Slovenian ecosystem and relation future Key skills and Competences for I4.0

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Slovenia and Policy Context

- Employment rate is higher than the EU average
- 89% of the EU average in GDP per capita in purchasing power, due to slower growth of productivity, but higher in the manufacturing sector (introduction of new technologies, additive manufacturing, international value chains)
- 98% of companies are SMEs (out of 5% of fastest growing companies, 43% are micro, 49% small and 7% medium-sized)
- The largest industrial branches in Slovenia are: Wood and wooden products, Chemicals, Pharmaceuticals, Plastic products, Metals, Machinery, ICT production, Automotive and mobility industries

Cohesion regions, NUTS 2 (2), statistical regions, NUTS 3 (12) and municipalities, LAU 2 (212)

borders of cohesion regions
borders of statistical regions
borders of municipalities
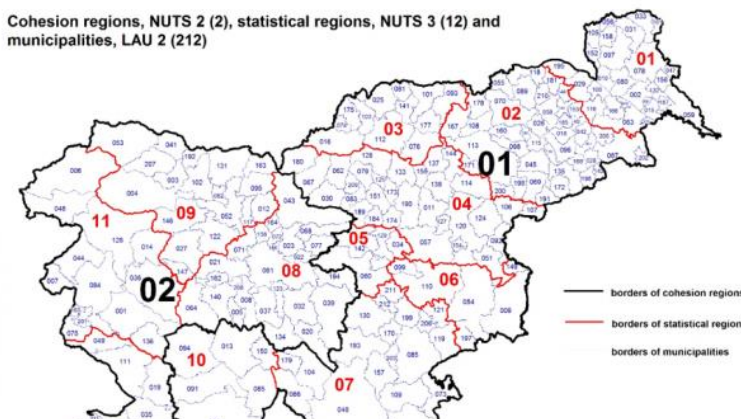
Slovenia and Policy Context

- Slovenia is ranked as a moderate innovator ↓, R&D activities are only slowly improving, and mainly in public RTOs, especially concerning in SMEs

- Innovation support environment

- Smart specialisation strategy
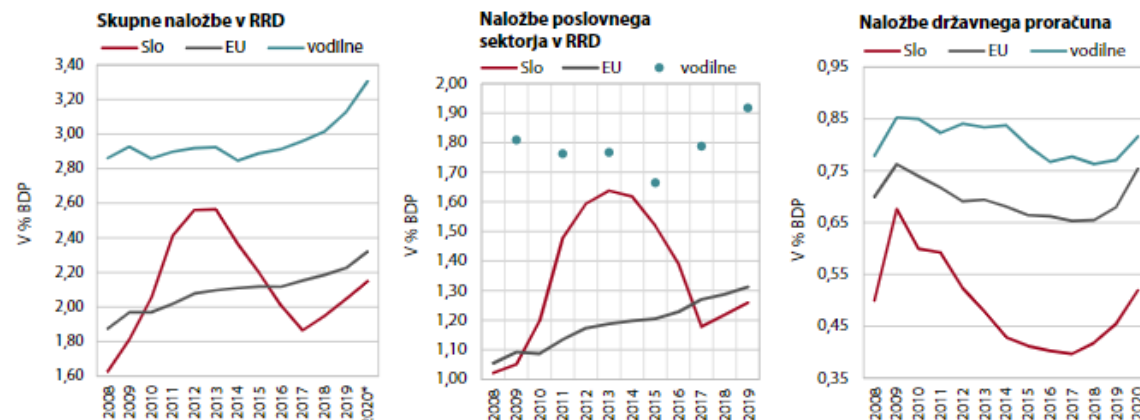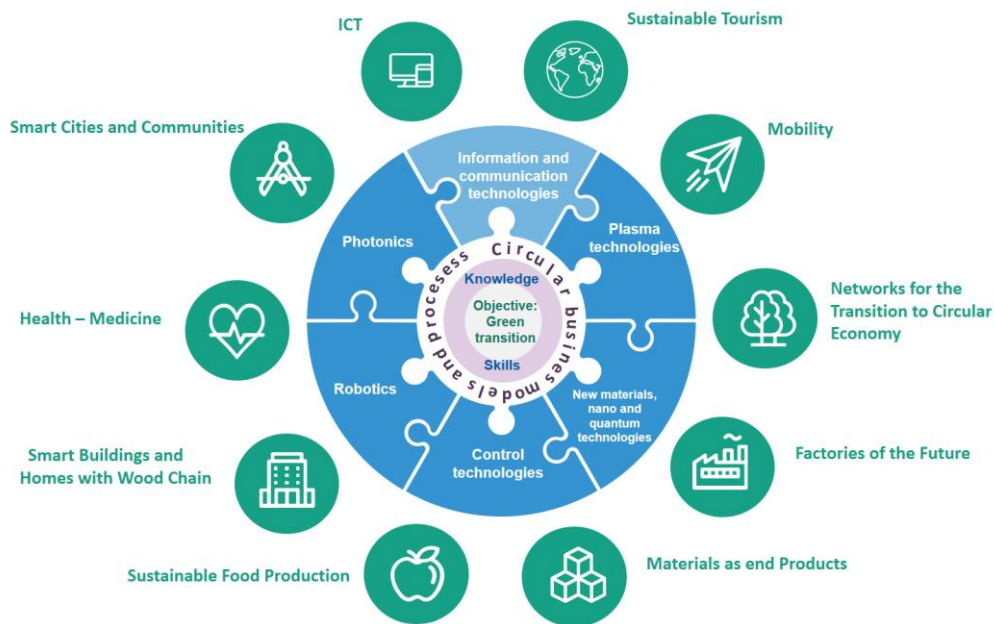

Vir: Eurostat (2022), SURS (2022); preračuni UMAR.
Opomba: Pri naložbah državnega proračuna za RRD so vključena tudi sredstva, ki se porabijo v tujini (kot npr. za članstvo v CERN-u).
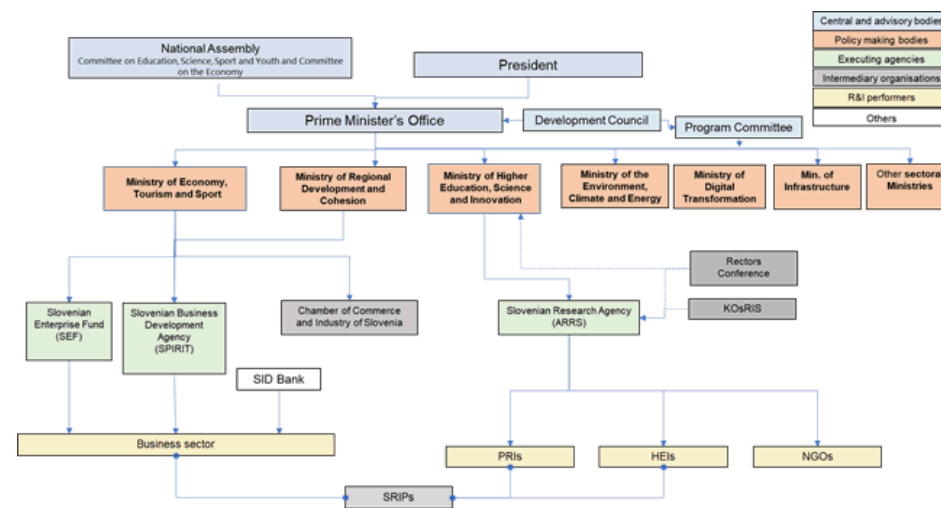
Slovenian action plan

Reasons:
- Increase in productivity
- Consistency of support mechanisms
- Stimulation of innovation investments
- Flexibility of instruments
- Addressing disparity between regions
- Fragmentation of the support ecosystem
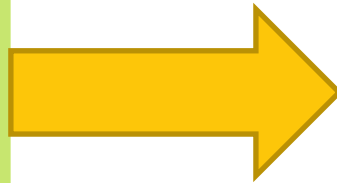
Actions:
- Development of national demonstration center Factories of the Future
- National demonstration center factories of the future (policy mix implementation)

Future Key skills and Competences for I4.0
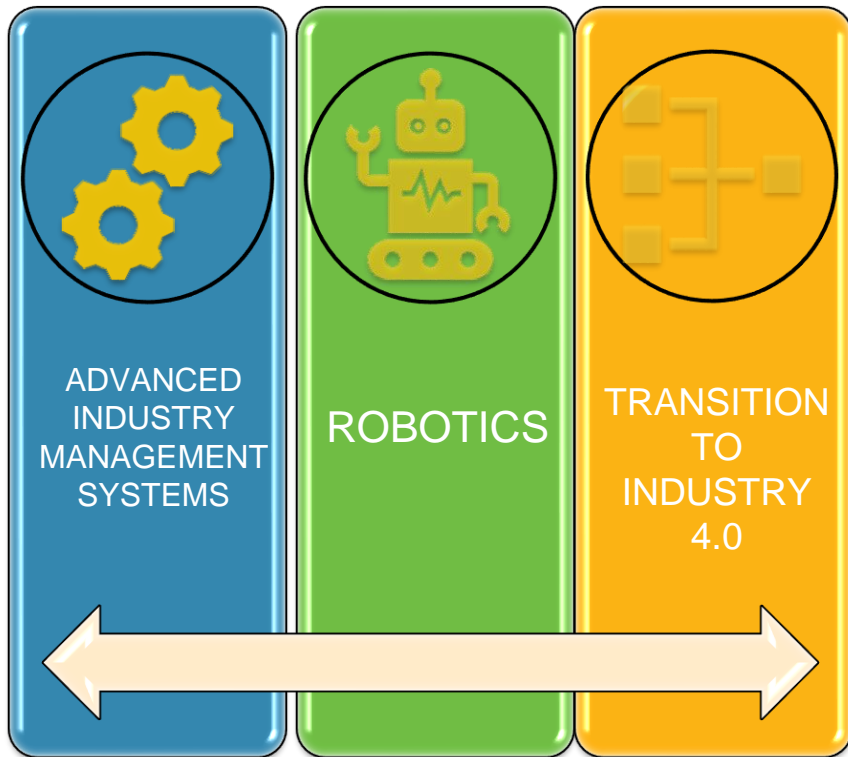
ADVANCED INDUSTRY MANAGEMENT SYSTEMS

ROBOTICS

TRANSITION TO INDUSTRY 4.0

Future Key skills and Competences for I4.0

We collaborated with:

- **12 companies**
- **2 business support organizations**
- **2 research departments**
- **2 Universities**
- **5 educational institutions**

B/S/H/ Danfoss DOMEL EL

ELVEZ epilog Iskra KOLEKTOR

LOTRIČ METROLOGY Polycom Robotina UNIOR

SiMER
povezujemo / we connect

Institut "Jožef Stefan", Ljubljana, Slovenija · Univerza v Ljubljani Fakulteta za elektrotehniko · Univerza v Ljubljani Fakulteta za strojništvo · Univerza v Mariboru Fakulteta za organizacijske vede

PATTERN CITY · TEHNOLOŠKI PARK LJUBLJANA · Gospodarska zbornica Slovenije · Gospodarska zbornica Slovenije Zbornica elektronske in elektroindustrije

Definition of a set of competence elements and profiles for SRIP focus areas

Checking the relevance of competency needs with companies

Description of competency needs forecasts for selected profiles and descriptions of competency development levels

Assessing the importance of predicted competency needs

Data analysis, interpretation and final report

PROFILES OF THE FUTURE

PLANNING

SUPPORT

IMPLEMENTATION

HR Specialist

Domain Engineer

I 4.0 Engineer

Smart Factory Achitect Business Systems Organizer

ICT Specialist
- Data Analyst
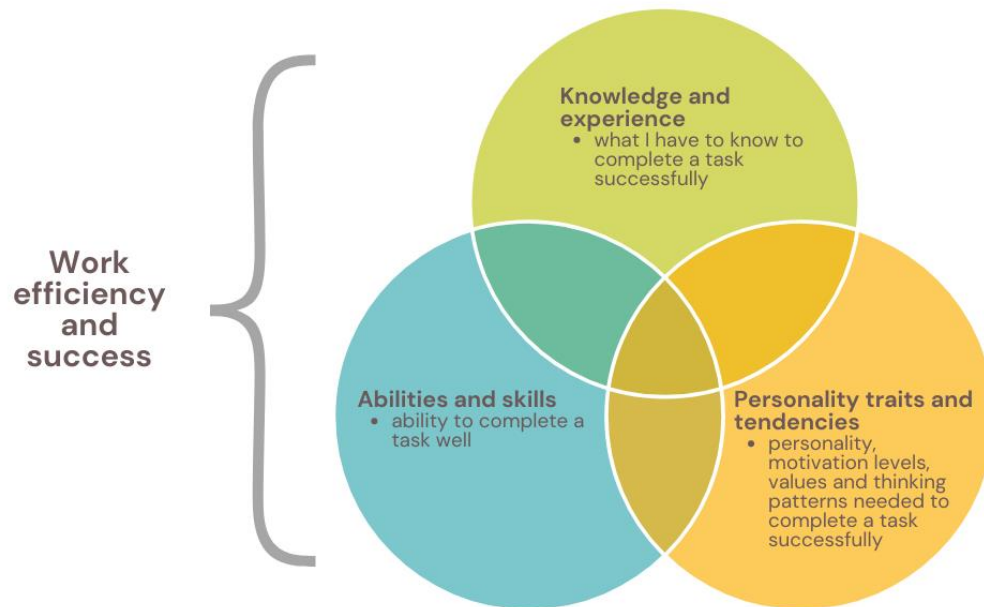- Network and Systems Specialist (including IIoT)

Specialists for Automation and Robotization
- Robotics Engineer
- Machine Vision Engineer (broader visual technologies)
- Automation Specialist
- I 4.0 Metrologist
- XR Developer

Production Engineer (various domains)

FUTURE OF WORK | COMPETENCIES

„POWER" COMPETENCIES

1 Professional/domain-specific competencies

2 Power competencies:
interpersonal competencies (EQ, communications skills, diversity and cultural intelligence) |*management and leadership competencies* | *personal competencies* (creativity, critical thinking, judgement and decision making, embracing change, active learning, growth mindset)

3 Digital competencies | Technology skills

4 Green and sustainable oriented competencies

Work efficiency and success

Knowledge and experience
• what I have to know to complete a task successfully

Abilities and skills
• ability to complete a task well

Personality traits and tendencies
• personality, motivation levels, values and thinking patterns needed to complete a task successfully

Thank you for your attention!

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