

Roundtable on Digitalization & Economics

A short history of Digitalization

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Who we are



Alexander Elsas

Lecturer

Economics, Management & Information Systems

Database developer with APEX

Information Systems for Business Students

Management for Computer Science Students



Carola Wondrak

Studies

Bachelor of Science Goethe University Frankfurt

Jobs

Internship at Cisco Strategy Germany 2015-2016

Strategy and Planning Analyst, Cisco since 2016

Digitalization and similar words

Whatever way it is spelt: It is important
and massive!

www.goethe-un

Google digitalisation

All News Images Books Videos More Search tools

About 535,000 results (0.54 seconds)

How to win "Digitization vs Digitalization" debate? - A boring post ...
<https://www.linkedin.com/.../how-win-digitization-vs-digitalization-debate-boring-r-a>
26 Aug 2015 - An interesting debate going around our community nowadays. "What is the difference between digitization and digitalization?". I come across ...

Digitalization - Gartner IT Glossary
www.gartner.com/it-glossary/digitalization/
Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of ...

Google digitilization

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Showing results for **digitalization**
Search instead for [digitilization](#)

Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business.

Digitalization - Gartner IT Glossary
www.gartner.com/it-glossary/digitalization/

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Google digitization

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About 43,300,000 results (0.58 seconds)

Living Services
Ad www.accenture.com/livingservices
Internet Of Things, Wearables, Digitization Of Everything PDF

Digitization is the process of converting information into a digital format . In this format, information is organized into discrete units of data (called bit s) that can be separately addressed (usually in multiple-bit groups called byte s).

What is digitization? - Definition from WhatIs.com
whatis.techtarget.com/definition/digitization

About this result • Feedback

Digitalization

Digitization

- is the technical process of converting analogue media into digital files and the first step to **digitalization**.
- reduced amount of physical storage space

Converting

- raw files into more meaningful files
- Documents: result from digitization is only a picture made of pixels
- Optical Character Recognition (OCR)
- identify objects or people in the raw picture file
- second step within digitization

Big acceleration since 2007

- availability of mobile connected devices
- third step to digitalization.

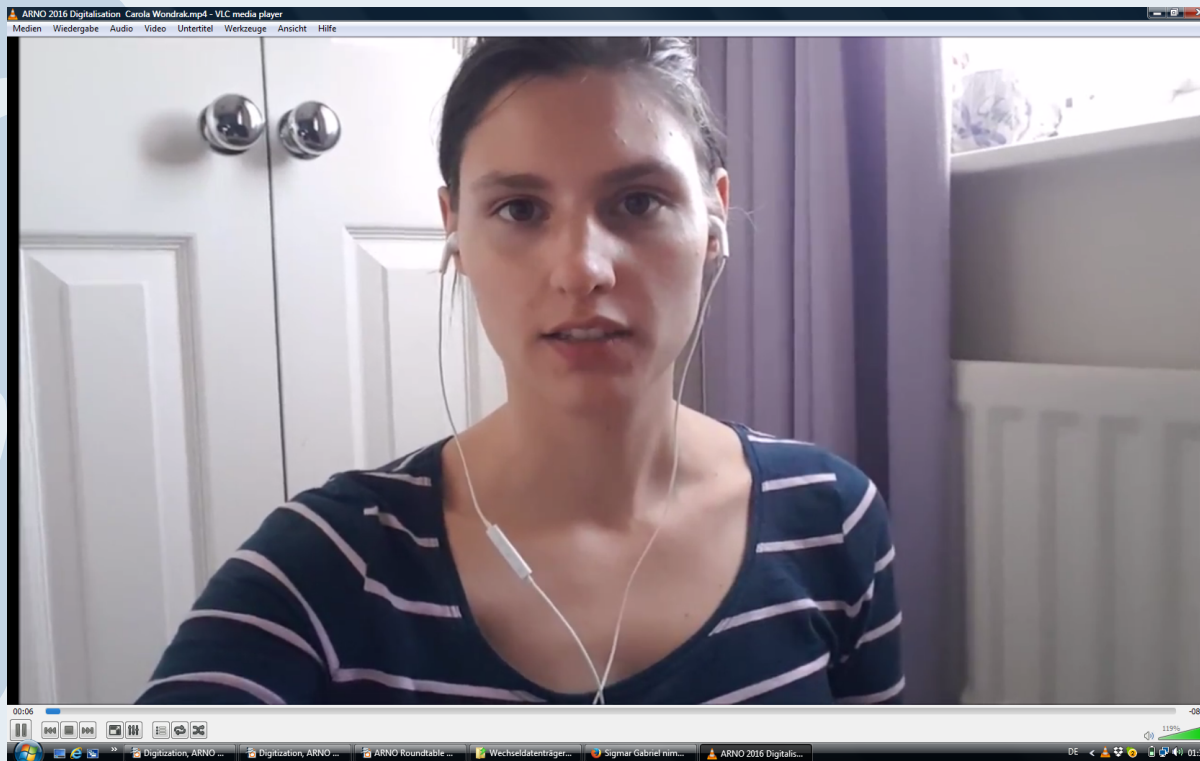
Industrial revolution

- before: mechanization, steam power, electrification
- Digitalization is changing private life → core difference between digitalization and the former revolutions
- → Technovation!

https://www.fhnw.ch/content/uploads/Technovation_RK_PK.pdf

Digital Content, Workforce, Education, Economies and Flexibility

Case study: Learning from somebody of the other side of the world...



Country digitalization & Big data

Analyzing data (usage data) to find way to improve reality

- **Car parking**
 - Help against congestion → direct people to free parking spaces
- **Commuting**
 - Go with an extra cart if the train seems to be full
- **Waste management**
 - Let the waste get picked up when full
- **Shopping**
 - Find out what people buy, recently buy, what they are interested in to better sell products and better reach the audience



Digitalization – Economic View

- **Digital Single market**
 - open up digital opportunities for people and businesses
 - Top priorities for European Union
 - only 15% shop online from another EU country
 - move from 28 national markets to a single one
 - three pillars:
 - (1) better access for consumers and businesses to digital goods and services across Europe
 - (2) creating the right conditions and a level playing field for digital networks and innovative services to flourish
 - (3) maximising the growth potential of the digital economy
- **Perfect Marktes**
 - Digitalization helps to shape the reality more into a perfect market
 - get closer to the model assumptions
 - model in economic reality

http://europe.eu/rapid/press-release_IP-15-4919_en.htm
<http://www.strategyand.pwc.com/globalhome/what-we-think/digitalization/megatrend>
<http://www.politico.eu/tag/digital-single-market/>
http://Marti.com/marticomline.co.uk/business/economics/Perfect_competition.html

The Digital Economy and Society Index (DESI)

5 principals measured

1. Connectivity

- Deployment of broadband infrastructure and its quality.

2. Human Capital

- Skills needed to take advantage of the possibilities offered by a digital society

3. Use of Internet

- Variety of activities performed by citizens already online

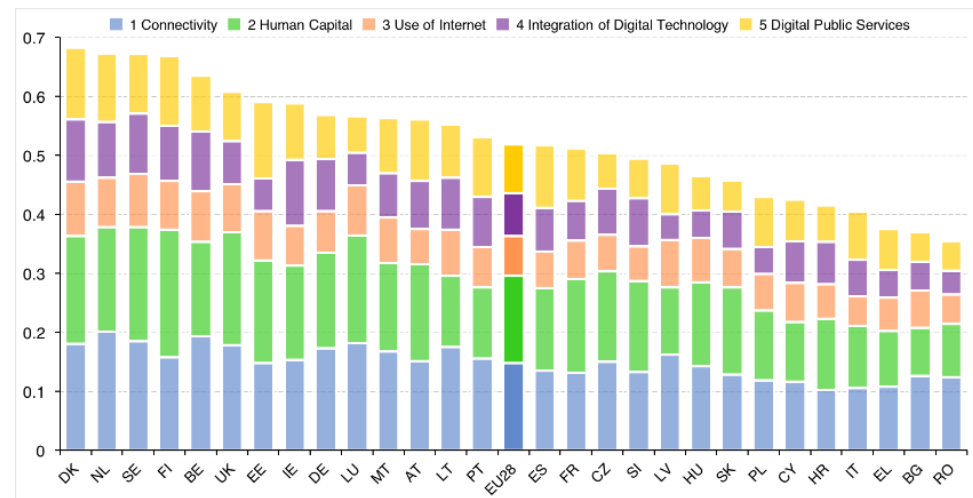
4. Integration of Digital Technology

- Digitisation of businesses and their exploitation of the online sales channel

5. Digital Public Services

- Digitisation of public services, focusing on eGovernment & Modernisation

The DESI 2016 summarises data collected mostly during calendar year 2015, which are at the basis of the main DESI ranking of EU member states depicted below. Each score in the DESI is between 0 and 1, with higher values representing better performance.



The DESI 2016 shows that both the European Union as a whole as well as individual Member States are progressing towards a digital economy and society. However, member states are at different levels of development and are progressing at different speeds.

Global Information Technology Report



[Agenda](#)

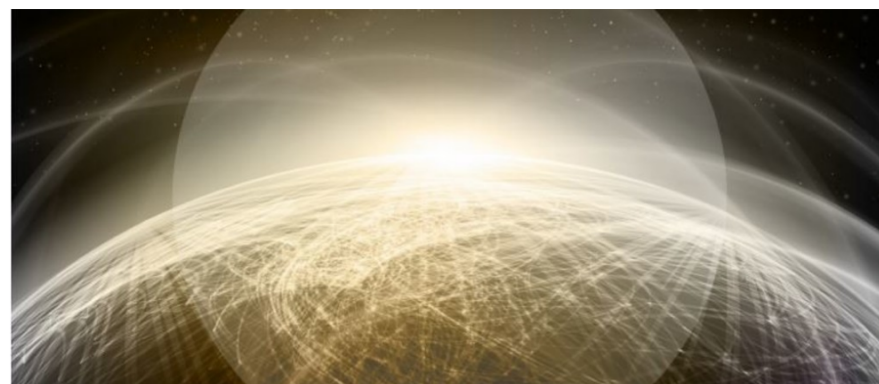
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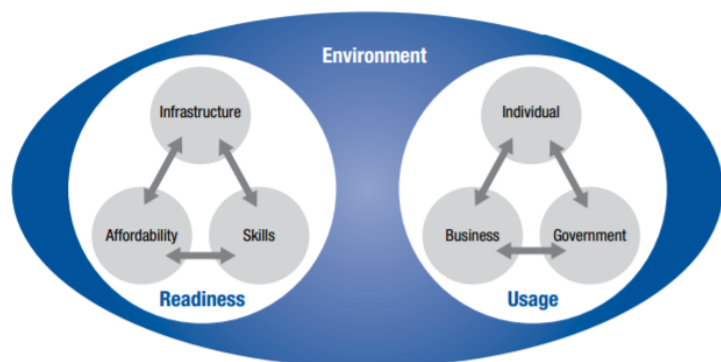
The Global Information Technology Report 2016



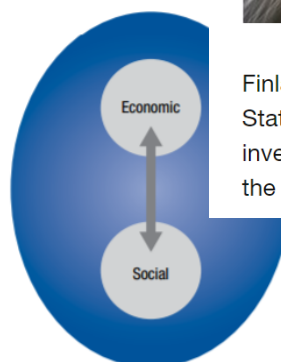
Finland, Switzerland, Sweden, Israel, Singapore, the Netherlands and the United States are leading the world when it comes to generating economic impact from investments in information and communications technologies (ICT), according to the World Economic Forum's *Global Information Technology Report 2016*.

- Since 2001, The Global Information Technology Report series published by the World Economic Forum in partnership with INSEAD and Cornell University has measured the drivers of the ICT revolution globally, using the Networked Readiness Index (NRI)
- using 53 individual indicators
- 139 economies covered

DRIVERS



IMPACT



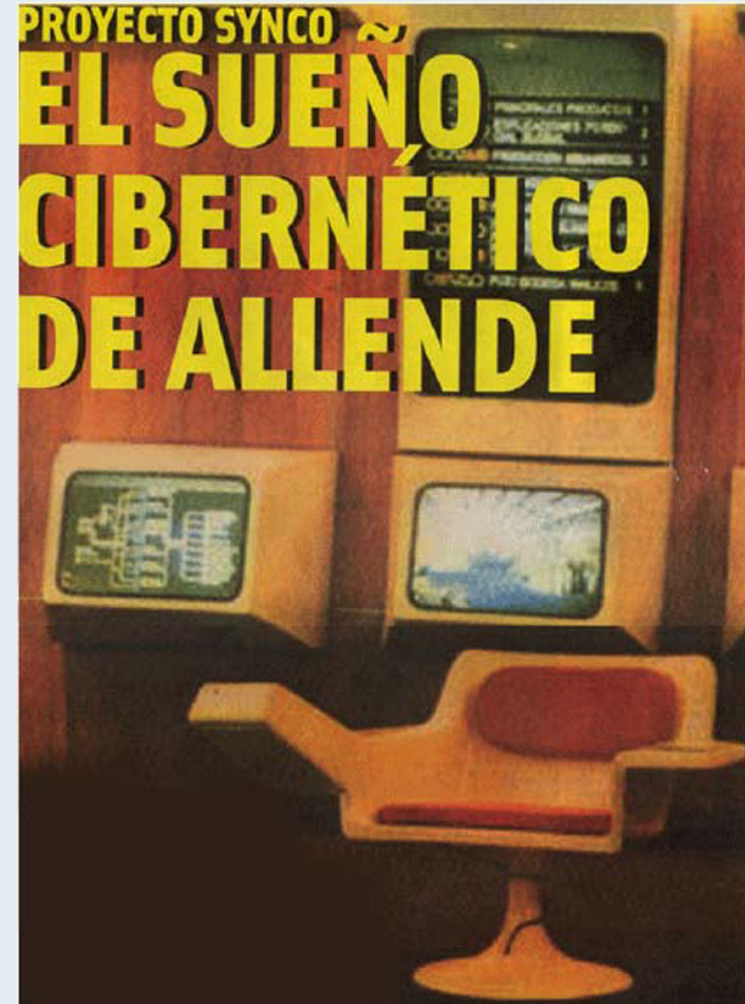
Digitalization, Cloud and Security

In a world, where everything gets closer and connected, what black sheep do stop our positivity and fun online? The 9 biggest threats of digitalization:

1. Data Breaches
2. Data Loss
3. Account Or Service Traffic Hijacking
4. Insecure APIs
5. Denial Of Service
6. Malicious Insiders
7. Abuse Of Cloud Services
8. Insufficient Due Diligence
9. Shared Technology



- Project from 1971–1973
- Chile
- four modules:
 - 1) economic simulator
 - 2) check factory performance
 - 3) operations room
 - 4) national network of telex machines linked to one mainframe computer
- Cyberstride
 - statistical modeling software



<https://www.youtube.com/watch?v=ISmQ5vT4pU&list=PLV6T2NEXCQ8Svz-MH25VEFKNf-TbyViSq&index=9>
<http://www.newyorker.com/magazine/2014/10/13/planning-machine>
<https://dprbcn.wordpress.com/2010/08/27/project-cybersyn-2/>

Digitalization – Impacts on the business area Córdoba

- New big data projects
- Research in Universities (together with universities around the world)
- More internationally open
- Still, most of the articles and search results are in Spanish
- Fedora Project
 - global partnership of free software community members
 - Interactive
 - Create, learn and modify software worldwide in a collaborative way



<http://www.tynmagazine.com/argentina-lbm-y-la-universidad-nacional-de-cordoba-investigan-nuevas-capacidades-para-big-data/>,
<http://www.nearshor.com/argentina-changing-career-path-wine-style/>, <http://www.telam.com.ar/notas/201504/102507-big-data-grandes-datos-cordoba-fundacion-sadosky.html>, #
https://fedoraproject.org/wiki/Fedora_Project_Wiki

Schwab, Klaus: The fourth industrial revolution

Ford, Martin: The rise of the robots: technology and the threat of mass unemployment

Brynjolfsson, Erik & McAfee, Andrew: The second machine age: work, progress, and prosperity in a time of brilliant technologies

Reach out to us!

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