



Pokojninska družba A, d.d.

Strateški, poslovni in kadrovski vidik digitalne preobrazbe

LTFE

Laboratorij za telekomunikacije

LMMFE

Laboratorij za multimedijo

prof. dr. Janez Bešter

IKT

Katedra za informacijske
in komunikacijske
tehnologije



Univerza v Ljubljani
Fakulteta *za elektrotehniko*

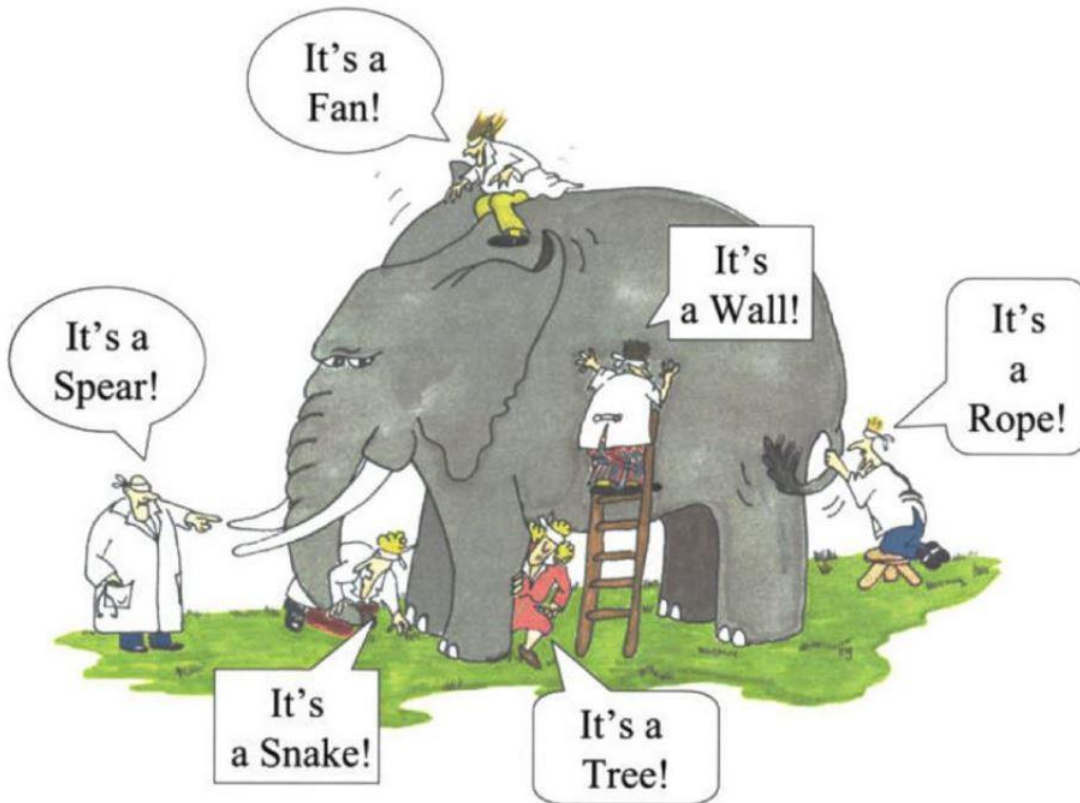
11.10.2017

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Priložnosti digitalne preobrazbe

- nove prebojne tehnologije
- „digitalni“ poslovni modeli
- kadri in kompetence „za 21 stoletje“
- izzvi izobraževalnega sistema in vseživljenjskega učenja
- pridobivanje in motiviranje talentov

Kaj je digitalna preobrazba?



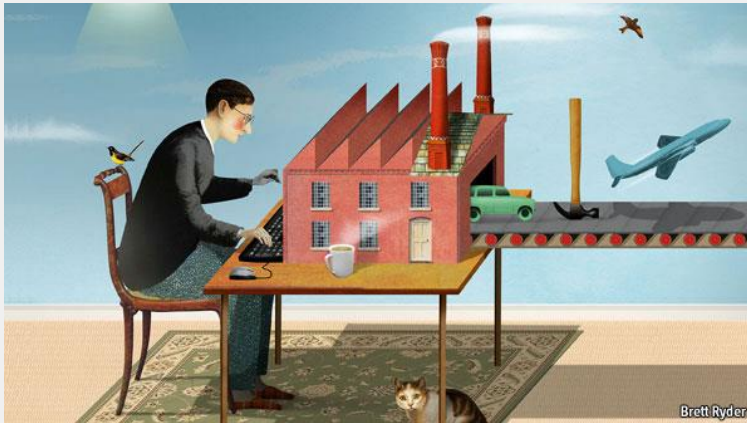
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— Digital is a lifestyle, not a technology



THE WORLD HAS CHANGED



Business disruption



Technology disruption

Cloud, Wearables, IoT, Big Data, Robotics, Blockchain, ...

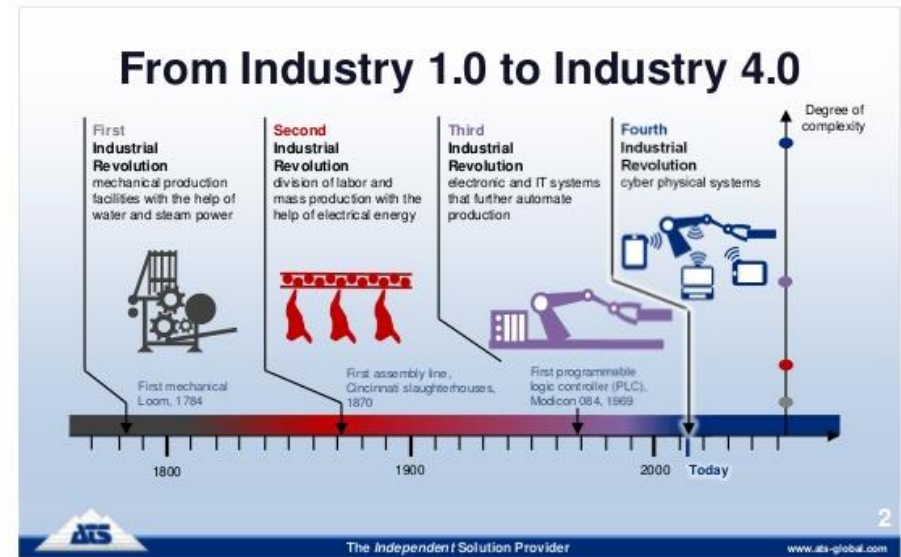
Generational disruption

Millennial, Gen X, Y, Z, Gen α

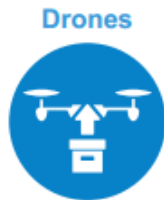
Vir: Microsoft

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Nove tehnologije



Examples of the falling cost of key technologies



Cost per unit

2007	\$100,000
2013	\$700

* kilowatt hour



Cost per unit

2000	\$2.7 billion
2007	\$10 million
2014	\$1,000

To find out more about the DTI project, visit <http://reports.weforum.org/digital-transformation>



Cost per kWh*

1984	\$30
2014	\$0.16

Technologies of the future

SEVEN TECHNOLOGIES ARE TRANSFORMING THE INDUSTRIES COVERED BY DTI RESEARCH



DTI research to date has identified seven key technologies that are expected to have the most impact among the industries analysed.

Note: This list is not comprehensive and does not include all the emerging technologies (e.g. blockchain) that were identified in only one or two use cases across DTI industries to date.



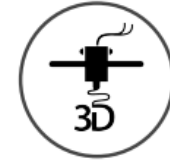
Artificial intelligence



Autonomous vehicles



Big data analytics and cloud



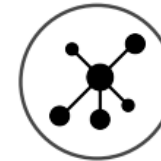
Custom manufacturing and 3D printing



Internet of Things (IoT) and connected devices



Robots and drones



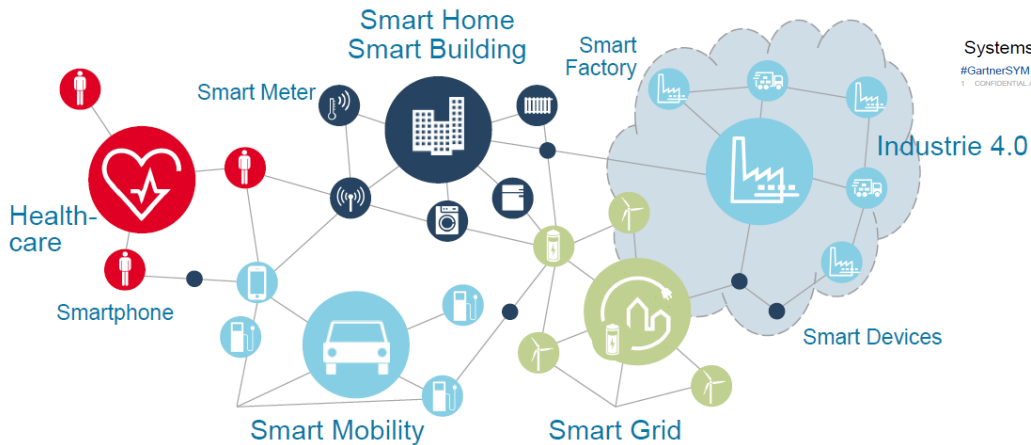
Social media and platforms

Vir: World Economic Forum

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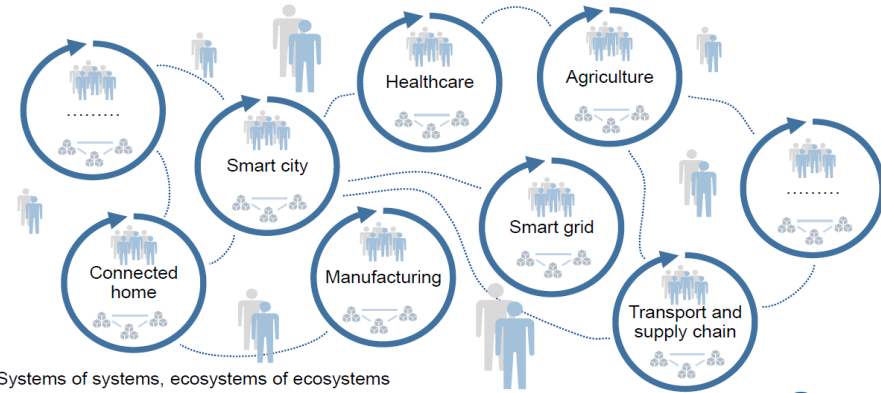
Internet stvari in storitve

The Internet of Things and Services



Graphics © Bosch Rexroth AG

IoT Will Become a Foundation of the Digital Society



Systems of systems, ecosystems of ecosystems

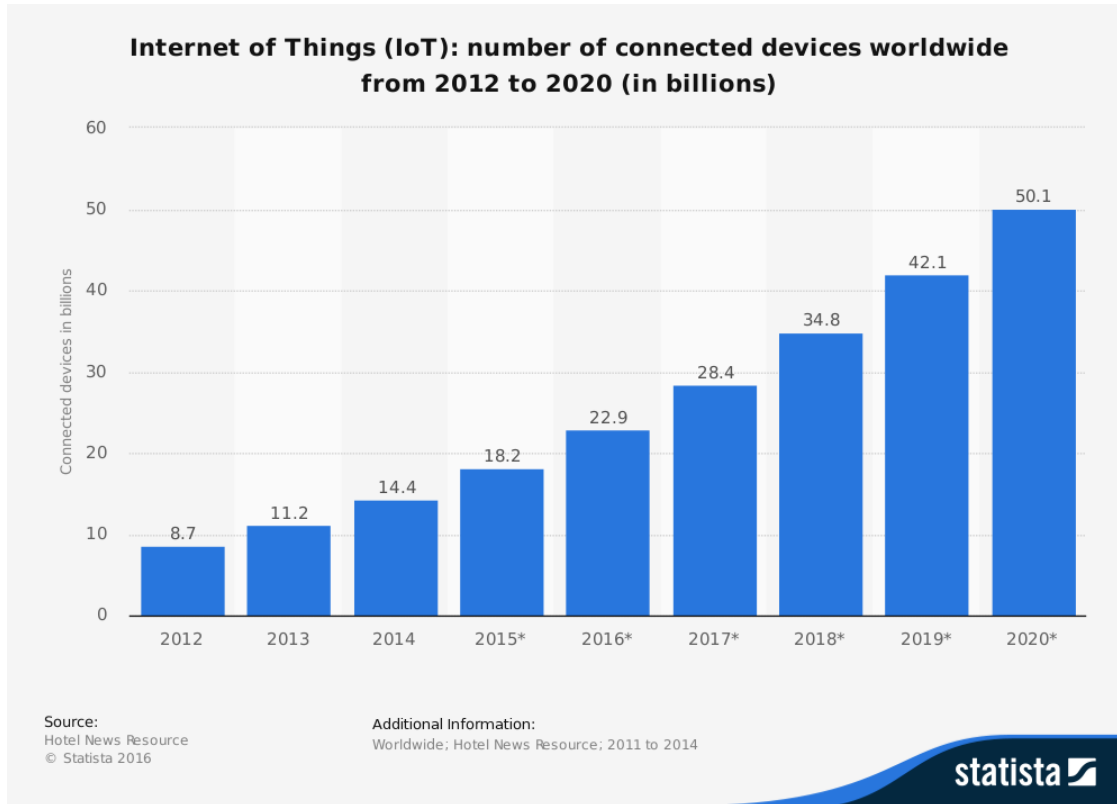
#GartnerSYM

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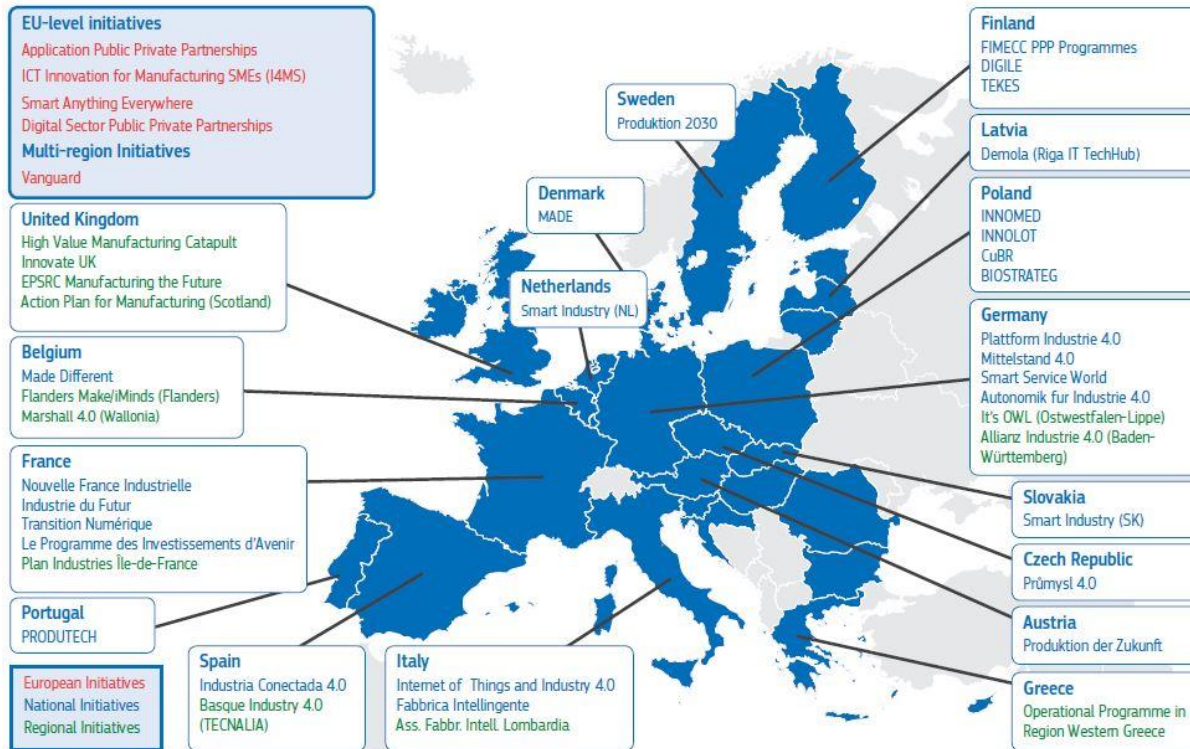
2020 – 50 milijard povezanih naprav v internetu



Vir: Ericsson Vision, 2010

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Iniciative po državah



Digitising European Industry



What can we do?

<https://ec.europa.eu/digital-single-market/en/digitising-european-industry>

Avstrija



GERMAN

ENGLISH

INDUSTRY 4.0 ▾

ABOUT THE ASSOCIATION ▾

EVENTS ▾

SUBJECTS ▾

SERVICES

Association Industry 4.0 Austria

The Platform for Smart Production

MORE

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PLATTFORM
INDUSTRIE 4.0



Federal Ministry
for Economic Affairs
and Energy

Federal Ministry
of Education
and Research

🏠 [Industrie 4.0](#) ▾ [In practice](#) ▾ [The platform](#) ▾

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Digitising European Industry First Stakeholder Forum



Federal Ministry
for Economic Affairs
and Energy



Mastering the digitisation of industry in Europe

Laurent Blanchard, Executive Vice President, Dassault Systèmes
Ineke Dezentjé Hamming-Bluemink, President, Employers' association FME
Tomas Hedeborg, President, Orgalime
Peter Olson, Vice President & Head of European Affairs, Ericsson



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Slovenija

Slovenska digitalna koalicija

 **DIGITALNA SLOVENIJA**

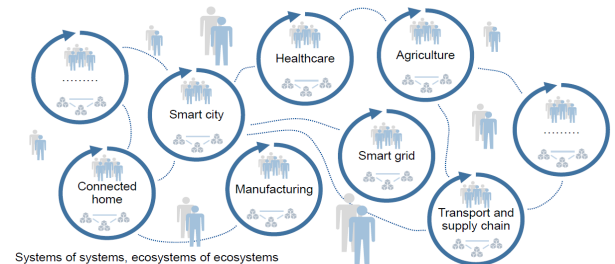


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Sprememba modela zaposlovanja



IoT Will Become a Foundation of the Digital Society



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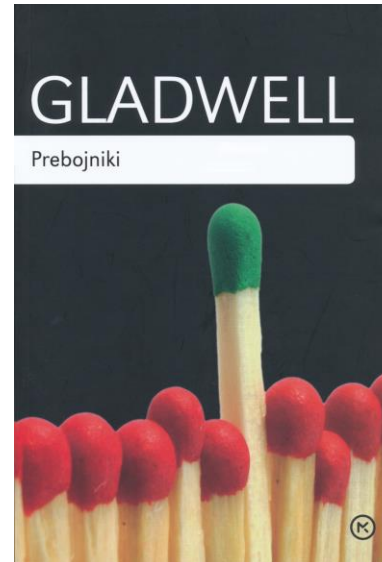
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Kadri so ključni za uspešno gospodarstvo

- Spodbujanje ustvarjalnosti, inovativnosti in podjetnosti

0. Stroka

1. Motiviranost
2. Vseživljenjsko učenje
3. Inovativnost
4. Ustvarjalnost
5. Komunikacijske veščine
6. Poslovnost
7. Vodstvene veščine



10 glavnih kompetenc

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



The Future of Jobs

Employment, Skills and
Workforce Strategy for the
Fourth Industrial Revolution



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



Kompetence „za preživetje“



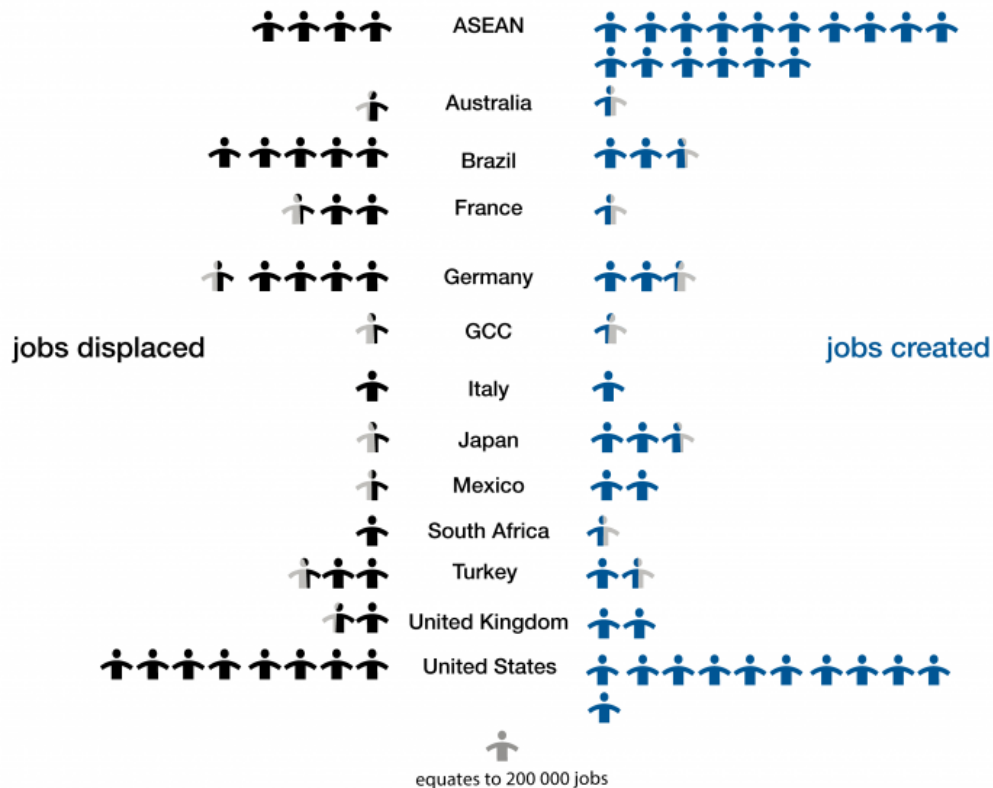
Tony Wagner's Seven Survival Skills

as defined by business leaders

1. CRITICAL THINKING AND PROBLEM SOLVING
2. COLLABORATION ACROSS NETWORKS AND LEADING BY INFLUENCE
3. AGILITY AND ADAPTABILITY
4. INITIATIVE AND ENTREPRENEURSHIP
5. EFFECTIVE ORAL AND WRITTEN COMMUNICATION
6. ACCESSING AND ANALYZING INFORMATION
7. CURIOSITY AND IMAGINATION

Trgi delovne sile

Labour markets disrupted



Source: Future of Jobs Report, World Economic Forum

IKT: 825.000 priložnosti!

The screenshot shows the European Commission website page for 'Grand Coalition for Digital Jobs'. The page is titled 'Grand Coalition for Digital Jobs' and is part of the 'Digital Economy & Society' section. The main content area features a headline: '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.' Below this, there is a paragraph explaining that digital technology is transforming almost every aspect of our public, private or work life, and that skills development does not come about as fast as technological development, leading to a paradoxical situation where millions of Europeans are currently without a job despite the presence of up to 825,000 unfilled vacancies for ICT professionals by 2020. A diagram on the right side of the page illustrates the 'Grand Coalition for Digital Jobs' with various stakeholders and their interactions. The page also includes a 'Share' button and a 'Latest' tab.

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

Evropi grozi pomanjkanje strokovnjakov, ki bi zapolnili

825.000 delovnih mest na področju informacijskih in komunikacijskih tehnologij – IKT

posledično ji grozi zmanjšanje konkurenčnosti

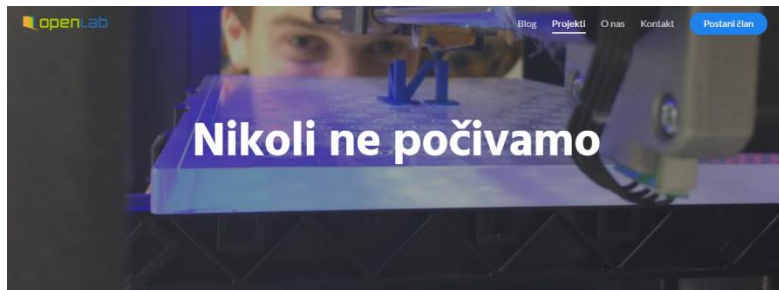


Multimedija v globalnem kroženju znanja

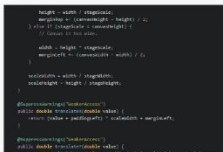


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Openlab



Tedenske delavnice



www.openlab.si

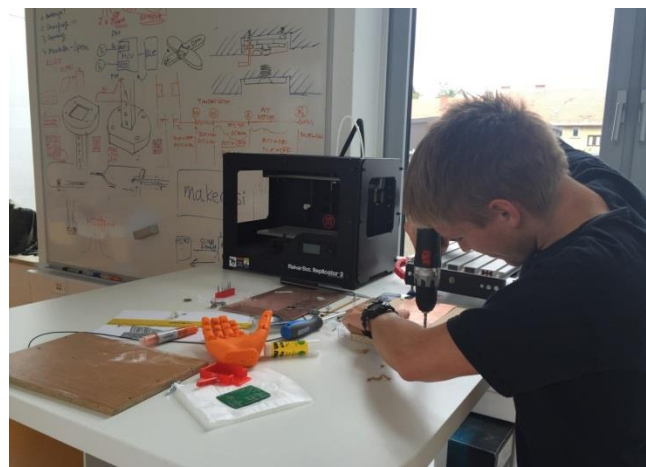
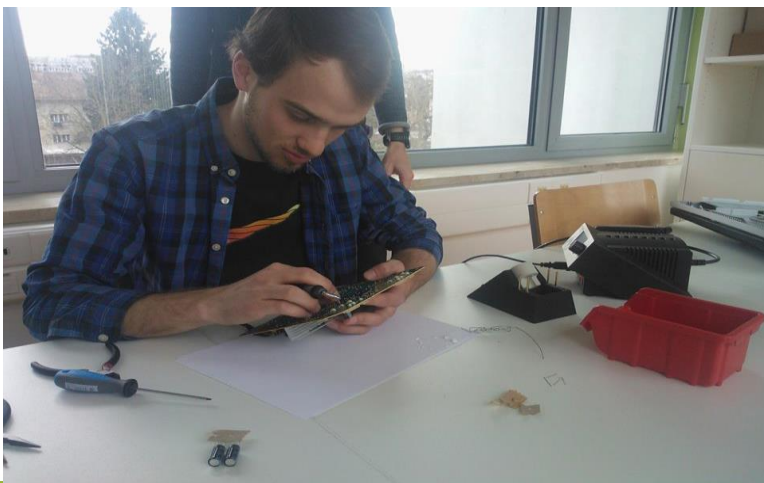
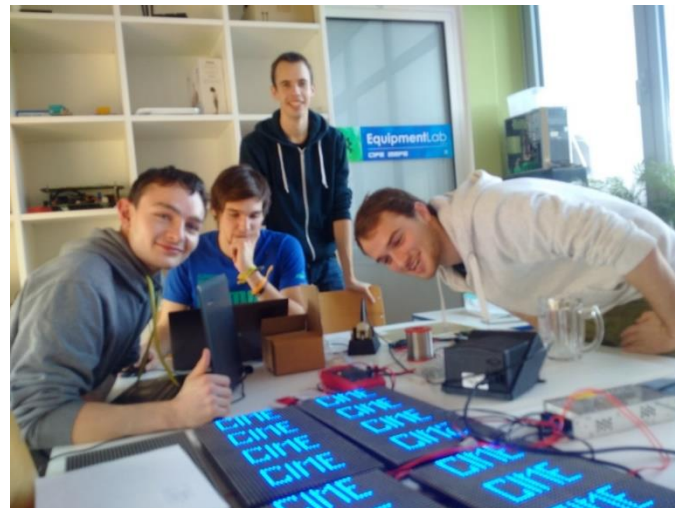


foto: Bojan Okorn
www.ksk.si

Makerlab

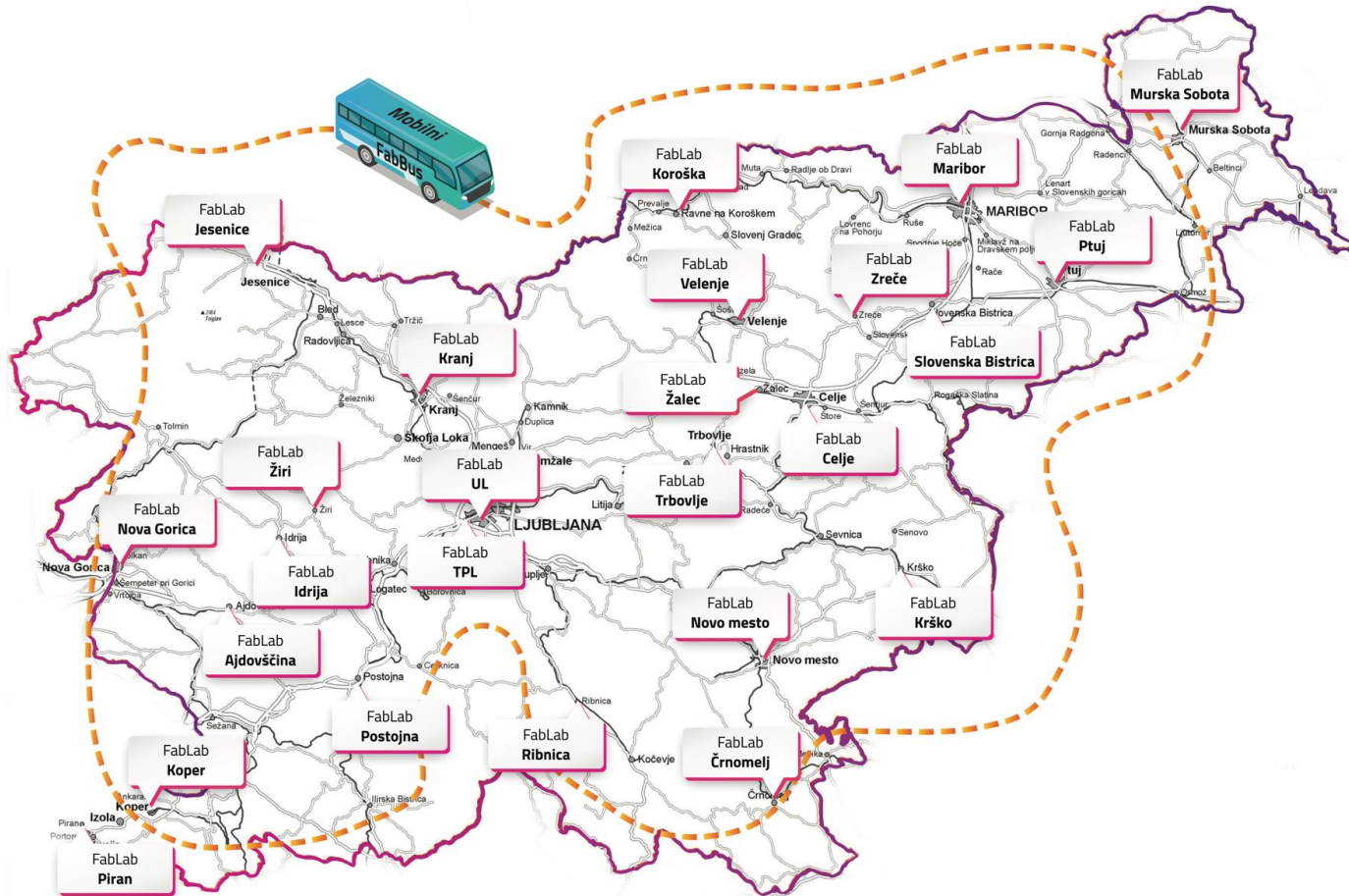


MakerLab
Ljubljana



IFE

Nacionalna mreža FabLab-ov



Vseživljensko izobraževanje www.ict-academy.eu

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



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10 najbolj inovativnih podjetij

10 Most Innovative Companies

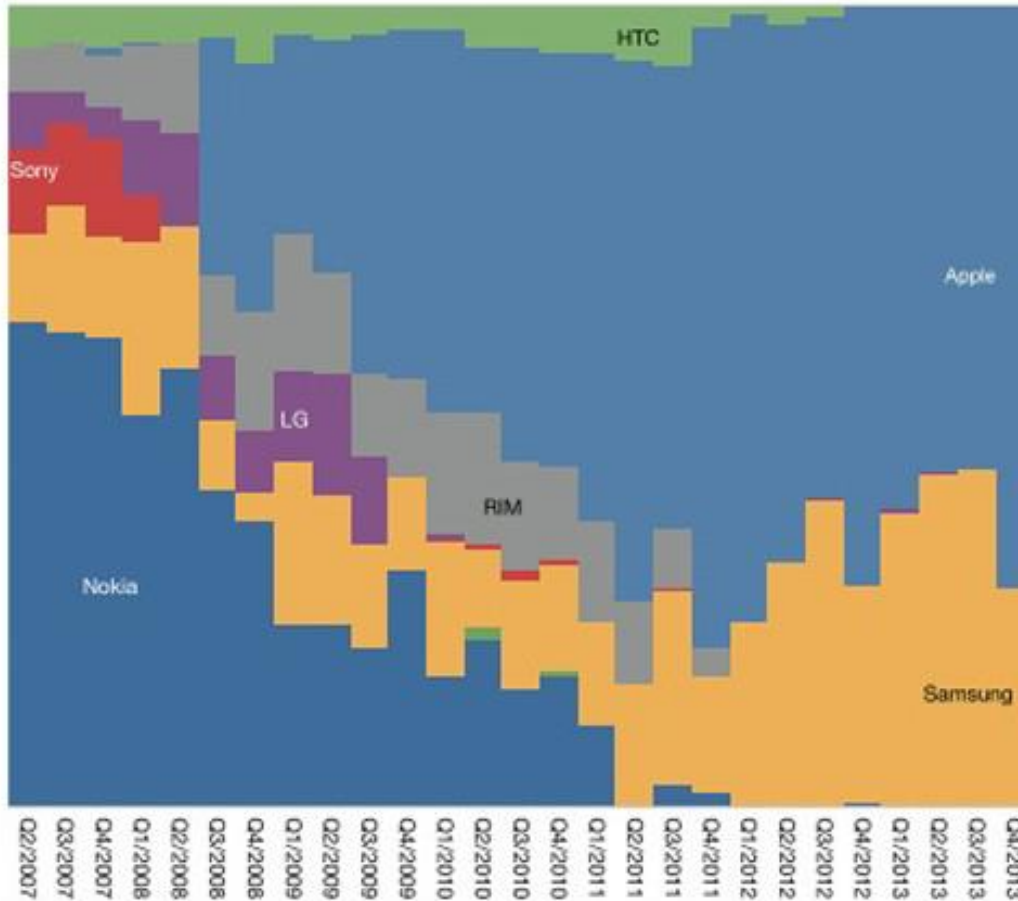
Rank	2010	2011	2012	2013	2014	2015	2016
1	Apple	Apple	Apple	Apple	Apple	Apple	Apple
2	Google	Google	Google	Google	Google	Google	Alphabet*
3	3M	3M	3M	Samsung	Amazon	Tesla	3M
4	General Electric	General Electric	Samsung	Amazon	Samsung	Samsung	Tesla
5	Toyota	Microsoft	General Electric	3M	Tesla	Amazon	Amazon
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.

Nokia – Apple – Samsung

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



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** ...

“Ni dovolj le optimizirati pristope znotraj obstoječih okvirjev”



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



Kako izkoristiti priložnosti dig. transformacije

- Večina podjetja (organizacije) 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 stalen proces, izobražujte se, povežite se s kompetentnimi partnerji

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



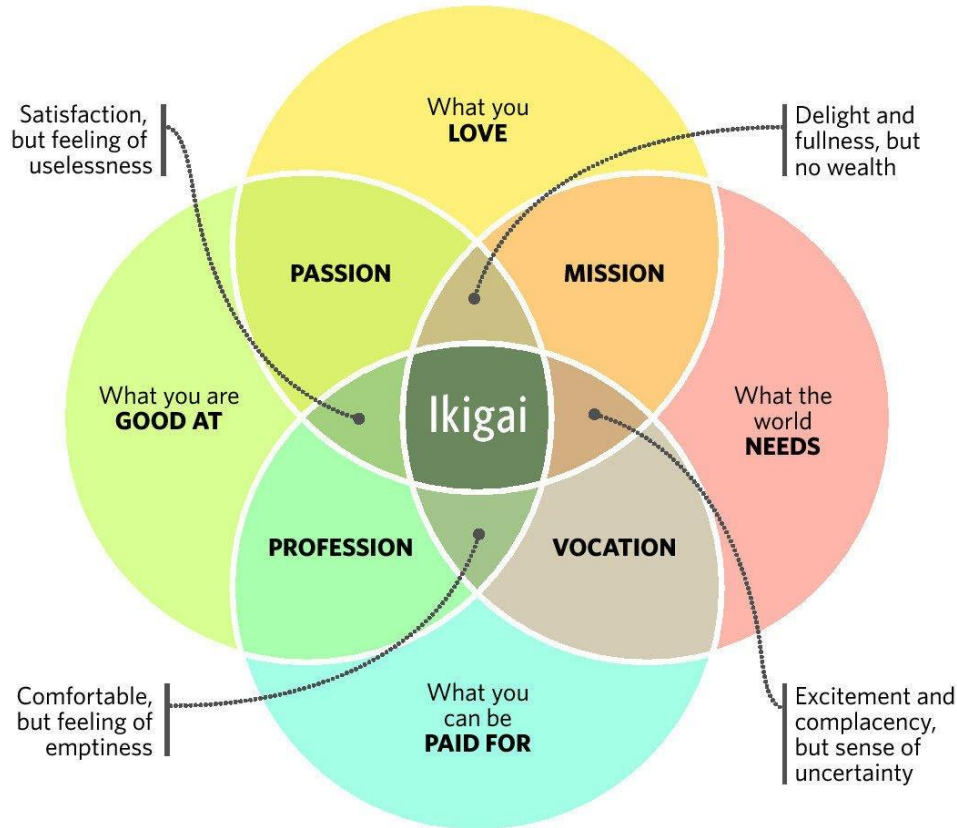
VIR : PwC's 2016 Global Industry 4.0 Survey

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Karierne odločitve in „boj za talente“!

Ikigai

A JAPANESE CONCEPT MEANING “A REASON FOR BEING”



SOURCE: dreamstime

TORONTO STAR GRAPHIC

TALENT
CENTER

[Talentcenter](#) [Methode](#) [Ablauf](#) [Wir](#) [Infos](#)



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Hvala za pozornost!

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