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*From the possible to the real!*



# ***Digital Transformation of Ukraine and Czechia: Perspectives and Risks***

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**IT for Practice 2017**

**VSB-TU Ostrava, 09-10 October 2017**

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# AGENDA



- *The era of the digital economy is a time of change.*
- *Comparative analysis of Digital Transformation of the EU, CZ and UA.*
- *Perspectives of Digital Transformation the EU, CZ and UA.*
- *Risks of the Digital Transformation.*
- *Conclusions and recommendations.*

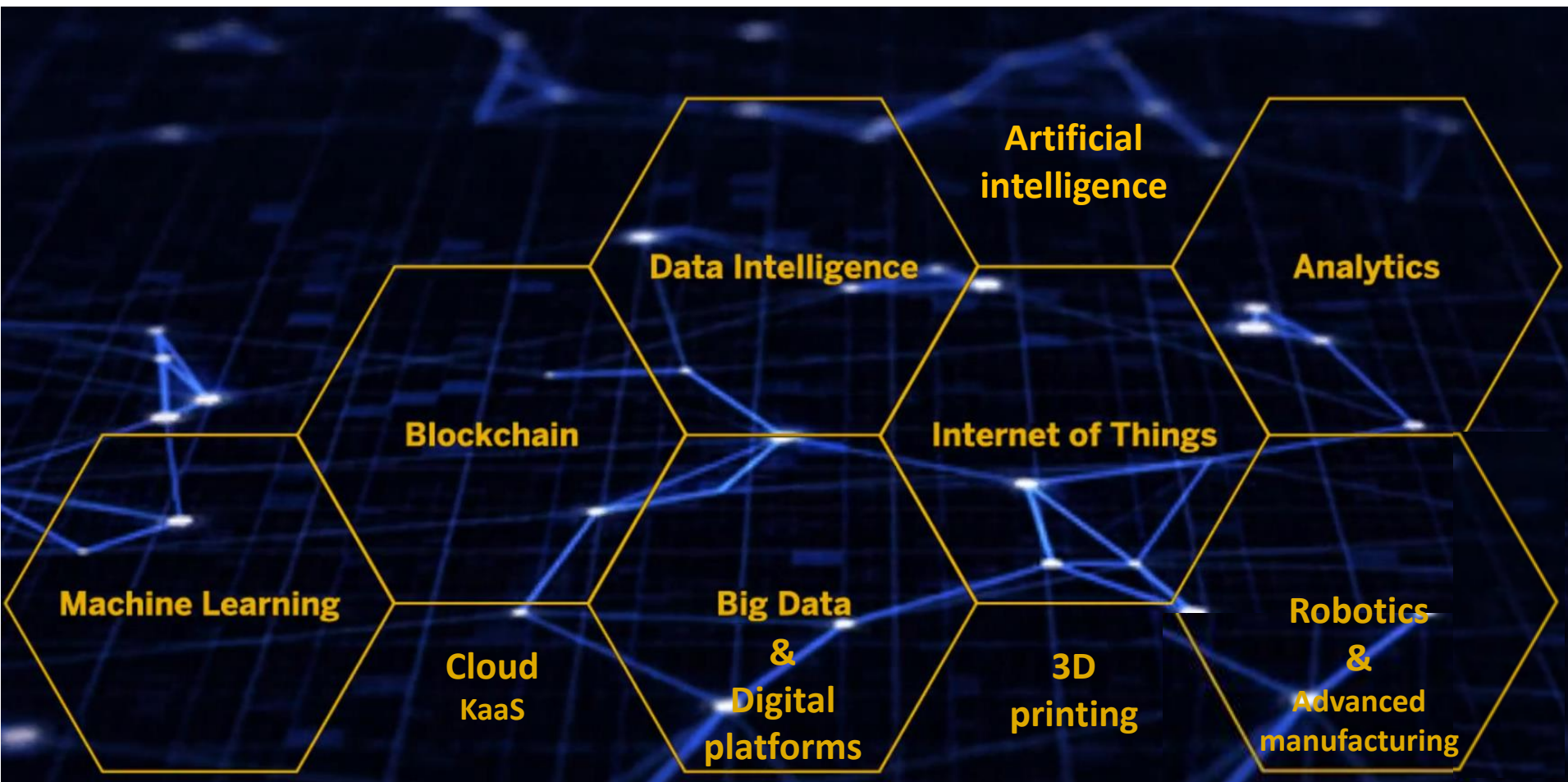
# The era of the digital economy is a time of change



“The digitalization of business has ceased to be a way of gaining competitive advantages, but has become a decisive factor in staying on the market” (Deloitte, 2016).

Digital transformation is a very dynamic process that affects all sectors of the economy and ruthlessly rejects outsiders.

# Digital Innovation Technologies – the Basis of Digital Transformation



# Digital Economy and Digital Transformation



Promotion and  
Innovation

Society and  
Knowledge

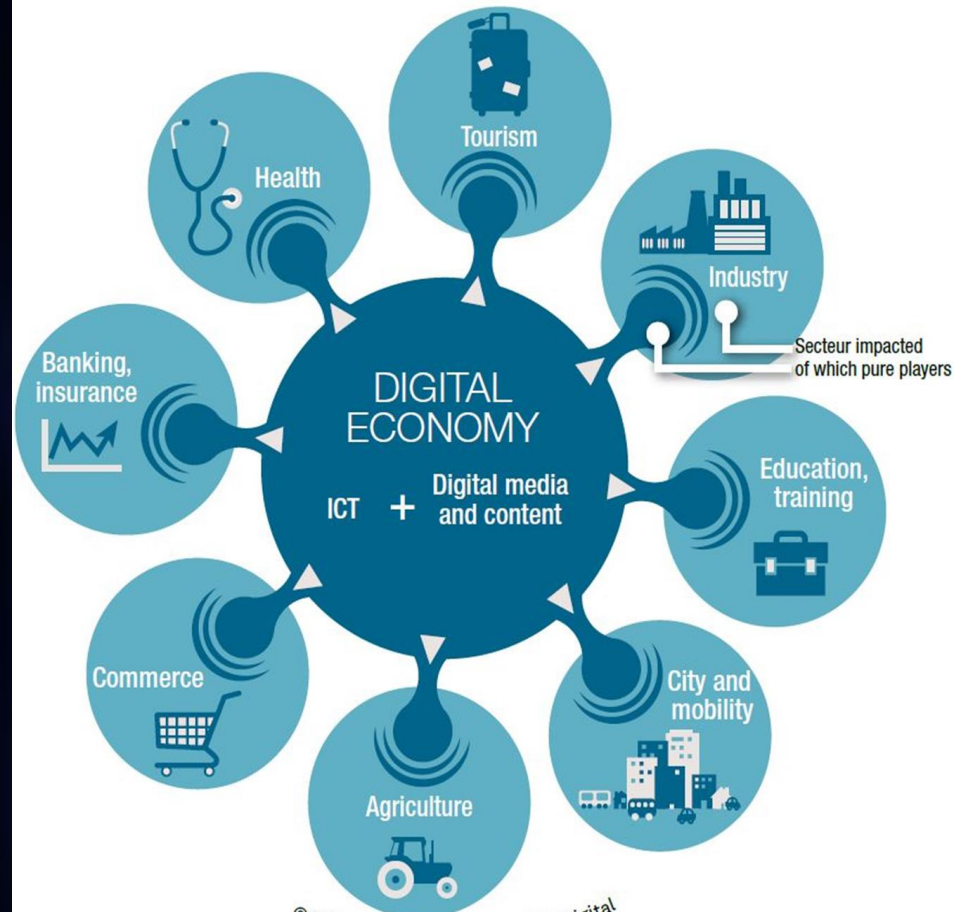
Service  
infrastructure

Digital  
Economy

Soft  
infrastructure

Hard infrastructure

Digital technology spreads through the entire economy



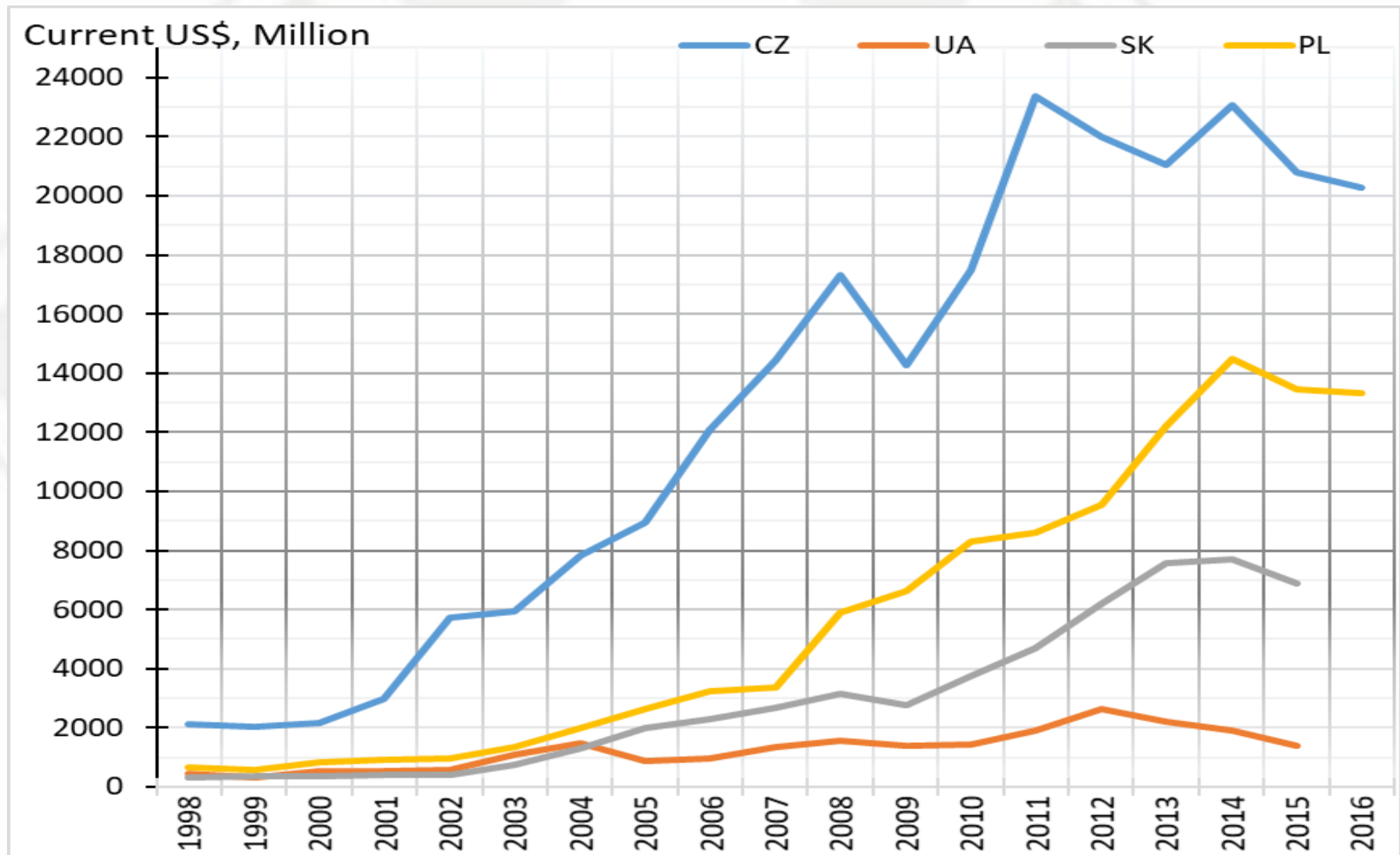
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# The Dynamics of High-technology exports of Czechia and Ukraine in comparison with the neighboring countries (Slovakia and Poland)

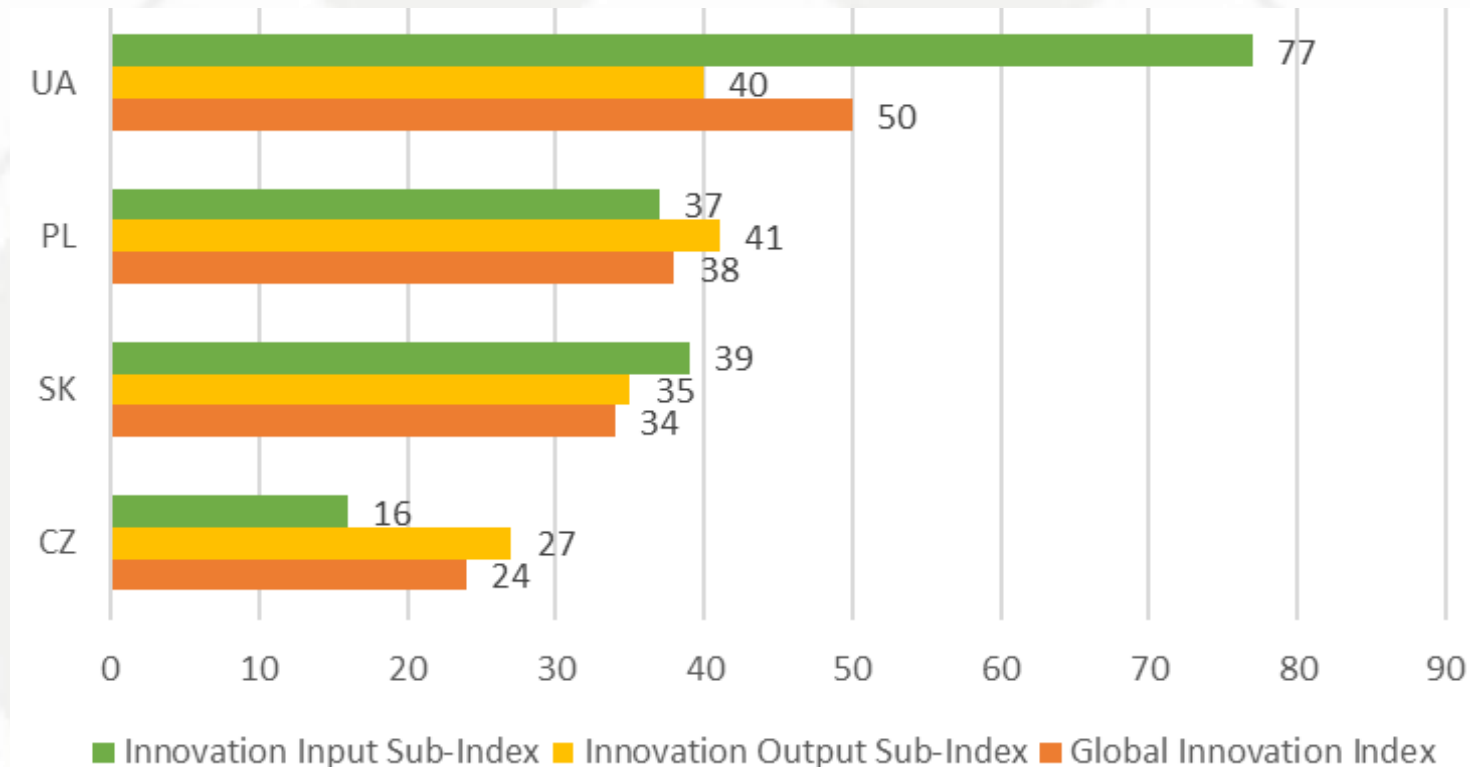


Source: own study based on the World Bank, 2017

# The Global Innovation Index 2017



## Rating among 127 countries

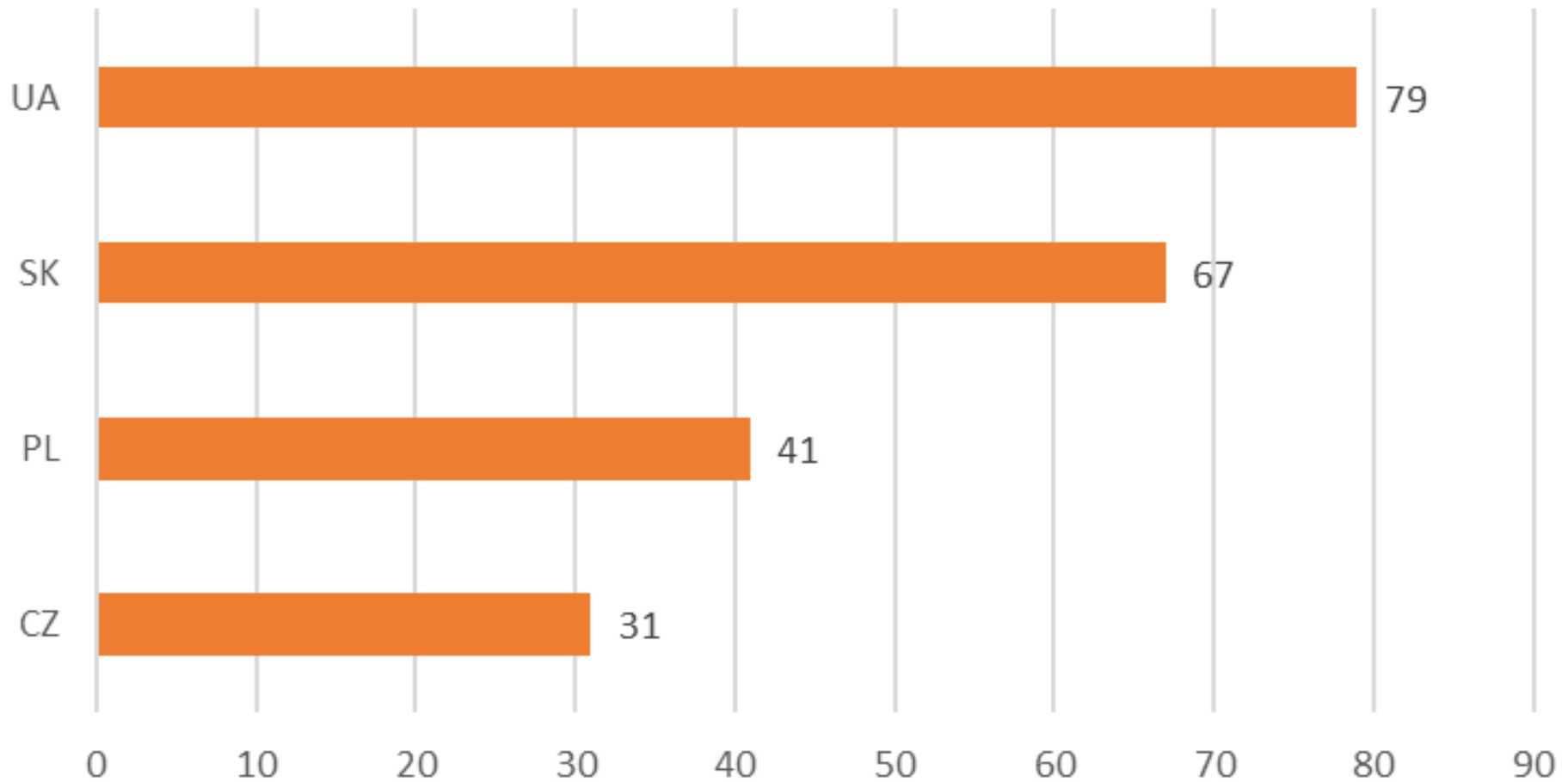


Based on the [http://www.wipo.int/edocs/pubdocs/en/wipo\\_pub\\_gii\\_2017.pdf](http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2017.pdf)

- Innovation Input Sub-Index (*Institutions, Human capital and research, Infrastructure, market sophistication, Business sophistication*)
- Innovation Output Sub-Index (*Knowledge and technology outputs, Creative outputs*)

# Global Competitiveness Index 2016-2017

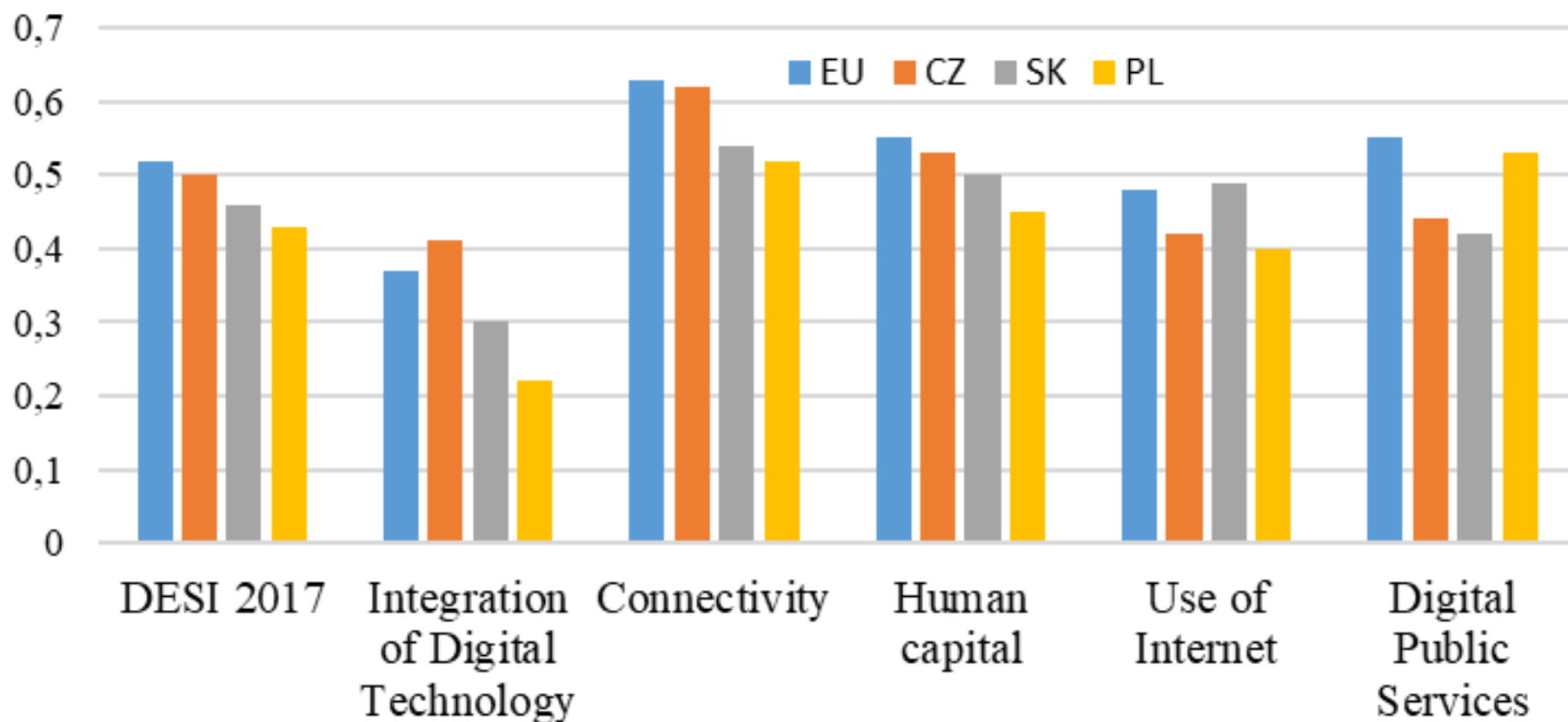
## Rating among 138 countries



Based on the

[http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017\\_FINAL.pdf](http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf)

# The value of the Digital Economy and Society Index (DESI) 2017 and its components for the Czech Republic in comparison with Slovakia, Poland and the average in the EU



Source : own construction based on the European Commission, 2017.



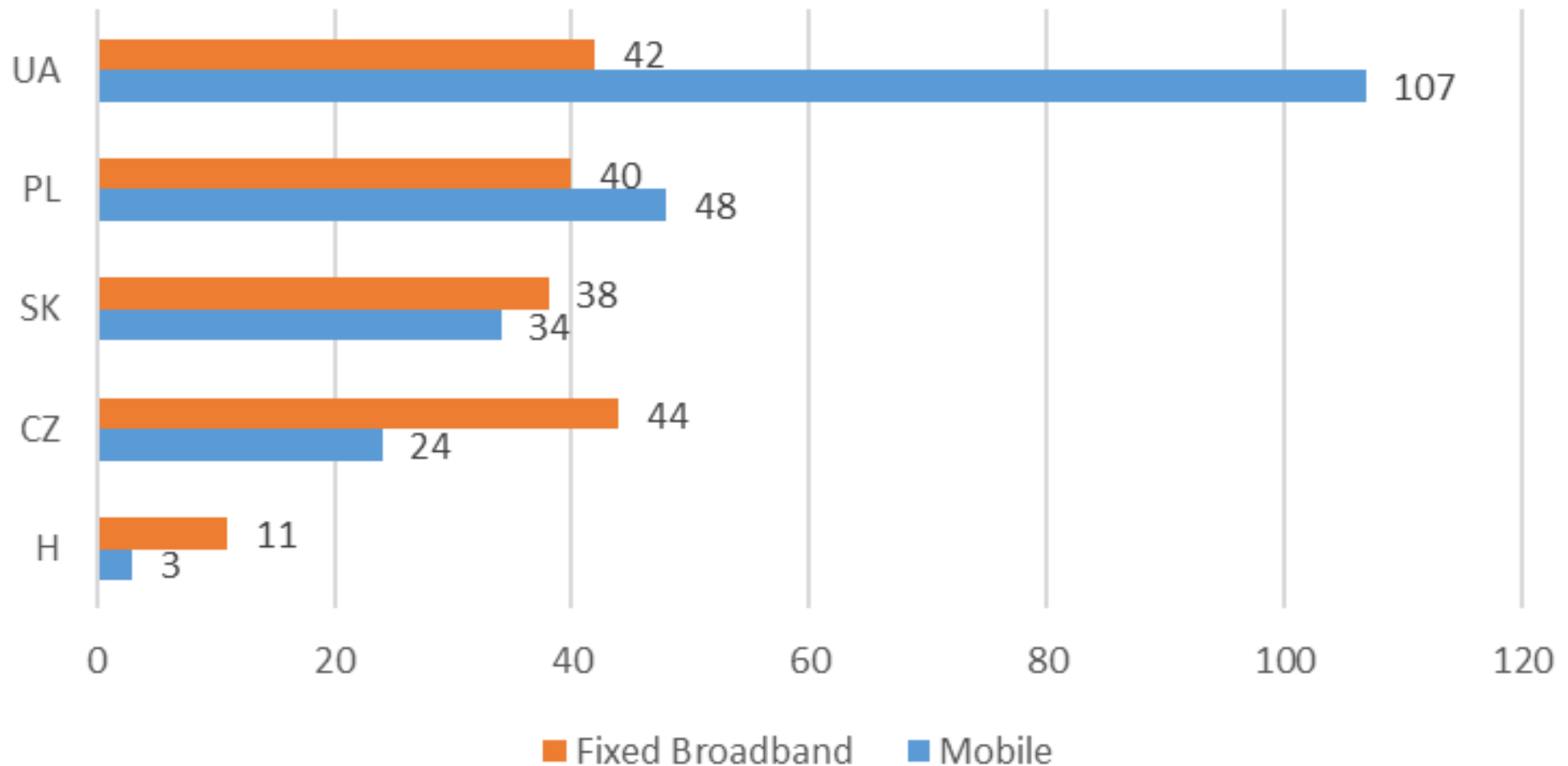
# The Czech Republic's successes in the field of innovation and digital transformation

*on our opinion are associated with such components*

- First of all, it is conducive business climate in the country, which stimulates the company to introduction of innovations.
- Secondly, a high-quality human capital, which perceives innovation and ready to accept active participation in the processes of digital transformation.
- Third, it is an effective management at all levels of the economy and society to use the potential and evaluate the effect of digital technologies application.

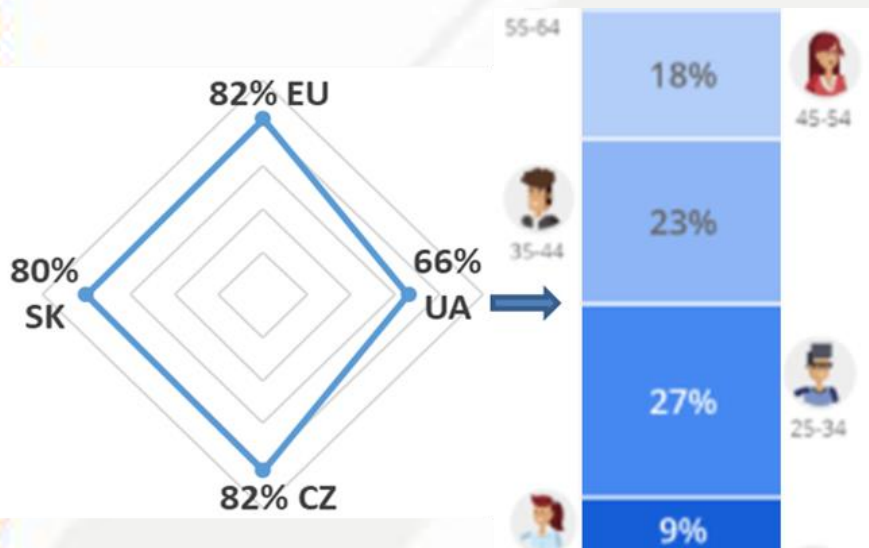
# Speedtest Global Index (August 2017)

## Rating among 133 countries



Based on the <http://www.speedtest.net/global-index>

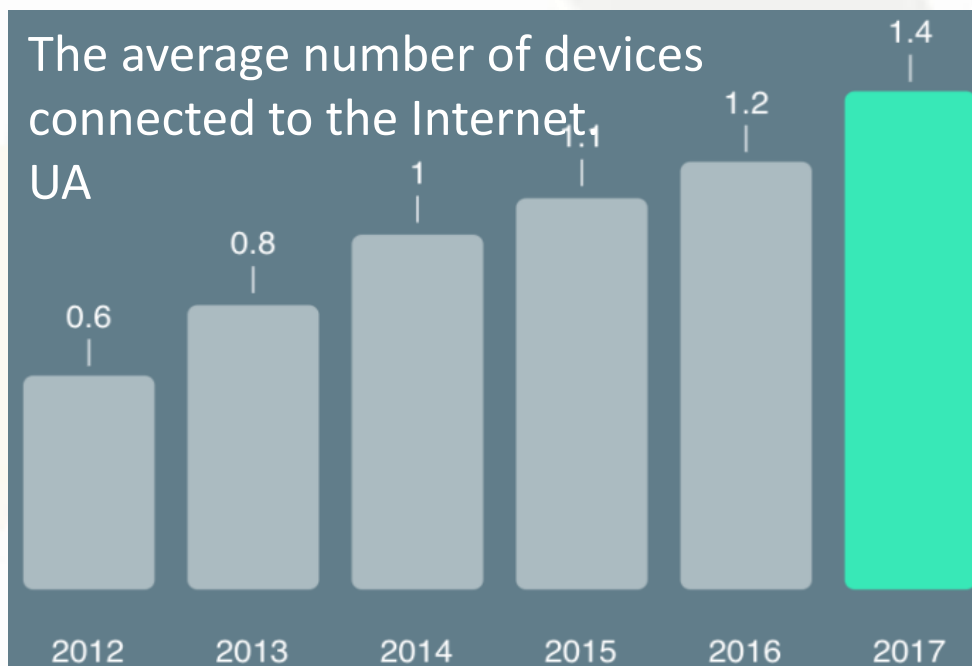
# Connected Consumer Study 2017



Sours: own based on the Kantar TNS

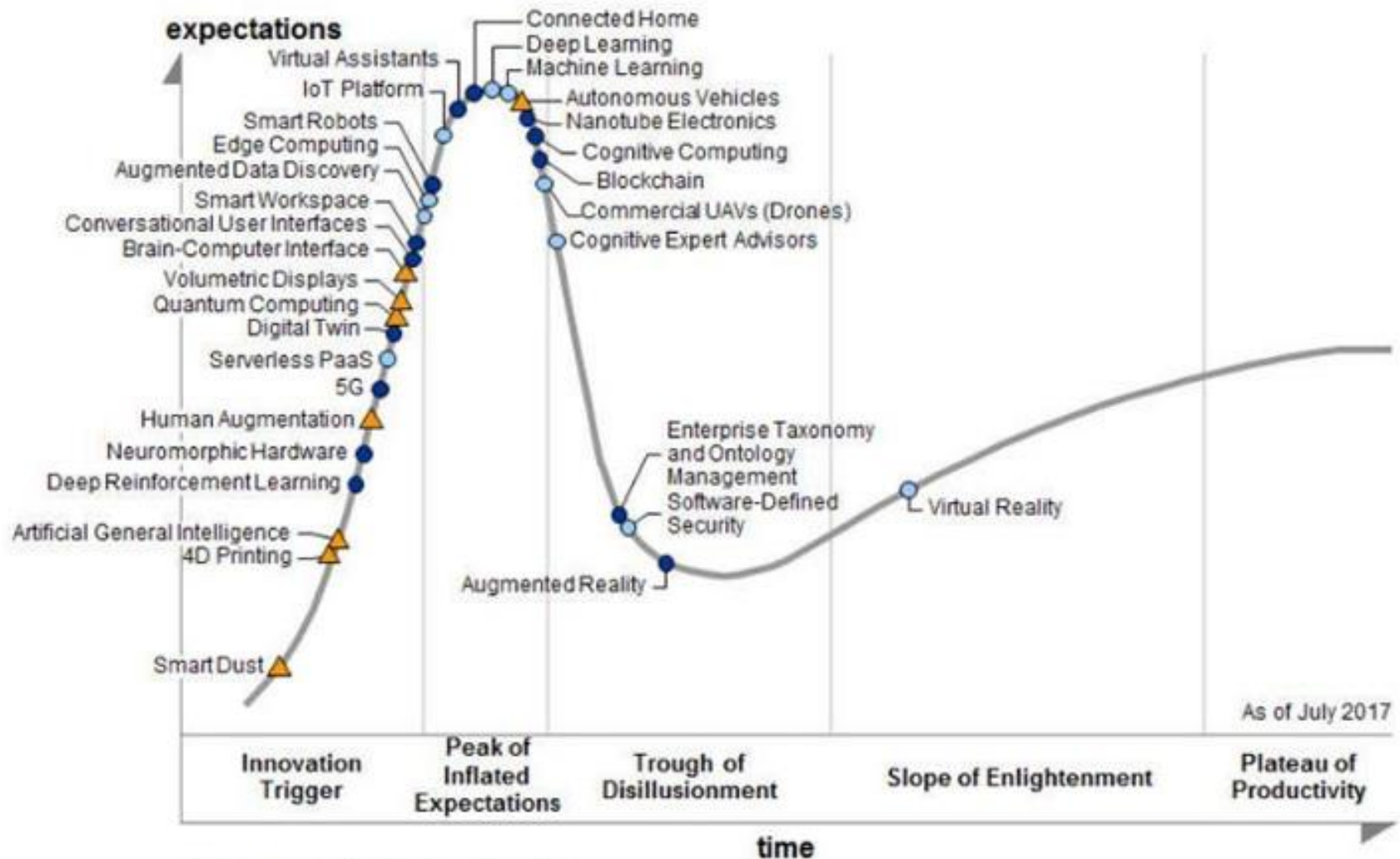
At the same time, for one Ukrainian user aged 16 to 44 years old, there are already 2 or more devices.

66% of Ukrainians regularly use the Internet for personal purposes.



Sours: Kantar TNS

# Hype Cycle for Emerging Technologies, 2017



Note: PaaS = platform as a service; UAVs = unmanned aerial vehicles

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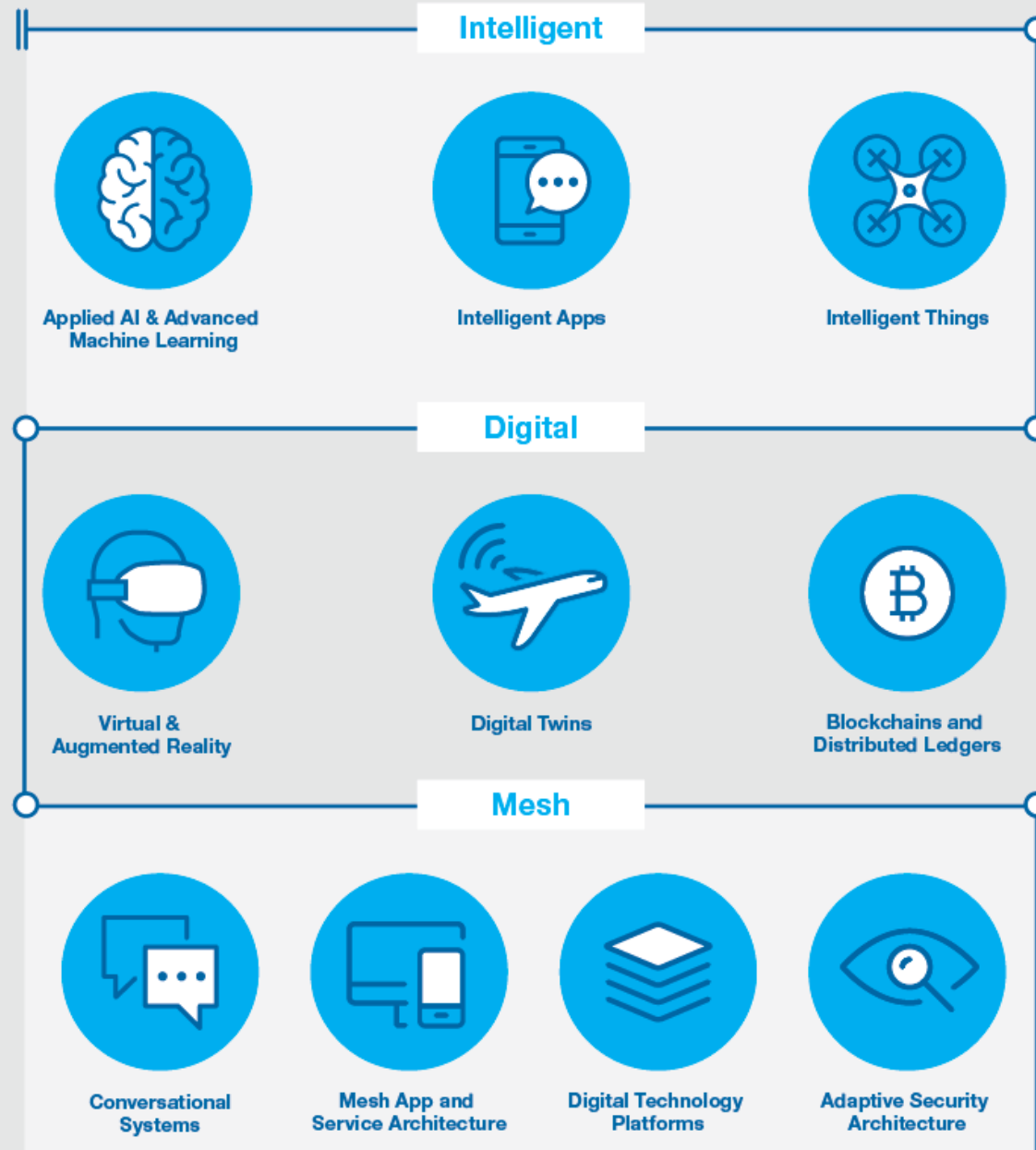


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# Top 10 Strategic Technology Trends 2017



Gartner.



# Europe 2020 strategy (Published in May 2010) -



## Perspectives of Digital Transformation EU

- On 6 May 2015, the European Commission adopted an ambitious strategy to complete the Digital Single Market.
- Representatives of the European Parliament, EU member states and the European Commission agreed on the text of the document regulating the use of digital content since 2018.



**TRAVEL WITH YOUR ONLINE CONTENT ACROSS THE EU**



**FILMS, SERIES, GAMES, SPORTS, NEWS BROADCASTS, MUSIC AND E-BOOKS**

# Europe 2020 strategy (Published in May 2010) - Perspectives of Digital Transformation EU



Goodbye **#roaming** fees in the EU  
as of 15 June 2017



Roaming charges ended on 15 June 2017. Europeans travelling within the EU countries can Roam Like at Home and pay domestic prices for roaming calls, SMS and data.

## #WIFI4EU

**120mln€** in grants for **INTERNET** connectivity  
in **LOCAL** communities:

- **ACCESSIBLE:** hotspots in public spaces (libraries, hospitals, parks)
- **EASY:** one login for all WIFI4EU points all over EU
- **FREE:** no ads, no commercial use of personal data

The European Commission



The European Commission wishes to promote free Wi-Fi connectivity for citizens and visitors in public spaces such as parks, squares, public building, libraries, health centres, and museums everywhere in Europe.

# Europe 2020 strategy (Published in May 2010) - Perspectives of Digital Transformation EU



Ministerstwo Cyfryzacji

31 mln Polaków dostanie nowe dowody osobiste.

W pierwszym kwartale 2019 r. rozpocznie się bowiem wydawanie nowych dowodów z tzw. warstwą elektroniczną (inaczej Polska musi oddać niemal całą dotację, czyli 294 mln zł, przyznaną na budowę systemu pl.ID i stworzenie e-dowodów)

For our countries the experience of Poland in introducing the new digital mobile service - mDocuments - would be interesting.

She will use a mobile phone instead of ordinary documents.

The first document available in the new service is the Identity Card (Passport).

Next, there will be other documents such as driver's license, registration certificate, insurance, etc. Instead of carrying all these documents with you, you just have to activate the service and have a personal mobile phone.



## Perspectives of Digital Transformation CZ

Czech Managerial Association (ČMA):

"Without a deep digital transformation, the Czech Republic is waiting for a catastrophic scenario."

- The main competitive advantages of the Czech Republic:
  - ✓ educated and disciplined workforce,
  - ✓ fairly reasonable labor market,
  - ✓ near emerging markets, especially Germany,
  - ✓ relatively good infrastructure.
- More than half of Czech enterprises on the road of digital transformation.
- Cloud is found in 32% of the companies surveyed, and 28% are planning or considering it, with IDC expecting an average annual growth rate of cloud service spending by 21% by 2020.
- In the implementation of Industry 4.0, the Czech Republic decided to cooperate mainly with neighboring Germany, which has been working on the concept of the Fourth Industrial Revolution since 2011.
- The Czech Republic can draw 14 billion euros from the EU funds for high-speed internet. The goal is to get the internet everywhere, "where the foxes give a good night", or else to link otherwise non-lucrative locations (so-called white spots). Connectivity should be at least 30 Mbit / s at speed.



# Digital agenda 2020 (was presented 27 Dec 2016) - Perspectives of Digital Transformation UA

- Ukraine, despite the difficult economic situation, has a sufficiently high-quality human capital (41st position in Human Capital & Research Sub-Index of the Global Innovation Index) and effective introduction tools of technological innovations (32nd place in Knowledge & technology outputs Sub-Index).
- This potential should be used for accelerating the processes of digital transformation in the country.
- The engine accelerated movement of Ukraine towards digital transformation should be the area of information and communication technologies and .
- In this area Ukraine is constantly increasing the volume of IT outsourcing.

# Perspectives of Digital Transformation UA

in co-operation with EU countries, especially with neighboring countries

- In Ukraine, in order to accelerate the information society, they plan to launch Mobile ID service in the second half of 2017 and intensify the deployment of 4G mobile networks.
- For Ukraine, which significantly lagging behind in development even mobile networks 4G, it makes sense to just focus on preparing the deployment of networks 5G.
- Joint steps to extend the "Roam like at home" initiative to Ukraine and other countries participating in the Digital Community, as well as the possibility of extending to Ukraine the initiatives of the European Commission "FreeWiFi4EU" and other joint projects in the field of digitalization.

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- Monopolization on the global digital market;
- The loss of state control over the activities of global businesses (data security, cartel conventions, ...);
- Threats to critical infrastructure of the state;
- Threats to the information security of the state, business and citizens;
- Possible impact on social behavior of client's citizens based on Big Data analysis;
- Risks for clients of financial marketplaces (intermediary sites that aggregate data on financial products and services and act as agents for their sale).



- Threats to critical infrastructure of the state;
- Threats to the information security of the state, business and citizens;
- Possible impact on social behavior of client's citizens based on Big Data analysis;
- Risks for clients of financial marketplaces (intermediary sites that aggregate data on financial products and services and act as agents for their sale).
- If the Czech Republic misses the opportunity to raise money for the development of the Internet, it will undoubtedly have unhealthy effects on the future development of our country. The loss of state control over the activities of global businesses (data security, cartel conventions, ...);

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- ***For the effective use of innovations for economic development, changes in the standard of living of society, industrial, ICT and scientific culture, freedom of entrepreneurship and active life position of the majority of people are of great importance.***
- ***The following are important factors for using the chances and levels of threats and risks of the digital transformation of the economy:***
  - ✓ ***state regulation and proactive legal support;***
  - ✓ ***state support for innovation and stimulation of private investment in the ICT industry;***
  - ✓ ***state control over the activities of global digital businesses;***
  - ✓ ***cyber defense of the state, business and citizens;***
  - ✓ ***digital literacy and digital skills of workers and citizens;***
  - ✓ ***preparation and continuous development of IT specialists.***
- ***On this way, support of the Czech Republic and other neighboring countries of the European Union is necessary for Ukraine to eliminate digital inequality and the rapid integration of Ukraine into the Digital Single Market is very important for Ukraine.***

# ***Thank Your for attention!***



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