Bern University of Applied Sciences

Master's Thesis Questionnaire

Paradoxes in Blockchain-Technology Implementation and Use: Creation and Validation of a Tension Framework

Student

Madumere Augustine

Introduction

Blockchain technology has been gaining significant attention for its potential to improve supply chain management. However, the introduction of blockchain technology into corporate logic and policy creates tension. Companies that want to use blockchain technology must have a good understanding of the contradictions involved in the implementation and use of blockchain technology and the resulting paradoxes. This questionnaire attempts to understand the tensions between drivers for and against blockchain technology and coping mechanisms.

I will treat all answers to the questions and subsequent information provided confidentially.

I appreciate your input!

Kindly provide your information below

Name:

Organisation:

Job Title:

Job Title:

Research Question: " *What are the tensions associated with implementation and use of blockchain technology in a supply-chain context, and what are the resulting paradoxes?*"

Paradoxical tensions are "*contradictory yet interrelated elements that exist simultaneously and persist over time*" (Smith & Lewis, 2011). For example, a high presence of centralized, mediating authorities in private blockchains impacts the level of anonymity in the blockchain, while access to the system as a whole or a specific function within the system requires some form of governance. To be validated, partners will have to give up their anonymity, enabling the de-anonymization of their data and thus creating a paradoxical tension between anonymity and transparency.

Question 1: Is your blockchain solution focused on optimizing an existing process through technology or do you want to create something completely new? What are the advantages of focusing on each solution?

Question 2: The value discipline refers to tensions related to what businesses want to achieve with a blockchain solution. Its emphasis is on aligning value creation with the needs of a company's internal and external customers. What are the needs of the customer? What value is created for them by the implementation of blockchain solutions?

Question 3: Organizational alignment is a source of tension that comes from whether to focus on external value networks or on creating and capturing internal value (while these are to be understood as two not mutually exclusive extreme positions). What are the challenges when integrating blockchain in a business process? How can blockchain be effectively integrated with existing business processes? What immediate steps are necessary to make this happen?

Question 4: The integration model refers to tensions related to the openness of the blockchain application to other participants, i.e., whether an inclusive or exclusive approach is pursued. The integration model yields the tension whether a company has a profit emphasis (i.e., focus on exclusivity) or a breakthrough emphasis (i.e., concentrate on inclusivity). How do you restrict access to the blockchain infrastructure? What benefits do arise from restricting access to a blockchain infrastructure?

Question 5: The accountability model refers to tensions directly tied to organizational compliance elements – a company's capacity to demonstrate and account for human activities that comply with rules within or outside a blockchain ecosystem. How can transparency and traceability foster internal processes and data exchange in organisational settings?

Question 6: The trust model refers to tensions related to the trust in blockchain code or trust in institutions or participants of blockchain solutions. Trust in code requires that companies agree on universally applicable rules and metrics tied to smart contracts. In institutional trust, the corporation is still in charge of maintaining the network, adhering to the law, complying with compliance requirements, and remaining a source of confidence. How can trust be established between selected users; what does this require from participants?

Question 7

Are there additional inputs or food for thought while evaluating blockchain implementation you'd like to add?

Thank you for taking part in this questionnaire! Kindly provide a contact detail if you would be open to follow-up questions.

Email address: