











Digital transformation – Introduction

Prof.dr.sc. Vjeran Strahonja

University of Zagreb, Faculty of Organization and Informatics

June 2024







Objectives

- Understand the concept of digital transformation and the contemporary context in which it is implemented
- Understand the concept of business model
- Define digital transformation as an approach and process of information and business systems development
- Determine the theoretical basis and methodology of digital transformation.

It is mandatory to prepare a document with answers to the questions!





CONTEXT



Quantity, volume, scalability ...



Lori Lewis: Infographic: What Happens In An Internet Minute https://www.allaccess.com/merge/archive/32972/infographi what-happens-in-an-internet-minute

2019



2020 This Is What Happens In An Internet Minute





Questions and assignments for students (1)



- In the "What happens in one minute Internet" infographic, find the services you use.
- 2. How the quantity and volume of these services have changed in recent years (see illustrations for previous years)
- 3. Try to remember when you started using a particular service (e.g. Facebook or email).
- 4. What was the volume and volume then, and what is it today?
- 5. What is scalability? How does scalability affect quantity and volume of contemporary services?



Acceleration...



Source: different sources, published by retail360uk,

https://retail-news.net/2018/01/03/number-of-years-it-took-for-each-product-to-reach-50million-users/





3 wheels - 4 wheels with solid tire 1888, tubeless tires 1954

Cabrio - closed car cab 1910

Rear lever brake - 4-wheel brakes 1919, disc brakes 1956

Without gearbox - manual gearbox with 3 speeds 1894, synchronized gearbox 1952





Questions and assignments for students (2)



- 1. Which product, service, or computer program has reached the fastest 50 million users in history?
- 2. How many years did it take from a phone with copper wires, to the first mobile phone?
- 3. Who are the inventors?



Risks ...



- ✓ Amazon: 100 ms response delay reduces sales by 1%.
- ✓ Google: An additional 0.5 seconds in page search time reduces turnover by 20%.
- ✓ Broker: A loss of \$ 20 million if its electronic trading platform lags 5 ms behind the competition...

√...

https://blog.gigaspaces.com/amazon-found-every-100ms-of-latency-cost-them-1-in-sales/

Questions and assignments for students (3)



1. What would change in your life and study if the Internet disappeared for a week, what services could you not use and what would be the consequences?





DIGITAL TRANSFORMATION - TERM



Digital transformation - Definition



- Digital transformation is a comprehensive business transformation with the aim of taking all the advantages and opportunities of modern digital technologies and their impact on society, taking into account the future.
- Digital transformation is the replacement or improvement to a higher level of products, services and processes, using digital technologies (IoT, Cloud Computing, AI,....), with the aim of realizing new business models, within a short period of time.

• ...



Digital Transformation - What is and what is not?



It is not just:

- implementation of an automated process,
- implementation of a digital product or service.

It is:

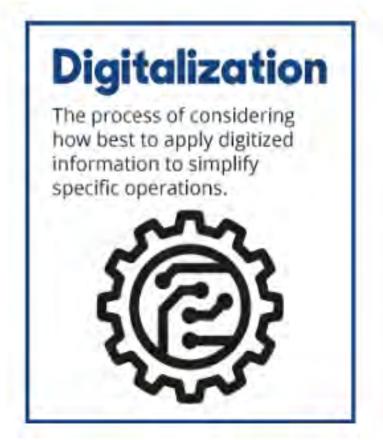
- all previous +
- continuous and strategic business improvement,
 - devising and implementing innovative business models and processes based on creative thinking, agility ...,
 - using digital technologies,
 - in order to create new or improved products and services (user experience, scalability ...),
 - and create new added value for the organization, partners and users,
 - taking into account the future (state, rate of change, trends).



Digital transformation - Historical dimension









(Source: https://www.coresystems.net/blog/difference-between-digitization-digitalization-and-digital-transformation)

Example 1 of DT: House electronics TV Traditional life cycle



1. Production

Source: FB Historija, El Niš proizvodnja



2. Sale / retail-



Source: gettyimages, Steve Schapiro

3. Post sale / repair

Source: https://www.zagorje.com/



Example 1: House electronics – TV sets



https://samsungtechwin.com/where-are-samsung-tvs-made/







https://www.dawn.com/news/1662359



Questions and assignments for students (4)

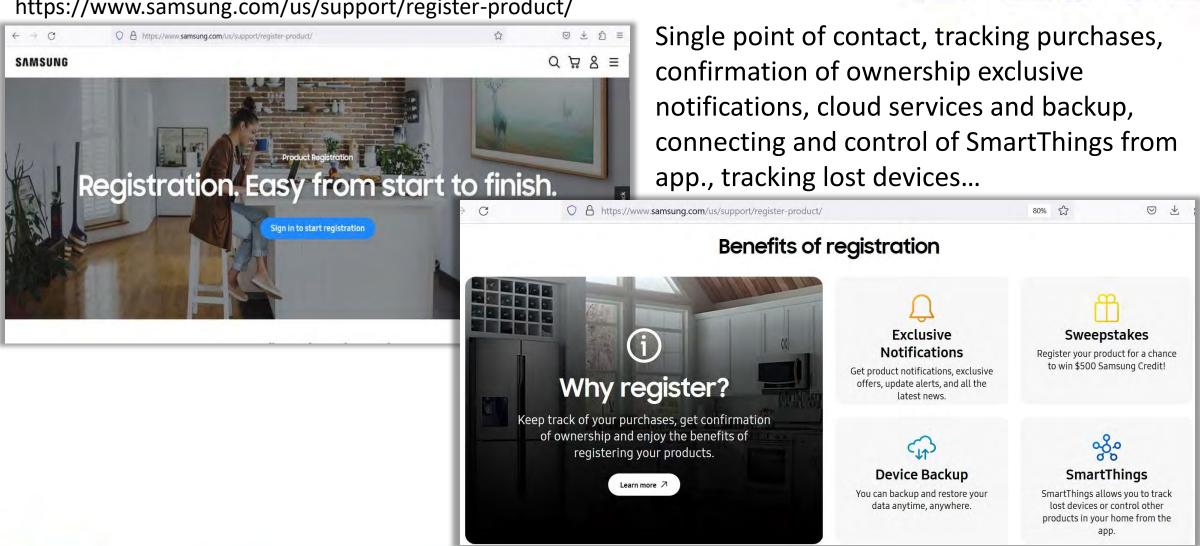


- 1. How was the industrial production of TV sets digitally transformed? Are any digital platforms used in production today?
- 2. How has marketing and sales been digitally transformed? Which digital platforms, methods and tools are used?

Example 1: House electronics - Post sale

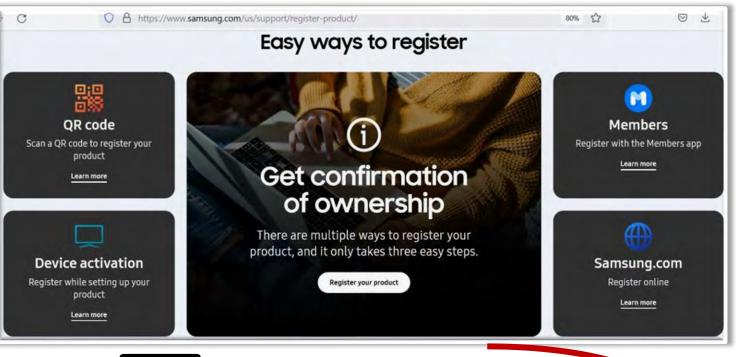


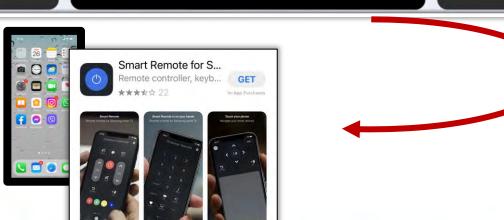
https://www.samsung.com/us/support/register-product/



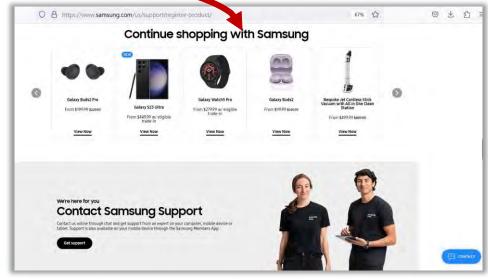
Example 1: House electronics - Post sale











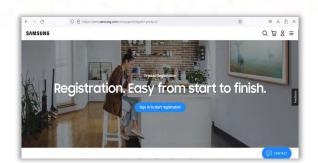
Funded by the European Union

The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

Example 1: House electronics - CONCLUSION

DEMO

- Modern products, such as television, are enriched with services.
- The basis of service provision are digital platforms and applications.
- Selling products is not the only opportunity to generate income.
- Revenues are generated during the entire life cycle, mostly in the Post Sale phase, by providing services and enriching products.
- The basis of Post sale's modern products are also digital platforms and applications.
- Even industrial product manufacturers are Digital Platform Enterprises in part of their business!





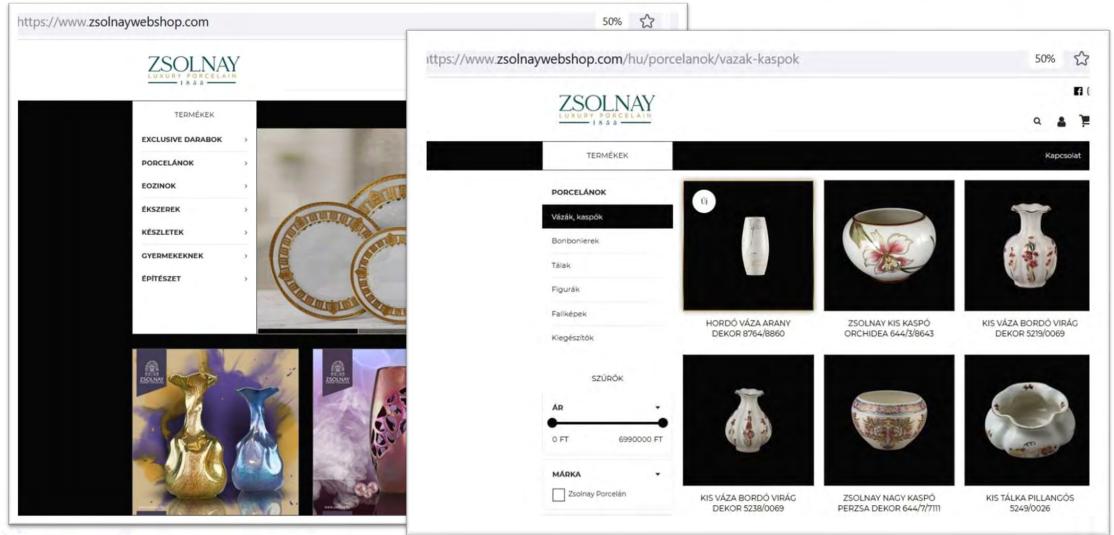




Example 2: Digital transformation of existing organizations and business models



Zsolnay ceramics and porcelain factory (Pécs, Hungary)



Questions and assignments for students (5)



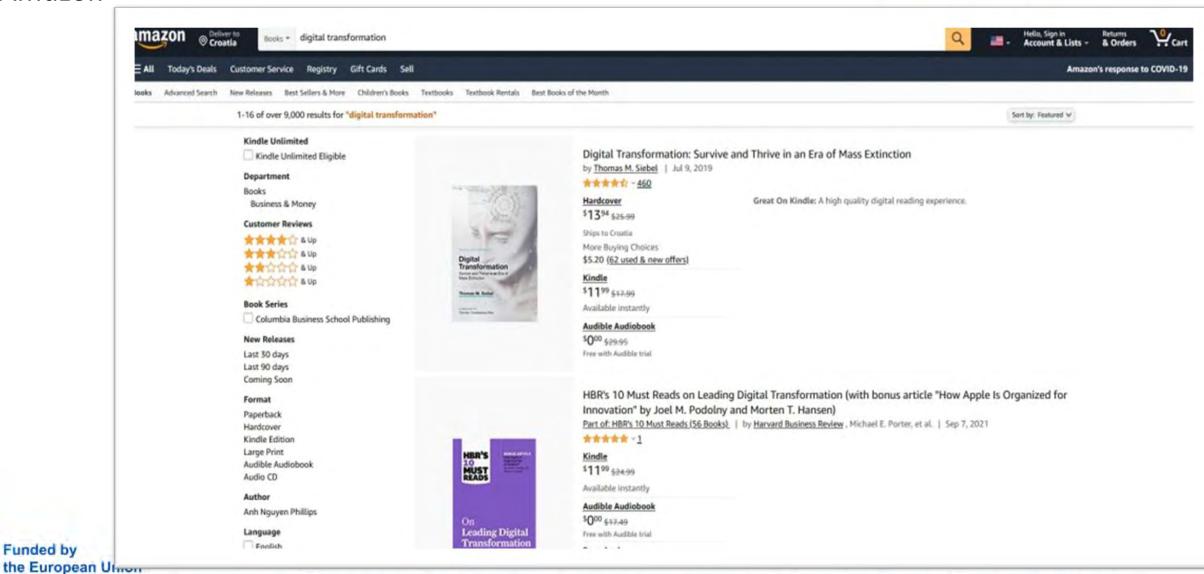
- 1. Explore which platforms you could use to sell your products, if you don't want to develop your own platform or web shop?
- 2. Does Zsolnay ceramics and porcelain factory use any of these platforms as a sales and distribution channel?

Example 3: Digitally born organizations



Amazon

Funded by



Questions and assignments for students (6)



- 1. Explore the history of Amazon. What is revolutionary in Amazon's business model?
- 2. What are the main sources of income?
- 3. What digital platforms and infrastructure does Amazon offer as services?



Views on digital transformation



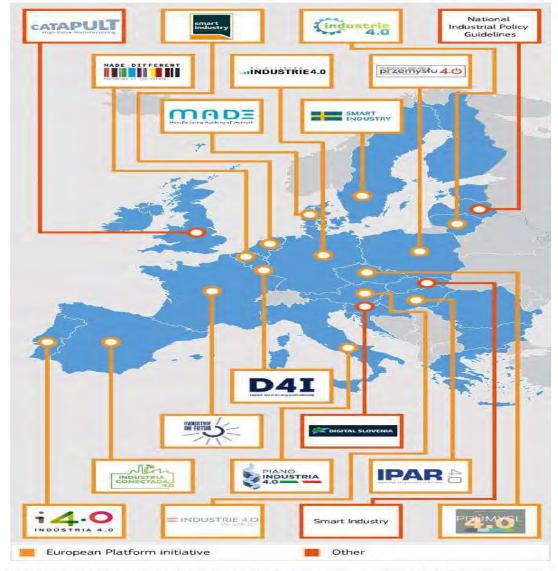
- A view of companies on business development and transformation
- The view of the government, public administration, the EU ...
- Research view and motivation of scientists
- User view

• • •

Digital transformation - Transformation of business



- Digital transformation is often implied in a business context, but it also exists in other areas, such as the public sector, NGOs, and even everyday personal life.
- Some initiatives have become synonymous with digital transformation, e.g., *Industry 4.0* in the field of industry, or Japanese *Society 5.0*.



EU view

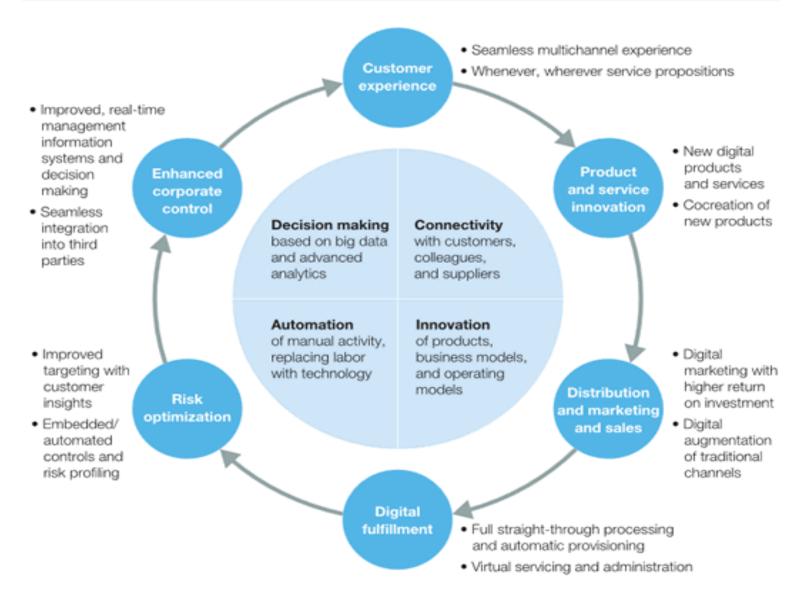


https://ec.europa.eu/growth/industry/policy/digital-transformation_en

- Digital transformation of the business sector and society in the EU is a potential for growth.
- Technology is opportunity.
- Digital transformation is a fusion of advanced technologies and integration of physical and digital systems, with the dominance of innovative business models and new processes and the creation of smart products and services.

Business view







Source: Expert interviews; McKinsey analysis

Questions and assignments for students (4)



- 1. Give some examples for New digital products and services (McKinsey view), ie products and services that did not exist before the Internet and digital transformation of business models
- 2. Find some more views on the digital transformation of other companies, consulting firms, etc. Compare with this view.



Thank you for attention!

vjeran.strahonja@foi.hr

