Intellectual Output 1

Rationalisation Phase

Deliverable: IO1/A1

BCT4SMEs

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ATERMON

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REVISION HISTORY

Version	Date	Author	Description	Action	Pages
1	14/04/2021	ATERMON	INSERT DATA	I	8

(*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

REFERENCED DOCUMENTS

ID	Reference		Title
1	2020-1-UK01-KA202-078895		BCT4SMEs Proposal
2			

APPLICABLE DOCUMENTS

ID	Reference		Title
1			
2			

Executive Summary

This document presents the deliverable of the activity IO1.A1 of the BCT4SMEs Project (henceforth, "Project").

Small businesses confront several problems in the business economy. Many of them face barriers in entering trade markets, while others can confront difficulties in several sectors, such as transactions, data storage, cash flow, and security. Blockchain technology can offer a solution to these challenges, as it can have a wide range of application in many fields, such as IoT, monetary exchange (bitcoin), storage, etc.

The project aims to support SMEs managers and owners in integrating blockchain technology and benefit from the advantages it comes with.

The present document contains information regarding:

- The security and financial issues that SMEs face in partner's countries;
- Information about the successful application of blockchain technology in the EU;
- Conclusions on the gap between the desired situation and the present situation.

Table of Contents

1. Methodology

During the rationalization phase, we will conduct research regarding the current problems that SMEs confront in terms of finances and security in partners' countries (UK, Netherlands, Spain, Greece, Cyprus, Poland). This phase will be called the "National Phase". The conclusions of the National Phase will reveal the present situation ("AS-IS").

We will also identify the winning practices from SMEs that use blockchain technology to address the issues that have proved challenging to SMEs. This phase will be called the "Transnational Phase". The best practices will include information on the successful implementation of blockchain technology in SMEs across the EU.

The comparative analysis of the Transnational Phase with the National Phase will reveal the gap between the desired situation ("TO-BE") and the present situation ("AS-IS").

2. National phase

2.1 Financial Challenges for SMEs

The country is facing the deepest recession in 100 years, despite the coronavirus support packages. This recent crisis has affected most the SMEs around the HORECA, the trade, the transport equipment, the production of the culture, recreation sports, and the tourist industries[1], but enterprises in other industries (construction, food manufacturing) have not yet seen the full impact of it. An economy that is highly dependent on exports of goods and services has been highly vulnerable to drops in demand from abroad[2].

It is true that the country's economy is undoubtedly in a better condition than other EU countries', as a result of the smart (partial) lockdown and the high level of digitisation which helped absorb the first blows of the pandemic, nevertheless the damage is done.

Small and medium-sized enterprises in the Netherlands are generally considered to be the engine of the Dutch job industry, as it is the case in Europe. In this sense, Dutch SMEs do considerably contribute to the national macro-economy. 443,842 enterprises were recorded as SMEs in Netherlands, according to 2020 data (STATISTA data)[3].

Annual surveys by Euler Hermes and Bibby have recorded that SMEs in the Netherlands face several struggles with **capital inflow**[4], as a result of managing late or unpaid invoices, as well as with the limited financing by banks, the most considerable external source of financial support for SMEs: Dutch SMEs are obtaining bank loans less often than SMEs elsewhere in the eurozone.[5]

[1] https://nltimes.nl/2020/08/14/recession-dutch-economy-shows-worst-ever-contraction

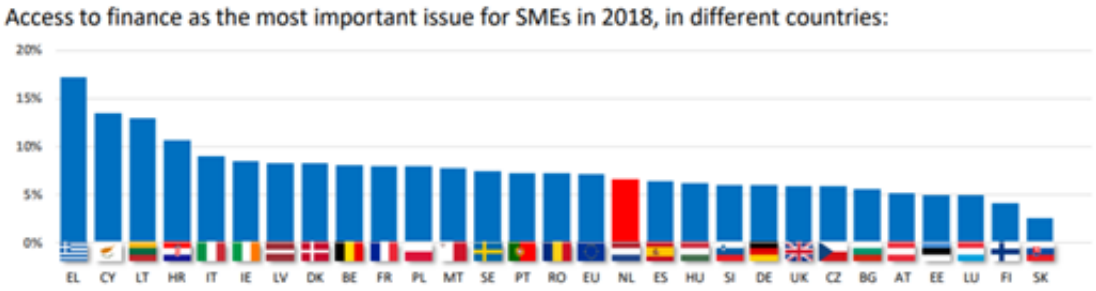
[2] https://nltimes.nl/2020/06/08/deepest-recession-100-years-facing-dutch-economy-better-eu-countries

[3] https://www.statista.com/statistics/818704/number-of-smes-in-the-netherlands/

[4] https://news.cision.com/factris/r/dutch-smes-are-struggling-with-cash-flow,c3004607

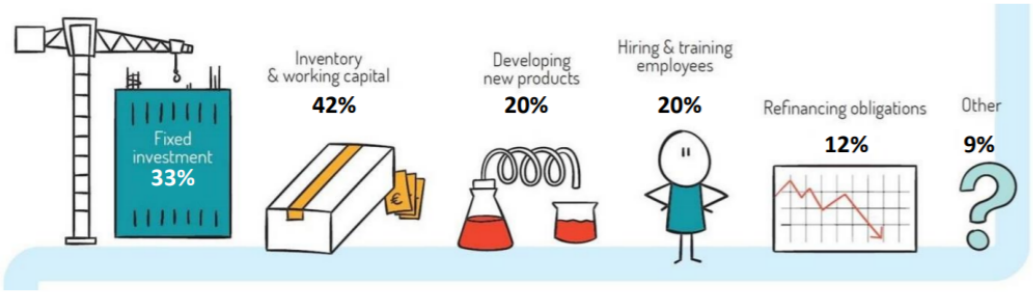
[5] https://www.cpb.nl/sites/default/files/omnidownload/Policy%20Brief%20SME%2009072019_0.pdf

Access to finance was recorded to be the most important issue for 6% of Dutch SMEs, slightly lower than the EU average (at 7%).



In the same report with EC data from 2018[6], it was stated that bank loans remain the relevant form of external financing for 42% of Dutch SMEs (compared to 47% at EU level). Some loan applications were rejected (3%), and of those successfully through 11% received less than they applied for, while a considerable amount of them did not even apply, out of fear of rejection.

The following image offers information on the sectors which the Dutch SMEs use the financing for:



Blockchain promises to solve this problem with 'smart contracts' which are self-executed, coded agreements that deliver guaranteed outcomes, under certain conditions, which will make transaction processes faster, simpler and efficient.

2.2 Security Challenges for SMEs

Despite the high digitization od Dutch SMEs, the sector has a lot to do in terms of cyber security. A recent EU restriction on the area of General Data Protection Regulation (GDPR), which came into force in 2018, found over the 80% of Dutch SMEs falling short of GDPR compliance.

Research by Capgemini and insurance company Interpolis has shown that many entrepreneurs in the country score well in the areas of physical security, access to the corporate network and security of the website, but they lack vision and policy in the organisation of business processes[7].

[6] EUROPEAN COMMISSION (2018). SME access to finance conditions 2018 SAFE results – Netherlands - published in November 2018 at: http://ec.europa.eu/growth/safe

[7] https://www.computerweekly.com/news/252437551/Dutch-SMEs-cyber-security-is-insufficient

This is due to the fact that cyber security is often neglected or under-estimated among SMEs, until an incident occurs. As the pandemic has pushed towards teleworking and online businesses, both the cases and the level of cybercrime is deteriorating, which has made the call for action more vital than ever.

The last 15 years the EU Agency for Cybersecurity has been assisting SMEs to integrate cybersecurity into their digital environments by publishing a number of reports and information packs, as well as guidelines on security risks, as well as tips to help towards cybersecurity crimes[8]. In addition, a workshop on challenges and recommendations for SMEs was held by ENISA online in November 2020.

Initiatives at EU level (the Connecting Europe Facility - CEF and the Horizon 2020 – H2020 programmes) have been supporting cybersecurity projects and capability developments, as well as act as a catalyst to attract further funding from the private sector and other public sector actors. Pilot projects such as CONCORDIA, ECHO, SPARTA and CyberSec4Europe aim to address the cybersecurity skill gap in EU and to deliver innovative solutions. Next to these EU initiatives, national ones for the Netherlands include[9]:

- Implementing the National Cyber Security Research Agenda III (NCSRA III) in order to pursue the development of cybersecurity research aimed at the development and commercialisation of innovative solutions
- Encouraging open-source encryption by making additional resources available for this within the framework of NCSRA III
- Establishing a Cyber Security Research Agency

Blockchain technologies offer security in transactions thanks to the decentralization of applications which does not let room for manipulation of transactions. Blockchain can also help SMEs build smarter and more secure supply chains, which ensures real-time tracking all along the trade line.

Maximum length: 3 pages

3. Transnational Phase

3.1 Best practices in application of blockchain technology in finances

Name of the company	NBK LV
Website	https://www.nbkbv.com/en/
Sector	Forwarding and Shipping
Country	Netherlands

[8] https://www.enisa.europa.eu/news/enisa-news/european-smes-facing-increased-cyber-threats-in-a-changing-digital-landscape

[9] https://www.fintechmagazine.com/banking/how-blockchain-helping-smes

Description of the issues that the company was facing before the application of blockchain technology (if applicable).	NBK's former income models of logistics providers needed to change as a result of the integration of goods, financial and information streams. The solution for this was found in the application of new technologies, collaborations and business models that are compliant with ever-changing legislation and regulation and the need for supply chain transparency.
Desciption of the blockchain stategies that the company adopted.	Enabling transactions

Name of the company	FLORYN (formerly known as InvoiceFinance)
Website	https://www.floryn.com/nl/over-ons
Sector	online lending market for small and medium-sized businesses (SMEs)
Country	Netherlands
Description of the issues that the company was facing before the application of blockchain technology (if applicable).	Supports SMEs in getting financing and loans.
Desciption of the blockchain stategies that the company adopted.	The Dutch company uses artificial intelligence to look at data from bank transactions and hundreds of other sources to quickly analyze a company's performance, making a fast and reliable risk assessment. In 3rd quarter of 2019, the company received 4,600 credit applications and, thanks to machine learning & blockchain technology, was able to process them almost immediately.

Name of the company	THE NEW FORK
Website	https://thenewfork.com/
Sector	Information Technology & Services (helping companies in the food industry adopt blockchain technology to their existing systems, to increase efficiency).
Country	Netherlands

Description of the issues that the company was facing before the application of blockchain technology (if applicable).	The company uses Blockchain technology that has the potential to track and record every step in the food supply chain, makes it possible to show customers how and by whom products are made, even in complex cases.
Desciption of the blockchain stategies that the company adopted.	**Albert Heijn**, a leading retailer in the Netherlands, used blockchain technology to make the production of its own-brand sustainable orange juice completely transparent, in partnership with its supplier, **Refresco**.

3.2 Best practices in the application of blockchain technology in security

Name of the company	ING BanK
Website	https://www.ingwb.com/themes/distributed-ledger-technology-articles/blockchain-the-future
Sector	Banking
Country	Netherlands
Description of the company's challenges before the application of blockchain technology (if applicable).	Security in transactions – need to eliminate intermediaries – fast transactions. Blochchain technology necessary for doing international business.
Description of the blockchain strategies that the company adopted.	The Dutch bank has long been interested in blockchain and cryptocurrency and is paying close attention to how the market is developing. In fact, ING conducts a yearly international survey documenting global sentiments towards the blockchain and cryptocurrency industry.

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Recommendations

-Use Arial 11 fonts for the body text

-Use APA for in-text citation and references

- Make sure that the author/source you have taken information from, is clearly stated in the main body and the references

Resources

https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/583788/EPRS_BRI(2016)583788_EN.pdf

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