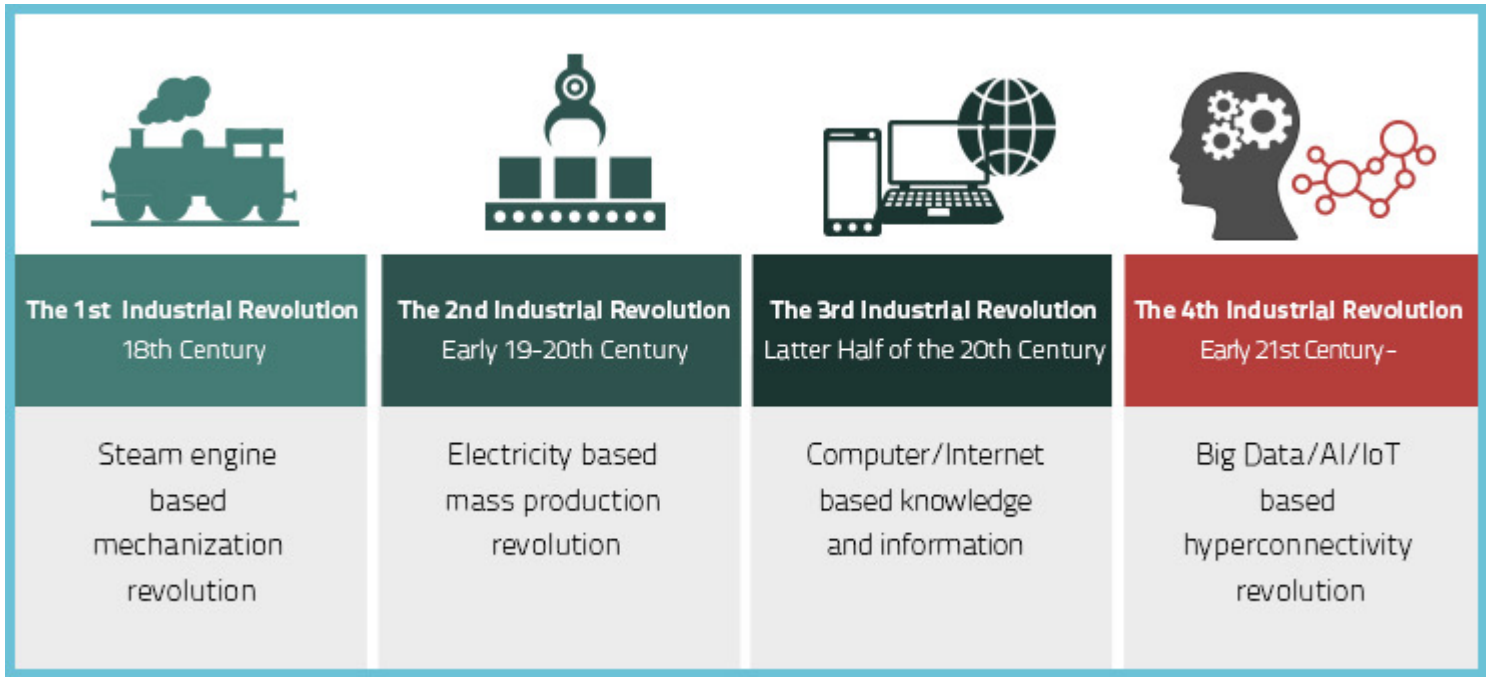
Competences 4.0

New employers´ requirements for employees regarding Industry 4.0

INDUSTRY 4.0



The 1st Industrial Revolution 18th Century	The 2nd Industrial Revolution Early 19-20th Century	The 3rd Industrial Revolution Latter Half of the 20th Century	The 4th Industrial Revolution Early 21st Century -
Steam engine based mechanization revolution	Electricity based mass production revolution	Computer/Internet based knowledge and information	Big Data/AI/IoT based hyperconnectivity revolution

INDUSTRY 4.0

- automation of traditional manufacturing and industrial practices,
- modern smart technology,
- M2M communication,
- IoT,
- self monitoring,
- diagnose issues,
- without human intervention

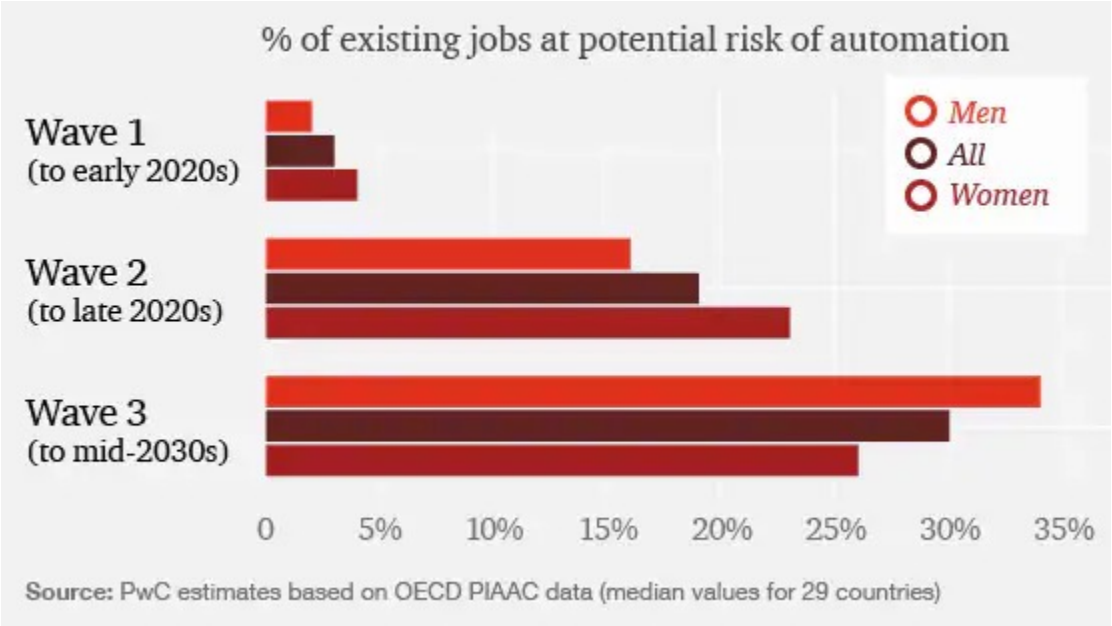
(source: Wikipedia)

I4.0 COMPONENTS

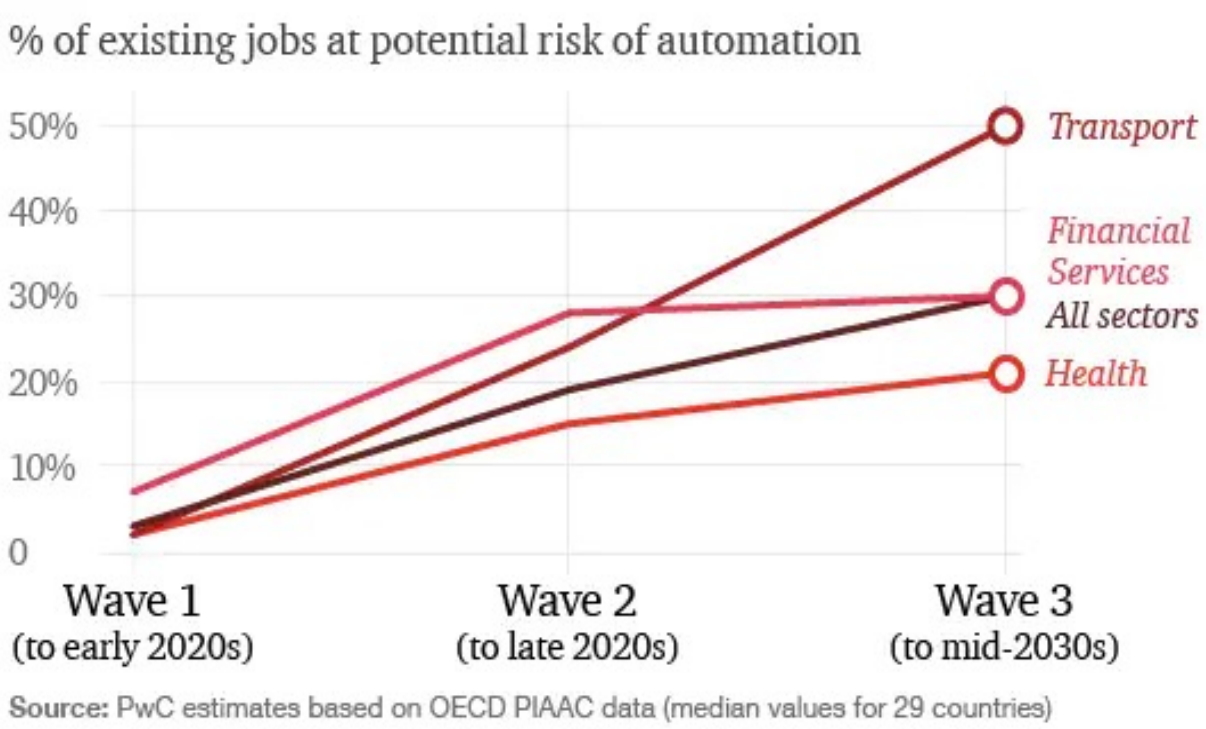
- Mobile devices
- Cloud computing
- Internet of things (IoT) platforms
- Location detection technologies (electronic identification) - Smart sensors
- Advanced human-machine interfaces
- Big analytics and advanced processes - Big Data
- Multilevel customer interaction and customer profiling
- Horizontal and Vertical System Integration
- Augmented reality/virtual reality
- On-demand availability of computer system resources
- Simulation
- Cyber Security

What is Industry 4.0?
Big Data and Analytics
Autonomous Robots
Simulation
Horizontal and Vertical System Integration
Industrial Internet of Things (IIoT)
Cybersecurity
The Cloud
Additive Manufacturing
Augmented Reality

I 4.0 and Labor market



Potential job automation rates by industry across waves



Source: PwC estimates based on OECD PIAAC data (median values for 29 countries)

New competences, new skills and new thinking

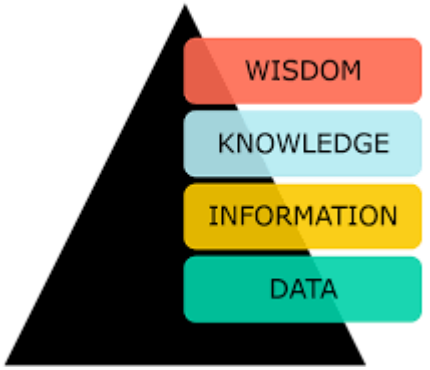
- to avoid the risk of this replacement, it is necessary to change competencies, skills of employees, to change education at basic, high and vocational schools.

Three scenarios for development of qualification requirements

- Growing Gap
- General Upgrade
- Central Link

Prediction of labor market development in Industry 4.0

- elimination of routine activities,
- change of Job duties,
- better knowledge of IT and company SW,
- soft skills.



New competencies of new employees

- Project orientation
- Goal focus / not on the way
- Teamwork + AR/VR
- Value chain
- IT systems
- Data and project management
- Soft skills and foreign languages

Competence questionnaire

Sections:

- Required competencies of students
- Working with data
- Corporate education
- Communication, teamwork and productivity

Competence questionnaire

Link: https://forms.gle/YTebcuvLqzckCC2o7

Conclusion

To prepare children

- For new world (for the future)
- Technology skills
- Practical use of IT and applications
- Soft skills developing

Artificial intelligence = teacher

Teacher = a guide to learning and world, to encourage and help with problems

Digital literacy will be as important as reading, writing and counting.

Thank you.

Tomas Prchal

Chamber of Commerce and Industry Jihlava

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