



Digitalna transformacija kot priložnost

prof. dr. Janez Bešter

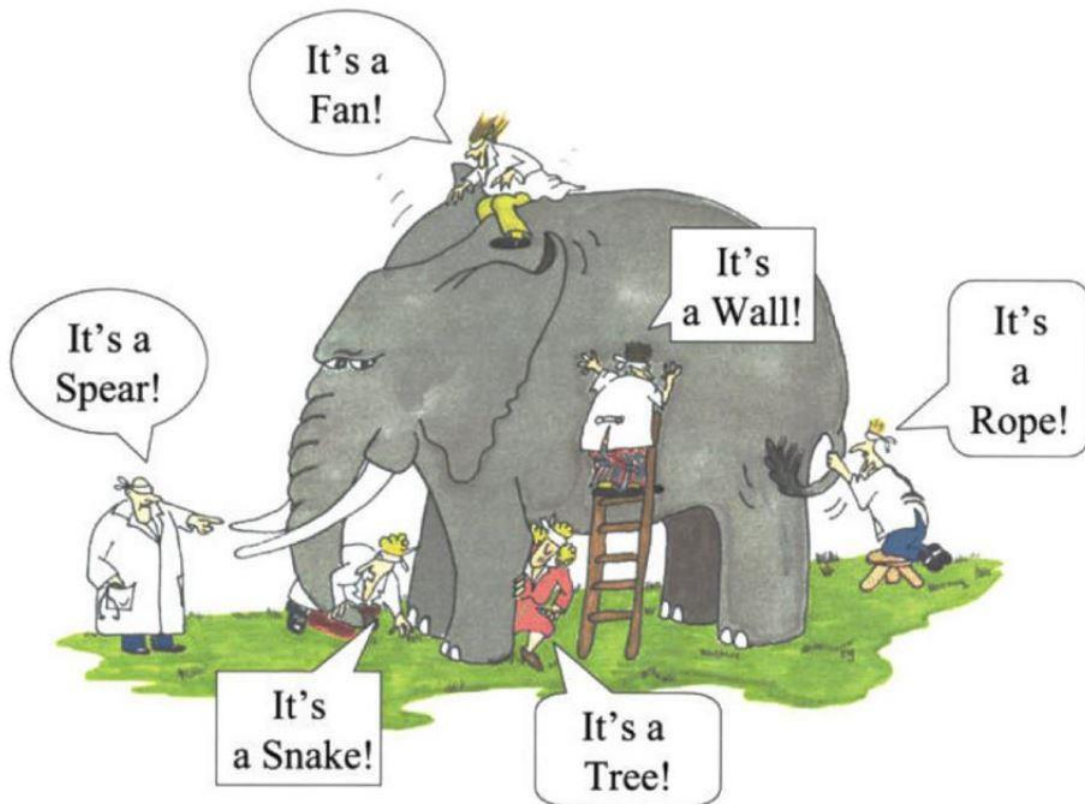


10. posvet dolenjskih in belokranjskih informatikov
INDUSTRIJA 4.0: DIGITALIZACIJA POSLOVNIH PROCESOV

6. April 2017

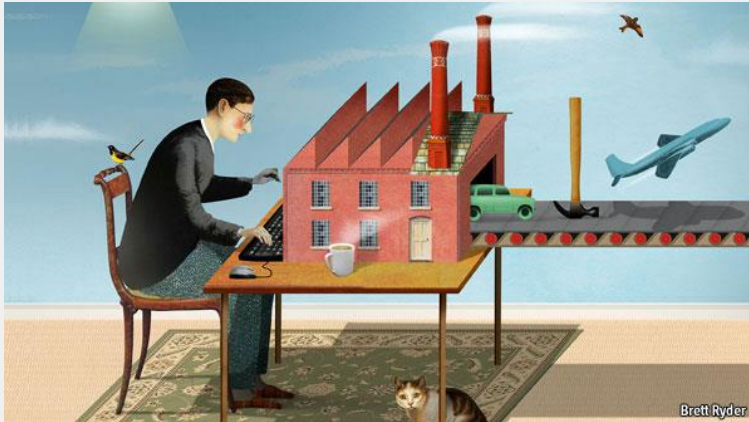
www.digitalna-akademija.si

Kaj je digitalna transformacija?



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THE WORLD HAS CHANGED



Business disruption



Technology disruption

Cloud, Wearables, IoT, Privacy, Robotics or Smart Machines

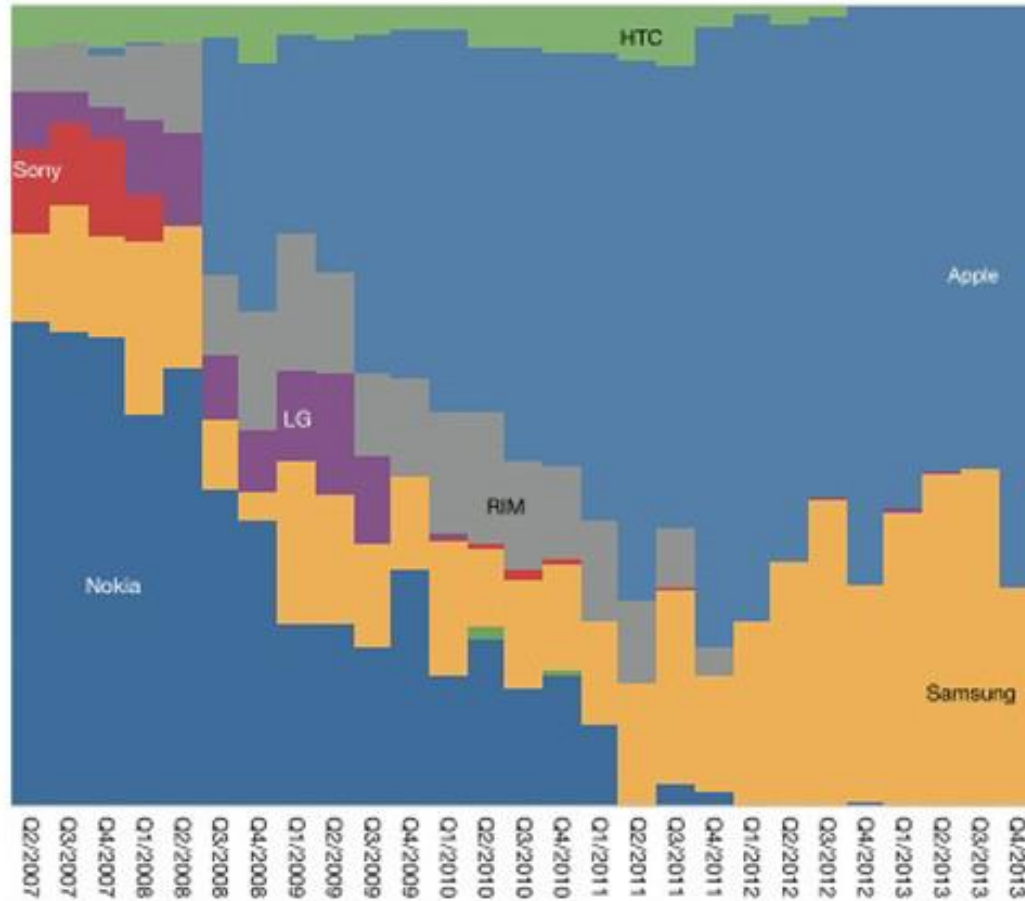
Generational disruption

Millennial, GenZ, Gen α

Vir: Microsoft

Nokia – Apple – Samsung

Percentage of Operating Profit from Mobile Phones (globally, select vendors)



10 Most Innovative Companies

Rank	2010	2011	2012	2013	2014	2015	2016
1	Apple	Apple	Apple	Apple	Apple	Apple	Apple
2	Google	Google	Google	Google	Google	Google	Alphabet*
3	3M	3M	3M	Samsung	Amazon	Tesla	3M
4	General Electric	General Electric	Samsung	Amazon	Samsung	Samsung	Tesla
5	Toyota	Microsoft	General Electric	3M	Tesla	Amazon	Amazon
6	Microsoft	IBM	Microsoft	General Electric	3M	3M	Samsung
7	Procter & Gamble	Samsung	Toyota	Microsoft	General Electric	General Electric	Facebook
8	IBM	Procter & Gamble	Procter & Gamble	IBM	Microsoft	Microsoft	Microsoft
9	Samsung	Toyota	IBM	Tesla	IBM	IBM	General Electric
10	Intel	Facebook	Amazon	Facebook	Procter & Gamble	Toyota	IBM

Source: 2016 Global Innovation 1000 study. The 10 Most Innovative Companies are named by respondents to the 2016 survey of global innovation experts.

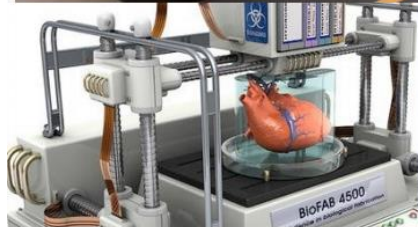
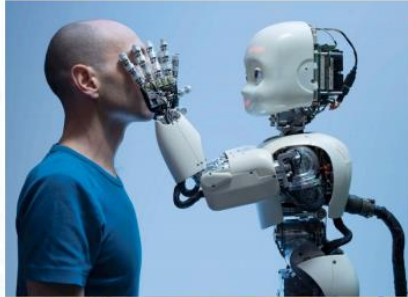
*In 2015, Google announced a corporate restructuring forming an umbrella company called Alphabet.







Companies who are planning to become a Digital Business see Business strategy and Digital Business strategy as **different** ...



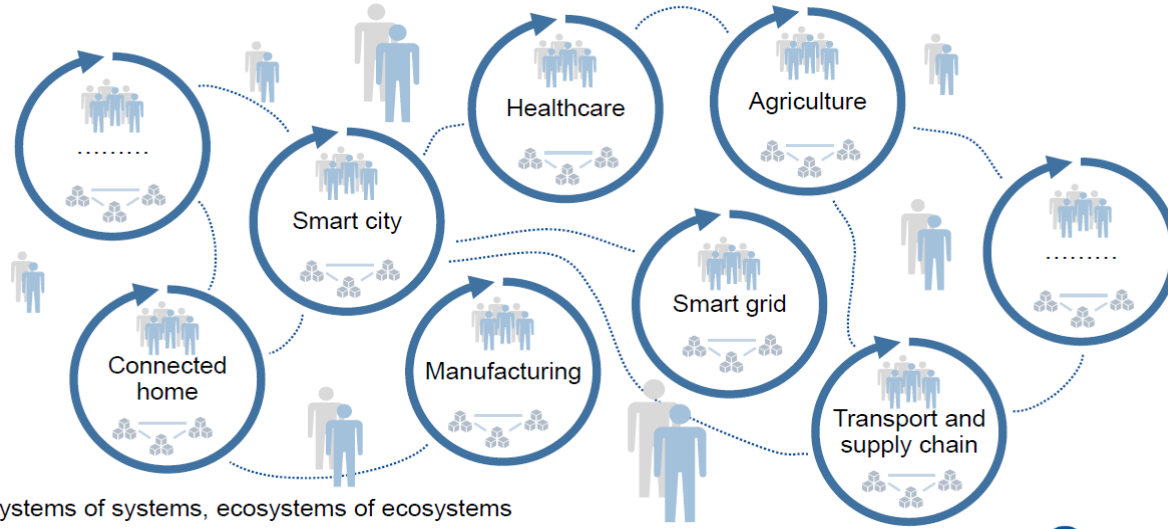
Companies who are doing Digital Business see Digital Business strategy and Business Strategy as **the same** ...

New business models



 UBER World's largest taxi company Owns NO Taxis	 airbnb World's largest Accommodation provider Owns NO Real estate	 skype WeChat World's largest Phone companies Owns NO Telco infra	 Alibaba Group World's most Valuable retailer Owns NO Inventory
facebook. Most popular Media owner Owns NO Content	 SocietyOne World's fastest Growing bank Owns NO Actual money	NETFLIX World's largest movie house Owns NO Cinemas	 Apple Google World's largest Software vendors Owns NO Apps

IoT Will Become a Foundation of the Digital Society



Systems of systems, ecosystems of ecosystems

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WORLD
ECONOMIC
FORUM

WORLD
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FORUM

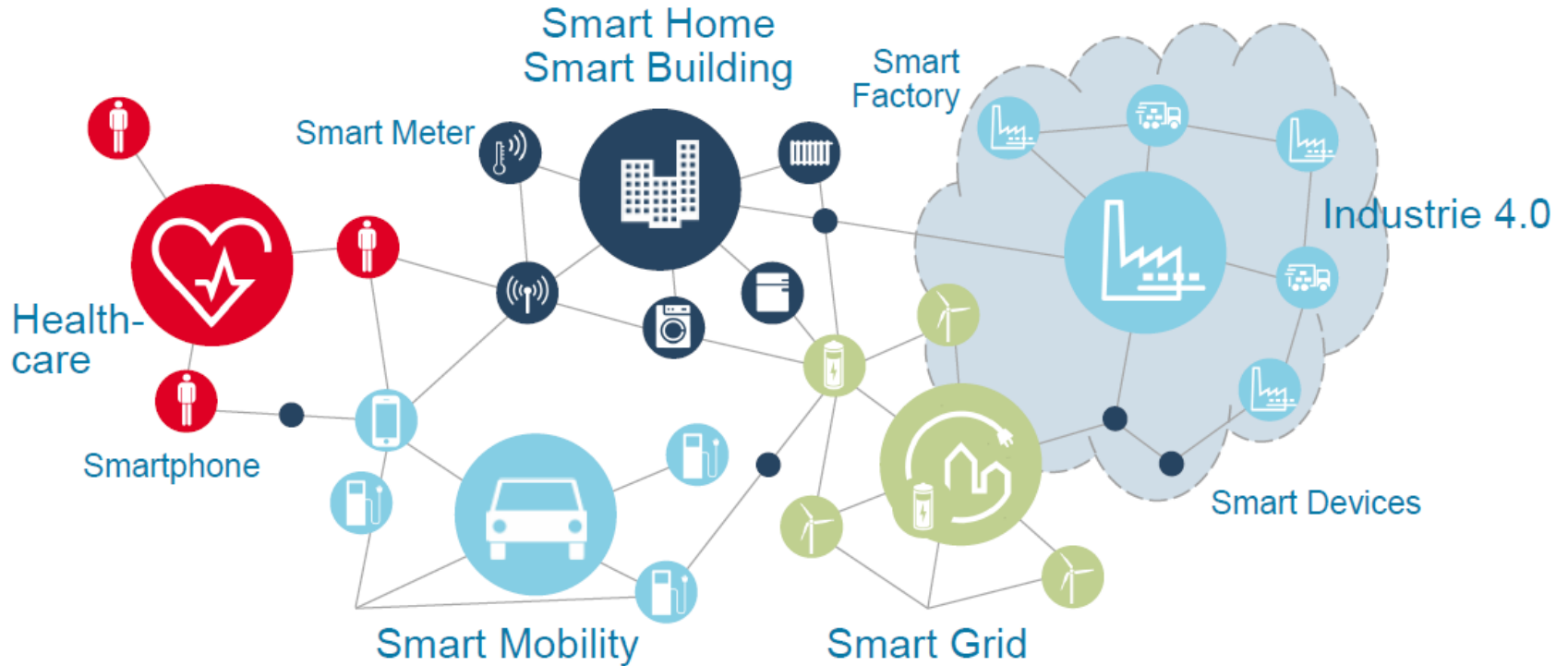
Digital Transformation Initiative

In collaboration with Accenture

Unlocking \$100 Trillion for Business and Society from Digital Transformation

EXECUTIVE SUMMARY
JANUARY 2017

The Internet of Things and Services

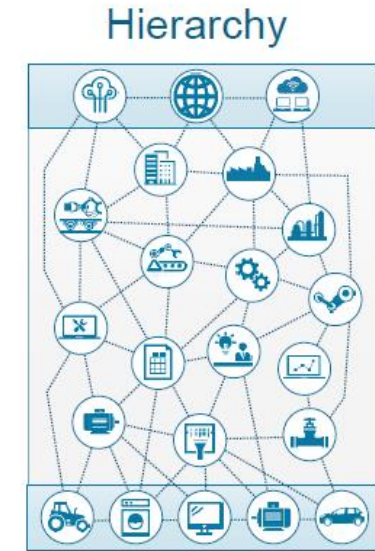
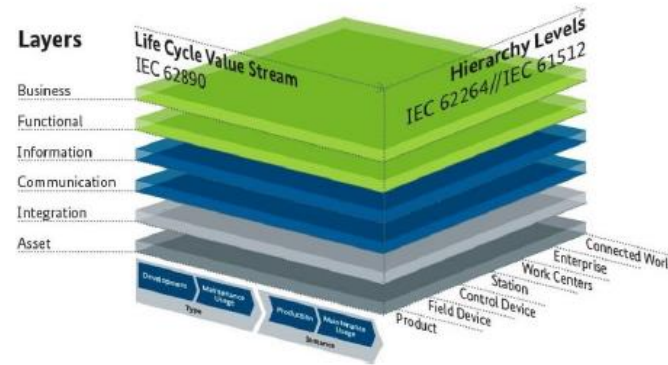
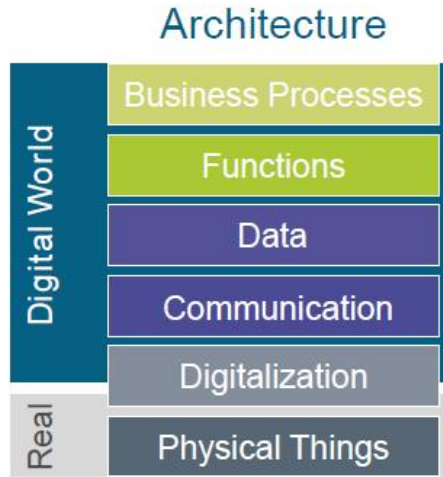


What is Industrie 4.0

- I4.0 connects / merges production with information and communications technology
- I4.0 merges customer data with machine data
- Machines communicate with machines
- Components and machines autonomously manage production in a flexible, efficient, and resource-saving manner



Reference Architectural Model Industrie 4.0 (RAMI 4.0)



Development, Production / Sales, Service

A Solution Space with a Coordinate System for Industrie 4.0



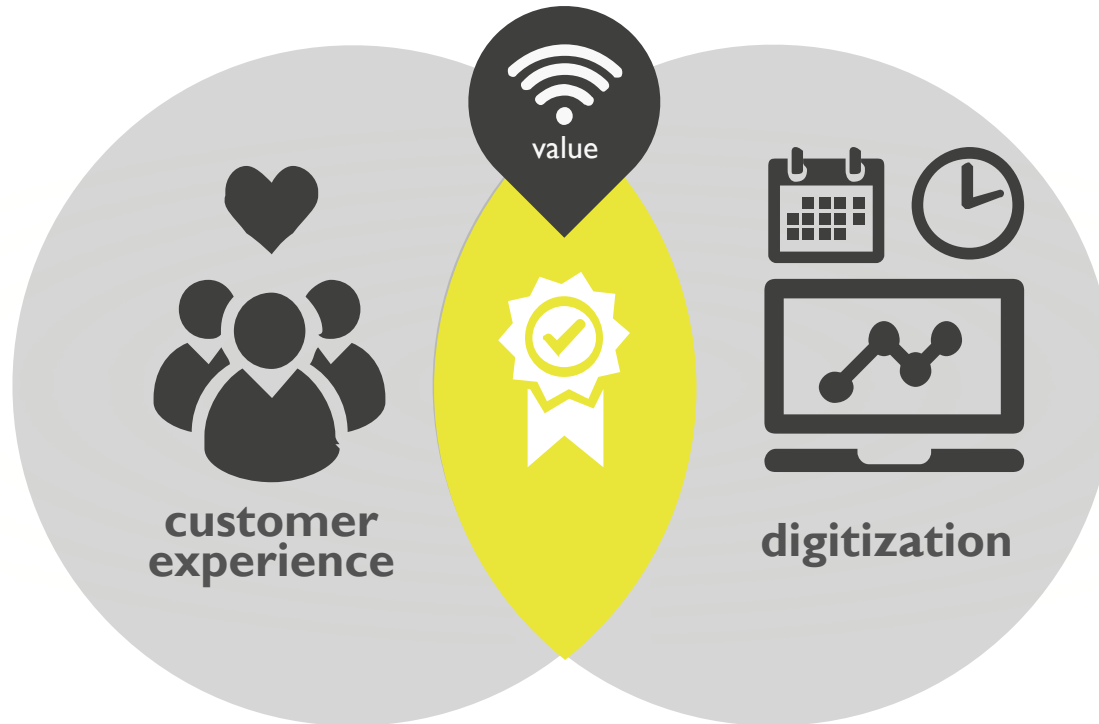
A European study
commissioned by
the Federation of
German Industries (BDI)
and conducted by
Roland Berger
Strategy Consultants

THE DIGITAL TRANSFORMATION OF INDUSTRY

How important
is it?
Who are the
winners?
What must
be done now?

we must establish a digital transformation agenda

WHICH IS CENTERED AROUND THE CUSTOMER



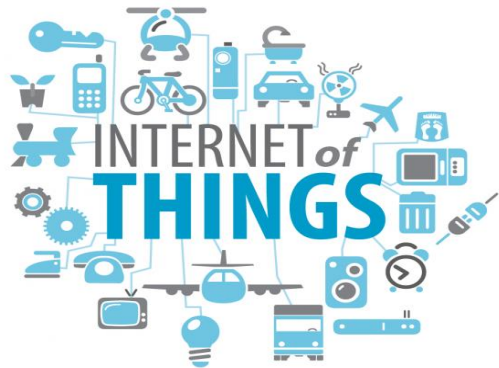


“Ni dovolj le optimizirati pristope znotraj
obstoječih okvirjev.”



“Poštni sortirni center nikoli ne bo dosegel zmogljivosti e-poštnega strežnika.”

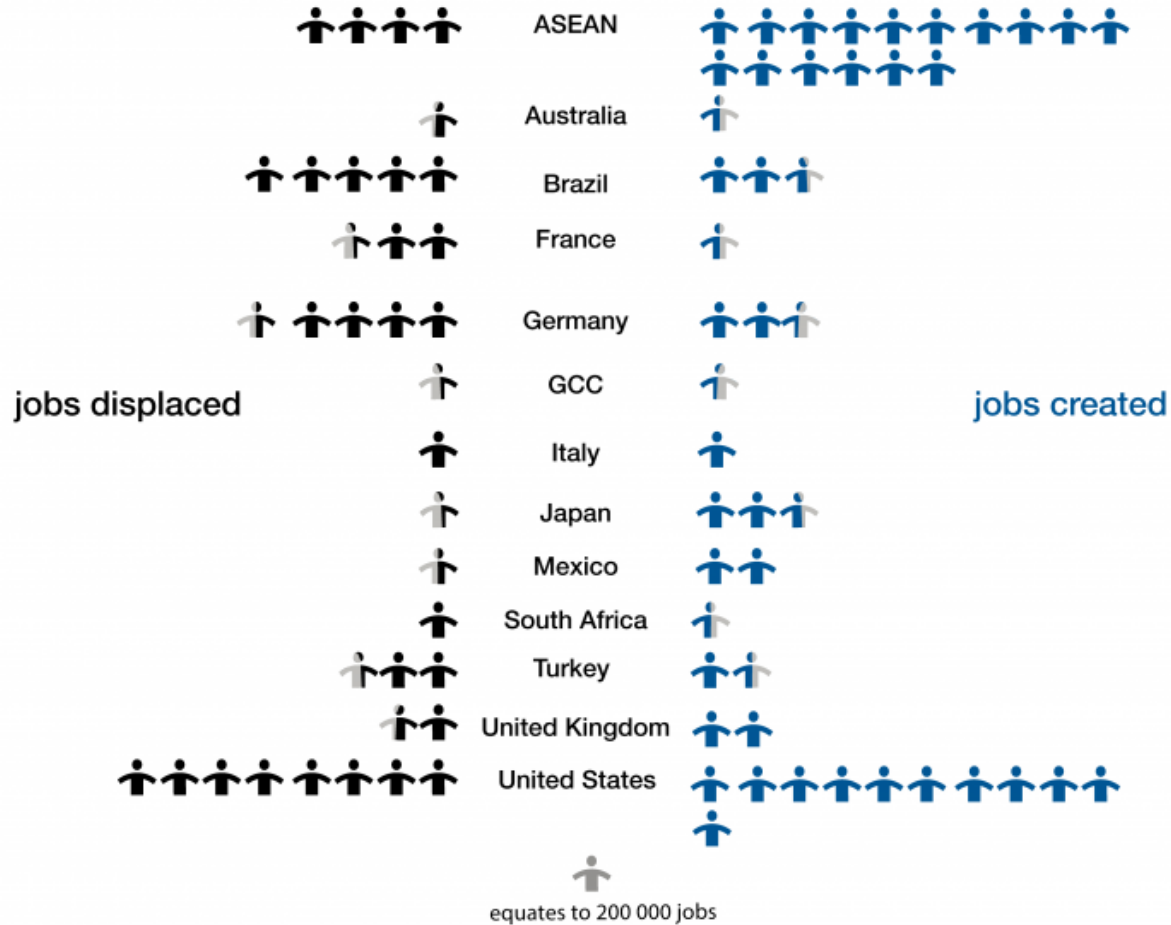
KADRI so ključni za uspešno gospodarstvo



- 1. Stroka
- 2. Vseživljenjsko učenje
- 3. Osebnost
- 4. Komunikacijske veščine
- 5. Poslovnost
- 6. Vodstvene veščine
- 7. Inovativnost

Spodbujanje ustvarjalnosti, inovativnosti in podjetnosti !

Labour markets disrupted



Top 10 skills

in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility



IKT: 825.000 PRILOŽNOSTI!

The screenshot shows the European Commission website page for 'Grand Coalition for Digital Jobs'. The page features a navigation menu with categories like 'The strategy', 'Economy', 'Society', 'Access & connectivity', 'Research & innovation', and 'DG CONNECT'. The main content area includes a sidebar with 'Society' and 'Skills & Jobs' sections, and a main article titled 'Grand Coalition for Digital Jobs'. The article text states: 'The European Commission is leading a multi-stakeholder partnership, the Grand Coalition for Digital Jobs, to tackle the lack of digital skills in Europe and the thousands of unfilled ICT-related vacancies across all industry sectors.' It also mentions that digital technology is transforming almost every aspect of public, private, or work life, and that there could be up to 825,000 unfilled vacancies for ICT professionals by 2020. A diagram on the right side of the article shows a network of connections between various sectors and skills. A 'Share' button is visible below the diagram.

Evropi grozi pomanjkanje strokovnjakov, ki bi zapolnili

825.000 delovnih mest na področju informacijskih in komunikacijskih tehnologij – IKT

posledično ji grozi zmanjšanje konkurenčnosti.

Skupni poziv Evropske komisije ter informacijskih in telekomunikacijskih podjetij k odpravi pomanjkanja usposobljenih strokovnjakov in povečanju zaposlovanja v digitalnem sektorju v Evropi (Bruselj, 2014)



Multimedija v globalnem kroženju ZNANJA

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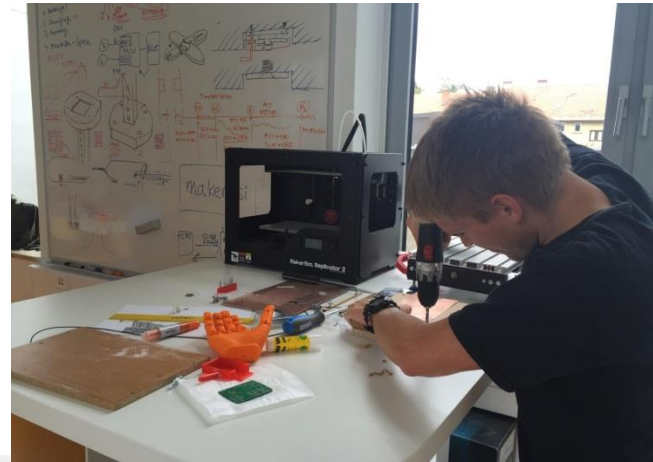
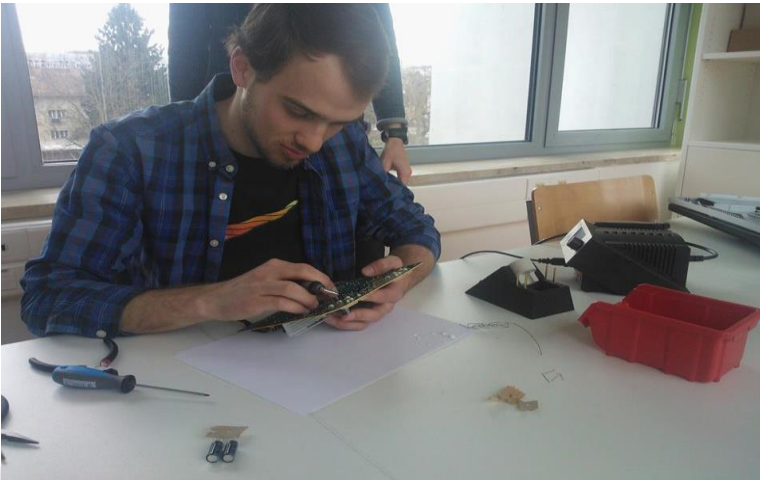
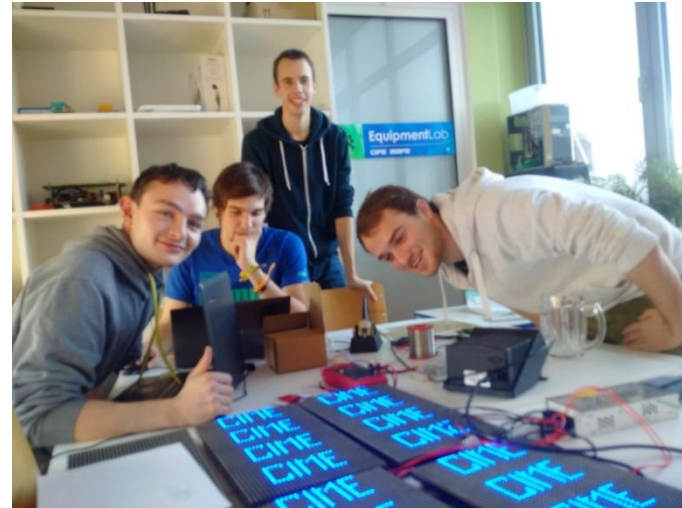


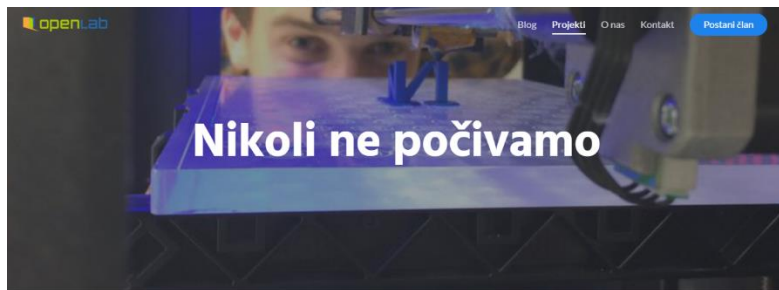
Online učenje in sodelovalno delo

The image displays a Zoom meeting interface. On the left, a group chat titled 'HelpDesk (6 members)' is visible, listing participants: rok.zurbli@lfe.org (ME), Mirko, mirko.orehek@gmail.com, Robert Bizjak, Nejc, and Administrator MITV (OWNER). The main area shows a video conference screen with a camera icon and the text 'You can join a conference using buttons below' and 'User deregistered.'. Below the video screen, there are controls for 'Quality' (set to SD) and a 'Call ended.' notification. A 'CO-BROWSING' button with a 'Follow' icon is present. On the right, a search bar and user profile 'rok.zurbli@lfe.org' are visible. A context menu is open over the video screen, offering options: 'Copy asset', 'Download', and 'Co-browsing'. Two yellow warning messages are displayed at the bottom right: 'Screen Share is not configured/allowed! Click here for instructions.'

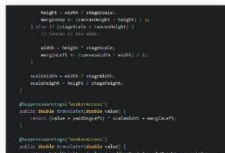


MakerLab
Ljubljana



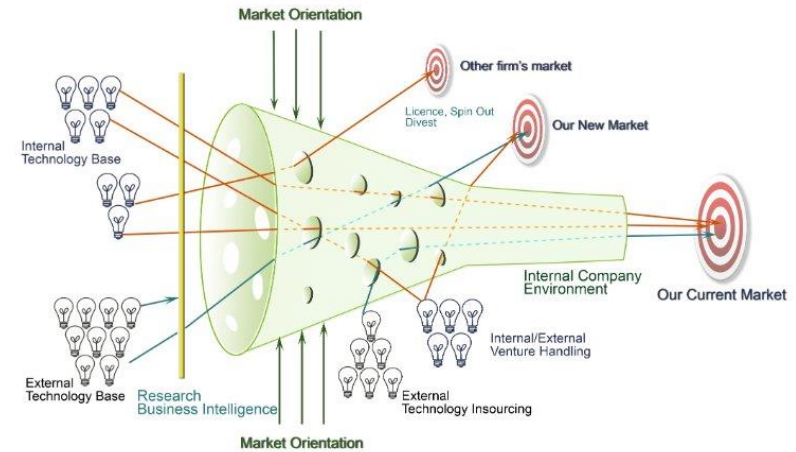
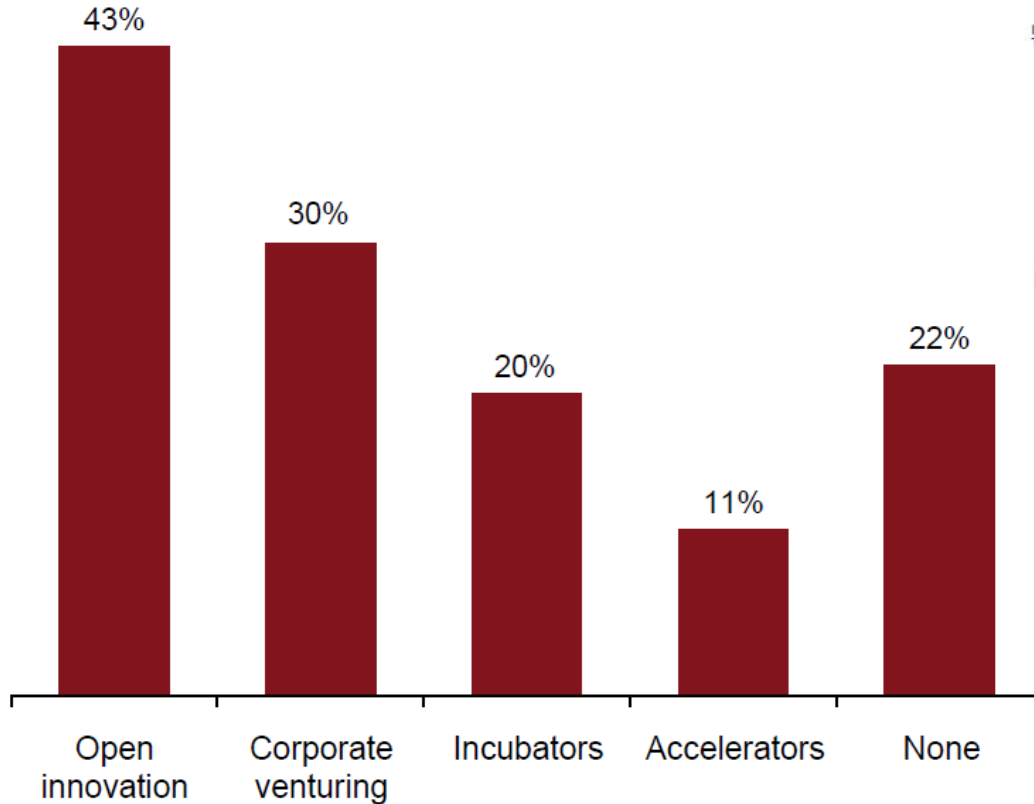


Tedenske delavnice



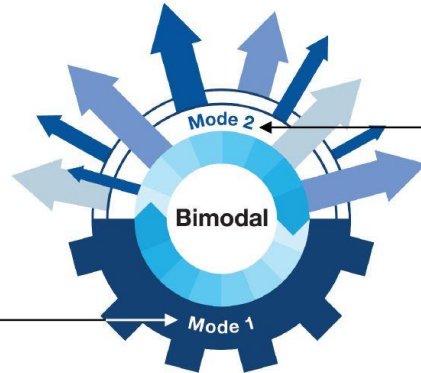
INOVACIJE V INOVACIJAH!

Type of innovation applied to compliment business model



BIMODALNOST

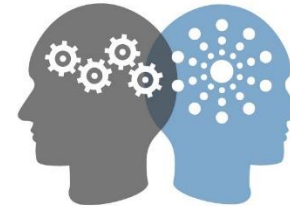
Bimodal is the practice of managing two separate but coherent styles of work — one focused on predictability and the other on exploration.



Mode 1 is predictable, improving and renovating in more well-understood areas.

Mode 2 is exploratory, experimenting to solve new problems.

Work Must Flow Between Modes (Refactoring); Methodologies Should Also (Metarefactoring)



Koraki do digitalnega uspeha



Jasen okvir
in cilji
strategije



Pilotni projekti,
agilni pristop,
partnerstva



Kompetence,
Privabiti prave ljudi,
izboljšati procese



Podatkovna analitika,
nove stortive,
večfunkcijski timi



Celovita transformacija
podjetja,
digitalna kultura



Celoviti produkti
in stortive,
ekostistem



VIR : PwC's 2016 Global Industry 4.0 Survey

Kako izkoristiti priložnosti digitalne transformacije

- Večina podjetja **mora razumeti** kaj se dogaja v poslovnem in tehnološkem okolju
- Digitalna transformacija mora biti **projekt vodstva**
- Digitalna transformacije pomeni **digitalni poslovni model** poslovanja, **NE (le) prenovo IT**
- **Kadrovska funkcija** in sestava ekip je ključna za prenovo
- Razvoj produktov in storitev v digitalnem okolju zahteva „**inovacijo inovacij**“
- **Bimodalnost**
- **Digitalna transformacija** je ključen proces, delajte stalno, izobražujte se, povežite se s kompetentnimi partnerji

Digital academy DA!



Univerza v Ljubljani
Fakulteta za elektrotehniko  **Katedra za IKT**



www.digitalna-akademija.si

Professional trainings in the field of ICT,
Digital transformation and IoT solutions



Modul 1: OSNOVNI POJMI, TEHNOLOGIJE IN TRENDI V DIGITALNI TRANSFORMACIJI

CILJ: Razumeti kaj se dogaja v poslovnem in tehnološkem okolju ter kje smo in kako naprej.

Modul 2: DIGITALNA TRANSFORMACIJA POSLOVNIH FUNKCIJ

CILJ: Razumeti ključne vidike digitalnega poslovnega modela.

Modul3: STRATEGIJA PODJETJA ZA DIGITALNO TRANSFORMACIJO

CILJ: Implementirati digitalno transformacijo, na konkretnem primeru lastnega podjetja.

Hvala za pozornost!

Vprašanja?

jb@ltfe.org

041 707 555

