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Enterprise Management in Digital Economy

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Curriculum Development
of Master's Degree Program in
Industrial Engineering for Thailand Sustainable Smart Industry

Częstochowa University of Technology – who are we?



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Overview of CUT

Czestochowa University of Technology (CUT) is the **largest state university in the region** with 7 decades of scientific and educational tradition. Its mission is to

„assist economic and social development with innovation and reliable technical solutions and high quality engineering education”.

Currently, CUT hires with 1000+ academic staff and offers courses to 11,000 students within 19 fields of study, in Polish and in English.





Building blocks of digital economy

- Digital data
- Digital technology
- Digital infrastructure

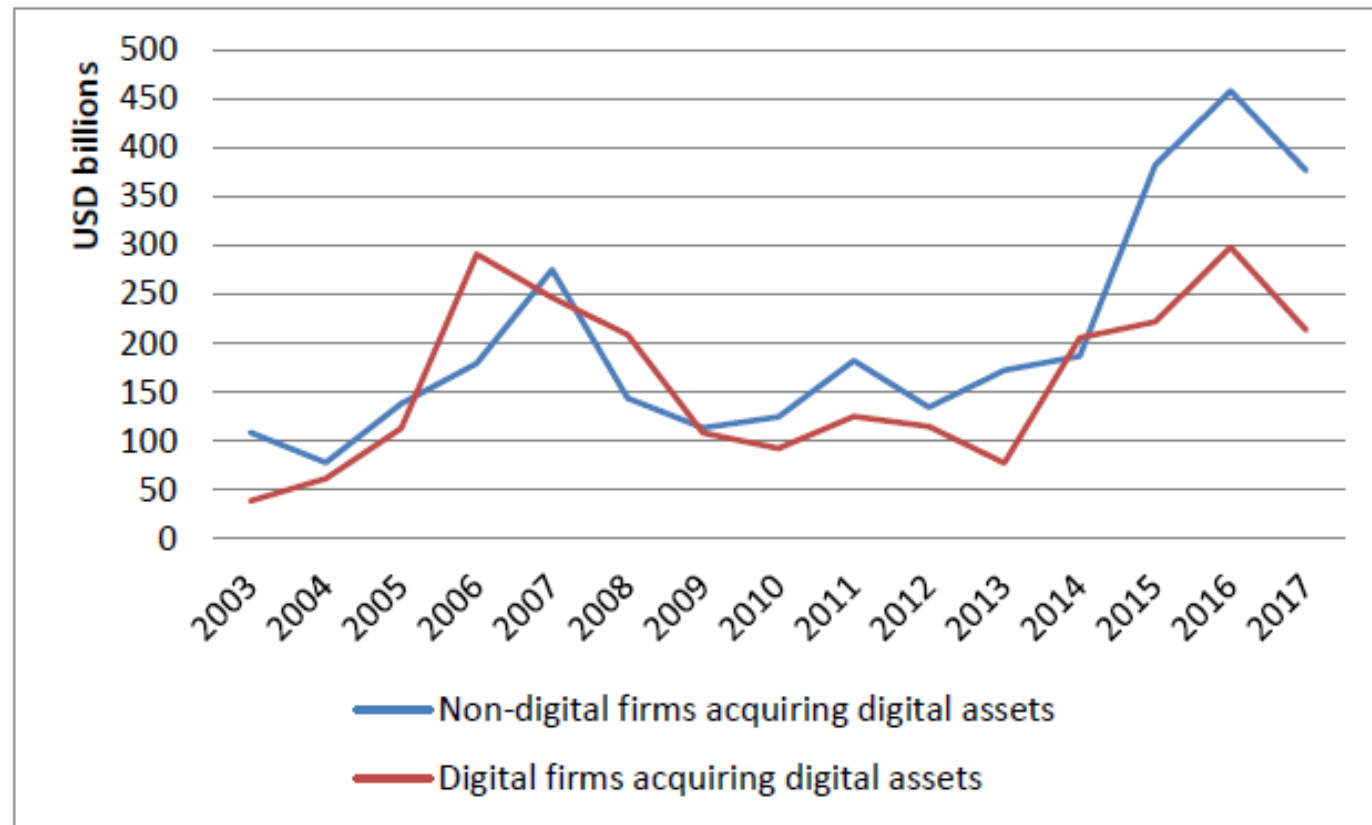
- Digitalisation – **conversion of things into digital data** for purposes of offering, (re)processing or storage at negligible costs and ease of access. It is a basis for **new business models, product and services, value streams or experiences.**



Acquisition of digital assets

Digital sector – companies whose main business relates to digital data, platforms, or technologies, such as internet publishing, social media platforms, and some manufacturing that is specific to the functioning of the digital economy, such as the sensors connected to digital networks.

Non-digital sector – traditional companies




Gestrin & Staudt (2018)



Key tags of digital enterprise

- Business models
- Technologies
- Strategy planning and implementation
- Products and services
- Marketing and advertising
- Payment systems
- Business processes and operations
- Security and privacy issues
- Systems and applications



Integrates all digital features into coherent system



Meaning of Business Model

- (1) the customer **value proposition** that fulfills an important job;
- (2) the **profit formula** that lays out how your company makes money delivering the value proposition;
- (3) the **key resources** that value proposition requires; and
- (4) the **key processes** needed to deliver it.

Innosight (2017)





Classification of BM 4.0

- **novelty-centered** - creating new markets, new services or innovations
AT&T/Connected car
- **efficiency centered** - to fasten, simplify, eliminate errors and improve the transparency of a transaction
Placemeter
- **lock-in centered** - to enlarge transaction volume and increase customer loyalty by various ways such as customizing, improving safety and reliability
Amazon's dash button
- **complementary** - provide additional goods/services that are more valuable together
Amazon's dash replenishment



Domains of decision making

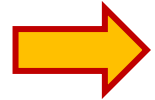
DOMAINS	DESCRIPTION	ROLE OF MANAGER
Strategy execution	Business strategy is the driver for both organisational design choices and infrastructure	Articulate the logic and choices pertaining to business strategy Implement and design required infrastructure and processes
Technology transformation	Identify best possible IT competences and relations of internal IS architecture to implement business strategy	Support strategy with technology Design required IS infrastructure
Competitive potential	Exploitation of emerging IT capabilities to impact on new products and services, influence key attributes of strategy and develop new forms of relationships	Articulate how emerging competences and governance patterns would impact on business strategy Identify and interpret trends in IT to understand opportunities and threats
Service level	Understanding of IT strategy with internal design of IS infrastructure and business processes	Articulate how to allocate scarce resources Make the operating business succeed



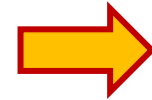
Approaching digital economy – business perspective



UNDERSTAND DIGITAL
DISRUPTION IN THE BIG
PICTURE CONTEXT



CREATE VALUE
AND CAPTURE
YOUR SHARE



BUILD A SUSTAINABLE
COMPETITIVE
ADVANTAGE





Step 1: understand digital disruption

Finding the opportunities in the face of digital disruption first requires a clear understanding of the strategic approaches that can create value.

- **Boost understanding of what digital disruption means** and discover the **key strategic approaches** to meet the challenge it poses
- Use the industry value chain to **map the activities and key players** in external environment as they respond to digital disruption, as well as the competitive dynamics between these players within industry
- Deepen **understanding of the external changes affecting business** and discover the relationship between value creation, market size and disruption.





Step 2: Create value and capture your share

To thrive in a disruptive environment, company needs to have a robust business model that supports value creation, and more importantly, value capture.

- Learn the “**value approach**” to digital disruption and strategy.
- **Understand how to apply tools** and concepts such as willingness-to pay, especially to assess the impact of new products and technologies
- Understand how value capture depends on the competitive dynamics between the key players collaborating in value creation and learn **how to leverage new technologies to bring new value propositions to market**
- Learn the **critical role positive feedback plays** in creating profitable positions within the industry value chain.





Step 3: Build sustainable competitive advantage

In a digital world, businesses need strategic agility and the flexibility to respond quickly, but success still depends on having a long-term plan; which is only possible by integrating execution with formulation and analysis.

- Use a strategic tool – the company value chain – to ensure activities within the organisation across **key functions and competencies are aligned with the overall value proposition** for successful strategic execution
- Develop ability to **identify the key organisational resources** required for strategy execution and anticipate how digital may transform the role of these resources
- Realise the value of **strategic partnerships** and their capacity to fill resource gaps, provide opportunities to develop new resources and enhance strategy agility.



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