the Barcelona Bootcamp - where Venture Teams were due to pitch their Proof-of-Concept to an audience of investors - was re-envisioned as the provision of fundraising support by an external expert in non-equity financing. Through one-on-one consultations, Venture Teams have co-developed a fundraising plan for the coming year, with a focus on both EU and national-level opportunities.</p>
Newsletter subscribers	1,000	948	Through communications research undertaken by Ideas for Change, it became clear that newsletters were not the preferred channel of the DLTs for Good audience. Instead, channels such as Twitter, LinkedIn, and Telegram had a higher presence. Followers and recurring engagement via these channels (as well as the newsletter) have been measured here to reflect the dominant channels of the ecosystem.

Downloads and views of the DLT4EU Accelerator Report in which the VFL model is detailed	1,000	909	<p>Similar to the KPI barrier above, the DLT4EU Consortium has found that the report format was not the main way in which insights are digested by the DLT ecosystem. Instead, most engagement occurs on Twitter, LinkedIn, and Telegram. Marketing activities therefore focused on driving traffic from these channels to the 'deliverables' page on the DLT4EU website.</p> <p>Additionally, the DLT4EU Accelerator Report was shared with all participants of DLT4EU and to the European Commission Joint Research Centre network.</p>
Knowledge sharing activities across policy-makers and public sector supporters	50+	43	<p>The main barrier to fulfilling this KPI was the pressure that the COVID-19 pandemic placed on the public sector participants of DLT4EU - including the Challenge Owners. Unfortunately this meant a lower engagement than expected, and thus a lower number of knowledge sharing activities were hosted specifically for this audience. However, relevant DLT4EU materials are hosted on the website as a legacy page, to ensure there is continued knowledge sharing beyond the programme.</p>

## 5. Programme-Level Impact Assessment Insights and Recommendations

Overall, the results of the Programme-Level Impact Assessment illustrate the importance of adopting an ecosystem-based model for stimulating the experimentation with - and adoption of - DLT applications by the public sector.

In total, 79% of the Key Performance Indicators were either 'exceeded' or 'met' (52% and 27% respectively). Most of these KPIs fall under the objectives related to curating a vibrant and sustainable ecosystem within the field of DLTs for public good, providing knowledge exchange and facilitating capacity building, and ensuring a deep understanding of the challenges facing the social and public sectors. Importantly, the results of these KPIs show the role of bringing in external subject matter experts to support and engage with the programme. For example, 45 experts were aligned with the core eight Challenge Areas of the programme to ensure a deep understanding for use case development by the VFL.

Conversely, the six KPIs that were not met (21% of the total) mainly relate to the engagement of the impact-driven investment community and the success of the Venture Teams to secure follow-on funding for their Proof-of-Concepts. For example, only one Venture Team was able to

secure impact investment as part of their DLT4EU activities. Insights from the research interviews with the Venture Teams, conducted at the end of DLT4EU, reflect this difficulty in interacting with the investment community so early on in the innovation process (see also Table 7).

### The Role of Ecosystem-based Innovation

From the outset, it was critical to design DLT4EU as a collaborative accelerator built on existing innovation programmes such as LEDGER, Blockchain4EU, DLT4Good, and Odyssey - overall 13 existing initiatives were connected to the accelerator. A key legacy of these programmes is the ecosystem they have catalysed - which was actively evolved by DLT4EU. And while this ecosystem is still taking shape, it is important that it becomes a long-term incubator for public and social sector organisations - demand-led by the end beneficiaries such as Challenge Owners.

The value of this ecosystem can be seen across the Knowledge Impact Area in particular: overall, there are 38 active organisations in the DLT4EU ecosystem, contributing their expertise and experiences to the eight VFLs. Often, this was through delivering a 'masterclass' on a specialist topic area or through one-on-one mentoring with the VFL participants. Additionally, research conducted by the DLT4EU Consortium into mapping the existing and foreseen challenges and barriers to the public and social good sector, helped to direct where ecosystem development into key topic areas, skills, and expertise that proved necessary to bring into the programme.

At the centre of this ecosystem is the need for a model to facilitate public and social sector experimentation and tackle key barriers - this is where the Virtual Field Lab model really comes in. It proved effective in fostering deep collaboration between public actors and DLT developers - for example, five out of the eight VFLs have confirmed they will continue their partnership after the programme. And indeed, in a research interview with the Convergence Tech Venture Team, Erik Zvaigzne highlighted that one of the main benefits of their participation in the programme was the VFL model: "Virtual Field Labs are an effective model to formalise people around a challenge which is valuable - [the VFL provides] an incentive to solve, but also an opportunity to solve something that has not had attention before."<sup>12</sup>

The VFL model was especially important when barriers to experimentation and adoption cropped up. For example, variations in European Union and national regulations - such as with the General Data Protection Regulation - have created a high degree of uncertainty for DLT use cases seeking to engage and empower citizens. This was a common experience for many of the VFLs - indeed, GDPR was a key consideration of the collaboration between AID:Tech and the City of Helsingborg in Sweden, who were developing a use case to help citizens 'port' their data from one city service to another. Through the VFL model, the Challenge Owner was able to bring legal experts to the table to help AID:Tech develop the Proof-of-Concept under the right

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<sup>12</sup> Zvaigzne, E. (2021). DLT4EU Research Interview. 19 January.

guidance. This was also the experience of the Acren and UNDP Lebanon VFL, who required additional expertise in local financial regulations in order to implement their pilot, and consider scaling routes for their Proof-of-Concept. Both the Venture Team and the Challenge Owner confirmed that it was the VFL model that enabled them to tackle specific challenges, as it helped them to work together to pivot their Proof-of-Concept.<sup>13</sup>

From the experiences of the VFLs, it is clear that creating DLTs for public good is not just a technological challenge. This is a highly complex space that requires a diverse set of experts and practitioners across impact-driven financing, UX / UI design, open source licensing and business models, participatory governance, and impact assessment. Many of the Venture Teams and Challenge Owners confirmed the value of access to a diverse and experienced ecosystem of masterclass leads and mentors to help support in the development of their Proof-of-Concept.

By curating an ecosystem of experts around the VFLs we were able to foster an agile acceleration approach - getting practical expertise to the teams as and when needed. This drastically reduced barriers and uncertainties inherent within DLT development and enriched the innovation process.

#### Capacity Building through the Virtual Field Lab

The development of meaningful DLTs for public and social good, however, is not just about being able to identify and solve the on-the-ground barriers experienced by Challenge Owners. It is also about capacity building and supporting the Challenge Owners to take a leadership role in the development of the DLTs for public good field.

The public sector needs to be a part of the innovation process from the very beginning to find those use cases and guide the development of the technology in ways that are the most relevant to public and social beneficiaries. The VFL provided a forum where public sector actors could contribute their expertise and insight directly to the DLT organisations - who rarely get hands-on, experienced input from public sector actors. Importantly, by folding the public sector end beneficiary much earlier into the innovation process, it helped to build grassroots change within organisations around DLT experimentation. Indeed, both the City of Helsingborg and City of Sant Boi Challenge Owners stated that they would not be experimenting with DLTs unless it had been for a programme like DLT4EU.<sup>14</sup>

The impact assessment also confirms that the public and social sectors have an important and active role to play in experimentation and adoption of DLTs - and indeed emerging technologies more broadly. A key objective of the accelerator was to undertake knowledge sharing activities for the Challenge Owners, but also the broader ecosystem from policymakers to public sector

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<sup>13</sup> Markovic. N. (2021). DLT4EU Research Interview. 21 January; Rizk. R. (2021). Research Interview. 16 February.

<sup>14</sup> Larcombe. M. (2021). DLT4EU Research Interview. 17 February; Peidr , C., & Moreno, N. (2021). DLT4EU Research Interview. 22 February.

supporters. These knowledge sharing activities included the three bootcamps, masterclasses on key topic areas, and the DLT4EU Final Event where insights and best practices were discussed by thought leaders from the public sector. Additionally, knowledge sharing meant one-on-one mentoring where the Challenge Owner and Venture Teams could collaboratively work together on a key problem, under the guidance of an expert. In this way, the DLT4EU programme ensured that capacity building was a continuous process, rather than carried out retrospectively - overall, 288 knowledge sharing and outreach activities were carried out over the course of the accelerator.

The emphasis on capacity building in the public sector also conferred benefits for the Venture Teams - for example, AID:Tech confirmed that working so closely with a Challenge Owner meant that they were able to understand the mindset and aspirations of the public sector in a new way.

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### Challenge Owner Readiness Level

While overall the Virtual Field Lab was proven as an effective model - for example, all KPIs related to the outputs of the VFLs were either 'met' or 'exceeded' - difficulties to make the most of the collaboration were still felt by participants. Through DLT4EU, it became clear that a key barrier to experimentation and adoption was the Challenge Owners' understanding of and readiness to use DLTs.

This readiness is an organisational ability to pragmatically engage in early-stage innovation, as well as act as that first customer of use cases - to have the capacity to guide, direct, and ensure use case scope and development. For Carles Peidr  and Natalia Moreno from Sant Boi City Council, this was a lack of time and resources to undertake new innovation activities, as well as the recognition of the political sponsorship needed to adopt a new DLT solution or programme.<sup>16</sup>

Additionally, in the first few months of DLT4EU, some Challenge Owners struggled to progress the scope of the use case with the Venture Teams, despite their high engagement and commitment to the challenge scoping and validation prior to the Open Call and launch of the accelerator. Often this was a lack of technical understanding of DLTs to be able to identify the value of specific use cases. For example, Max Larcombe from the City of Helsingborg felt that for their organisation, the technology still felt too uncertain despite being proactive to educate themselves and the technical support received from their Venture Team - indeed, this was considered to be the main barrier to public sector adoption by the City of Helsingborg team.<sup>17</sup>

Almost all of the Venture Teams felt this lack of certainty and understanding from Challenge Owners about DLTs, and proactively sought to help their VFL to understand how the technology can work, its uses, and benefits. And while the programme also provided the Challenges Owners with specific masterclasses on the potential role and value of DLTs to their organisations, and

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<sup>15</sup> Thompson, J. (2021). DLT4EU Research Interview. 19 January.

<sup>16</sup> Peidr , C., & Moreno, N. (2021). DLT4EU Research Interview. 22 February.

<sup>17</sup> Larcombe, M. (2021). DLT4EU Research Interview. 17 February.



the current state of use cases in Europe, it is clear there is a need for structural education and capability building internally within the public and social sectors beyond the Virtual Field Lab model.

### The Funding Gap

The need for timely access to financing was highlighted by all participants of DLT4EU as a key barrier to the successful experimentation and adoption of DLTs in the public and social sectors - indeed three out of the six 'unmet' KPIs fall under objectives to engage investors and secure funding for Proof-of-Concept development (see Table 7).

Specifically, barriers to accessing this funding were presented in four main ways. First, relates directly to the relative immaturity of the technology. In particular, the scarcity of reliable and trusted public examples of working DLT systems in the public and social sectors to demonstrate the possibility to improve the resilience of, and trust in, public procurement, supply chains, increase transparency around data access, and open new avenues for data sharing, collaborative working, and citizen-centric services.<sup>18</sup> This translates into a general view by investors that the risk is just too high - Areti Kamyli, from the Venture Team Alice, highlighted that often this was combined with the perception that impact-driven organisations cannot be commercially successful.<sup>19</sup>

The second barrier is a general information asymmetry when identifying and applying to sources of non-equity funding - despite online resources such as Your Europe provided by the European Commission, and EuroAccess. When funding opportunities were identified by Venture Teams, in particular, there were still barriers to successfully securing the funding - including how time intensive submitting applications can be, as well as the experience that it is hard to 'decipher' what the financing body is really looking for in the application.<sup>20</sup> Additionally, this was also felt by Venture Teams who were interested in accessing more niche funding types - such as on a city-level - who struggled to access the knowledge needed to apply to these sources.<sup>21</sup> Further, contracting expertise in fundraising and application writing can often be too expensive for less mature organisations focused on early-stage innovation.

Further, some Venture Teams report that the amount of funding available for early-stage innovation with DLTs is too low and that there is a general lack of funding options for amounts of €50,000-€90,000 which are needed for Proof-of-Concept development.<sup>22</sup> Many of the Venture Teams have applied to the same EU-led programmes - such as LEDGER and the European

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<sup>18</sup> Garcia. F., During. L., MacNeil. A., and Corbin. L., 'D1.2 DLT4EU Insights Report', (March, 2020), p11.

<sup>19</sup> Kamyli. A. (2021). DLT4EU Research Interview. 20 January; MacNeil, A., Corbin, L., Putri., A., Singh, A., Learney, R., Basil, P., Hyde, I., Higuera, A., Ramierz, A. (2021). 'D6.4 DLT4EU Final Report'.

<sup>20</sup> Fellgett. T. (2020). 'Grant Writing Application Masterclass'. 24 November; Ibid.

<sup>21</sup> Franquesa. D. (2021). DLT4EU Research Interview. 4 February; Ibid.

<sup>22</sup> Markovic. N. (2021). DLT4EU Research Interview. 21 January; Ibid.

Innovation Council (EIC) Accelerator - as they are one of the few funding routes known to the DLT ecosystem.<sup>23</sup>

And finally, linked to the above mismatch between need and availability of funding, there is a secondary mismatch in the type of funding available and the type of business model and / or organisation in the DLTs for public and social good field. Many of the business models of the Venture Teams are non-for-profit and cannot be invested in with traditional venture financing - such as the community-based models of the Venture Teams DisCO and eReuse, who are actively not trying to “be like startups”.<sup>24</sup> For these Venture Teams, it significantly narrows the financing field if the very type of funding available is unable to be used by the organisation. Instead, feedback from seven out of the eight Venture Teams shows that their focus is only on non-equity funding for the next phase of the Proof-of-Concept development, such as grants and subsidies.

**Table 8: The Main Benefits of DLT4EU by Participant**

The Main Benefits of DLT4EU by Participant <sup>25</sup>		
Participant	Benefit Category	Description
Venture Teams	Market Access	<ul style="list-style-type: none"> <li>• Direct access to - and input from - end beneficiaries and users of DLTs with a potential for a ‘first customer’</li> <li>• Supports earlier use case validation and development</li> </ul>
	Market Access	<ul style="list-style-type: none"> <li>• Direct access to ecosystem benefits - such as mentoring, knowledge sharing, peer learning, and investment</li> </ul>
	Knowledge & Capability Building	<ul style="list-style-type: none"> <li>• Builds knowledge and capability in public sector innovation</li> <li>• Encourages long-term relationships and engagement with end beneficiaries</li> </ul>
	Operations & Resources	<ul style="list-style-type: none"> <li>• Provides (some) financial and operational support to participate</li> </ul>
Challenge Owners	Innovation Model	<ul style="list-style-type: none"> <li>• Provides a de-risked innovation environment, where needed support and guidance is provided</li> </ul>

<sup>23</sup> Thompson. J. (2021). DLT4EU Research Interview. 19 January; Ibid.

<sup>24</sup> Foster. L. DLT4EU Research Interview. 20 January; Franquesa. D. (2021). DLT4EU Research Interview. 4 February.

<sup>25</sup> Benefits synthesised by the DLT4EU Consortium from the following Monitoring Methods: Venture Acceleration Action Plans, Accelerator Feedback Surveys, Research Interviews, and desk research. For more information, please see Appendix 3.

		<ul style="list-style-type: none"> <li>• Opportunity to apply lean and / or agile innovation processes</li> </ul>
	Market Access	<ul style="list-style-type: none"> <li>• Direct access to DLT providers without need for procurement</li> </ul>
	Market Access	<ul style="list-style-type: none"> <li>• Direct access to wider ecosystem within DLTs for social good, but also the wider public sector innovation space</li> </ul>
	Knowledge & Capability Building	<ul style="list-style-type: none"> <li>• Direct, applied learning experiences of experimentation and adoption of DLT use cases with a challenge-specific focus</li> <li>• Facilitates learning on new collaboration-based models</li> <li>• Builds internal capabilities in leading innovation approach and focus</li> <li>• Encourages long-term relationships and engagement with DLT providers</li> </ul>
	Operations & Resources	<ul style="list-style-type: none"> <li>• Low financial cost to participation (as personnel time) which reduces risk of conflict with internal budget and procurement cycles</li> </ul>
<b>DLT4EU Ecosystem</b>	Innovation Model	<ul style="list-style-type: none"> <li>• Provides access to possible future partners, solution providers, and / or investment opportunities</li> </ul>
	Knowledge & Capability Building	<ul style="list-style-type: none"> <li>• Enables wider use case validation</li> <li>• Acts as a microcosm of challenges, barriers, and insights in the DLTs for public good field</li> </ul>
<b>European Commission</b>	Knowledge & Capability Building	<ul style="list-style-type: none"> <li>• Enables multi-sector and pan-European insights on the challenges, barriers, and pertinent use cases common to the European Union</li> </ul>

**Recommendations for Future Programmes**

From the results of the programme-level impact assessment and feedback from participants, it is clear that there is a great need for ecosystem-based innovation, such as that deployed using the Virtual Field Lab model. In order to replicate, improve, and scale the successes of DLT4EU, the following five practices are recommended:

- 1. Build on the ecosystem curated by existing initiatives:** DLT4EU has shown that public sector experimentation and adoption with DLTs relies on the ecosystem that surrounds

and engages with the innovation process. Rather than starting from scratch, actively bringing in the existing ecosystem insights and expertise from the start will lead to a more valuable programme and build collective intelligence on the most effective models of innovation for the public sector.

2. **Extend the Challenge Area identification and scoping phase:** To ensure the Challenge Owners are in the best position to engage and lead early-stage experimentation with DLTs, we recommend extending the first phase of the programme where the Challenge Owners are supported in their readiness to participate in Virtual Field Lab. This is strongly tied to the need to move to innovation models that are not cyclical and based on preconceptions of “startups” and commercialisation of B2B or B2C business models. Feedback from Challenge Owners themselves confirmed that this would help them to participate fully in the accelerator.<sup>26</sup>
3. **Experiment with type and size of participatory funding:** For future programmes, feedback from participants confirmed that participatory funding needs to be matched to the business and financial maturity of the Venture Teams - Dr. Nikola Markovic from the Acren Venture Team suggested, for example, that a tiered funding approach could be applied where more financial support goes towards organisations who were less mature than other participants.<sup>27</sup> Additionally, some Venture Teams highlighted that in-kind support could have been more valuable than a participation fund - for example, having access to designers to develop communications materials.
4. **Engage the impact-investors and funding bodies even earlier:** Similar to having a dedicated, extended phase for the Challenge Owners, the same needs to be in place for the investment community of the ecosystem, including non-equity sources of funding.
5. **Move away from short-cycle innovation programmes:** Working with the public sector requires long-term, deep engagement, and especially for DLT experimentation and adoption. As well as extending the timeline of the programme, one suggestion from Convergence Tech (Venture Team) is to completely abandon the bootcamp, demo day, pitch model and instead enhance the ecosystem engagement with the Virtual Field Lab by having a full-time, committed advisory team who would join the VFL for the entire programme.<sup>28</sup> If a bootcamp-style sprint was then held, it would be focused on cross-VFL peer learning only.

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<sup>26</sup> Peidr , C., & Moreno, N. (2021). DLT4EU Research Interview. 22 February.

<sup>27</sup> Markovic, N. (2021). DLT4EU Research Interview. 21 January.

<sup>28</sup> Zvaigzne, E. (2021). DLT4EU Research Interview. 19 January.

## Appendix 1: DLT4EU Impact Compass

DLT4EU Impact Compass						
Programme-Level Impact Assessment						
#	Objective	KPI	Definition	Impact Area(s)	Result	Evidence <sup>29</sup>
1	Rigorously understand the present and foreseeable challenges facing the social and public sectors in the EU	15-20 studies synthesised	n/a	Social Knowledge Economic	54	See D1.2 DLT4EU Insights Report <sup>30</sup>
		15-20 experts consulted	n/a		25	<p>The 25 experts consulted were from these organisations below. At least one expert has been interviewed from each organisation.</p> <ul style="list-style-type: none"> <li>● Ministry of Infrastructure, Sweden</li> <li>● Ministry of Finance, Finland</li> <li>● Ministry of Economic Development and Technology, Slovenia</li> <li>● European Blockchain Partnership</li> <li>● Luxembourg House of Financial Technology</li> <li>● Positive Blockchain</li> <li>● Italian Banking Association</li> <li>● Norwegian Government (Digital Identity Division)</li> <li>● École Polytechnique Fédérale de Lausanne</li> <li>● Zumo</li> <li>● Trakti</li> <li>● Tongadive</li> <li>● Catena Consulting</li> <li>● Farmatrust</li> <li>● Outlier Ventures</li> <li>● World Bank</li> </ul>

<sup>29</sup> Please note that names have been provided where consent has been obtained for KPIs evidence, otherwise an organisation name has been provided instead. In these cases, the number of organisations provided may not match the KPI result due to multiple individuals from one organisation.

<sup>30</sup> Garcia, F., During, L., MacNeil, A., Corbin, L. (2020) 'D1.2 DLT4EU Insights Report: Distributed Ledger Technologies for Public Good'.

						<ul style="list-style-type: none"> <li>• Authtrail/Kalmia</li> <li>• Applied Blockchain</li> <li>• Moneyfold</li> <li>• Digital Catapult</li> <li>• Rome University</li> </ul>
		Per challenge: 2-3 experts aligned on the key challenge identified	Active participants specifically identified to help the VFLs		45	<ul style="list-style-type: none"> <li>• 3 subject matter experts per Challenge Area</li> <li>• 21 subject matter experts covering both Digital Citizenship and / or Circular Economy at a sector level</li> </ul>
2	To map the framework conditions for the successful utilisation of DLT by EU public and social sectors	A minimum of 15-25 of experts consulted	n/a	Social Knowledge Economic	25	<p>The 25 experts consulted were from these organisations below. At least one expert has been interviewed from each organisation.</p> <ul style="list-style-type: none"> <li>• Ministry of Infrastructure, Sweden</li> <li>• Ministry of Finance, Finland</li> <li>• Ministry of Economic Development and Technology, Slovenia</li> <li>• European Blockchain Partnership</li> <li>• Luxembourg House of Financial Technology</li> <li>• Positive Blockchain</li> <li>• Italian Banking Association</li> <li>• Norwegian Government (Digital Identity Division)</li> <li>• École Polytechnique Fédérale de Lausanne</li> <li>• Zumo</li> <li>• Trakti</li> <li>• Tongadive</li> <li>• Catena Consulting</li> <li>• Farmatrust</li> <li>• Outlier Ventures</li> <li>• World Bank</li> <li>• Authtrail/Kalmia</li> <li>• Applied Blockchain</li> <li>• Moneyfold</li> <li>• Digital Catapult</li> <li>• Rome University</li> </ul>
3	Build meaningful and sustainable relationships	Per challenge: 2-3 per experts aligned	Active participants specifically identified to help the VFLs	Social Knowledge Economic	45	<ul style="list-style-type: none"> <li>• 3 subject matter experts per Challenge Area</li> <li>• 21 subject matter experts covering both Digital Citizenship and / or Circular Economy at a sector level</li> </ul>

<p>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 investment to real-world challenges and impact</p>	<p>on the key challenge identified</p>			
	<p>10-15 beneficiaries engaged</p>	<p>Active Challenge Owner organisations in the cohort</p>	<p>14</p>	<ul style="list-style-type: none"> <li>• City of Helsingborg</li> <li>• City of Sant Boi</li> <li>• Greater London Authority</li> <li>• Vodafone Foundation</li> <li>• Waag Society</li> <li>• DYNE</li> <li>• Chief Technology Office Amsterdam</li> <li>• UNDP Morocco</li> <li>• UNDP Lebanon</li> <li>• UNDP Serbia</li> <li>• Digital Future Society</li> <li>• Spanish Red Cross</li> <li>• London Legacy Development Corporation</li> <li>• UNDP Alternative Finance Lab</li> </ul>
	<p>5-7 social impact investors engaged</p>	<p>Social impact investors that have interfaced with the Venture Teams</p>	<p>4</p>	<ul style="list-style-type: none"> <li>• Karel Vanderpoorten (DG GROW)</li> <li>• João Santos (Mustard Seed Maze Venture Capital)</li> <li>• João Farinha (Advisor for the Secretary of State for Digital Transition of the Portuguese Government)</li> <li>• João Machado (Portugal Social Innovation)</li> <li>• Additionally Outlier Ventures and LeadBlock Partners (traditional investors) engaged with the Venture Teams</li> </ul>
	<p>8-10 projects co-initiated by developers and beneficiaries</p>	<p>Number of Proofs-of-Concepts</p>	<p>8</p>	<p>Eight Proof-of-Concepts developed by the Virtual Field Labs</p>
	<p>3 projects supported by impact investment</p>	<p>n/a</p>	<p>1</p>	<p>Alice has received impact grant funding from InnovateUK</p>
	<p>+500 attendees reached by events</p>	<p>Cumulative number of attendees in various</p>	<p>1,961</p>	<p>DLT4EU Public Launch Event</p> <ul style="list-style-type: none"> <li>• 84 unique live views</li> </ul>

			programme activities (i.e. Public Launch Event, Bootcamps, Final Event)			<ul style="list-style-type: none"> <li>• 377 unique web visits</li> <li>• 507 unique YouTube views</li> </ul> <p>DLT4EU Final Event</p> <ul style="list-style-type: none"> <li>• 63 unique live views</li> <li>• 512 unique web visits</li> <li>• 263 unique YouTube views</li> </ul> <p>Bootcamps</p> <ul style="list-style-type: none"> <li>• Amsterdam Bootcamp: 52 attendees</li> <li>• London Bootcamp: 50 attendees</li> <li>• Barcelona Bootcamp: 53 attendees</li> </ul>
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	n/a	Social Knowledge	13	<ul style="list-style-type: none"> <li>• Mobile World Capital</li> <li>• LEDGER</li> <li>• Dutch Blockchain Coalition</li> <li>• PIB Blockchain Solutions</li> <li>• Impact Hub Barcelona</li> <li>• Mobile World Congress Foundation</li> <li>• Odyssey Hackathon</li> <li>• DLT4Good Social Prize</li> <li>• DECODE</li> <li>• Commons Transition</li> <li>• DG CNECT</li> <li>• Impact Hub Amsterdam</li> <li>• Impact Hub Lisbon</li> </ul>
		50 external references made about DLT4EU	To count media (i.e. articles, mentions) by organisations outside DLT4EU Consortium, and to distinguish between explicit articles and media coverage			56
5	Prototype new DLT applications and initiatives that are capable	5-10 proofs-of-concept prototypes made	n/a	Social Knowledge Economic	8	Eight Proof-of-Concepts developed by the Virtual Field Labs



	of addressing existing and foreseeable challenges in the social and public sectors, and validated by a robust impact assessment framework	within the DLT4EU Virtual Field Labs				
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	Experts consulted to inform D7.1 DLT4EU Impact Assessment Framework Report	Knowledge	12	<p>DLT4EU Consortium</p> <ul style="list-style-type: none"> <li>● Robert Learney (Digital Catapult)</li> <li>● Pierre Baisle (Digital Catapult)</li> <li>● Giovanni Maccani (Ideas for Change)</li> <li>● Mara Balestrini (Ideas for Change)</li> <li>● Antoine Coudard (Metabolic)</li> <li>● Chris Monaghan (Metabolic)</li> <li>● Andrew Kneuppel (Metabolic)</li> </ul> <p>European Commission Joint Research Centre</p> <ul style="list-style-type: none"> <li>● Anna Hakami</li> <li>● Alexandre Polvora</li> </ul> <p>Accelerator / Venture Expertise</p> <ul style="list-style-type: none"> <li>● Murray Gray (Generous Minds)</li> <li>● Moritz Blanke (Social Impact Berlin)</li> <li>● Theo Fellgett (Co-Founder Applied, Former BIT Ventures)</li> </ul>
		5-10 expert peer-reviews of framework	Expert peer reviews consulted in the creation of the D7.1 DLT4EU Impact Assessment Framework Report			12

						<ul style="list-style-type: none"> <li>Alexandre Polvora</li> </ul> <p>Accelerator / Venture Expertise</p> <ul style="list-style-type: none"> <li>Murray Gray (Generous Minds)</li> <li>Moritz Blanke (Social Impact Berlin)</li> <li>Theo Fellgett (Co-Founder Applied, Former BIT Ventures)</li> </ul>
		5-10 concepts validated	Number of Proofs-of-Concept validated by the Evaluation Jury		8	Eight Proof-of-Concepts were developed by the Venture Teams
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	n/a	Economic Social Environmental	8	Eight Proof-of-Concepts were developed by the Venture Teams
		3-5 services expanded in the public sector	Number of Proofs-of-Concepts applicable to the public sector		4	Four Proof-of-Concepts were developed for the public sector. These organisations are: <ul style="list-style-type: none"> <li>City of Helsingborg</li> <li>City of Amsterdam</li> <li>Sant Boi City Council</li> <li>Greater London Authority</li> </ul>
		70% of DLT4EU projects receive follow-on funding acquired	Venture Teams that receive follow-on funding, including the DLT4EU follow-on funding		50%	Three Venture Teams received DLT4EU follow-on funding: <ul style="list-style-type: none"> <li>eReuse</li> <li>Convergence Tech</li> <li>Alice</li> </ul> <p>Outside DLT4EU</p> <ul style="list-style-type: none"> <li>Alice has received impact grant funding from InnovateUK <sup>31</sup></li> <li>AID:Tech has secured Series A investment from an Asian sovereign wealth fund as well as investors in Silicon Valley <sup>32</sup></li> <li>Prosume has applied to the Italian National</li> </ul>

<sup>31</sup> Kamyli, A. (2021). DLT4EU Research Interview. 20 January 2021.

<sup>32</sup> Thompson, J. (2021). DLT4EU Research Interview. 19 January 2021.

						Innovation Fund to help support the new business development that was partially developed via DLT4EU - the outcome of this application was not known at publication
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	n/a	Social Economic	11	<p>4 public sector organisations</p> <ul style="list-style-type: none"> <li>• City of Helsingborg</li> <li>• City of Amsterdam</li> <li>• Sant Boi City Council</li> <li>• Greater London Authority</li> </ul> <p>4 development sector organisations</p> <ul style="list-style-type: none"> <li>• UNDP AltFinLab</li> <li>• UNDP Morocco</li> <li>• UNDP Serbia</li> <li>• UNDP Lebanon</li> </ul> <p>1 public-third sector organisation</p> <ul style="list-style-type: none"> <li>• Digital Future Society</li> </ul> <p>2 third-sector organisations</p> <ul style="list-style-type: none"> <li>• Vodafone Foundation</li> <li>• WAAG Society</li> </ul>
		3-5 non-profit and/or public applications developed	Number of services expanded			8

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	Organisations that are actively engaged with the programme	Social Knowledge	38	<ul style="list-style-type: none"> <li>14 Active Challenge Owners</li> <li>8 Venture Teams</li> <li>9 communications partners</li> <li>7 core mentors</li> </ul>
		1,000 people subscribe to newsletter	Newsletter subscribers and recurring engagement on main and secondary channels		219 (newsletter) 729 (other channels) 948 (total)	DLT4EU Main Channels <ul style="list-style-type: none"> <li>219 total number of newsletter subscribers</li> <li>477 newsletter openings;</li> <li>535 Twitter followers</li> <li>167 Instagram followers</li> <li>27 Telegram subscribers</li> <li>11 newsletters sent throughout the DLT4EU programme</li> </ul> DLT4EU Secondary Channels (using Ideas for Change account) <ul style="list-style-type: none"> <li>2,682 total number of newsletter subscribers</li> <li>4,996 newsletter openings;</li> <li>2,861 number of followers IFC LinkedIn</li> <li>9925 Twitter impressions on posts with newsletter with DLT4EU content</li> <li>373 Twitter engagement when announcing newsletter with DLT4EU content</li> <li>1,413 LinkedIn impressions when announcing newsletter with DLT4EU content</li> <li>92 LinkedIn engagement when announcing newsletter with DLT4EU content</li> <li>9 newsletters where DLT4EU was mentioned were sent</li> </ul>
		10-15 media articles	n/a		53	<ul style="list-style-type: none"> <li>48 articles published by Ideas For Change</li> <li>3 articles published by Digital Catapult</li> <li>2 articles published by Metabolic Institute</li> </ul>
10	To increase the capacity of EU social and public sectors to take up DLT-based solutions and to	30-50 actors reached within governments and NGOs	n/a	Social Knowledge	96	48 actors reached within governments and NGOs <ul style="list-style-type: none"> <li>European Commission Joint Research Centre</li> <li>UNDP Alternative Finance Lab</li> <li>City of Helsingborg</li> <li>Mission Possible 2030</li> <li>The Hague Tech</li> <li>Agency for Digital Italy</li> </ul>

equip intermediaries to support them				<ul style="list-style-type: none"> <li>● Den Haag Gemeente (The Hague Municipality)</li> <li>● UNDP Morocco</li> <li>● UNDP Serbia</li> <li>● UNDP Lebanon</li> <li>● OECD</li> <li>● FairChain Foundation</li> <li>● DG CNECT</li> <li>● DG GROW</li> <li>● Portuguese Government</li> <li>● Italian Ministry of Economic Development</li> <li>● Sant Boi City Council</li> <li>● London Legacy Development Corporation</li> <li>● Greater London Authority</li> <li>● Vodafone Foundation</li> <li>● Chief Technology Office Amsterdam</li> <li>● Italian National Innovation Fund</li> <li>● UK Financial Conduct Authority</li> <li>● Ministry for Economic Affairs and Energy, Germany</li> <li>● Bank of Lithuania</li> <li>● Ministry of Infrastructure, Sweden</li> <li>● European Parliament</li> <li>● Ministry for Europe and Foreign Affairs, France</li> <li>● Ministry of Economic Development and Technology, Slovenia</li> <li>● Center for Global Development</li> <li>● Norwegian Government</li> <li>● Ministry of Finance, Finland</li> <li>● Partners for International Business (PIB) Blockchain Solutions</li> <li>● Mobile World Capital Foundation</li> <li>● DECODE (H2020)</li> <li>● 40 actors reached through the Joint Research Centre network</li> <li>● 7 governments and NGOs reached through the DLT4EU Final Event. These actors came from the organisations below: <ul style="list-style-type: none"> <li>○ European Commission Joint Research Centre</li> <li>○ It Will Be</li> <li>○ Sant Boi City Council</li> <li>○ UNDP Angola</li> </ul> </li> </ul>
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		<p>50+ knowledge sharing activities across policymakers and public sector supporters</p>	<p>Bootcamp and programme masterclasses, events, additional workshops, mentoring (on knowledge sharing and not operational) - key to this is audience where Challenge Owners attended as well</p>	<p>43</p>	<p><b>Amsterdam Bootcamp</b></p> <ul style="list-style-type: none"> <li>• DLTs for Public Good Masterclass with Jaya Brekke (University of Durham), Mara Balestrini (Ideas for Change), and Liz Corbin (Metabolic Institute)</li> <li>• DLTs for Public Good Masterclass - Challenge Owners with Jaya Brekke</li> <li>• VFL Challenge Scoping - Working with the Public and Social Sectors by the Dutch Blockchain Coalition</li> <li>• Pentagrowth Masterclass by Ideas for Change</li> <li>• DLT Value-Sensitive Masterclass by University of Applied Sciences Amsterdam</li> <li>• Legal and Regulation Masterclass by Primavera de Filippi</li> <li>• Innovative Finance Masterclass by Seadna Quigley (Metabolic) and Iulia Tudor (Digital Catapult)</li> <li>• 5 hours of additional VFL mentoring with Challenge Owners</li> </ul> <p><b>London Bootcamp</b></p> <ul style="list-style-type: none"> <li>• Mid-Term Demo Day</li> <li>• Masterclass on DLT Governance Session with Lawrence Lundy-Bryan (Outlier Ventures) and Sue McClean (Baker McKenzie Law Firm)</li> <li>• Masterclass on Open Source Licensing and Business Models for Growing Your Community by Gilles Gravier (WIPRO) and Francesco Rampone (Italian Blockchain Association)</li> </ul> <p><b>Barcelona Bootcamp</b></p> <ul style="list-style-type: none"> <li>• End Demo Day for Challenge Owners</li> </ul> <p><b>Programme</b></p> <ul style="list-style-type: none"> <li>• Mentoring hours which involved the CO:</li> <li>• 15 hours confirmed across Program where CO attended</li> </ul>
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						<ul style="list-style-type: none"> <li>• Shared D1.2 Insights Report with European Commission audience of 40</li> <li>• Challenge Owner Guide by Digital Catapult</li> <li>• European Blockchain Infrastructure Services Presentation</li> <li>• DLT4EU Public Launch Event</li> <li>• DLT4EU Final Event</li> <li>• SWITCH Panel - Blockchain for the Circular Economy</li> <li>• Digital Future Society by MWC</li> <li>• EBSI Event at European Commission</li> <li>• Master in City &amp; Technology's Blockchain 4 Cities</li> <li>• Sónar+D CCCB 2020 Talk: 'S+T+ARTS: Re-Thinking the Future of Cites'</li> <li>• Art Thinking Forum: Humanizing Technology</li> <li>• European Blockchain Infrastructure Services Presentation</li> </ul>
11	To develop an effective Virtual Field Lab model for those who wish to run similar incubation schemes	1,000 downloads and views of the DLT4EU Accelerator Report in which the VFL model is detailed	n/a	Knowledge	909	<ul style="list-style-type: none"> <li>• 773 unique views of D1.1 on DLT4EU website</li> <li>• 30 downloads on the DLT4EU website</li> <li>• 66 views by DLT4EU Programme cohort</li> <li>• 40 views by European Commission Joint Research Centre network</li> <li>• 943 LinkedIn views on Metabolic LinkedIn post about D1.1</li> <li>• 1,174 Facebook D1.1 link clicks on Digital Catapult post</li> <li>• 214 LinkedIn D1.1 clicks on Digital Catapult post</li> </ul>
		5-10 VFLs occurring across the EU	n/a		8	8 Virtual Field Labs in total
12	To drive positive social change through capacity building: providing a forum for knowledge	50+ knowledge sharing and outreach activities.	Bootcamps and programme masterclasses, mentoring, events, and additional workshops specific to audience	Knowledge	288	<p>Amsterdam Bootcamp</p> <ul style="list-style-type: none"> <li>• DLTs for Public Good Masterclass with Jaya Brekke (University of Durham), Mara Balestrini (Ideas for Change), and Liz Corbin (Metabolic Institute)</li> <li>• DLTs for Public Good Masterclass - Challenge Owners with Jaya Brekke</li> <li>• VFL Challenge Scoping - Working with the Public and Social Sectors by the Dutch Blockchain</li> </ul>

<p>exchange and strategic guidance between DLT experimentation, digital social innovation, and policy initiatives</p>	<p>Coalition</p> <ul style="list-style-type: none"> <li>● Pentagrowth Masterclass by Ideas for Change</li> <li>● DLT Value-Sensitive Masterclass by University of Applied Sciences Amsterdam</li> <li>● Legal and Regulation Masterclass by Primavera de Filippi (Harvard University)</li> <li>● Innovative Finance Masterclass by Seadna Quigley (Metabolic) and Iulia Tudor (Digital Catapult)</li> <li>● Venture Building Masterclass by Chris Monaghan (Metabolic)</li> </ul> <p>London Bootcamp</p> <ul style="list-style-type: none"> <li>● Mid-Term Demo Day</li> <li>● Masterclass on DLT Governance Session with Lawrence Lundy-Bryan (Outlier Ventures) and Sue McClean (Baker McKenzie Law Firm)</li> <li>● Masterclass on Open Source Licensing and Business Models for Growing Your Community by Gilles Gravier (WIPRO) and Francesco Rampone (Italian Blockchain Association)</li> <li>● Sprint Retrospective by DLT4EU Consortium</li> <li>● Sprint Planning by DLT4EU Consortium</li> </ul> <p>Barcelona Bootcamp</p> <ul style="list-style-type: none"> <li>● Demo Day with expert panel</li> <li>● End Demo Day for Challenge Owners</li> <li>● Masterclass on Pitching and Storytelling by Hayley Bagnall (Altus Impact)</li> <li>● Masterclass on Public Funding and Investment co-led by Karel Vanderpoorten from DG GROW, João Farinha (advisor for the Secretary of State for Digital Transition of the Portuguese Government), and João Machado from Portugal Inovação Social</li> <li>● Masterclass on Writing Grant Applications by Theo Fellgett (Co-Founder Applied and Former BIT Ventures)</li> </ul> <p>Additional Programme</p> <ul style="list-style-type: none"> <li>● Fundraising Support with David Altabev (Urban Frontiers);</li> <li>● Communications Sessions with Hayley Bagnall</li> </ul>
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						<ul style="list-style-type: none"> <li>(Altus Impact) <ul style="list-style-type: none"> <li>European Blockchain Infrastructure Services Presentation</li> <li>DLT4EU Public Launch Event</li> <li>DLT4EU Final Event</li> <li>SWITCH Panel - Blockchain for the Circular Economy</li> <li>Digital Future Society by MWC</li> </ul> </li> </ul> <p>Mentoring for Programme</p> <ul style="list-style-type: none"> <li>Amsterdam Bootcamp (6 mentors with 40 hours offered)</li> <li>London Bootcamp (15 mentors with 60 hours offered)</li> <li>Barcelona Bootcamp (7 mentors with 56 hours offered)</li> <li>Monthly (103 additional hours of mentoring offered)</li> </ul>
n/a	n/a	Number of public actors engaged with the Accelerator and Insights report, as well as during the challenge identification and refinement process	n/a	Knowledge	73	<ul style="list-style-type: none"> <li>40 individuals across the European Commission Joint Research Centre network;</li> <li>33 public actors involved in the challenge identification and refinement phase <ul style="list-style-type: none"> <li>European Commission Joint Research Centre</li> <li>City of Helsingborg</li> <li>UNDP Alternative Finance Lab</li> <li>Spanish Red Cross</li> <li>Vodafone Foundation</li> <li>Digital Future Society</li> <li>Agency for Digital Italy</li> <li>Den Haag Gemeente (The Hague Municipality)</li> <li>Italian Ministry of Economic Development</li> <li>City of Sant Boi</li> <li>London Legacy Development Corporation</li> <li>Greater London Authority</li> <li>Chief Technology Office Amsterdam</li> <li>Ministry of Infrastructure, Sweden</li> <li>Ministry of Economic Development and</li> </ul> </li> </ul>

						<ul style="list-style-type: none"> <li>○ Technology, Slovenia</li> <li>○ Norwegian Government</li> <li>○ Ministry of Finance, Finland</li> <li>○ WAAG Society</li> <li>○ UNDP Morocco</li> <li>○ UNDP Serbia</li> <li>○ UNDP Lebanon</li> <li>○ Dark Matter Labs</li> </ul>
n/a	n/a	Number of stakeholders joining or dropping out of the programme prior to its completion; number of public organisations who follow-up	n/a	Social	178	<ul style="list-style-type: none"> <li>● 178 stakeholders have joined throughout the DLT4EU programme. These stakeholders include partners, subject matter experts, active Challenge Owners, and active Venture Teams</li> <li>● Two Challenge Owners did not receive applications for their Challenge Areas (Dark Matter Labs and the Greater London Authority)</li> <li>● Two Challenge Owners did not complete the programme (Spanish Red Cross and Chief Technology Office Amsterdam)</li> <li>● One Challenge Owner dropped out at the Open Call stage (Agency for Digital Italy)</li> <li>● Five Virtual Field Labs have confirmed that they will continue the PoCs after the DLT4EU programme (Alice.Si, Convergence Tech, Acren, Prosume, eReuse)</li> <li>● Two Virtual Field Labs may continue their PoCs after the DLT4EU programme (CiSe, DisCO) pending the COVID-19 pandemic</li> </ul>
n/a	n/a	Number and types of SDGs addressed in the entire range of the challenges	n/a	Social Environmental	14	Please see Appendix 2 for the complete overview of the Venture Teams' SDG targets
n/a	n/a	Number of engaged social policy government sectors and non-profit organisations	n/a	Social	48	<p>DLT4EU ecosystem</p> <ul style="list-style-type: none"> <li>● 37 non-profit organisations, public policy, and third sector organisations: <ul style="list-style-type: none"> <li>○ European Commission Joint Research Centre</li> <li>○ UNDP Alt FinLab</li> <li>○ City of Helsingborg</li> <li>○ Mission Possible 2030</li> </ul> </li> </ul>

						<ul style="list-style-type: none"> <li>○ The Hague Tech</li> <li>○ Agency for Digital Italy</li> <li>○ Den Haag Gemeente</li> <li>○ UNDP Morocco</li> <li>○ UNDP Serbia</li> <li>○ UNDP Lebanon</li> <li>○ OECD</li> <li>○ FairChain Foundation</li> <li>○ DG CNECT</li> <li>○ DG GROW</li> <li>○ Portuguese Government</li> <li>○ Italian Ministry of Economic Development</li> <li>○ Sant Boi City Council</li> <li>○ London Legacy Development Corporation</li> <li>○ Greater London Authority</li> <li>○ Vodafone Foundation</li> <li>○ Chief Technology Office Amsterdam</li> <li>○ Italian National Innovation Fund</li> <li>○ UK Financial Conduct Authority</li> <li>○ Ministry for Economic Affairs and Energy, Germany</li> <li>○ Bank of Lithuania, Lithuania</li> <li>○ Ministry of Infrastructure, Sweden</li> <li>○ European Parliament</li> <li>○ Ministry for Europe and Foreign Affairs, France</li> <li>○ Ministry of Economic Development and Technology, Slovenia</li> <li>○ Center for Global Development</li> <li>○ Norwegian Government (Digital identity division)</li> <li>○ Ministry of Finance, Finland</li> <li>○ PIB Blockchain Solutions</li> <li>○ Mobile World Capital Foundation</li> <li>○ DECODE (H2020)</li> <li>● 46 hours in total across entire programme</li> </ul> <p>DLT4EU Public Launch Event</p> <ul style="list-style-type: none"> <li>● Challenge Owners for Digital Citizenship: City of Helsingborg, UNDP Lebanon, UNDP Serbia, Digital Future Society, Spanish Red Cross, London</li> </ul>
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						<p>Legacy Development Corporation, UNDP Alternative Finance Lab</p> <ul style="list-style-type: none"> <li>• 1.5 hour long event</li> </ul> <p>DLT4EU Final Event</p> <ul style="list-style-type: none"> <li>• 10 non-profit organisations, public policy, and third-sector organisations <ul style="list-style-type: none"> <li>○ European Commission Joint Research Centre</li> <li>○ Saluscoop</li> <li>○ Carelliance</li> <li>○ Alastria</li> <li>○ eCircular</li> <li>○ RREUSE</li> <li>○ Fairbnb.coop</li> <li>○ Center for Open Education and Blockchain</li> <li>○ UNDP Angola</li> <li>○ Dattum Research</li> </ul> </li> <li>• 2 hour long event</li> </ul>
n/a	n/a	Number of engaged environmental policy government sectors and non-profit organisations		Environmental	48	<p>DLT4EU ecosystem</p> <ul style="list-style-type: none"> <li>• 46 hours in total across entire programme</li> <li>• 37 non-profit organisations, public policy, and third sector organisations: <ul style="list-style-type: none"> <li>○ Please see the previous KPI above</li> </ul> </li> </ul> <p>DLT4EU Public Launch Event</p> <ul style="list-style-type: none"> <li>• Challenge Owners for Circular Economy: City of Sant Boi, Greater London Authority, Waag Society, DYNE, Chief Technology Office Amsterdam, UNDP Morocco, Spanish Red Cross, London Legacy Development Corporation, UNDP Alternative Finance Lab</li> <li>• 1.5 hour long event</li> </ul> <p>DLT4EU Final Event</p> <ul style="list-style-type: none"> <li>• 2 hour long event</li> <li>• 10 non-profit organisations, public policy, and third-sector organisations <ul style="list-style-type: none"> <li>○ Please see the previous KPI above</li> </ul> </li> </ul>

n/a	n/a	Number of public licenses, open or semi-open patents, and/or business models published by venture teams		Knowledge	8	Eight Venture Teams have released at least part of the Proof-of-Concept under an open source license of their choice.
n/a	n/a	Skills development: Number and type of training provide to relevant stakeholders		Knowledge	14	<p>Amsterdam Bootcamp</p> <ul style="list-style-type: none"> <li>• VFL Challenge Scoping - Working with the Public and Social Sectors by the Dutch Blockchain Coalition</li> <li>• Pentagrowth Masterclass by Ideas for Change;</li> <li>• DLT Value-Sensitive Masterclass by University of Applied Sciences Amsterdam</li> <li>• Legal and Regulation Masterclass by Primavera de Filippi (Harvard University)</li> <li>• Innovative Finance Masterclass by Seadna Quigley (Metabolic) and Iulia Tudor (Digital Catapult)</li> <li>• Venture Building Masterclass by Chris Monaghan (Metabolic)</li> <li>• VFL Sprint Planning by DLT4EU Consortium</li> </ul> <p>London Bootcamp</p> <ul style="list-style-type: none"> <li>• Masterclass on DLT Governance Session with Lawrence Lundy-Bryan (Outlier Ventures) and Sue McClean (Baker McKenzie Law Firm)</li> <li>• Masterclass on Open Source Licensing by Gilles Gravier (WIPRO) and Francesco Rampone (Italian Blockchain Association)</li> <li>• VFL Sprint Planning by DLT4EU Consortium</li> </ul> <p>Barcelona Bootcamp</p> <ul style="list-style-type: none"> <li>• Masterclass on Pitching and Storytelling by Hayley Bagnall (Altus Impact)</li> <li>• Masterclass on Public Funding and Investment co-led by Karel Vanderpoorten from DG Grow, João Farinha (advisor for the Secretary of State for Digital Transition of the Portuguese Government), and João Machado from Portugal Inovação Social</li> <li>• Masterclass on Writing Grant Applications by Theo Fellgett (Independent)</li> </ul>

						<p>Additional Programme</p> <ul style="list-style-type: none"> <li>• Communications Sessions with Hayley Bagnall (Altus Impact)</li> <li>• Fundraising Support with David Altabev (Urban Frontiers)</li> </ul>
n/a	n/a	Number and type of regulatory barriers identified at the EU and/or national policy level		Knowledge	5	<p>D1.2 Insights Report findings:</p> <ul style="list-style-type: none"> <li>• Legal barrier (i.e reconciling GDPR and DLT and regulatory processes that elongate investment cycles)</li> <li>• Political barrier (i.e governance uncertainty)</li> <li>• Technological barrier (i.e interoperability, integration, and user experience) <sup>33</sup></li> </ul> <p>Research Interviews findings:</p> <ul style="list-style-type: none"> <li>• Financial regulation (i.e Acren faced a financial regulation barrier when replicating the PoC to a different country) <sup>34</sup></li> <li>• Organisational barriers (i.e Alice faced internal resistance from the initial Challenge Owner when shifting to a new system of impact reporting) <sup>35</sup></li> </ul>
n/a	n/a	Maturation of business model based on TRL development	'Technical Feasibility' average score from Evaluation Jury	Economic	n/a	See Table 5, Section 4
n/a	n/a	Number of new opportunities found for problem-DLT solution fit	'Challenge-Solution Fit' average score from Evaluation Jury	Economic Knowledge	n/a	See Table 6, Section 4

<sup>33</sup> Garcia, F., During, L., MacNeil, A., Corbin, L., (2020). 'D1.2 DLT4EU Insights Report: Distributed Ledger Technologies for Public Good'.

<sup>34</sup> Markovic, N. (2021). 'DLT4EU Research Interview'. 21 January 2021.

<sup>35</sup> Kamyli, A. (2021). 'DLT4EU Research Interview'. 20 January 2021.

## Appendix 2: Sustainable Development Goals

Sustainable Development Goals (SDGs)	Venture Team(s)
SDG 1: No Poverty	Convergence Tech
SDG 2: Gender Equality	Convergence Tech
SDG 3: Good Health And Wellbeing	CiSe
SDG 4: Quality Education	eReuse
SDG 7: Affordable and Clean Energy	Prosume, Acren
SDG 8: Decent Work and Economic Growth	Convergence Tech, Acren
SDG 9: Industry, Innovation, and Infrastructure	Convergence Tech, CiSe
SDG 10: Reduced Inequalities	Convergence Tech, eReuse
SDG 11: Sustainable Cities and Communities	Prosume, DisCO, CiSe
SDG 12: Responsible Consumption and Production	Convergence Tech, DisCO
SDG 13: Climate Action	Acren, eReuse
SDG 15: Life on Land	Convergence Tech, eReuse
SDG 16: Peace, Justice, and Strong Institutions	Alice, eReuse, AID:Tech
SDG 17: Partnerships For The Goals	Alice

## Appendix 3: Monitoring Methods

Programme-Level Impact Assessment Monitoring Methods <sup>36</sup>		
Method	Purpose	Data Collected
<b>Interviews as part of D1.2 DLT4EU Insights Report<sup>37</sup></b>	This deliverable provided an early-stage analysis of the policy, economic, social, technological, legal, ethical and environmental conditions, drivers and barriers to the uptake of DLT for public and social good. This included an analysis of DLT market and technical risks, challenges and opportunities in the EU	Qualitative insights on drivers and barriers to the uptake of DLT for public and social good.
<b>Open Call Evaluation Criteria<sup>38</sup></b>	This evaluation criteria was used by the Evaluation Committee to select the participating ventures in the DLT4EU programme	Professional evaluation of the Proofs-of-Concept by the Evaluation Jury
<b>DLT4EU Stakeholder Registration Form</b>	<p>The overarching purpose of the registration form was to ensure appropriate diversity of stakeholders and the monitoring of specific target groups (e.g. public policy)</p> <p>The registration form was a list of fields that a given stakeholder (event attendees, mentors, investors, challenge owner, venture teams) will input data into and submit to the DLT4EU team</p>	Demographic data, professional background or expertise, and/or organisation type
<b>Accelerator Programme Feedback Survey</b>	<p>The main purpose of this monitoring tool was to assess the level of engagement of different stakeholder groups with the DLT4EU programme</p> <p>The survey was a set of questions that a given stakeholder completed after a</p>	Professional opinion and expertise

<sup>36</sup> Coudard, A., MacNeil, A., Corbin, L., (2020). 'D7.1 DLT4EU Impact Assessment Framework'.

<sup>37</sup> Garcia, F., During, L., MacNeil, A., Corbin, L., (2020). 'D1.2 DLT4EU Insights Report: Distributed Ledger Technologies for Public Good'.

<sup>38</sup> Baisle, P. (2020) 'D2.2 DLT4EU Open Call Report'.



	specific activity (e.g. Bootcamps) or event	
<b>Venture Acceleration Action Plan</b>	The Venture Acceleration Action Plan was a standardised report that venture teams completed at the end of every month during the accelerator. This report was used to track their progress in developing a PoC.	Challenge alignment, strategy (i.e. market analysis), technical development, GDPR compliance, developments in their business (i.e. new hire), beneficiaries and network engaged, barriers they face (i.e. regulation), progress on open source licensing (i.e. documentation developed), and plan for the next month
<b>D4.1 Proof-of-Concept Evaluation Criteria<sup>39</sup></b>	This set of evaluation criteria was used by the Evaluation Committee to assess and select the winning projects at the Final Event in May 2021	Evaluation of the projects for the final award
<b>Research Interview</b>	<p>The main purpose of this monitoring process was to assess the level of knowledge development stemming from the DLT4EU programme, from a business, technical, and social perspective.</p> <p>An interview held with stakeholders at the end of the DLT4EU programme to discuss and receive specific feedback or expertise on the impacts of the DLT4EU programme. The research interviews were semi-structured, and tailored to the specific stakeholder group (i.e., Venture Teams, Challenge Owners, mentors).</p>	Main benefits of participation in DLT4EU and the VFL model for their organisation, whether the PoC development will continue, challenges and barriers faced during participation, and improvement areas for future programmes
<b>Web Analytics</b>	The purpose of this monitoring tool was to assess the level of engagement, knowledge dissemination level, and more broadly the reach of the DLT4EU with its wider ecosystem.	Website visitors, Click Through Rate (CTR), views, re-posts, likes, community growth rate

<sup>39</sup> MacNeil, A. (2021) 'D4.1 DLT4EU Evaluation Criteria'.

	Web analytics were the measurement, collection, analysis and reporting of online data stemming from the interaction of online users with the DLT4EU website, the use of online communication channels (e.g. emails) associated with the DLT4EU team, or the use of social media platforms (e.g. Twitter, Instagram, LinkedIn) in relation to the DLT4EU project.	
<b>Stakeholder Database</b>	Throughout the DLT4EU programme, a database of all stakeholders (i.e. public sector, policy, challenge owners, mentors etc.) was compiled in order to record the impact and engagement KPIs of the programme and PoCs.	This database included data on organisational type, contact role, and type of engagement. The Stakeholder Registration Form was a key input of this data set.
<b>Proof-of-Concept Submission</b>	A submitted overview document and live pitch for their PoC Submission by each Venture Team, which were assessed by the Evaluation Jury as part of WP4.	Overview of the Proofs-of-Concept.
<b>D1.1 DLT4EU Accelerator Report</b> <sup>40</sup>	An interim report detailing the accelerator structure (inclusive of specified sub-challenges and VFLs) as well as the criteria used for selection of projects.	Robust theoretical and methodological framework used to deliver the accelerator programme and VFLs for other accelerator programmes to replicate.
<b>D6.1 DLT4EU Project Dissemination and Communications Plan</b> <sup>41</sup>	A dissemination and outreach strategy focused on raising the awareness of relevant stakeholders, participant communities and the general public with regard to the project aims, activities and findings throughout the length of the project.	Engagement strategy that translated project activities and outcomes into a vibrant and sustainable DLT ecosystem.

<sup>40</sup> Ho, K., MacNeil, A., Corbin, L. (2020). 'D1.1 DLT4EU Accelerator Report'.

<sup>41</sup> Higuera, A., Balestrini, M., MacNeil, A., Zemaityte, D. (2020). 'D6.1 DLT4EU Project Dissemination And Communication Plan'.