Digital Data Technologies to help Technology Manufacturing Companies towards Circular Business Models

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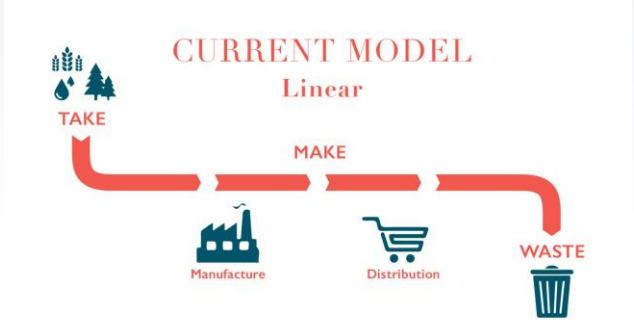
Background

Linear Business Model → Depletion of resource stocks and climate change



Circular Economy

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Problem Statement

- Technology manufacturing companies' business models are still based on the Linear Economy
- Business model transition challenges and barriers
- Digital Data Technologies

Circular Business Model + Digital Data Technologies → Circular Economy

Research Question

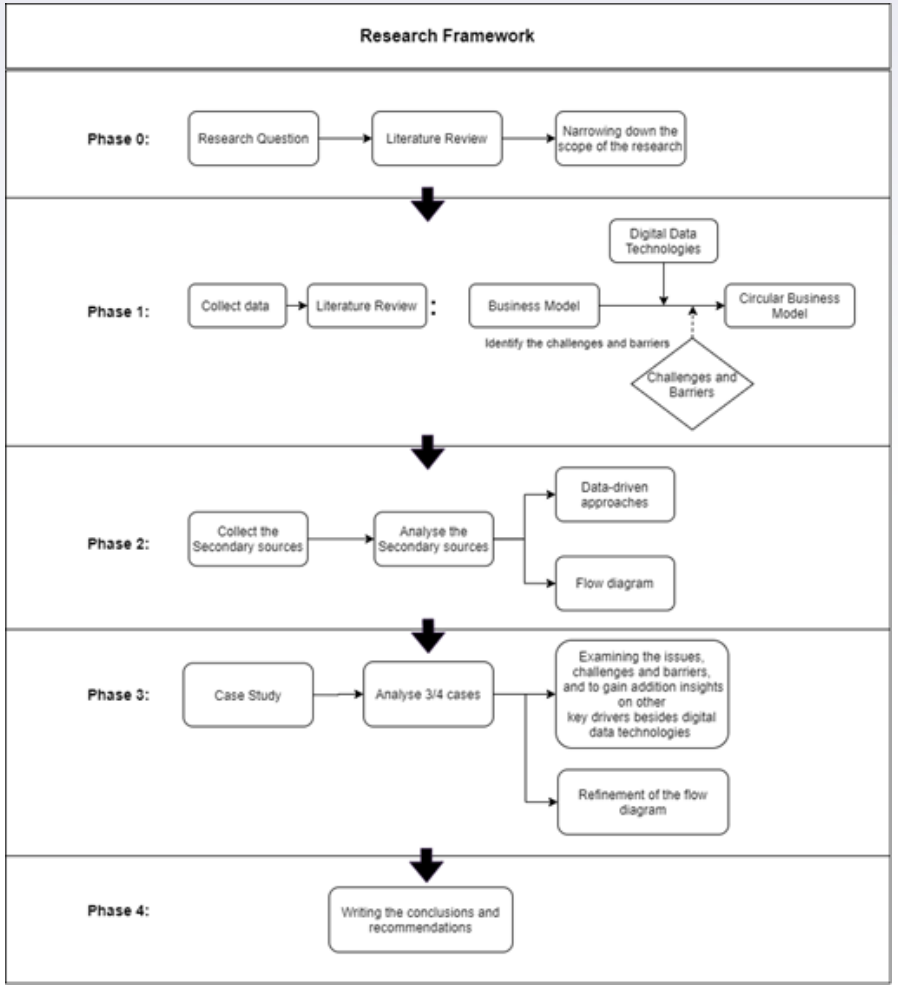
- *How can the digital data technologies help the technology manufacturing companies towards circular business models?*

Research Methodology

- Qualitative research approach
- Primary and Secondary resources

Research Activities

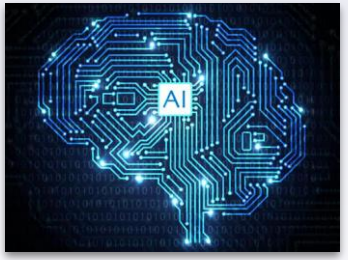
- Literature Review
- Data analysis
- Flow diagram
- Case Studies
  - Conducting interviews and document analysis
- Refining the flow diagram



Literature Review

- Company environmental culture
- Lack of capital
- Lack of government support/ effective legislation
- Lack of information
- Lack of technical and technological knowledge
- Lack of support from the supply and demand network

- Value Proposition
- Value Creation and Delivery
- Value Capture



Business model

Circular business model challenges and barriers

Digital data technologies

- *Data Analysis*
  - Artificial Intelligence
  - Big Data Analytics
- *Data Collection and storage*
  - Big Data
  - Internet of Things
  - Blockchain Technologies

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Case studies

- Multiple case design
- Conducting interviews and document analyses

Companies

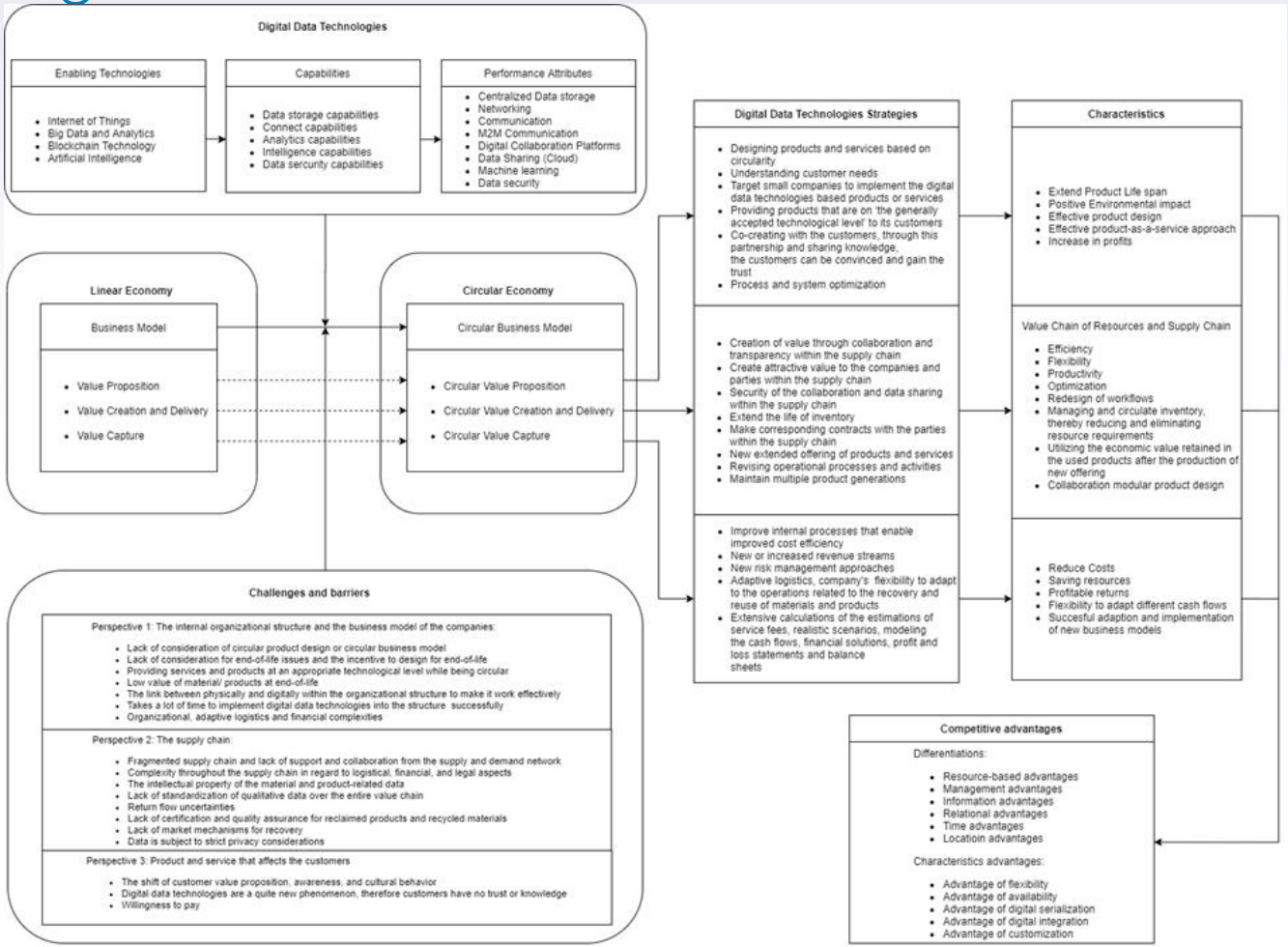
CIRCULARISE

Deloitte.

FAIRPHONE

Signify

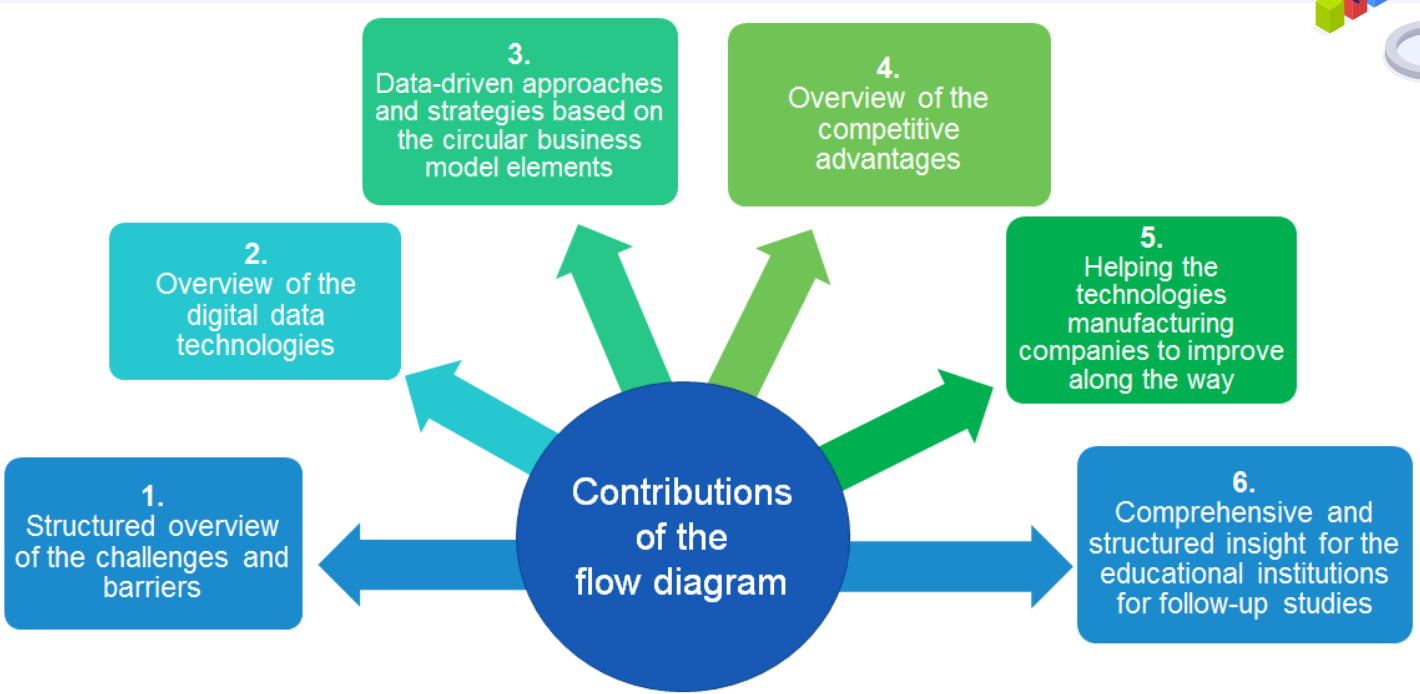
Flow Diagram



Conclusion

- In order to achieve a circular economy, the technology manufacturing companies have to adapt circular business models
- Three circular business model elements
  - Circular value proposition
  - Circular value creation and delivery
  - Circular value capture
- Digital data technologies
  - Big data, Analytics, Internet of Things, Blockchain technology and Artificial intelligence

Contributions of the flow diagram



Conclusion

Limitations

- The research scope is limited to the technology manufacturing sector
- The flow diagram is based on theories of the literature review and the case studies

Recommendations for future research

- Further research in practice and more case studies should be conducted
- Focusing on the drivers, for instance; the internal managerial structure of a technology manufacturing company, or external structure effect, for example the financial sector that are opening up resources, and the government that influences the regulations and legislation

Thank You!

Any questions?