From Digitization and Digitalization to Digital Transformation

A Case for Grey Literature Management

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Why digital transformation matters ❓

14% of jobs are at high risk of automation. 32% of jobs could be radically transformed in the next 15-20 years.
The Future of Work, OECD Employment Outlook 2019   **46%**

Worldwide spending on technologies & services that enable DX will reach $2 trillion in 2022.
International Data Corporation (IDC)   **$**

85% of the jobs in 2030 don't exist yet!
Dell Technologies and Institute for the Future (IFTF)

20% reduction in global carbon emissions by 2030.
Telstra Corporation, Australia

By 2020 the average person will have more conversation with bots than with their spouse.
Gartner

Overview

- **Digital transformation (DX)**
  - The concept
  - The terminology
    - Digitization
    - Digitalization
    - Digital transformation
- **DX impact on grey literature (GL)**
    - Scanning, automation, digital business
    - Work, workplace, workforce
- **Conclusions**

Digital transformation (DX) – the concept

DX: A large-scale change of the fundamental business components using modern IT. Also a cultural change that challenges the status quo.

Target: Business model, Products, People, Processes, Productivity.

Impact on: Profit, Operating model, Supply chain, Infrastructure, Products, Sales approach, Customers, Market and marketing, Purchasing, Finance, Human resources, Organizational culture.

Business process reengineering: Rule-based (algorithmic) processes automated by technologies, **vs** **DX:** redefining business using IT enablers.

Enabling technologies: AI/ML, Robotics, IoT, Big data/Analytics, Mobile & cloud computing, Social networks, 3D printing, AR/VR, 5G.

Stages: Digitization, Digitalization, Digital Transformation.

Digitization - Conversion from analog to digital format

Scanners

In the late 1990's the rise of commercially available hi-resolution (e.g. 600 DPI or more) triggered the mass conversion of analog data (paper archives) to digital format.

CD-ROMs

The invention of the first compact disk (CD) in 1982 offered a cheap storage and distribution medium, used not only for storing paper documents but also for the conversion of audio and video analog formats such as LPs, cassettes, film reels, and VHS tapes.

New formats

TIFF, DjVu, PDF help convert microfilms and microfiches.

Benefits

Usability, the speed of access, transferability, and the possibility of further processing.

Digitization - Automation of business processes

Powerful IT
The automation of various business processes/operations based on powerful IT hardware and software.

Enthusiasm
Huge investments in purchasing, developing, deploying, and maintaining different applications, but still dealing with single tasks using unrelated technologies that hardly talk to each other.

Phases
The initial phase where single operations or processes are automated.
The mid-phase where related processes are automated and joined together.
The third, most complex phase, where multiple systems that support business processes and information flows are integrated.

Benefits
Although siloed information, distinct, different, and sometimes redundant applications are common, digitalization helps lower production costs, optimize business results, and creates new revenue options and new customer experiences.

Digital transformation - The creation of a digital company

Doing things differently

Creating a new business model by using modern IT, leveraging existing knowledge and profoundly changing the essence of the organization - its culture, management strategy, technological mix, and operational setup. Pursuing new revenue streams, products and services.

Customer-centric approach

Placing the customer in the centre of all decisions and actions.

New technologies

Maximizing the use of mobile applications, AI, cloud computing, analytics, chatbots, and other digital services.

Benefits

Customer satisfaction, profitability, process streamlining, new business opportunities.

DX impact on grey literature

Historical phases

- Digitization: Scanning
- Digitalization: Automation
- Digital transformation: Business change

DX impact on GL

- Work
- Workforce
- Workplace

Digitization and grey literature

Background

    Late 1990's

    CD-ROMs

    New formats

    Access, use, distribution, transfer, additional processing

Golden years of GL

    Increased interest, funding, research…

Ephemeral documentation

    Routine, trivial, duplicated (exists somewhere else)

    Little value, administrative, financial, legal, cultural, historical

Grey literature

    Important, valuable, worth collecting, processing and sharing

Issues

    Quality

    Long-term preservation

    Management standards

    Qualified professionals

    Proper training opportunities

Digitalization and grey literature

Background

Powerful IT hardware and software

Huge investments in IT

Stand-alone systems and applications

Loss of GL focus

Multitude of types (150-200)

Omnipresence in all processes, operations and activities

Government (reports), business (emails), academic (theses)

No specific GL applications. Part of larger systems

Lack of standards and best practices

Lack of training opportunities

Weak professional associations

Digital transformation and grey literature

Background
Top of the line IT tech (AI, clouds, analytics, mobile)
Customer-centric approach
Organizational culture change

Big opportunity for repositioning GL
Must become part of the business strategy
Establish a strong link with IT (e.g. intelligent search)
Adopt and promote new modern approaches (agile, cooperation, open access)
Promote long-term preservation

Impact of digital transformation on GL work, workforce and workplace

The work
- What – the nature of GL work (variety, volume, veracity, velocity, value)
- Why – the role of leadership (forward thinking, visionary, customer focus)
- Who – the workforce
- How – the work organization

The workforce
- Digital literacy
- Life-long learning
- Engagement
- Mobile force
- Generation gap
- Digital ethics

The workplace
- New IT tools
- Digital dexterity
- Digital culture
- Removal of info silos
- Agile, fluid & flexible teams
- Remote work

Conclusions

ASSUMPTION		ACTION
Change	➡	Learning
Speed	➡	Skills
Complexity	➡	Teamwork
Disruption	➡	***Transformation***

Not to be forgotten!

Technology	- Not a Silver Bullet
Legacy systems	- Costly endeavour
Human factor	- Major factor

The pace of change
will never be this slow again!

Thank you!