



# EBSI4BE

A new journey for blockchain applications in Belgian public sector

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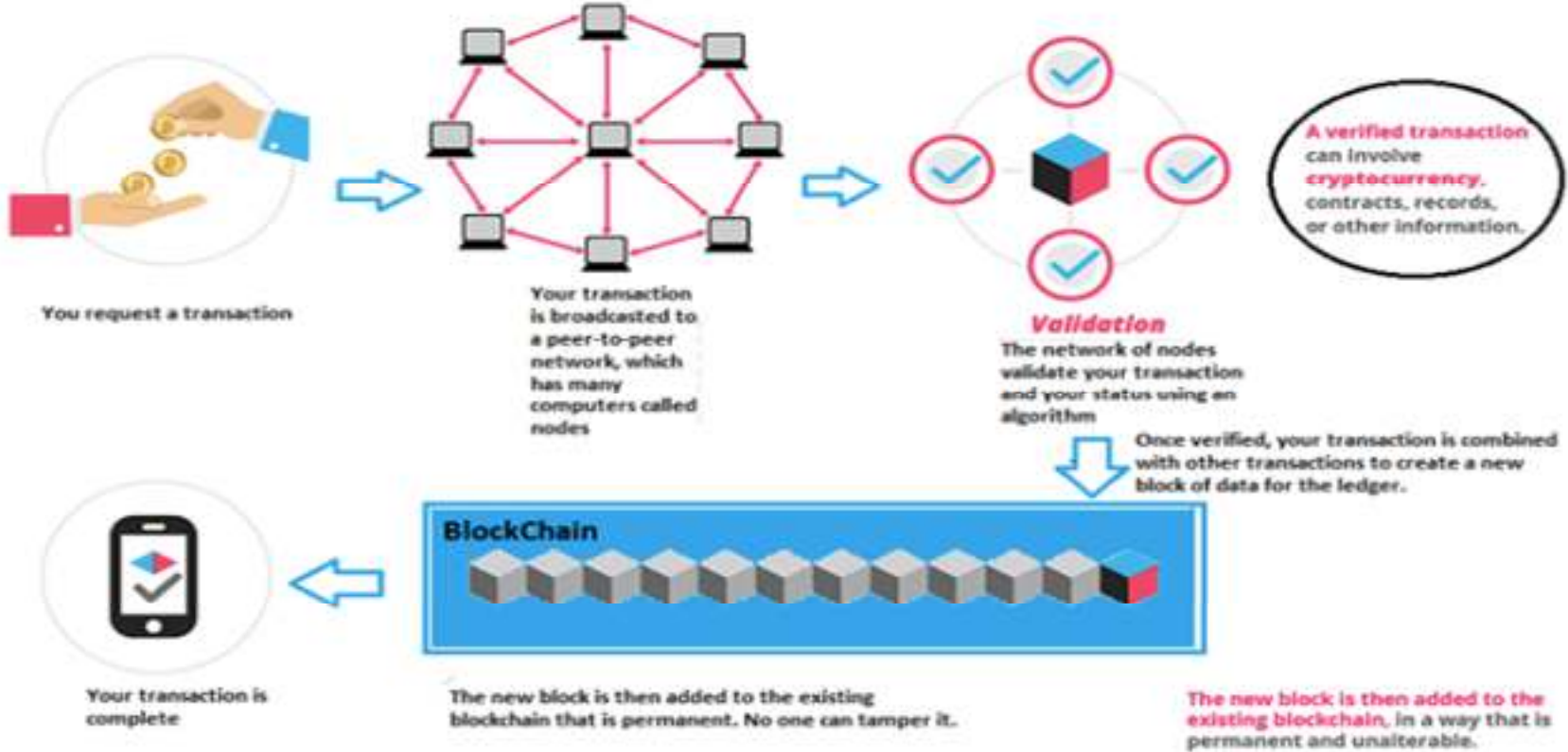
# Introduction

- My research is about the blockchain's use in the public sector and its implications for public governance.
- I am going to focus on:
  - Why blockchain is important for the public sector?
  - What are the promises and challenges of blockchain?
  - Why EBSI is important for the Belgian public sector?
  - How EBSI4BE can help Belgian public sector?

# What is EBSI4BE?

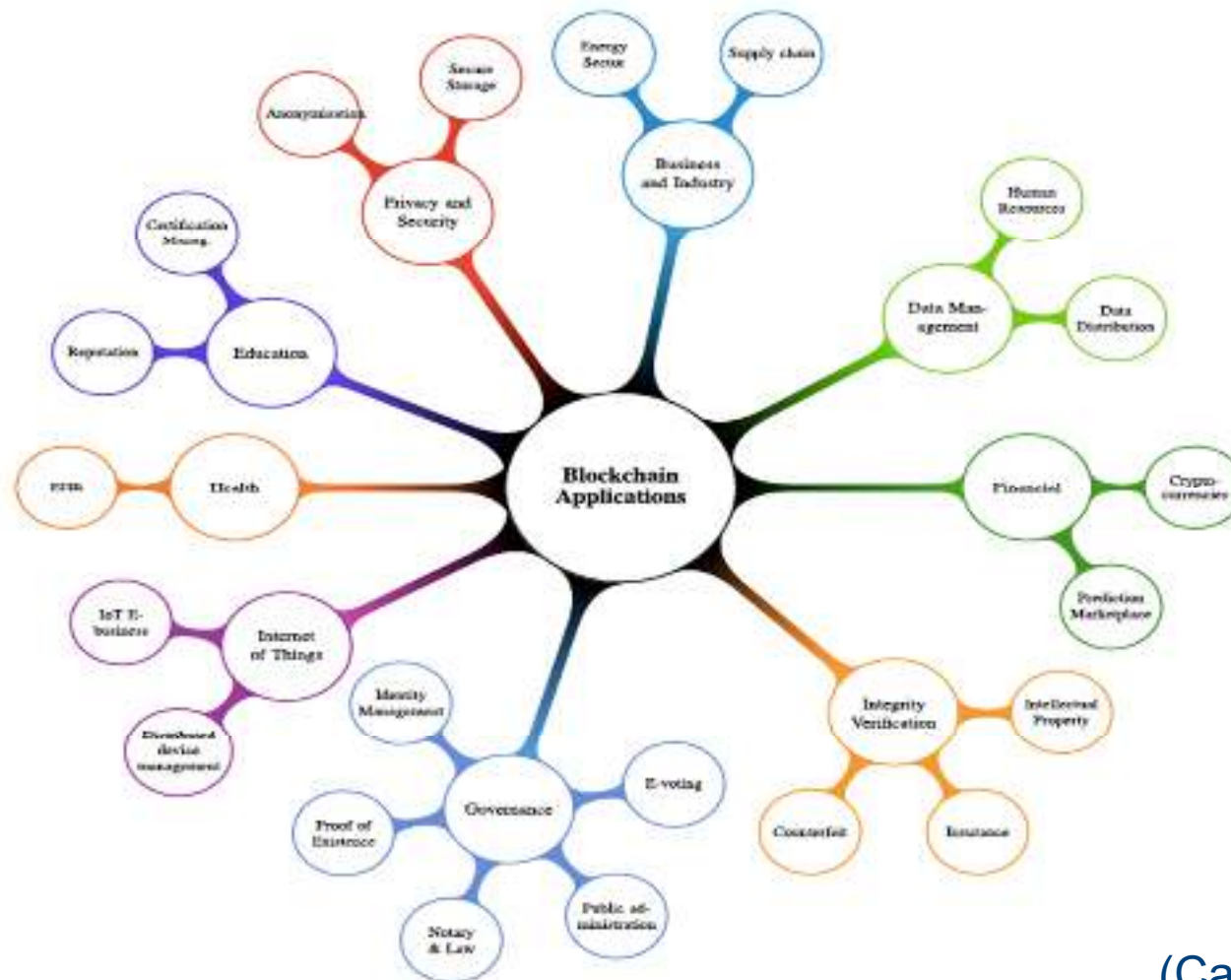
- EBSI4BE is an initiative of the Belblock project (funded by CEF-Blockchain)
- Supported by KU Leuven, SMALS, BELNET, BOSA
- The aim of the EBSI4BE is to become a hub for Belgian public sector to share ideas, know-how and solutions for the EBSI use cases and the use of blockchain technology in public services.
- The eventual objective of EBSI4BE is to become a national helpdesk with the collaboration of national stakeholders, to support EBSI use cases in Belgium.

# How does blockchain work?



(Dubey, 2018)

# Blockchain applications



(Casino et al, 2019)

# The use cases in public sector

Function	Areas of Application	Blockchain application	Countries
Verifying identity/data integrity	<ul style="list-style-type: none"> <li>- National identity systems</li> <li>- Single digital identity to citizens.</li> </ul>	<ul style="list-style-type: none"> <li>- BCT-powered digital national identity systems.</li> <li>- BCT-powered e-voting systems</li> </ul>	<ul style="list-style-type: none"> <li>- Estonia</li> <li>- Jamaica</li> <li>- India</li> </ul>
Registering assets	<ul style="list-style-type: none"> <li>- Property registry and land titling</li> <li>- Company registry</li> <li>- Integration of multi-provider government services</li> </ul>	<ul style="list-style-type: none"> <li>- BCT-powered land registry system.</li> <li>- BCT-powered company registry system.</li> <li>- BCT-powered patent registry system.</li> <li>- BCT-powered integrated government services</li> <li>- BCT-powered smart city applications.</li> </ul>	<ul style="list-style-type: none"> <li>- Georgia</li> <li>- Ghana</li> <li>- Sweden</li> <li>- UK</li> <li>- Malta</li> <li>- The Netherlands</li> <li>- China</li> <li>- Dubai</li> <li>- Singapore</li> <li>- Switzerland</li> </ul>
Tracking transactions	<ul style="list-style-type: none"> <li>- Automating and tracking high-risk transactions.</li> <li>- Smart contracts in public services.</li> </ul>	<ul style="list-style-type: none"> <li>- BCT-powered public contracts</li> <li>- BCT-powered government payment systems</li> <li>- BCT-powered aid management</li> </ul>	<ul style="list-style-type: none"> <li>- United Nations</li> <li>- Canada</li> <li>- Mexico</li> <li>- Denmark</li> <li>- USA</li> </ul>

# Elysian fields or Pandora's box?

- What are these promises of blockchain ?
  - Build confidence on the recorded information through immutability and transparency.
  - Prevent a single point of failure in data governance.
  - Remove the need of a third party to verify the genuinity of information (less transaction cost)
  - A possible pathway for a decentralized and/or autonomous system of governance.
- What are the challenges?
  - Governance
  - Legislative framework
  - A trusted, scalable infrastructure
  - Administrative control, accountability considerations
  - Interoperability issues
  - Future challenges (e.g. quantum computers)



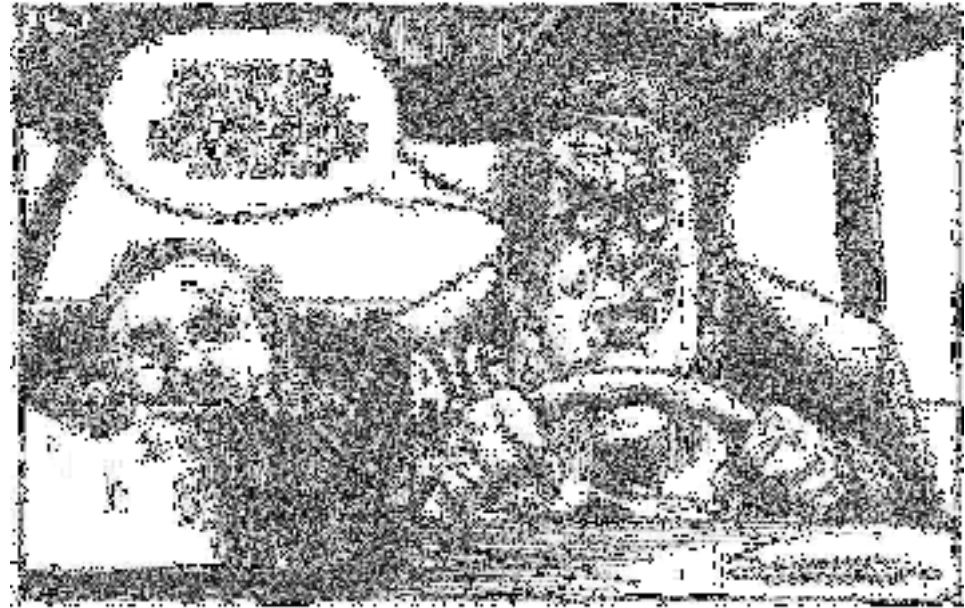
# Why EBSI is important?

1. EBSI means that there will be a trusted infrastructure to develop and implement blockchain use cases.
2. EBSI is backed by the EU – this is important because it means that the EU legal framework should and would be compliant with EBSI.
3. EBSI aims to be ‘the’ infrastructure of cross-border public services in the EU (e.g. diploma verification, notarization services, ESSIF...etc.)
4. EBSI can lead to the standardization of blockchain applications for the use of public sector among EU countries.



# Are we there yet?

- There are still many unknowns about implementation. We are at the beginning of this journey.
- Technical, business-related, governance, and user-base challenges need to be addressed.
- The use cases at the European level need to be translated to the Belgian ecosystem
- We need use cases to learn, to experiment and to develop right tools to help on the transition.



Therefore, our aim with EBSI4BE to be a hub for all stakeholders to share the lessons-learned about the user needs, and to find solutions, guidelines and training materials for future applications.

Join us in this journey



[www.ebsi4be.eu](http://www.ebsi4be.eu)



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