GLOBAL DIGITAL TRANSFORMATION

MASTER'S SEMINAR

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OUTLINE

1.	AIM	What is this seminar about?
2.	SCOPE	What is the area of interest for this seminar?
3.	TOPICS	What are the possible research topics to select?
4.	EXPECTATIONS	What is expected from successful completion of this seminar?
5.	RESEARCH	How the research underpinning this seminar should be performed?
6.	STRUCTURE	How the outcomes of this research should be structured?
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8.	TOOLS	What tools should be used for research and documentation?
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WHAT THE SEMINAR IS ABOUT?

The seminar aims to provide student with:

- ideas,
- expectations,
- information,
- knowledge,
- sources and
- guidance

concerning :

- the research area,
- selection of research topics,
- planning of the research process,
- monitoring of the execution of this process,
- documenting the outcomes through Master's thesis, and
- preparing for thesis presentation and defense.

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DIGITAL TRANSFORMATION – INDIVIDUAL SCALE

Concerning individuals, digital transformation entails:

- the integration of digital technology into all areas of people's lives – work, learning, health, relationships, sports, travel, entertainment, civic affairs, etc.
- fundamentally changing how people operate – doing new things, doing thing differently, doing things better/faster/cheaper, new interactions, new ways of thinking, better decisions, etc.
- developing and maintaining capabilities, built around new digital inventions, for continued technological exploration, innovation and improvement
- developing and maintaining capabilities for understanding and addressing technology-originated threats and other externalities

DIGITAL TRANSFORMATION – ORGANIZATIONAL SCALE

Concerning organizations, digital transformation:

- Involves an organization undertaking a series of digitalization projects, ranging from automating processes to retraining workers to use computers
- Undergoing cross-cutting organizational change to fulfill the potential and address the risks of newly digitalized processes, and
- Making change-management into core competency, becoming more agile to facilitate ongoing digitalization initiatives.

Source: G. Unruh and D. Kiron, "Digital Transformation on Purpose," *MIT Sloan Manag. Rev.*, pp. 1–6, 2017.
Source: J. Bloomberg, "Digitization, Digitalization, And Digital Transformation: Confuse Them At Your Peril" pp. 2–7, 2018.

DIGITAL TRANSFORMATION – GLOBAL SCALE

At the global scale, digital transformation is:

- a system-level transition that, due to the adoption of digital technologies, alters social, economic, political, etc. behaviors on a large scale.

- it:
  - restructures economies due to new digital business models and processes
  - restructures societies due to people integrating new digital technologies into their lives and habits
  - restructures politics due to new structures of political participation and activism, and new forms of political expression.

Source: G. Unruh and D. Kiron, "Digital Transformation on Purpose," *MIT Sloan Manag. Rev.*, pp. 1–6, 2017.

DIGITAL TRANSFORMATION – EXTERNALITIES

Digital transformation restructures society in both positive and negative ways.

This includes:

- Technological unemployment increasing inequality but also offering opportunities for leisure and artistic expression.
- Bioengineering brings the promise of combating diseases but also risks excluding genetic groups judged to be inferior and promoting superior.
- Ubiquitous digital infrastructure connects people around the world but also introduces systemic threats and vulnerabilities connected to it.

Source: G. Unruh and D. Kiron, "Digital Transformation on Purpose," *MIT Sloan Manag. Rev.*, pp. 1–6, 2017.

DIGITAL TRANSFORMATION – SOCIETAL ADAPTATION

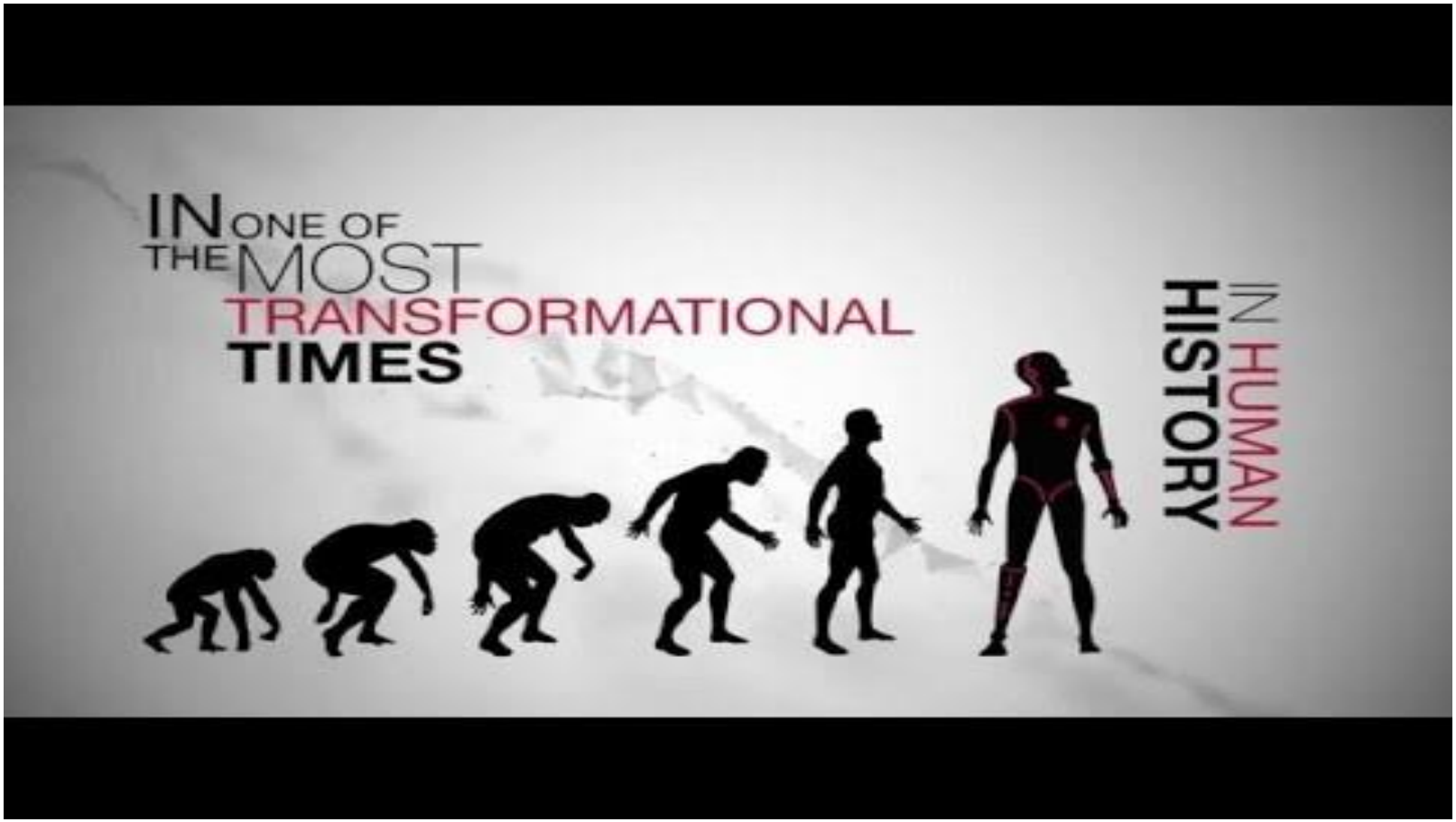
Society usually adapts in a reactive — not proactive — ways to digital transformation.

This is often because digital technology can proliferate much faster than our ability to understand and anticipate its impact.

The automobile had been ubiquitous for decades before we understood the downsides of "car culture," like smog, sprawl, and climate change.

Source: G. Unruh and D. Kiron, "Digital Transformation on Purpose," *MIT Sloan Manag. Rev.*, pp. 1–6, 2017.

DIGITAL TRANSFORMATION – VIDEO



Source: https://www.youtube.com/watch?v=ystdF6jN7hc

THEMATIC AREAS

This seminar is focused on digital transformation in the global scale – cities, countries and the world.

1. Features and dynamics of digital transformation around the world and over time
2. Results and impact of digital transformation on cities, countries and the world
3. Technological, institutional, cultural and other factors influencing digital transformation
4. Benefits of digital transformation - efficiency, equity, transparency, engagement, etc.
5. Threats of digital transformation - inequality, exclusion, cybercrime, surveillance, etc.
6. Controlling digital transformation - policies, institutions, projects, capacities, etc.
7. Digital transformation helping countries meet the UN Sustainable Development Goals
8. Digital transformation helping build societal resilience during the COVID-19 pandemic
9. Benchmarking digital transformation in Poland/EU against other countries/regions
10. Multi-disciplinary digital transformation research and its impact on policy and practice

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PAST AND FUTURE TOPICS

PAST TOPICS

1. Cross-border exchange of digital medical data between EU Member States
2. Digital technology adoption for national disaster risk reduction – digitalization versus exposure analysis
3. Relationship between smart city and quality of life in polish cities – Correlation analysis based on conducted measurements

POSSIBLE FUTURE TOPICS

4. Evolution of digital government research domain over the years - are DG conference series converging?
5. Comparison between smart city measurement instruments - common and diverging components
6. Comparison between China and EU in the use of digital technology to fight the COVID-19 pandemic

TOPIC SELECTION REQUIREMENTS

In order to have thesis topics confirmed, the following should be answered:

1. What are the research questions?
2. Why are these questions important to tackle?
3. Are the questions original in relation to current literature and practice?
4. What data and methods will be used to answer the research questions?
5. What theoretical foundations will be used to conduct research and interpret the results?
6. How will the research be conducted, which methodology will be used?
7. What are the expected results of this research and who will be their recipients?

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MASTER'S THESIS

The master's diploma thesis is realized during postgraduate master's studies.

Such a thesis:

- has the nature of
  - theoretical work,
  - project work,
  - experimental work,
  - calculations, or
  - analyses
- is related to scientific research or the solving of complex engineering problems
- the work consists in applying scientific methods to achieve the thesis objective and includes a review of relevant scientific and professional literature.

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RESEARCH PROCESS

1. Defining research area of interest
2. Reviewing scientific and professional literature
3. Defining research problem/question from this literature
4. Defining theoretical constructs to help address this research problem/question
5. Collecting and analyzing data using defined theoretical constructs
6. Interpreting the findings using theoretical constructs
7. Documenting the whole process and the findings
8. Submitting, presenting and defending the thesis

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THESIS STRUCTURE

Abstract
Table of contents
List of abbreviations

1. Introduction
   - 1.1. Motivation
   - 1.2. Objectives
   - 1.3. Approach
   - 1.4. Results
   - 1.5. Structure

2. Literature review
   - 2.1. Review method
   - 2.2. Topic 1
   - 2.3. Topic 2
   - 2.4. Topic 3
   - ...
   - 2.N. Theoretical framework

THESIS STRUCTURE

3. Methodology
   - 3.1. Questions
   - 3.2. Data
   - 3.3. Methods
   - 3.4. Reliability

4. Findings

5. Discussion
   - 5.1. Reflections on the findings
   - 5.2. Reflections on the process
   - 5.3. Implications for research
   - 5.4. Implications for practice

6. Conclusions
   - 6.1. Summary
   - 6.2. Limitations
   - 6.3. Plans

THESIS STRUCTURE

References
List of figures
List of tables
List of appendices

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THESIS WRITING

- Formatting – keeping strictly to the formatting guidelines provided by the master thesis template at the page https://zie.pg.edu.pl/dyplomowanie
- Grammar – regular use of the Grammarly software to check the correctness of the language used with each major version produced
- Reading – knowledge of the literature in our subject area is mandatory in order to write informatively on our research topic and add something new to literature
- Researching – literature informs research, research produces findings, thesis documents and discusses such findings and the process leading to them
- Discipline – writing requires insight, time and discipline, with specific writing goals set and fulfilled on a weekly basis

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TOOLSET

- Word for writing
- Excel for calculations
- Powerpoint for figures
- Scopus for literature search
- Mendeley for reference organization
- Xmind for conceptual frameworks
- Grammarly for grammar checking
- Etc.

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TIMELINE

DEADLINE	TASK	WRITTEN
December	Topic defined and approved	Chapter 1
January	Systematic literature review performed	Chapter 2
February	Theoretical constructs defined	Chapter 2
February	Research methodology defined	Chapter 3
March	Data collected and analyzed	Chapter 4
April	Results are documented	Chapter 4
May	Results are discussed	Chapter 5
June	Conclusions are drawn	Chapter 6

THANK YOU FOR YOUR ATTENTION

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