



# BLOCK START

## **D2.4: BlockStart DLT Assessment Tool - 1<sup>st</sup> version**

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<b>Author</b>	CIVT
<b>Contributor(s)</b>	BRPX, CIVT, F6S
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23/12/2019	v1.1	BRPX	Second version including BRPX inputs
27/12/2019	v1.2	F6S	Tool published on BlockStart's website
31/12/2019	Final	BRPX, CIVT	Final version including review by BRPX

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

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

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List of Abbreviations and Acronyms	
<b>DLT</b>	Distributed Ledger Technology
<b>Q</b>	Question
<b>M</b>	Million
<b>SME</b>	Small and Medium-sized Enterprise

## 1. Introduction

BlockStart project has created and published a DLT Assessment Tool, which aims to evaluate SMEs/ startups capacity and potential to start using DLT/ blockchain technology. The tool has been conducted based on the knowledge gathered during the expert interviews and research made for D2.1. To assess the potential of implementing DLT/ blockchain we evaluate the type of company, innovation readiness level and DLT/ blockchain potential in company's processes.

For the first iteration of the DLT Assessment Tool, [Typeform](#)'s platform was used, as it provides the required functionality and logic jumps needed to conduct a decent assessment tool.

All respondents who, through their answers, show evidence of high potential to implement DLT/ blockchain, will be redirected to BlockStart's Open Call application page.

## 2. Type of company

First, we aim to find out if a company is an SME/ startup, as our goal is to determine the potential of DLT technology only for SMEs/ startups. We achieve this by asking the companies to confirm if they meet SME conditions as to EC's description (less than 250 employees, annual turnover less or equal to €50M and annual balance sheet less or equal to €43M). In addition, participants are asked to provide information about their company type, to double check if the respondent actually represents an SME/ startup (Q2 & Q3).

## 3. Innovation readiness assessment

During the questionnaire we measure the innovation capacity of the company in order to find out if the company is ready to implement new solutions into their processes. During the research, we found that DLT/ blockchain implementation requires understanding of the principles of technology and extensive knowledge to use the best features that it brings.

Innovation readiness is determined by gathering information on level of innovation in the company, experience in implementing the innovations, capacity of IT department and know-how about the DLT/ blockchain technology. According to this information, at the end of the assessment, respondents receive feedback on the level of innovation readiness (high or low). By this, it is expected that the respondents will evaluate their availability for DLT/ blockchain implementation rationally and if they have low innovation readiness, will take steps to become more innovative (Q5, Q6, Q7, Q8).

## 4. DLT/ blockchain potential assessment

Furthermore, during the initial DLT/ blockchain research, we have identified main challenges that motivates SMEs/ startups to adopt blockchain:

- Abundance of Intermediaries (Q9, Q10, Q11, Q12, Q13, Q14, Q15)

- Management of Digital Assets (Q16, Q17)
- Data Management and Storage (Q18)
- Supply-chain Complexity (Q19)
- Transactions Management (Q20, Q21)

In the DLT Assessment Tool we aim to identify if the company faces any of the challenges and could potentially solve them with the technology.

At the end of the assessment, SMEs/ startups receive feedback, based on their answers, if DLT/ blockchain could have a high impact in company's processes. High impact result is provided if the company provides positive answers to any of the identified challenges that could be overcome by implementing DLT/ blockchain solutions and low impact if the technology would not solve any challenges.

## 5. Other collected data

In the DLT Assessment Tool we collect this additional data:

- In order to begin the DLT Assessment potential, every respondent has to accept BlockStart's privacy policy (*mandatory*).
- Respondents are asked to provide the industry of their operations, which will be used for future research (*mandatory*).
- At the end of the assessment, respondents are asked to provide their professional email address, if they want to receive the updates on further development of the project (*optional*).
- At the end of the assessment, respondents are asked to provide the name of the company they represent (*optional*).

## 6. DLT Assessment Tool questions and possible answers

Questions and possible answers that assess the company's DLT/ blockchain technology potential are provided in *Table 1* below.

*Table 1: DLT Assessment Tool questions*

No.	Question	Possible answers
1.	Before you start, please read our privacy policy (click here).	<ol style="list-style-type: none"> <li>1. Start</li> <li>2. Leave</li> </ol>
2.	Does your company meet each of the following conditions?	<ol style="list-style-type: none"> <li>1. The number of employees in your company is less than 250;</li> <li>2. The annual turnover of your company does not exceed €50M;</li> <li>3. The annual balance sheet total of your company does not exceed €43M.</li> </ol>

3.	What type of company do you represent?	<ol style="list-style-type: none"> <li>1. Micro enterprise</li> <li>2. Small enterprise</li> <li>3. Medium-size enterprise</li> <li>4. Large enterprise</li> <li>5. Startup</li> <li>6. State-owned enterprise</li> </ol>
4.	Choose the industry that matches your activities the best:	<ol style="list-style-type: none"> <li>1. Agriculture</li> <li>2. Construction</li> <li>3. Education</li> <li>4. Financial and Insurance activities</li> <li>5. Healthcare and Medicine</li> <li>6. Information and Communication</li> <li>7. Manufacturing</li> <li>8. Media, Arts, Entertainment, Recreation</li> <li>9. Mining and Quarrying</li> <li>10. Non-profit and Charity</li> <li>11. Other services</li> <li>12. Real estate activities</li> <li>13. Transportation</li> <li>14. Utilities and Energy supply</li> <li>15. Wholesale and Retail</li> </ol>
5.	Choose the level of innovativeness in your company:	<ol style="list-style-type: none"> <li>1. High. You are open to new ideas and often implement them in. You see innovations as a continuous process and embrace it</li> <li>2. Medium. You are willing to implement new ideas and are open to innovation</li> <li>3. Low. You have no policies regarding innovation. You see innovations as a one-time event and accept it reluctantly</li> </ol>
6.	Do you have experience in implementing innovative solutions?	<ol style="list-style-type: none"> <li>1. Yes. These innovations were related to IT business processes improvement</li> <li>2. Yes. But these innovations were NOT related to IT business processes improvement</li> <li>3. No. You have not introduced significant innovations</li> </ol>
7.	Do you have an IT department?	<ol style="list-style-type: none"> <li>1. Yes. IT department has capacity to develop and implement new systems and/or provide integration of own systems with external software</li> </ol>

		<p>2. Yes. You have an IT department but it is handling specific systems and applications and is not capable of new software development</p> <p>3. Yes. But IT department only provides maintenance and support</p> <p>4. No</p>
8.	How do you classify your level of familiarity with DLT/ blockchain?	<p>1. Very high. You have already implemented DLT/ blockchain solutions in your operations</p> <p>2. High. You understand how DLT/ blockchain works and have concepts on how to use blockchain in your operations</p> <p>3. Medium. You heard about DLT/ blockchain, but never used and do not have ideas about how to use it in your company</p> <p>4. Low. You do not know how DLT/ blockchain could be used</p>
9.	Are there many participants (competitors, suppliers, business partners, regulators, etc.) with common technological advancement interests in your market?	<p>1. Yes</p> <p>2. No</p>
10.	Do these participants (competitors, suppliers, business partners, regulators, etc.) contribute together to the creation of horizontal or vertical flows of information that is used by all market participants but no one is the sole owner of it?	<p>1. Yes</p> <p>2. No</p>
11.	Do the participants (competitors, suppliers, business partners, regulators, etc.) know and trust each other?	<p>1. Yes</p> <p>2. No</p>
12.	Do you and your business partners need to rely on a trusted third party (government organisation, guarantor, etc.)?	<p>1. Yes</p> <p>2. No</p>
13.	Could a trusted third party be replaced by an information system?	<p>1. Yes</p> <p>2. No</p>
14.	Are you managing contractual relationships under which performance of work, provision of services or other actions that influence the contractual obligations can be digitally recorded and verified?	<p>1. Yes</p> <p>2. No</p>
15.	Could your business processes or relations with business partners or customers be automated based on "if this then that" logic?	<p>1. Yes</p> <p>2. No</p>

16.	Do you work with digital assets or need to track the creation and movement of digital assets?	1. Yes 2. No
17.	Could the issuance of digital certificates for physical assets (tokenization) help your business?	1. Yes 2. No
18.	Do you need to collect, store and analyze data and information and at least one of the following characteristics is suitable for your business?	1. Yes 2. No
19.	Is your business part of the supply chain and at least one of the following characteristics is suitable for your business?	1. Yes 2. No
20.	Does your business depend on internal and external transactions and at least one of the following characteristics is suitable for your business?	1. Yes 2. No
21.	Does partial disclosure of the information you store may increase customer confidence in your company?	1. Yes 2. No

## 7. DLT Assessment Tool results provided for respondents

The results presented to respondents, based on their answers, are showcased in the *Table 2* below.

*Table 2: DLT Assessment Tool provided solutions*

Short answer	In depth answer
<b>Innovation readiness answers</b>	
<b>Your company has a high level of readiness for innovation.</b>	You have already implemented DLT/ blockchain solutions and have a clear idea of the principles of DLT/ blockchain. You also have a strong IT department that can participate in the development of the solution, customize the integration of the solution with your IT systems and maintain the solution after the launch. Thus, the introduction of new DLT/ blockchain solutions is not an insurmountable challenge for your company.
	We recommend you contact us for the further development of this area. At the end of the questionnaire, you will find a field to share your email, in case you wish us to get in touch with you for further cooperation.
	You have already implemented DLT/ blockchain solutions and have a clear idea of the principles of DLT/ blockchain. But you do not have a strong IT department that could participate in the development of the solution, customize the integration of the solution with your IT systems and maintain the solution after the launch. The introduction of new DLT/ blockchain solutions is not an insurmountable challenge for your company, but we recommend you consider

	<p>the possibility of creating your own IT department or the possibility of attracting a company that will help you integrate and maintain the solution after launch.</p> <p>We also recommend you contact us for the further development of this area. At the end of the questionnaire, you will find a field to share your email, in case you wish us to get in touch with you for further cooperation.</p> <hr/> <p>You have an idea about the principles of DLT/ blockchain and, perhaps, considered several solutions for your company. You also have a strong IT department that can participate in the development of the solution, customize the integration of the solution with your IT systems and maintain the solution after the launch. Thus, the development and implementation of DLT/ blockchain solutions for your company is a difficult but feasible task.</p> <p>We recommend you contact us for the further development of this area. At the end of the questionnaire, you will find a field to share your email, in case you wish us to get in touch with you for further cooperation.</p> <hr/> <p>You have an idea about the principles of DLT/ blockchain and, perhaps, considered several solutions for your company. But you do not have a strong IT department that could participate in the development of the solution, customize the integration of the solution with your IT systems and maintain the solution after the launch. The development and implementation of DLT/ blockchain solutions for your company is a difficult but feasible task, but we recommend you consider the possibility of creating your own IT department or the possibility of attracting a company that will help you integrate and maintain the solution after launch.</p> <p>We recommend you contact us for the further development of this area. At the end of the questionnaire, you will find a field to share your email, in case you wish us to get in touch with you for further cooperation.</p>
<p><b>Your company has a low level of readiness for innovation.</b></p>	<p>You have an idea of how DLT/ blockchain works, but you are not ready to innovate. Thus, the implementation of DLT/ blockchain solutions can be a daunting task for your company. Before proceeding with its development and implementation, we recommend you carry out work to develop and improve the company's innovation strategy and strengthen your IT department. Next, we will show you DLT/ blockchain solutions that may suit your company.</p> <p>We recommend you contact us for advice on what needs to be done in order to implement these solutions in the company's activities. At the end of the questionnaire, you will find a field to share your email, in case you wish us to get in touch with you for further cooperation.</p> <hr/> <p>You do not have a broad understanding of the principles of DLT/ blockchain. Thus, the implementation of DLT/ blockchain solutions can be a daunting task for your company. Before proceeding with its development and implementation, we recommend you to know more about the blockchain technology and principles of DLT. Next, we will show you DLT/ blockchain solutions that may suit your company.</p> <p>We recommend you contact us for advice on what needs to be done in order to implement these solutions in your company's activities. At the end of the questionnaire, you will find a field to share your email, in case you wish us to get in touch with you for further cooperation.</p>

	<p>You do not have a broad understanding of the principles of DLT/ blockchain. Thus, the implementation of DLT/ blockchain solutions can be a daunting task for your company. Before proceeding with its development and implementation, we recommend you carry out work to develop and improve the company's innovation strategy and strengthen your IT department. Also, we recommend you to know more about the blockchain technology and principles of DLT. Next, we will show you DLT/ blockchain solutions that may suit your company.</p> <p>We recommend you contact us for advice on what needs to be done in order to implement these solutions in the company's activities. At the end of the questionnaire, you will find a field to share your email, in case you wish us to get in touch with you for further cooperation.</p>
<p><b>DLT/ blockchain potential assessment answers</b></p>	
<p><b>Unfortunately, your company is not eligible for BlockStart program.</b></p>	<p>The BlockStart program is targeted at SMEs. Nevertheless, if you are interested in developing DLT/ blockchain solutions for your company, you can contact us for advice and consultation, through <a href="mailto:hello@blockstart.eu">hello@blockstart.eu</a></p>
<p><b>Your company has a high potential for implementing and using DLT / blockchain</b></p>	<p>Based on your answers, we believe that your company has a high potential for implementing and using DLT/ blockchain. In the market in which you operate, there are many participants united by common interests. At the same time, the lack of trust between the participants makes DLT/ blockchain a solution that can ensure interaction on a transparent and at the same time "trustless trust" basis. Also, DLT/ blockchain can help you get rid of the trusted third party by providing trust between you and your partners without intermediaries.</p> <p>In addition, we have conducted a preliminary assessment of the challenges for your company that can be overcome with the help of DLT/ blockchain, as well as certain aspects of your company that can be improved through the use of DLT/ blockchain.</p>
	<p>Based on your answers, we believe that your company has a high potential for implementing and using DLT/ blockchain. In the market in which you operate, there are many participants united by common interests. At the same time, the lack of trust between the participants makes DLT/ blockchain a solution that can ensure interaction on a transparent and at the same time "trustless trust" basis.</p> <p>In addition, we have conducted a preliminary assessment of the challenges for your company that can be overcome with the help of DLT/ blockchain, as well as certain aspects of your company that can be improved through the use of DLT/ blockchain.</p>
	<p>Based on your answers, we believe that your company has a high potential for implementing and using DLT/ blockchain. DLT/ blockchain can help you get rid of the trusted third party by providing trust between you and your partners without intermediaries.</p> <p>In addition, we have conducted a preliminary assessment of the challenges for your company that can be overcome with the help of DLT/ blockchain, as</p>

	well as certain aspects of your company that can be improved through the use of DLT/ blockchain.
<b>Your company has a low potential for implementing and using DLT / blockchain</b>	<p>Based on your answers, we believe that DLT/ blockchain will not have a significant impact on the market in which you operate, due to the lack of a network effect, the absence of common goals of market participants, or a high degree of trust between key players.</p> <p>Nevertheless, we have conducted a preliminary assessment of the challenges for your company that can be overcome with the help of DLT/ blockchain, as well as certain aspects of your company that can be improved through the use of DLT/ blockchain.</p>

## 8. Conclusion

This DLT Assessment Tool is intended to be a first iteration, with further technical and content improvements to be implemented during the second, third and final iterations, according to the feedback received from the respondents, further consultations with experts and changes in the industry. The tool is already public and can be accessed on the following webpage of BlockStart's website: [www.blockstart.eu/dlt/](http://www.blockstart.eu/dlt/). It will be shared with the community through BlockStart's and consortium partners' public dissemination channels, and also with the help of intermediaries/ ecosystem builders.