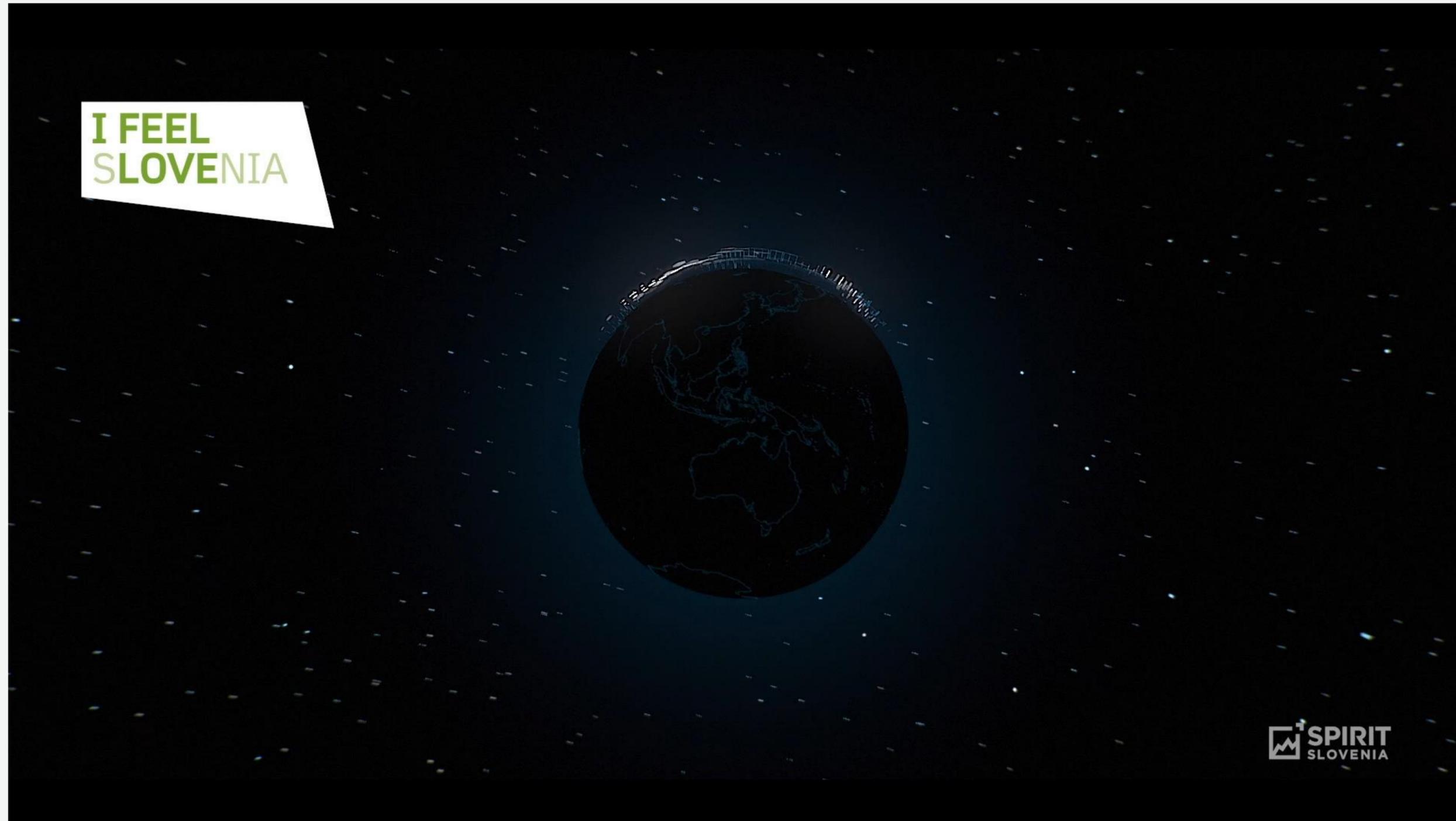


Welcome to the webinar: Current Situation and Future Direction of Slovenian Economy after COVID-19.
The webinar will begin at 4:00 pm (JST)



Current Situation and Future Direction of Slovenian Economy after COVID-19

Tokyo – Ljubljana, July 2020

Slovenian Public Agency for Entrepreneurship,
Internationalization, Foreign Investments and Technology



Welcome note by

H.E. Ambassador dr. Ana Polak Petrič

Embassy of the Republic of Slovenia, Tokyo





Welcome note by

Mrs. Ajda Cuderman

Director, SPIRIT Slovenia public agency



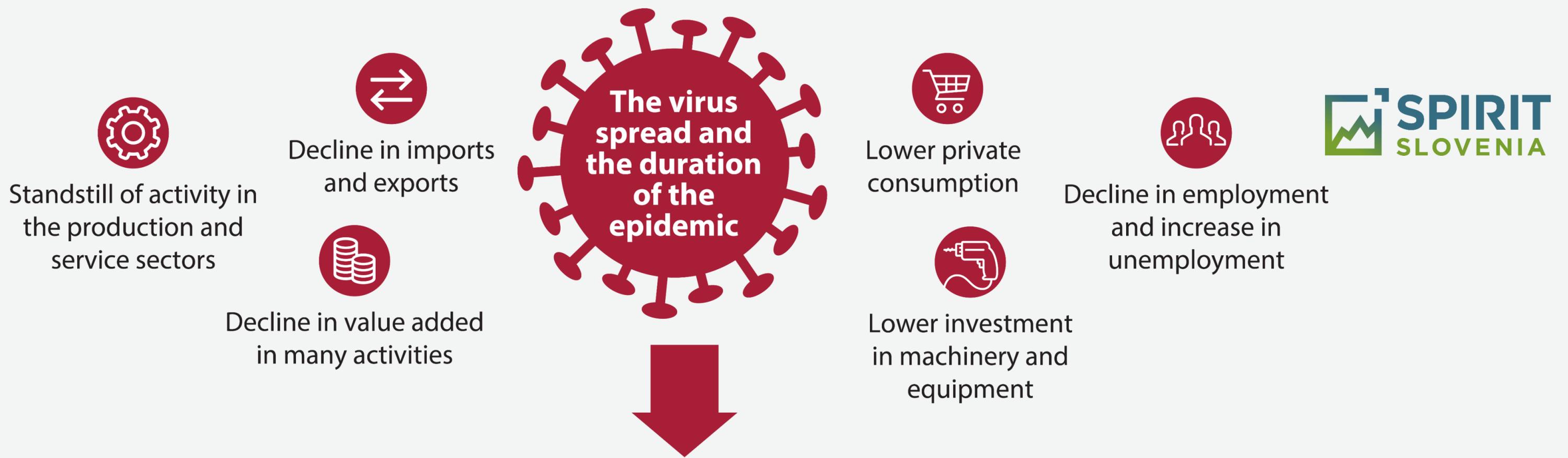
Successful management of the coronavirus pandemics



Test preformed on 3. July	625
Positive cases on 3. July	9
Current number of patients in hospitals	7
Total number of tests preformed	98.945
Total number of tests positive	1.581
Total number of patients discharged	301
Total number of deaths	111

- **New York-based media company Vox ranked Slovenia among the overlooked success stories in the fight against the coronavirus pandemic, along with Vietnam, Iceland, Jordan and Greece.**





Alleviation of the consequences of the epidemic for the economy and population

Government intervention measures
Mega (anti-corona) legislative package

Support after the end of the epidemic

Government measures for a faster recovery of economic activity

Source: IMAD, 2020

Measures and coordinated action at EU level

EC and ECB measures for mitigating the consequences of the epidemic and a faster recovery of economic activity

Macroeconomic environment

	European Commission Economic forecast (May 2020)		
	2019	2020	2021
GDP growth in %	2.4	-7.0	6.7
Inflation (% , yoy)	1.7	0.5	1.2
Unemployment (%)	4.5	7.0	5.1
Gross public debt (% of GDP)	66.1	83.7	79.9
Current account balance (% of GDP)	6.8	6.8	6.8
Exports (goods and services)	4.4	-12.4	13.5

Export driven economy

- € 39 bn (85 % of GDP in 2018), of that € 31 bn goods and € 8 bn services

Membership

- EU-28 (2004), euro-area (2007), OECD (2010), NATO (2004)



Key sectors in Slovenia



Automotive industry

Number of companies: 280

Number of employees: 17,451

Revenues (in €): 4.4 billion

Key export markets: EU, Mexico, Turkey, UK, USA...

Electrical & Electronics

Number of companies: 668

Number of employees: 33,924

Revenues (in €): 5.4 billion

Key export markets: EU, Russian Federation, UK...

Chemicals & Pharmaceuticals

Number of companies: 901

Number of employees: 32,039

Revenues (in €): 6.3 billion

Key export markets: EU, Albania, Austria, BIH, Russian Federation, Macedonia, Montenegro, Serbia, USA ...

Information and communications technology (ICT)

Number of companies: 3,735

Number of employees: 24,036

Revenues (in €): 4.4 billion

Key export markets: EU, Australia, Belarus, BIH, Israel, Kazakhstan, Moldova, Montenegro, Norway, Russian federation, Serbia, UK, Ukraine, USA...

Logistics and Distribution

Number of companies: 3,350

Number of employees: 29,368

Revenues (in €): 5.4 billion

Machining and Metalworking

Number of companies: 3,280

Number of employees: 62,652

Revenues (in €): 9.3 billion

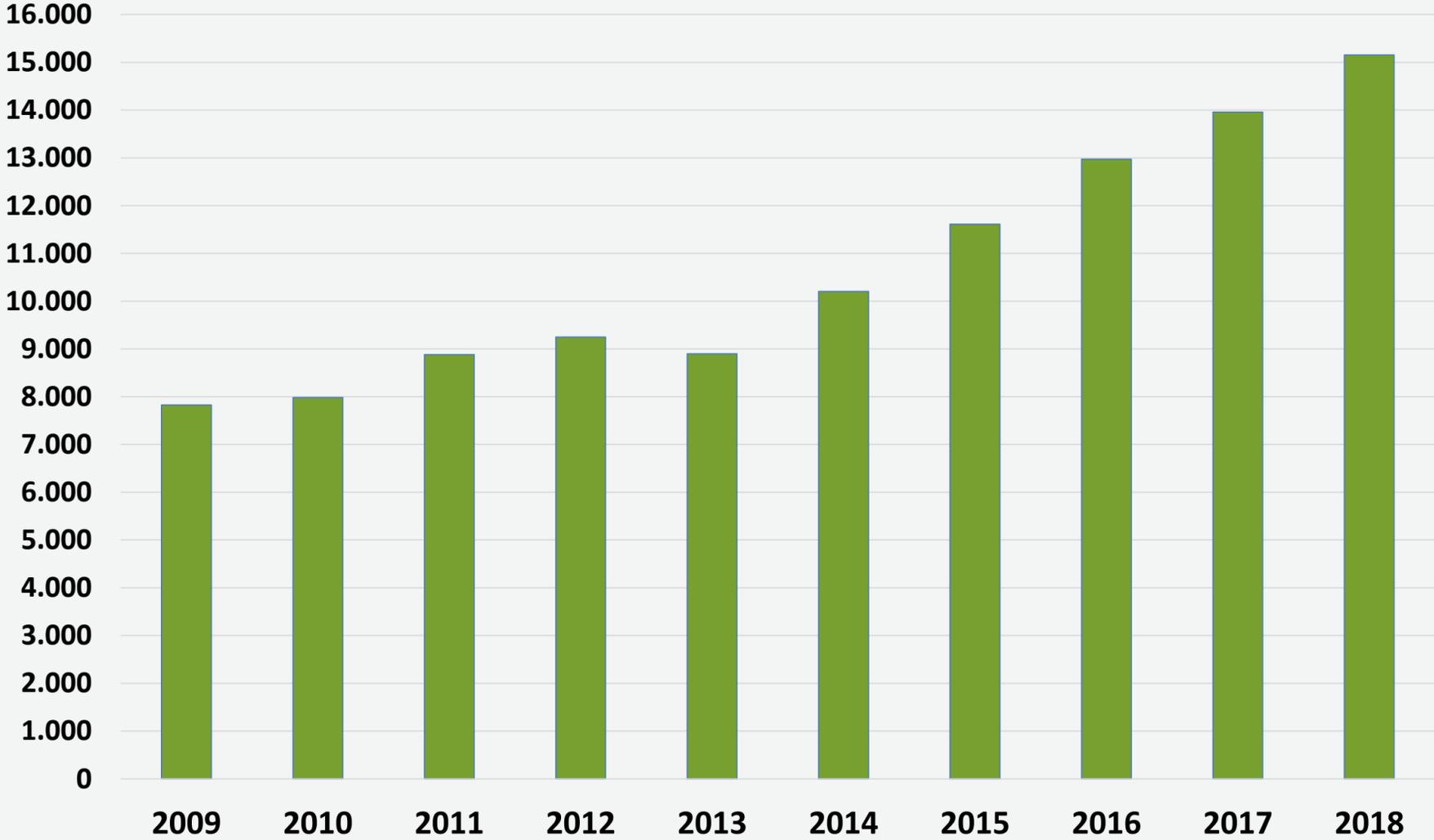
Key export markets: EU, Australia, Serbia, Switzerland, UK, USA...



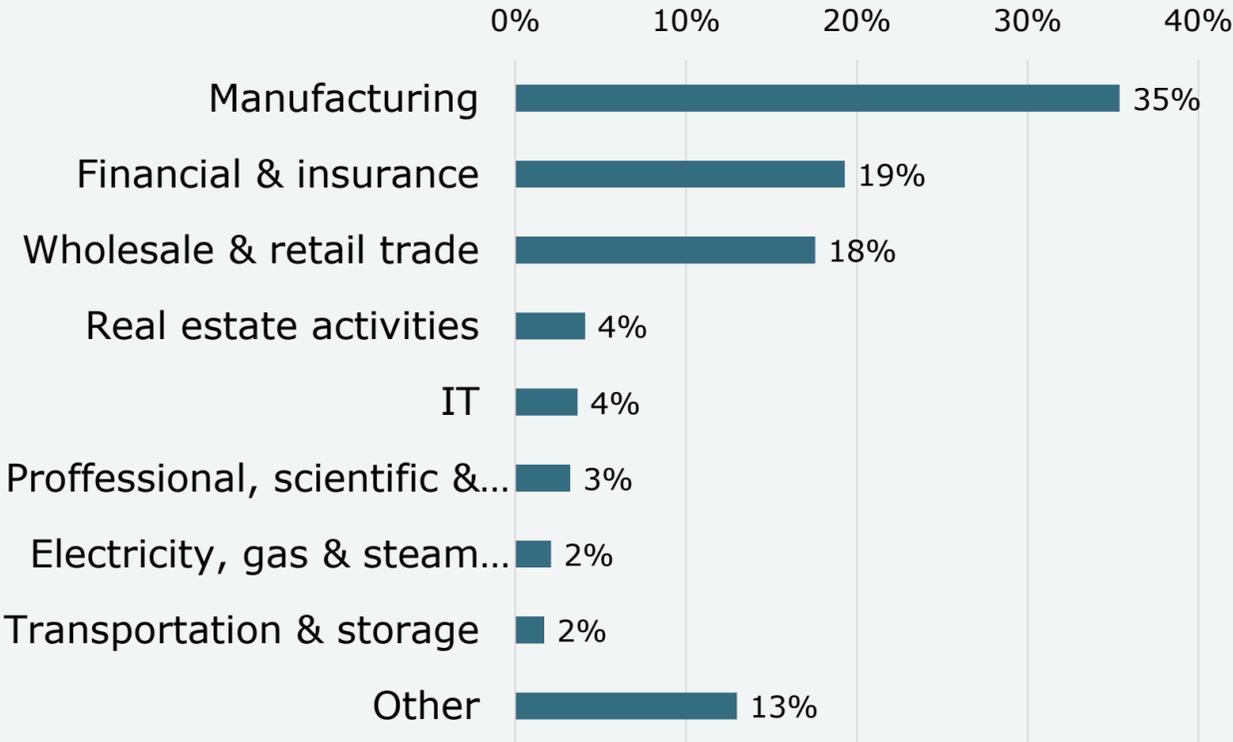
FDI in Slovenia



FDI stock in Slovenia, in mio. EUR

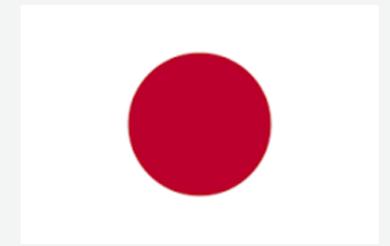
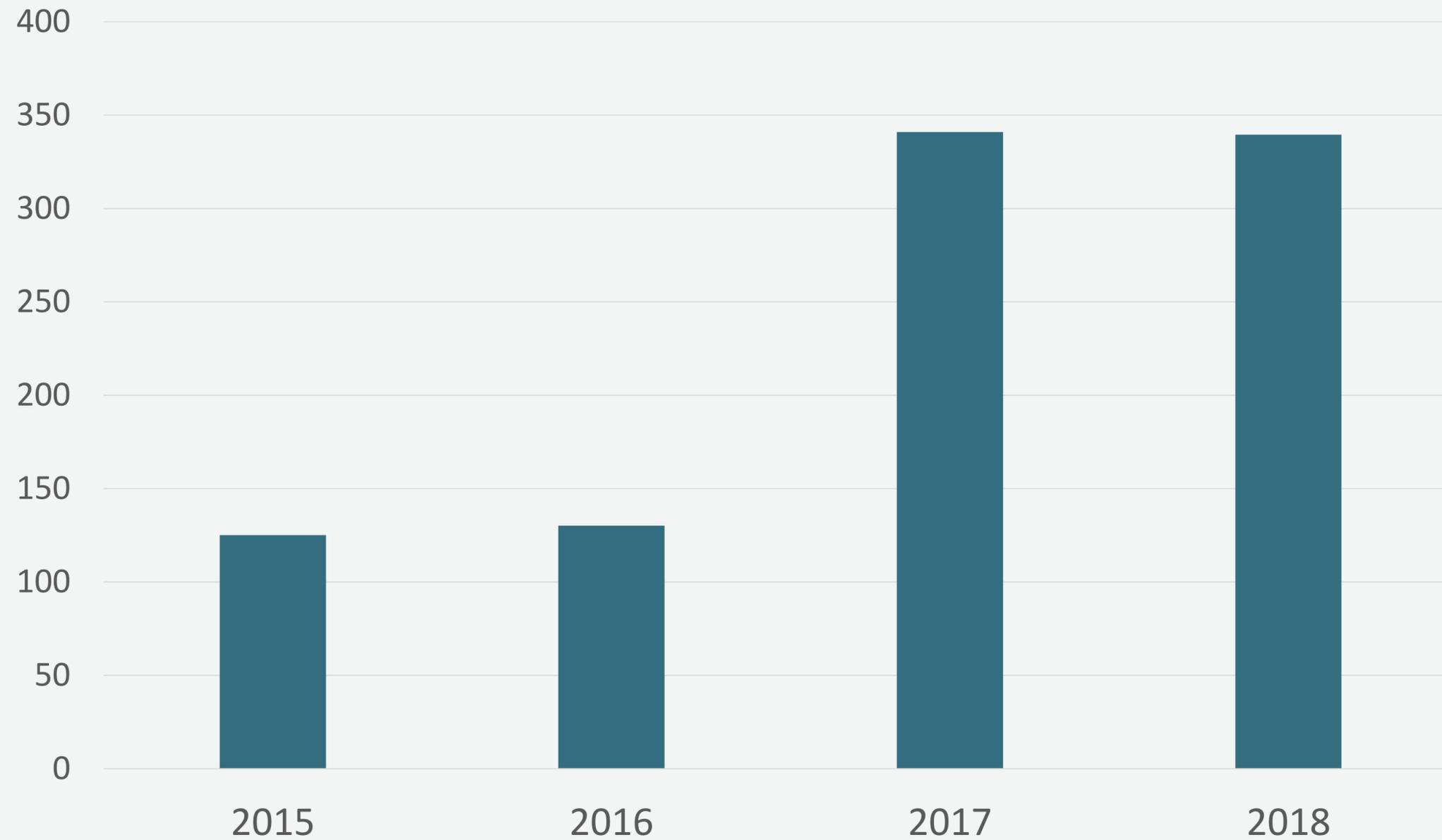


Inward FDI by Sector, year-end 2018



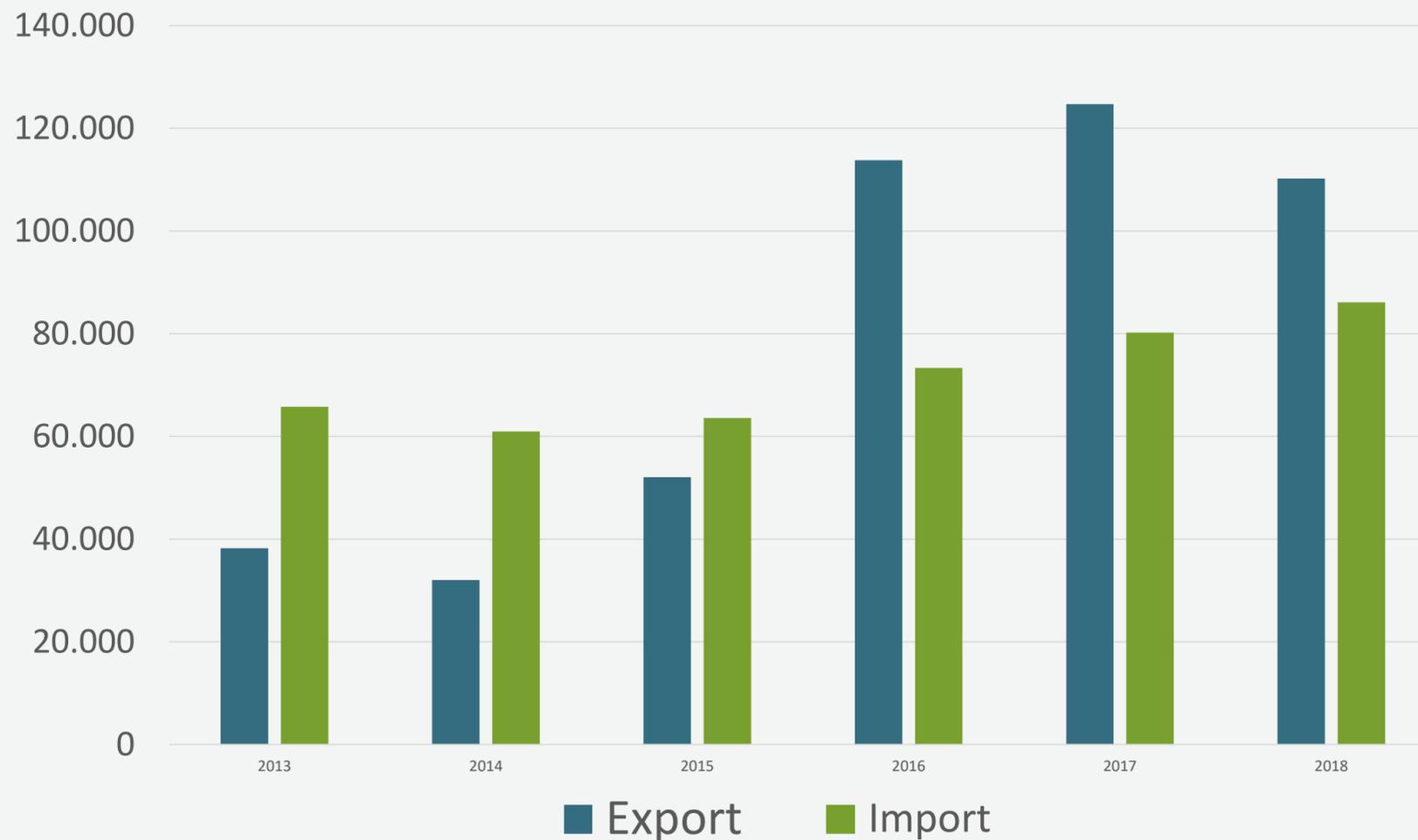
Japanese FDI in Slovenia

Japanese FDI in Slovenia, by ultimate investing country (in million EUR)



Bilateral trade Slovenia - Japan

Bilateral trade of goods, in 1,000 EUR



Slovenian export to Japan by group of products, 2019

Share in %	Group of products
58%	Vehicles other than railway or tramway rolling stock and parts thereof
9%	Nuclear reactors, boilers, machinery and mechanical appliances
7%	Pharmaceutical products
4%	Optical, photographic, measuring, precision medical instruments
3%	Rubber and articles thereof
2%	Organic chemical products

Slovenian import from Japan by group of products, 2018

Share in %	Group of products
32%	Vehicles other than railway or tramway rolling stock and parts thereof
13%	Nuclear reactors, boilers, machinery and mechanical appliances
8%	Electrical machinery and equipment and parts thereof
8%	Other base metals, cermets, articles thereof
7%	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal
6%	Plastics, rubber and articles thereof

I FEEL
SLOVENIA

GREEN.

CREATIVE.

SMART.

Join Slovenia's family of investors, experience country's green qualities, tap into its creative talent and discover its smart solutions to grow your business.

Why investors choose Slovenia?



Gateway to Europe and beyond

Easy market access to:

- EU markets (500 million inhabitants)
- Europe's east (200 million) and southeast markets (20 million)

Port of Koper

- One of the northernmost ports of the Mediterranean
- Shortest way to CE Europe: well connected with its hinterland, serving the larger eastern European markets
- High quality port infrastructure

Well-established links to regional markets

- Shared history (70 years) in former Yugoslavia and (over 500 years) in the Habsburg Monarchy, DACH markets
- Excellent knowledge and understanding of our neighbours (customs, culture & language), east (200 million) and southeast markets (20 million)

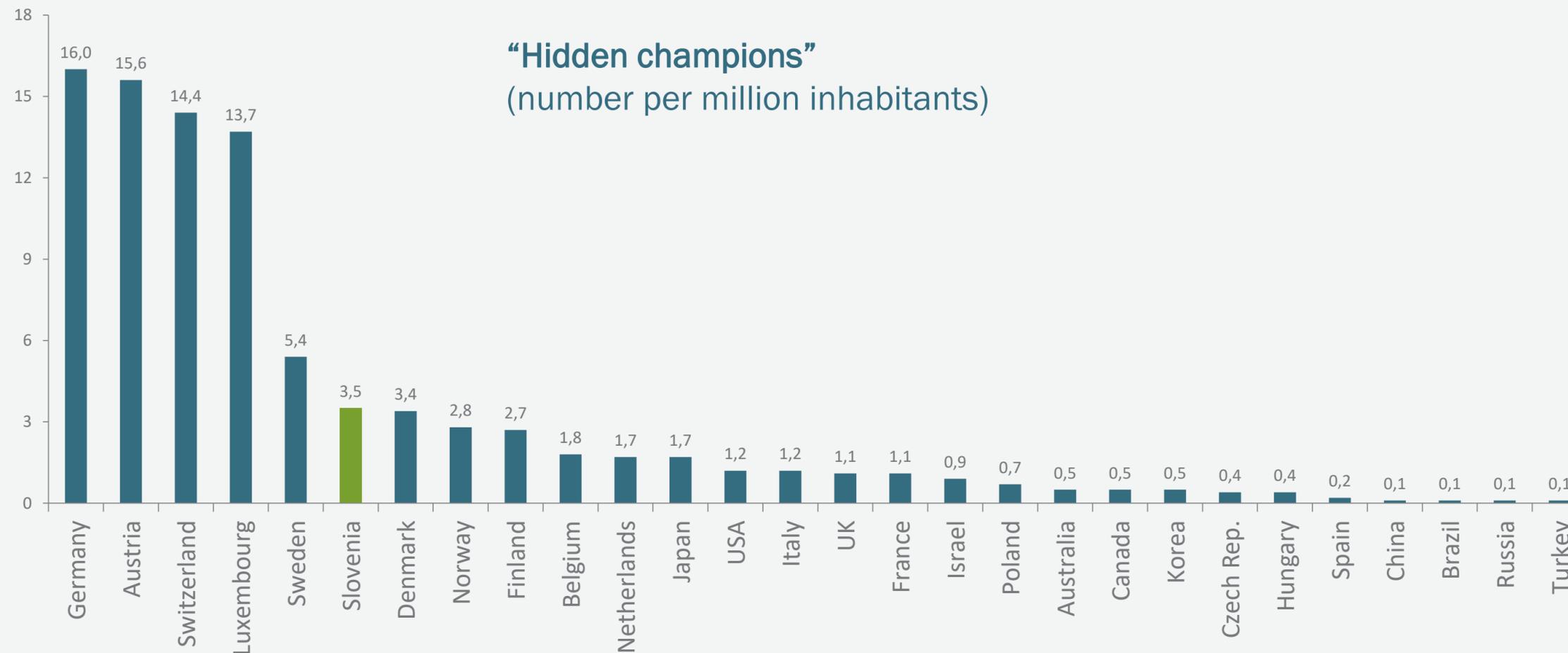


Slovenia: a country of hidden champions



“Hidden champions” (definition by Hermann Simon):

- Leaders in terms of market share in their respective fields (among top 3 in the world or No. 1 on the continent)
- Earning modest revenues (no more than €1 bn, with some exceptions)
- “hidden” (i.e. not well known to general public)



Source: European Bank for Reconstruction and Development



Excellence in high-tech and niche technologies



Automotive industry

- **Global market leader in high-end titanium exhaust;**
- **No. 2 globally in the production of diesel cold-start systems**
- **World leader in the production of gas springs for automotive industry.**



Opportunities for Japanese partners:

Testing market for new operating vehicle systems, including autonomous driving and hydrogen-based transportation, in-wheel electric propulsion systems for electric and hybrid vehicles.



Aerospace Industry



- **Pioneers of high technology in light aviation, using electric flight and pursuing extreme aero efficiency;**
- **Global market leader with established reputation in the specialized, fixed wing small Unmanned Aircraft Systems (UAS).**



Opportunities for Japanese partners:

Geo-informatics and spatial analytic solutions, satellite imagery processing services, on-board data handling solutions, solutions for aerospace testing.



Excellence in high-tech and niche technologies



Electrical Equipment

- **No. 1 in the world in the biomass combustion controller market;**
- **Global No. 1 in the commercial vacuum-cleaner motor segment.**
- **No. 1 in Europe and North America in DIY liquid cooling systems**

Opportunities for Japanese partners:

Thermal management solutions, robotics and automation solutions, lighting fixtures and luminaires – smart lights solutions and design, smart home products, niche high quality products for automotive industry, particularly for electric vehicles.

Machining and fabricated metal products

- **Global leader in logging winches and firewood processors;**
- **One of the worlds leading manufacturers of crankshaft processing machines in the passenger cars and trucks;**
- **One of the 10 largest producers of industrial knives in the world**

Opportunities for Japanese partners:

Metal matrix composites, niche, high quality products, 3D metal printing solutions.



Excellence in high-tech and niche technologies



Information and communications technology (ICT)

- **Global leader in control systems for particle accelerators in “big physics” development and proton therapy;**
- **No. 2 in the world in the enterprise labelling software business, focused on manufacturing and supply chains;**
- **Global No. 1 producer and supplier of and adviser on instrumentation for measuring the positions of elementary beam particles in accelerators,**
- **A regional European leader in the production of test and measurement instruments for electronic components**
- **Pioneers of artificial intelligence – Slovenia (IJS) set up international AI research center with UNESCO**

Opportunities for Japanese partners:

Machine learning, IoT, Blockchain Technologies, Biometrics, 3D printing, AI, Virtual Intelligence.

Biotechnology

- **Leading European provider of innovative healthcare and lifestyle solutions based on preventive genetic testing;**
- **World leader in the commercial production of Cellulose NanoCrystals;**
- **World’s leading CMO for production of bacteriophages**

Opportunities for Japanese partners:

“centrifuge free” system for isolation and concentration of mesenchymal stem cells from bone marrow, development of technologies to produce hybrid cells.





STIMULATING INVESTMENT ENVIRONMENT



FDI OPENESS

3rd least restrictive country among OECD members (*OECD, FDI Regulatory Restrictiveness Index Database 2017*)

STARTING A BUSINESS – FAST & SIMPLE

- Only 2 procedures required to register a firm at zero cost
- Max. 5 days for registration of a Limit liability company (minimum funding capital of € 7,500)

Ranked as worlds 2nd most reliable and secure energy supply system (*World Energy Council 2018*)

CORPORATE INCOME TAX 19 %
EFFECTIVE TAX RATE 13,12%*

Tax reliefs:

- Up to 100 % of the amount invested in R&D
- Up to 40 % of the amount invested in equipment and intangible long-term assets

*data for 2017 (Ministry of Finance, 2019)

VAT (Value Added Tax)

- 22 % - standard rate
- 9.5 % - reduced rate

CAPITAL GAIN TAX

0 – 25%
(depending on holding period)

I FEEL SLOVENIA

HIGHLY CAPABLE AND PRODUCTIVE WORKFORCE

- 47.7% of young people studying and researching at Slovenia's globally renowned universities
- 41.2% of students graduated in science and engineering (IMD world competitiveness yearbook 2018)
- Slovenia's productivity ranks above its near neighbours: Slovakia, Czech Republic, Croatia, Hungary
- 84% of working population speaks at least one foreign language
- Number of researches per 1 million people: 4,200



Quality of Life

High Standard of Living:

- Moderate climate, well preserved countryside, active lifestyle, tourism destination
- 15th place on Quality of Life Index 2019 (Numbeo)

Education

- Several international schools
- Highest quality of educational system

Safety

- 11th safest country (Global Peace Index 2018)

Healthcare

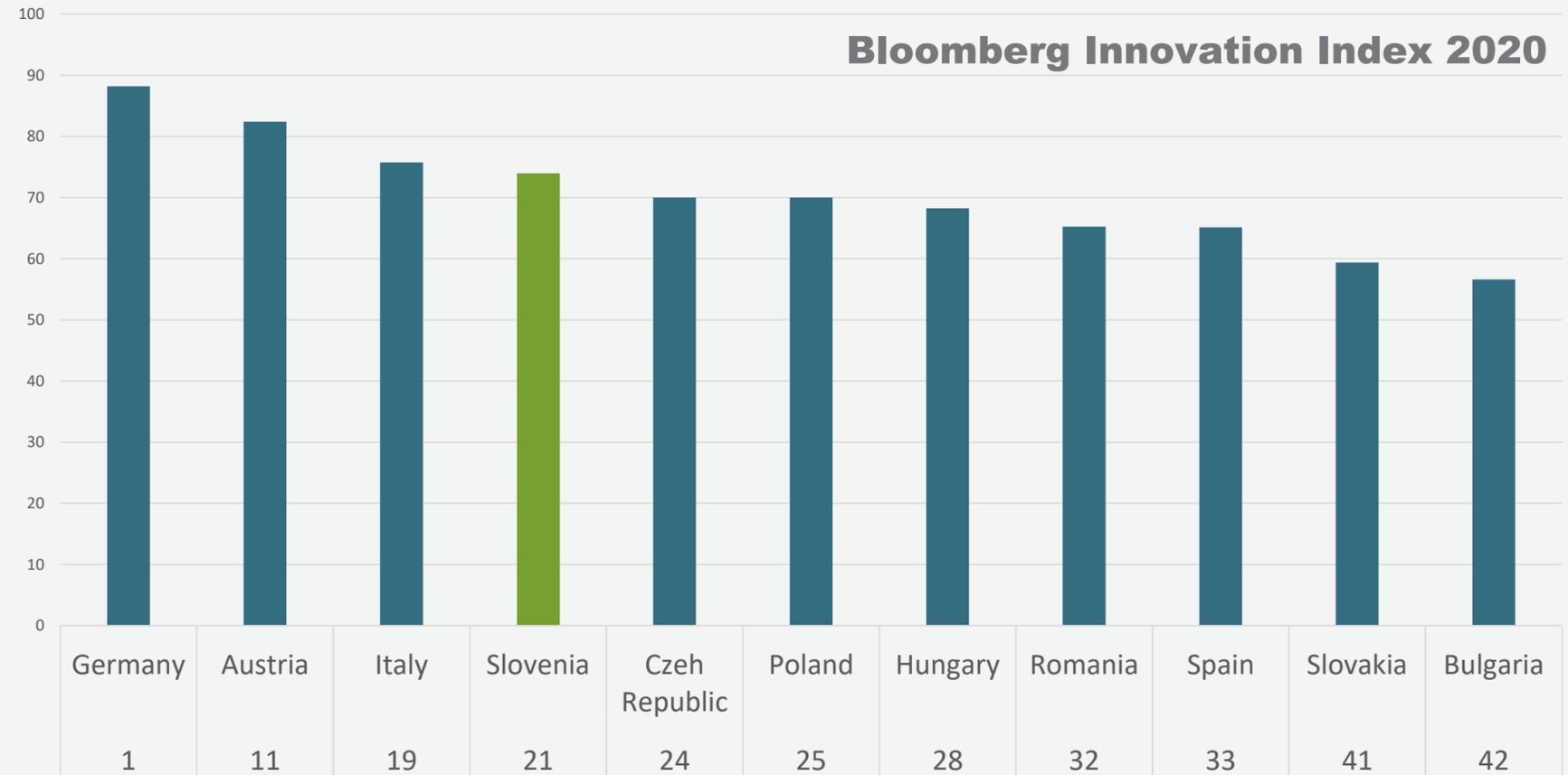
- Strong healthcare system (Life expectancy at birth: 78 years)



Important R&D player in the region



- **2 % GDP allocated to R&D, 3/4 by business sector**
- **Tax incentive: 100 % tax deduction on R&D expense**
- **Strong/Modest Innovator (European Innovation Scoreboard)**
- **Innovative Economy (Bloomberg Innovation Index 2020)**



Slovenian hi-tech research institutions



Sector: Research

- Research in advancement of electrochemical energy storage focused on secondary batteries – specifically lithium-ion, lithium-sulfur, magnesium batteries as well as organic battery materials. Bridging the gap between fundamental science and applied engineering by combining academically and industrially relevant questions.
- Cooperation with HONDA (2004-2016) on research of Mg batteries



Sector: Research

- Long tradition in developing collaborative partnerships with industry.
- Research in the field of :
 - Physics
 - Chemistry and Biochemistry
 - Electronics and Information Technologies
 - Reactor Engineering and Energetics
- new knowledge and ideas that are the result of the research at the Institute and its international partners offer numerous development opportunities for Slovene and foreign enterprises



International Research Centre on Artificial Intelligence

- First UNESCO sponsored International Research Centre on Artificial Intelligence at the Jožef Stefan Institute in Ljubljana, Slovenia
- to provide an open and transparent environment for AI research and debates on AI, providing expert support to stakeholders around the globe in drafting guidelines and action plans for AI
- to advise governments, organisations, legal persons and the public on systemic and strategic solutions in introducing AI in various fields

Companies that have already chosen Slovenia

YASKAWA



Yaskawa I. investment:

- Greenfield investment in a new smart factory for high-tech production of robots
- Investment value: € 25 mn
- The factory was built according to the planned timeline and budget
- Planned expansion of the current site due to good experience and the support of the government and local authorities

Timeline:

- Q4, 2016: Decision for Slovenia
- Q4, 2017: Building permission & construction start;
- Q1, 2019: Commissioning & pilot production;
- Q2, 2019: Start of production
- Q3, 2019: Start of production on the 2nd assembly line, doubling the production capacity





Factory output:

- Production line for robots max. payload 7 to 25 kg
- Production line for robots max. payload 35 to 225 kg
- Current output of the factory: 125 robots
- Expected output by Q2, 2020: 250 robots
- Currently the factory is producing 9 types from the Yaskawa range of robots
- The markets supplied are: Europe, Russia, Middle East and Africa
- Production of controllers planned in the 2nd part of 2020

YASKAWA

 **SPIRIT**
SLOVENIA



Cooperation with other Slovenian companies and research institutions :

- 70 % of the robot is made from parts originating from Europe
- 2 large (Helios and Kovis) and several smaller suppliers from Slovenia
- Cooperation in research and development of machine vision with the Faculty of Mechanical Engineering of the University of Ljubljana
- Robotics X, R&D center in Ljubljana, Slovenia, Yaskawa EU partner in the field of development of complex Industry 4.0 software solutions, one of the major elements of i3-Mechatronics digital data solutions

Municipality of KOČEVJE

Location of YASKAWA in Slovenia



Local support for investors

- Dedicated team to help an investor with all the procedures and red-tape in the country
- Helping investor to solve issues as quick as possible on both local and national level
- Special financial incentives scheme for the Kočevje area

Green & Circular economy

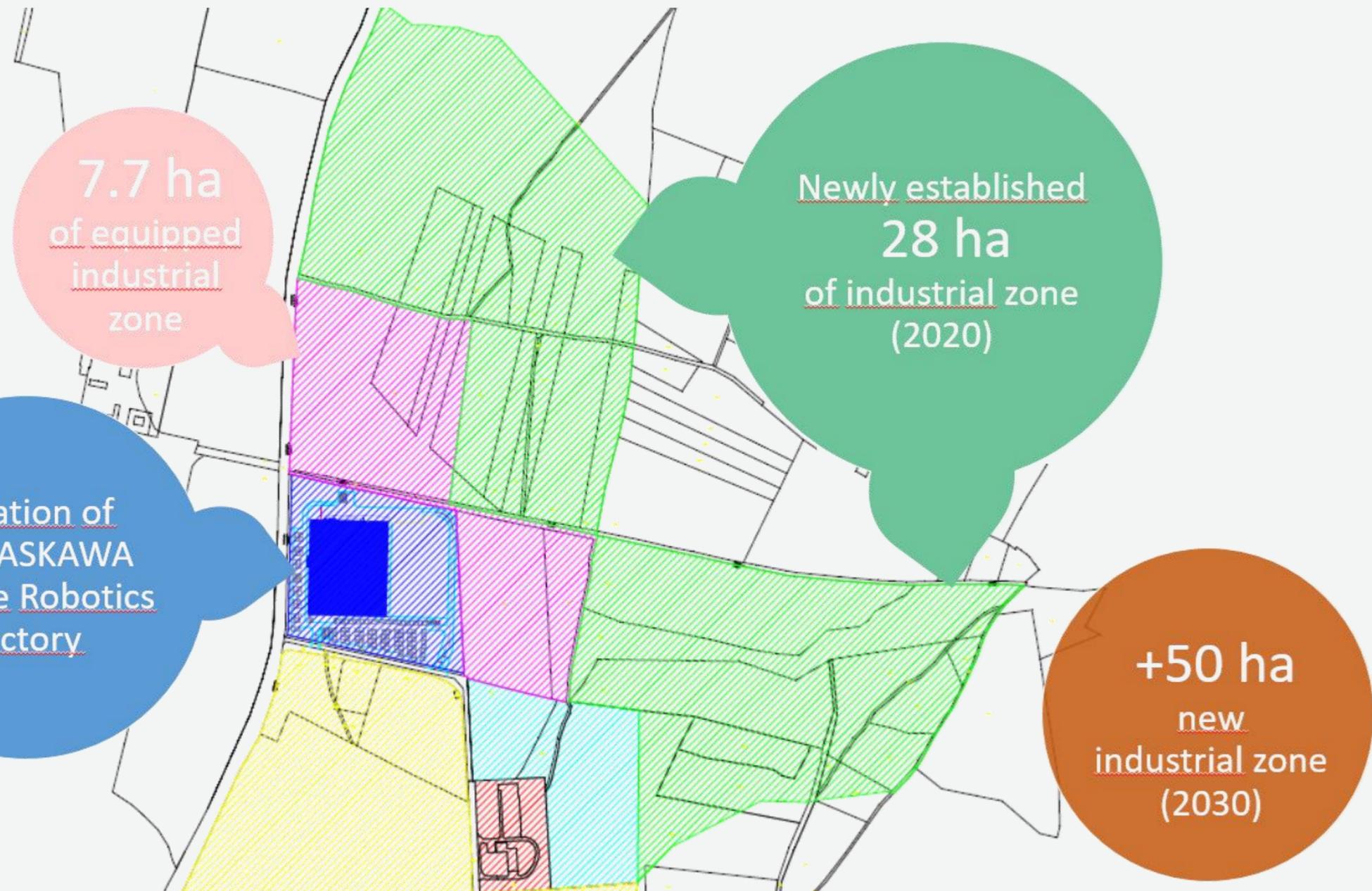
- 85% of Kočevje area is covered with forests
- Heating system with renewable resources (wood chips)

Providing new infrastructure

- 28ha buildable land in the industrial zone +50ha in the upcoming years
- Renewed railway track in 2020

Municipality of KOČEVJE

Expansion of the industrial zone



PREDICTABLE ENERGY COSTS

Municipality owns the forest (energy resource)

+

Operates the heating plant fuelled by wood biomass

=

Long-term heating price for the investor

Municipality of KOČEVJE

Systematically introducing robotics in schools



Preparing our youth with the skills of tomorrow

- Kočevje as the hub for robotics training for primary school teachers on a national level
- Every schoolchild in Kočevje knows the basics of robot programming at the age of 10

Secondary education

- Introduced new secondary school program due to investor's needs (mechanical technician)
- 20% of open curriculum can adapt to company needs

Higher education & Research projects

- EU funding available for research projects
- Aiming to introduce application-based higher education programmes

Companies that have already chosen Slovenia



Sector: Chemicals

Acquisitions of Helios by Kansai Paint

»We are pleased to have found a company such as Helios with consistent business philosophy and excellent potential to become even more important in the coatings field in Europe. «

»We wish to develop Helios into a strong European innovation center with the best knowledge and professional skills in various coating segments.«

Hiroshi Ishino, Chairman Kansai Paint



Sector: Medical devices

- Brownfield investment in a new factory for elastomer components for pharmaceutical and medical industry
- Value of investment: € 25 mn



Sector: Pharmaceuticals logistics

- Greenfield investment in a new logistics centre for pharmaceuticals
- Largest pharmaceutical warehouse for Kühne&Nagel
- Project size: 90,000m²
- Investment value: approx. EUR 50m



Sector: Automotive

- Biggest ever greenfield investment by Magna Steyr
- Multi-OEM Paint Shop (BMW, JLR, Mercedes-Benz G-Class)
- Investment value: approx. EUR 150m



Slovenian-Japanese Cooperation - Pilot Projects



Project NEDO

Slovenian-Japanese partnership – NEDO Project – partnership between the Japanese agency NEDO and the Slovenian transmission system operator (ELES).



- **Implementation of a smart grid on the national level by means of integrated and centrally managed cloud solutions**
- **Duration: 2016 – 2021**
- **Project value: EUR 35 million**
- **Partners: NEDO, Hitachi, ELES**



<https://www.eles.si/en/nedo-project>

HITACHI
Inspire the Next



Human-centric engagement

All generations

WHAT?



Logistics



Smart grid



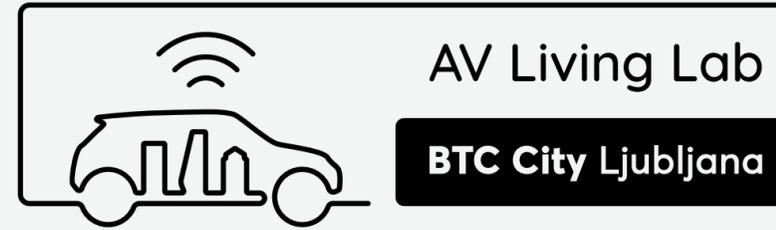
Retail/Fintech



Robotics/AI

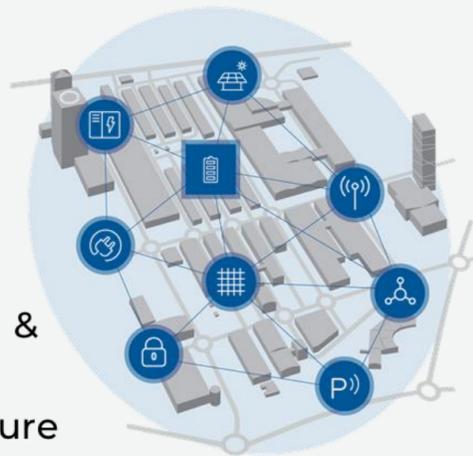


Mobility



AV Living Lab is an integrator and a unique world-class living lab for mobility and connected industries.

WHERE?



475.000 m²
surface area

21 mio
visitors per year

600
shops & services

11 km
of roads

Physical &
Digital
infrastructure

Content, people and
data-rich environment



HOW?

JAPANESE TECH
& CHALLENGE

AV LIVING LAB
SERVICES

Cross-industry integration
Research and development
Proof-of-concept
implementation
and execution

NEW BUSINESS
MODELS AND
SOLUTIONS



I FEEL
SLOVENIA

Toyota DriveMe pilot project

„In-house car sharing“ with Toyota Adria:

- Carsharing and innovative fleet management
- Toyota and Lexus hybrid vehicles
- Reducing car ownership costs
- **AV Living Lab's role: content and documents preparation, sales and pricing strategy, feedback collection**



MOBILITY

- 1 **Car sharing platform**
PoC, Production: Hybrid/EV car sharing service
- 2 **Ride sharing platform**
PoC: Ride, shuttle sharing, virtual stops, ad-hoc hailing service
- 3 **Multimodal mobility**
PoC: Awarding the commute for less traffic congestion
- 4 **Car - pedestrian visual interaction**
PoC: Car light signalization go/nogo
- 5 **Thematic mobility**
PoC: Thematic mobile shuttles design
- 6 **City POI mobility platform**
PoC: City POI and mobility interaction service
- 7 **Autonomous vehicle passenger drive user experience perception**
PoC: Survey of user perception on live AV demo event
- 8 **Mobility loyalty program application**
PoC, Demo: Blockchain app, Cars on Miles™
- 9 **Autonomous vehicles simulation**
Demo: Driver biofeedback simulator
- 10 **Autonomous driving**
PoC, Demo: Shuttle bus passenger driving
- 11 **Smart parking**
PoC, Production: Car detection, routing to parking
- 12 **Autonomous vehicle object detection**
PoC: ML neural network camera object/person detection
- 13 **3D environment model generation**
PoC: Point cloud model from camera pics
- 14 **Car types identification**
Demo: Bluetooth long range detection, analytics
- 15 **High accuracy positioning**
PoC: Differential GPS and RTK positioning

RETAIL & FINTECH

- 1 **Pay with a Smile**
PoC: Face recognition based payment
- 2 **Visitors segmentation**
PoC: Video based person counting and segmentation
- 3 **Digital payment platform**
PoC: Blockchain based, crypto payment platform

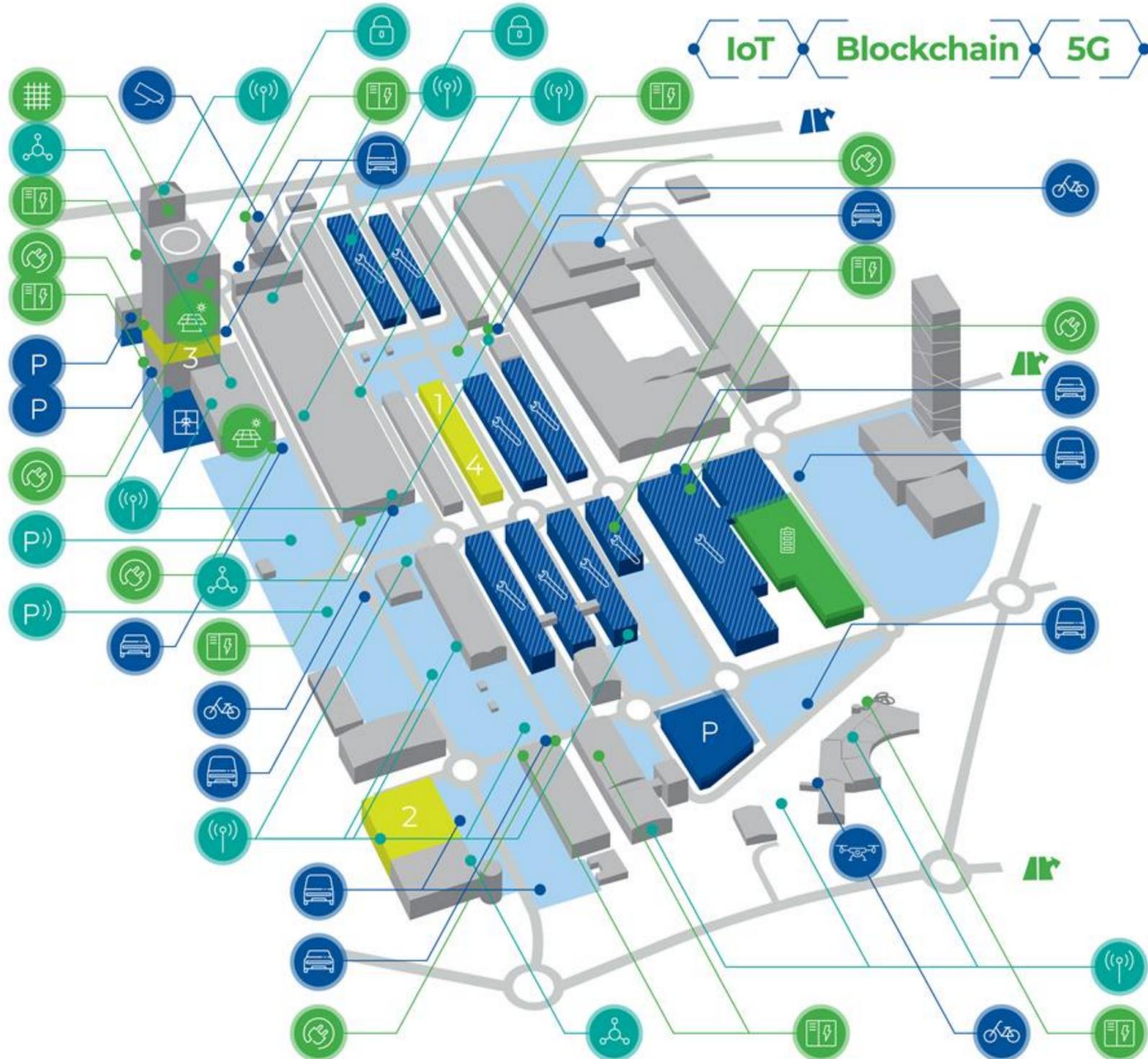
SMART GRID

- 1 **Waste heat recuperation**
PoC, Production: Industrial waste heat to swimming pool heating
- 2 **Energy storage**
PoC: Battery storage for smart grid
- 3 **Smart waste management**
PoC, Production: Separated waste collection
- 4 **Digital logistics platform**
PoC: Blockchain parcel management

SMART CITY & IoT

- 1 **Target marketing**
PoC: Bluetooth & WiFi indoor micro location tracking
- 2 **Maps content enrichment (preparation)**
PoC: Data enrichment, traffic congestion, POI on map, integration with city open data sources
- 3 **Asset management**
Production: Digital platform, Maximo
- 4 **Data analytics**
Production: Data warehouse platform, PowerBI
- 5 **Smart city KPI tracking**
Production: Digital platform, ISO 37120
- 6 **IoT environmental sensor nodes**
Demo, Production: LoRa WAN environment IoT sensors
- 7 **IoT sensor platform**
Demo, Production: IoT platform, sensor analytics
- 8 **Crowd participation**
Demo, Production: Smart city ideas collection app





SMART GRID CAPABILITIES

-  **Transformer stations, 20 kV/400 VAC**
2 pcs 0.6 MVA, 5 pcs 2x 1 MVA, 2 pcs 3x 1 MVA, 2x 1.6 MVA
-  **Smart grid battery storage**
> 4 MWh
-  **e-car, electric vehicle charging**
-  **Smart city and smart grid management center**
-  **Photovoltaic power plant**

ICT CAPABILITIES

-  **WiFi access points**
IEEE 802.11b/g/n/ac
-  **Smart city IoT sensors, LoRa hot spots**
-  **Smart parking IoT sensors**
-  **Cybersecurity, Blockchain, IT development**

AUTOMOTIVE CAPABILITIES

-  **Car sharing**
-  **Bike sharing**
-  **Control tower for autonomous vehicles and drones**
-  **Parking and underground garage**
770 in 4 levels and 1100 payable
-  **Autonomous shuttle bus stops**

INNOVATION CAPABILITIES

-  **ABC Startup Accelerator**
-  **Innovation Startup Campus**
-  **IBM Innovation Center**
-  **Autonomous Vehicle Simulation Center**
-  **Service garages, underground**
-  **24/7 video surveillance command center**
-  **Open parking spaces**

Contact point



www.investslovenia.org

Information on:

- Industries, legislation, taxes and incentives
- investment opportunities, industrial sites, and local suppliers
- Links with industry and local authorities
- Organization of fact-finding missions, business and investment conferences
- Supporting existing foreign investors in Slovenia

www.sloveniapartner.eu

Information on:

- Business specific information and company counselling
- Database of Slovenian exporters
- Information on Slovenian suppliers
- Presentation of Slovenian business environment
- Brochure Connect to Slovenian Business Excellence
- Advice and a hand in practical matters

I FEEL
SLOVENIA



**THANK YOU FOR
YOUR ATTENTION!**



REPUBLIC OF SLOVENIA



EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND