

Noile tehnologii în viitorul mobilității

Smart Diaspora 2023 – ecosistemul de cercetare, inovare și antreprenoriat

Andrei Son, Country Innovation Manager, Continental Automotive Romania

www.continental.com

R&D Romania



We Are Shaping the Future of Mobility.



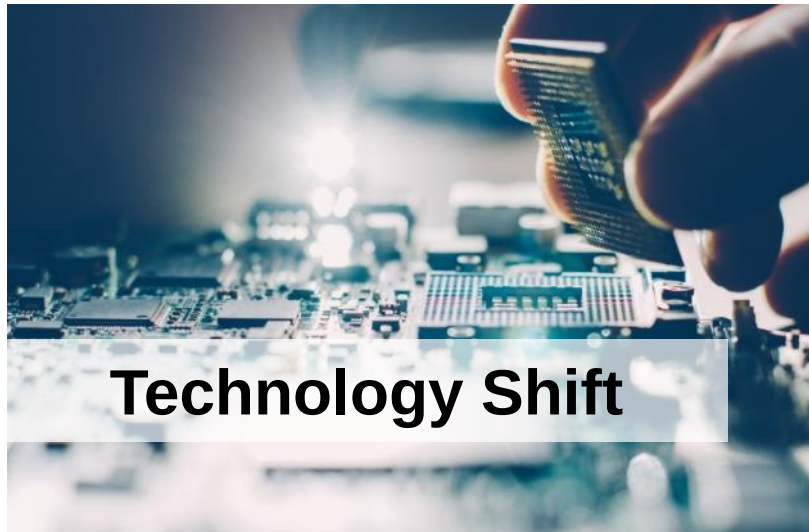


Digitalization



Sustainability

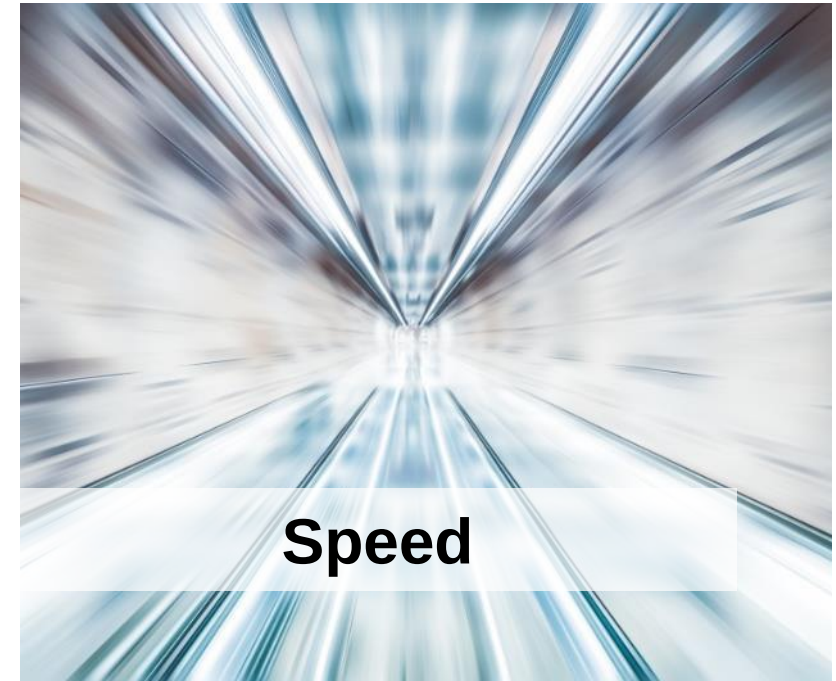
Our Challenges and Opportunities



Technology Shift



Competitive Environment



Speed

Continental Group

Leading the Way for Your Mobility



A leading player
in **autonomous
mobility**

First to market
with **software-
defined**
vehicle architecture

Industry-
benchmark
operational efficiency
in **tires**

190,875
talented and
dedicated
employees

Continental Group

Our Structure as of January 1, 2022

Group			
Group Sector	Automotive 15.4bn sales / 89.3k employees 	Tires 11.8bn sales / 57.2k employees 	ContiTech 5.9bn sales / 40.9k employees 
Business Area	› Safety and Motion › Autonomous Mobility › User Experience › Smart Mobility › Architecture and Networking	› Original Equipment › Replacement APAC › Replacement EMEA › Replacement the Americas › Specialty Tires	› Advanced Dynamics Solutions (AD) › Conveying Solutions (CS) › Industrial Fluid Solutions (IFS) › Mobile Fluid Systems (MFS) › Power Transmission Group (PTG) › Surface Solutions (SSL)

527 Locations in 58 Countries & Markets

- › Argentina
- › Austria
- › Australia
- › Belgium
- › Botswana
- › Brazil
- › Canada
- › Chile
- › **China**
- › Columbia
- › Costa Rica
- › Czech Republic
- › Denmark
- › Ecuador
- › Finland
- › **France**
- › **Germany***
- › Ghana
- › Greece
- › **Hungary**
- › **India**
- › Indonesia
- › Ireland
- › Israel
- › Italy
- › **Japan**
- › Kazakhstan
- › Lithuania
- › Luxembourg
- › Malaysia
- › **Mexico**
- › Morocco
- › Netherlands
- › Norway
- › Peru
- › Philippines
- › Poland
- › Portugal
- › Republic of South Africa
- › **Romania**
- › Russia
- › Saudi Arabia
- › Serbia
- › **Singapore**
- › Slovakia
- › Slovenia
- › South Korea
- › Spain
- › Sri Lanka
- › Sweden
- › Switzerland
- › Taiwan (China)
- › Thailand
- › Turkey
- › United Arab Emirates
- › United Kingdom
- › **USA**
- › Zambia

* Headquarters in Hanover

As of: Dec. 31, 2021



DETROIT



HANOVER



SHANGHAI

Continental Corporation in Romania

End of December, 2022



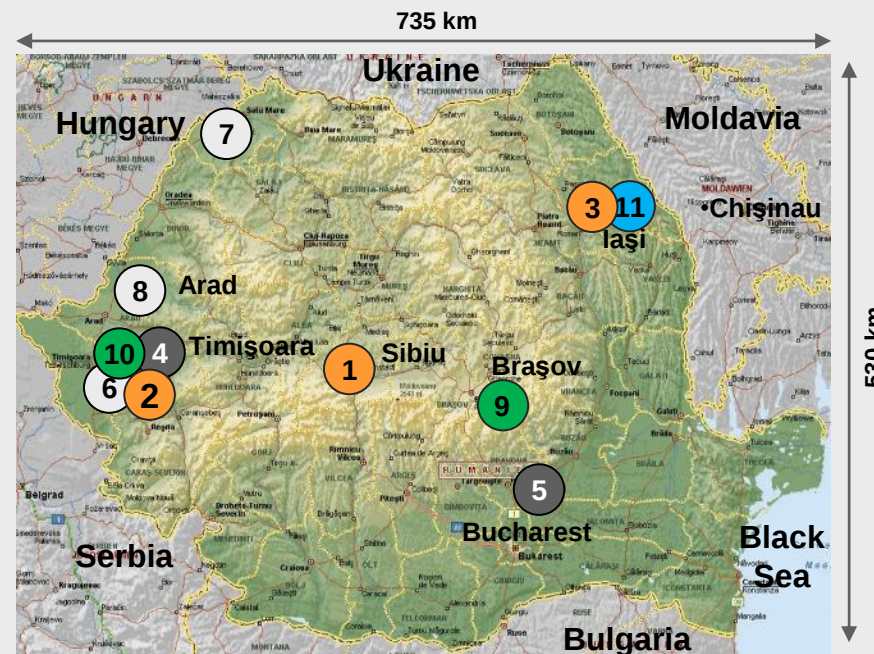
+2.2 billion
in investment



+19,000
employees



8 legal entities
in 11 locations



Automotive

- ① Sibiu
Engineering Center & Electronic Manufacturing
- ② Timisoara
Engineering Center & Electronic Manufacturing
- ③ Iasi,
Engineering Center
- ⑪ Continental Lightning Iasi
- ⑨ Elektrobit
Brasov Engineering Center
- ⑩ Timisoara Engineering Center

Tires

- ④ Timisoara, Production
- ⑤ Bucuresti, Distribution Center

ContiTech

- ⑥ Timisoara, Engineering & Production Center
- ⑦ Carei, Production Center
- ⑧ Nadab, Production Center

Relevance for Romanian Society and Industry

1

Top employer

2

Top technology, products,
digitalization, SW, smart mobility

3

Top investor

4

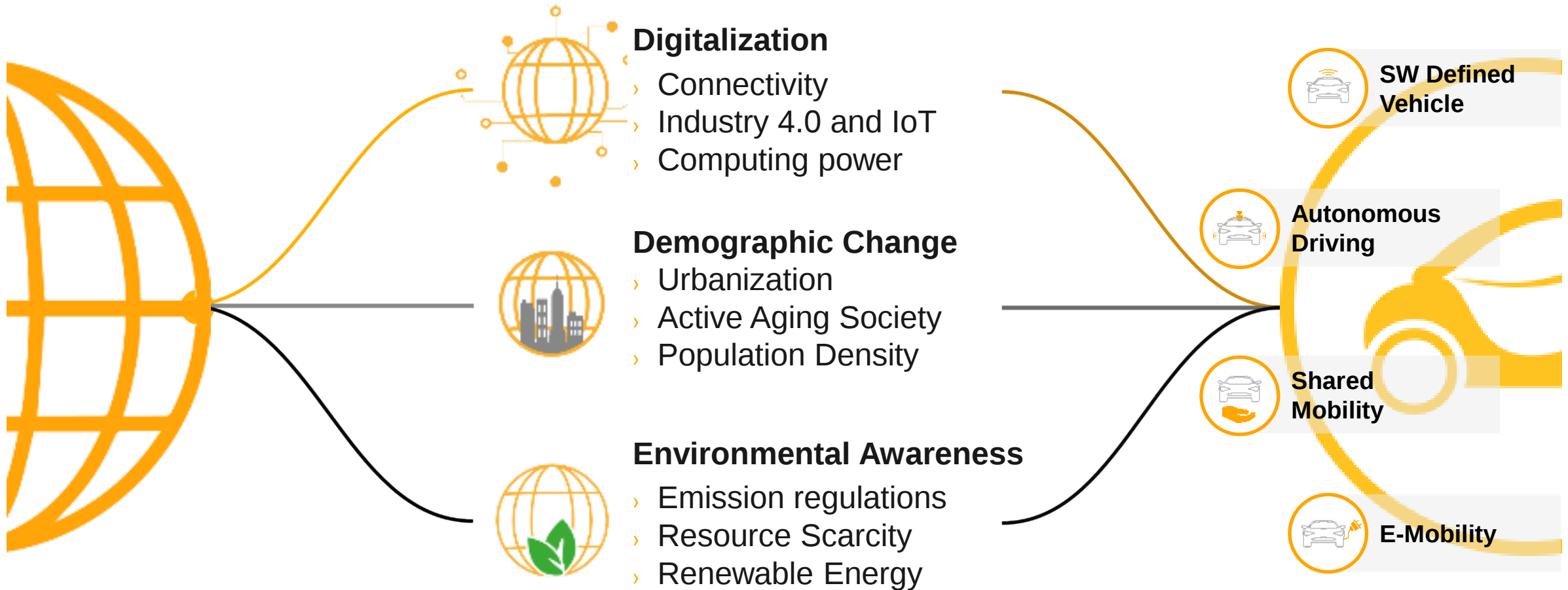
Top citizen of the community

Continental Automotive Timisoara

Customer Portfolio



Global trends and their effects in future mobility



Our Vision for Tomorrow

What will our world look like in 2030?



- 250 experts working on the latest developments in almost all areas of life on a daily basis
- scenarios describes the not-so-distant future with a whole new level of detail and clarity

E-Vehicles & Charging

- › Electromobility in different forms
- › Climate-friendly hybrid and electric vehicles
 - Clean Air Solutions
 - 48 Volt, 12 Volt Micro Hybrid
 - High Voltage Technologies
 - Pure BEV
- › Charging infrastructure
- › Energy generation, management and smart grid
- › (Wireless) charging, bidirectional systems



Shared Seamless Mobility

- › Seamless mobility journey: Safe, easy, stress-free and environment-friendly trip
- › Convenient integration of mobility offerings
- › Mobility hubs and transport networks
- › Mobility-as-Service (MaaS) as one digital platform
- › Shared mobility solutions



SW Defined Vehicles

- › Holistic Connectivity integrating mobile and non-mobile living spaces
- › Connectivity of smart devices and online services/ apps with the car
- › Connectivity via the cloud (e.g. OTA updates, flexible infotainment)
- › Connectivity car to infrastructure (e.g. cellular V2X, 5G, DSRC)
- › Usage of new data sources for the intelligent transport management
- › New digital services, data monetization



Intelligent Intersections

- › Real-world, end-to-end solution to collect and transfer valuable information
- › Safety: warn about a crossing, out-of-sight pedestrian
- › Traffic Management: data to control signal changes, stream-line traffic and reduce emissions
- › Sensor set, sensor fusion algorithms and Dedicated Short-Range Communication (DSRC)



Railway (trains, trams)

- › Rail transportation incl. high-speed trains
- › Safe mobility: Active and passive assistance technologies
 - Sensor and camera technology to trams to avoid accidents
 - Head-up display for continuous information about movements
 - Automatic Emergency Brakes
- › Efficiency & sustainability: Lighter products, air springs, surface materials
- › Advanced technologies and solutions expertise



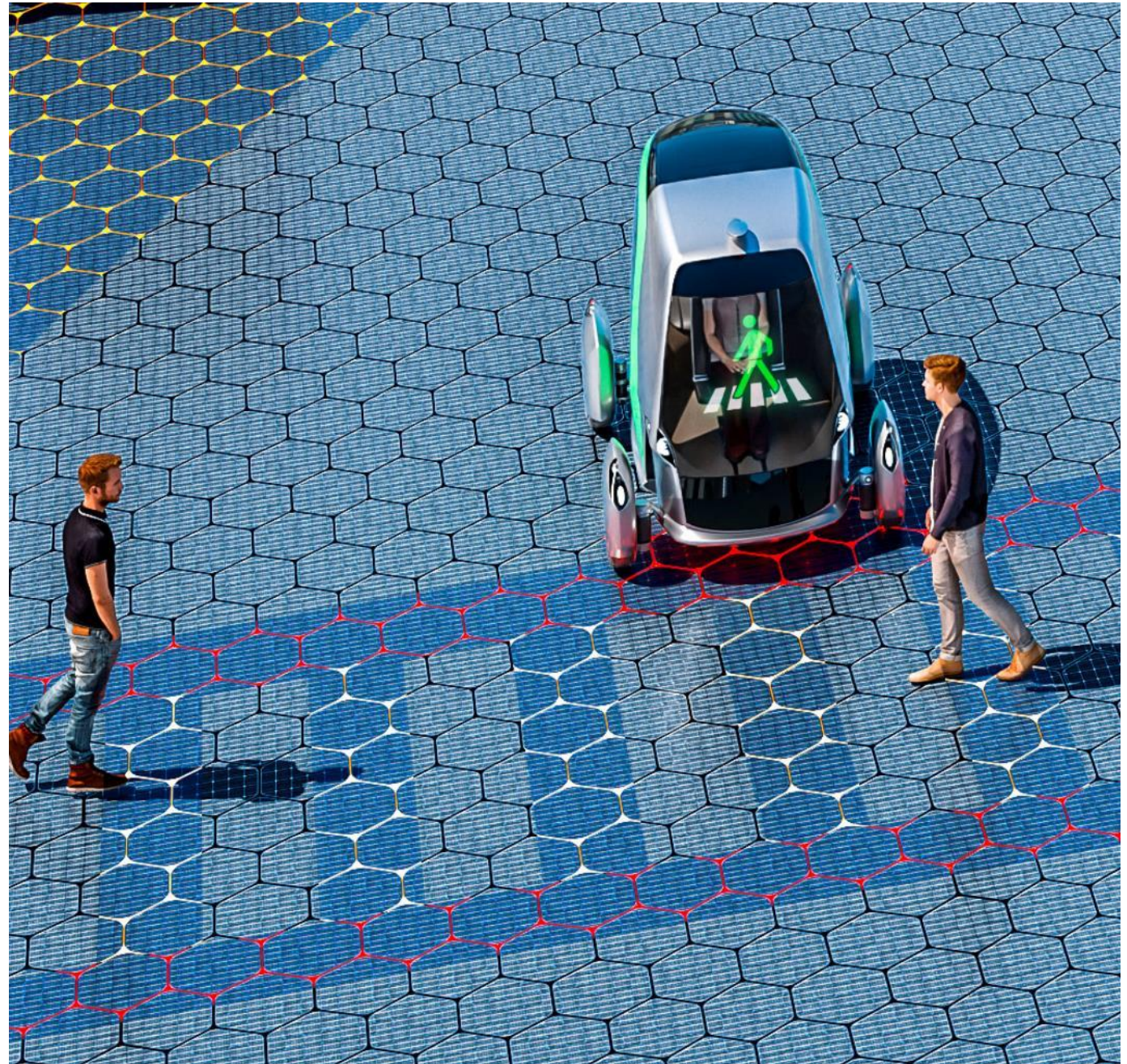
Smart Agriculture

- › Innovative Products (e.g. sensors, suspension, tires)
- › Ergonomic Driver HMI & Cockpit Technologies
- › Connectivity Technologies & Services
- › Highly Automated and Intelligent Precision Farming (Robots / Drones)
- › Additional solutions for Mining & Construction, Material Handling



Autonomous Driving

- › Today's ADAS provide basis for automated driving
- › Automation brings more safety, comfort, convenience, efficiency
- › New sensor technologies, high-performance computer systems
- › Sensor fusion, environment model
- › Cluster intelligence formed from the connected vehicle fleets
- › Human-machine dialogue with new components and solutions

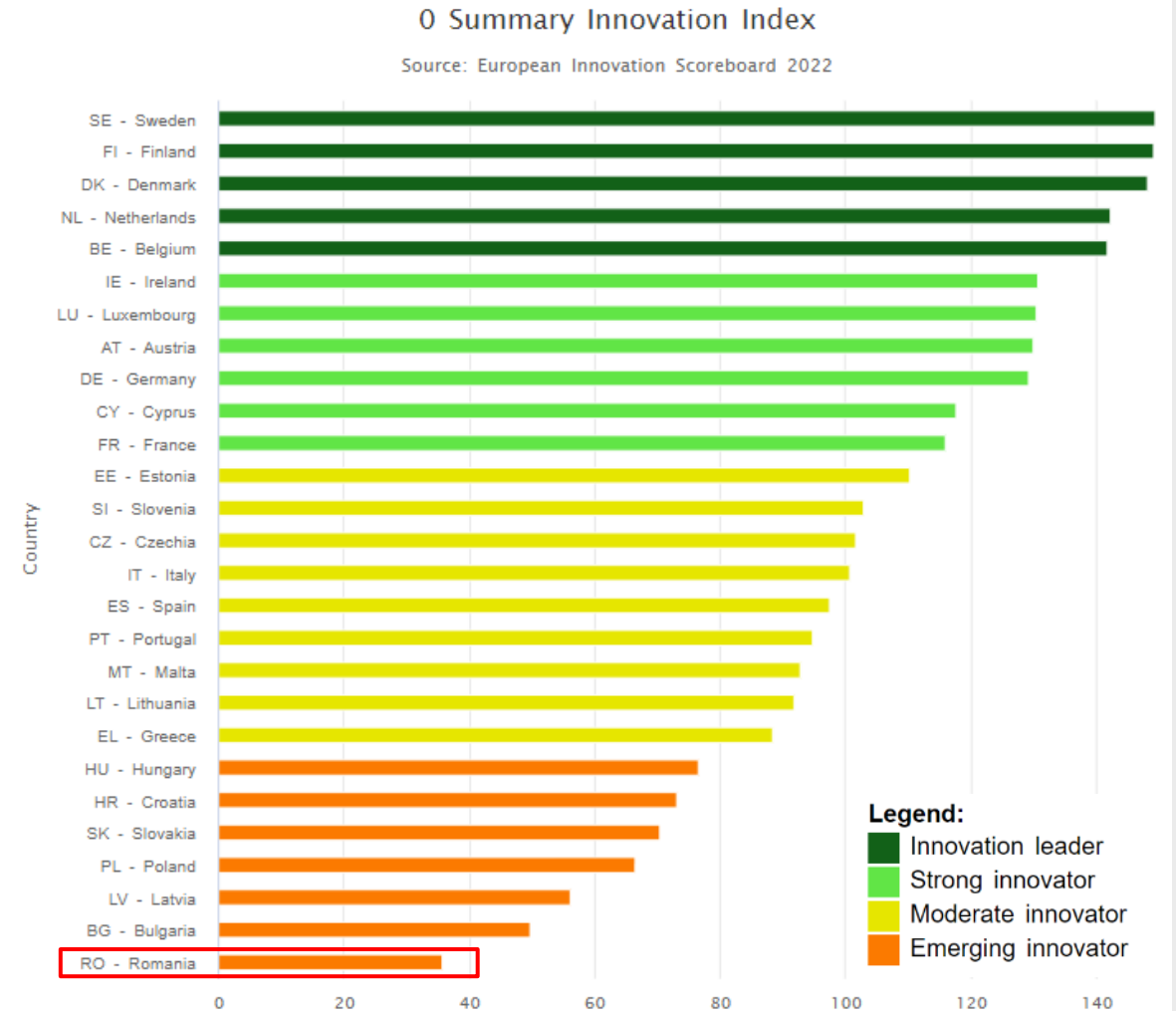
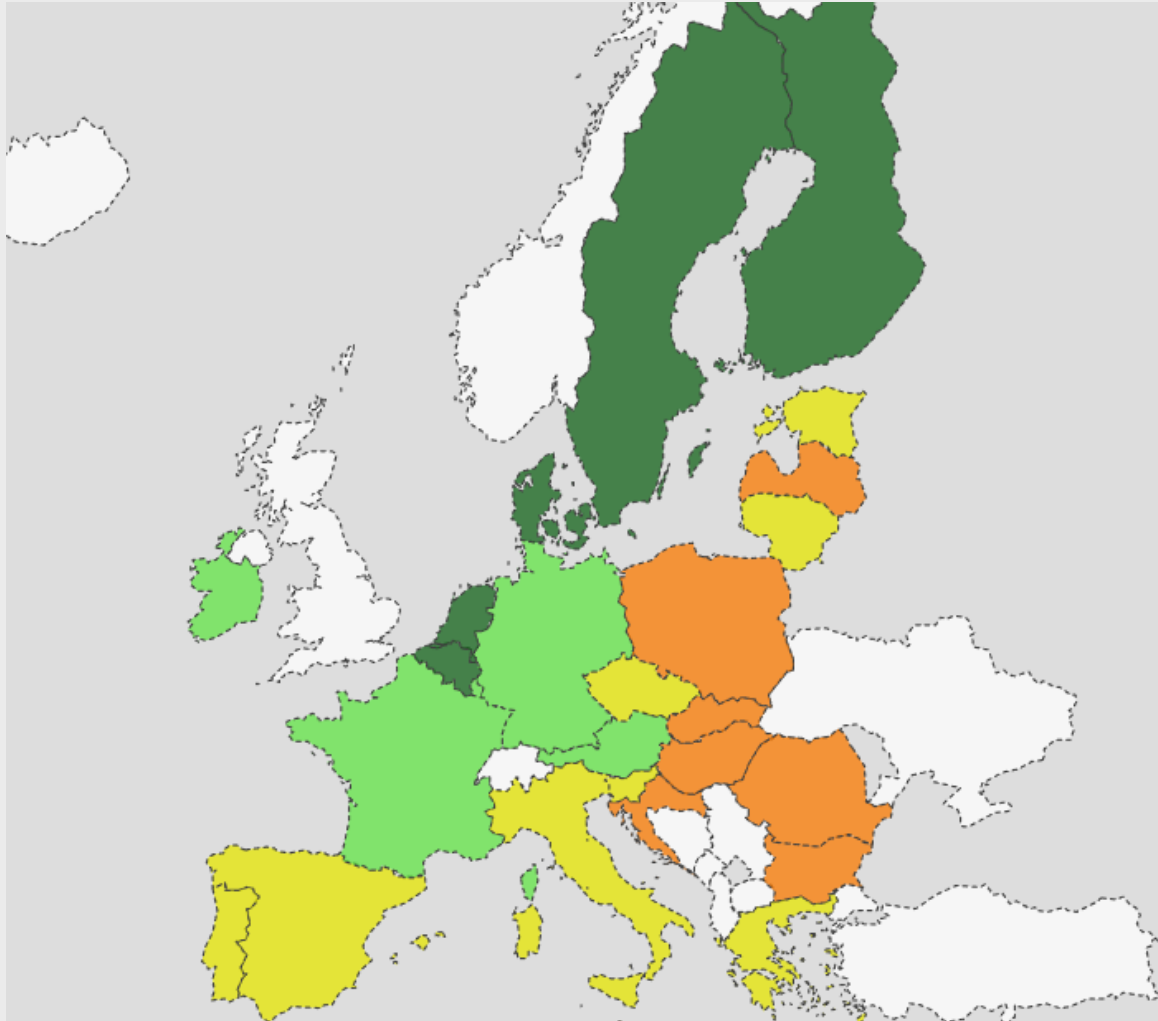


Last-mile Delivery

- › Growing & dynamic market, driven by increasing e-commerce sales
- › Automated goods delivery up to 80% of all B2C deliveries
- › Seamless & efficient goods delivery with the help of delivery robots and driverless vehicles
- › Utilization of transport capacity and reduction idle times
- › Transfer and scale automotive technology



Inovația din România în context internațional



Source: European Commission - 2022 European Innovation Scoreboards: The innovation performance of the EU and its regions is increasing

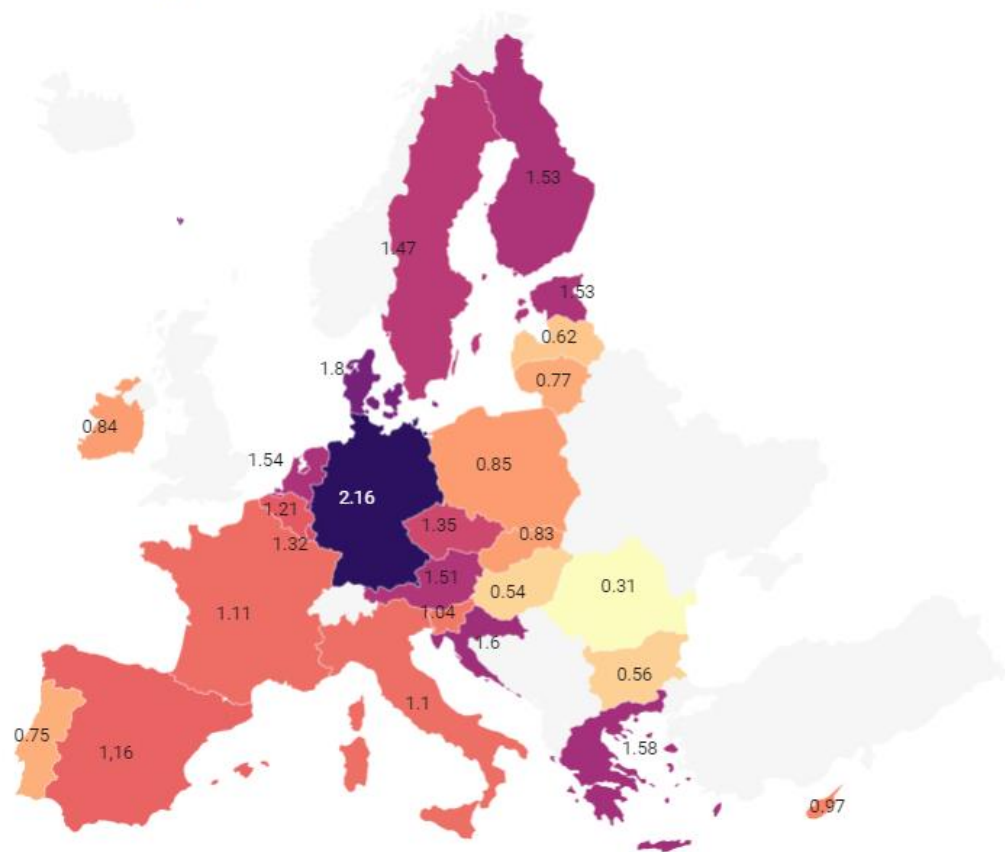
Inovația din România În context internațional

Share of the State budget dedicated to R&D

%. In 2020, provisional data

EU (27): 1,42%

0.31 2.16

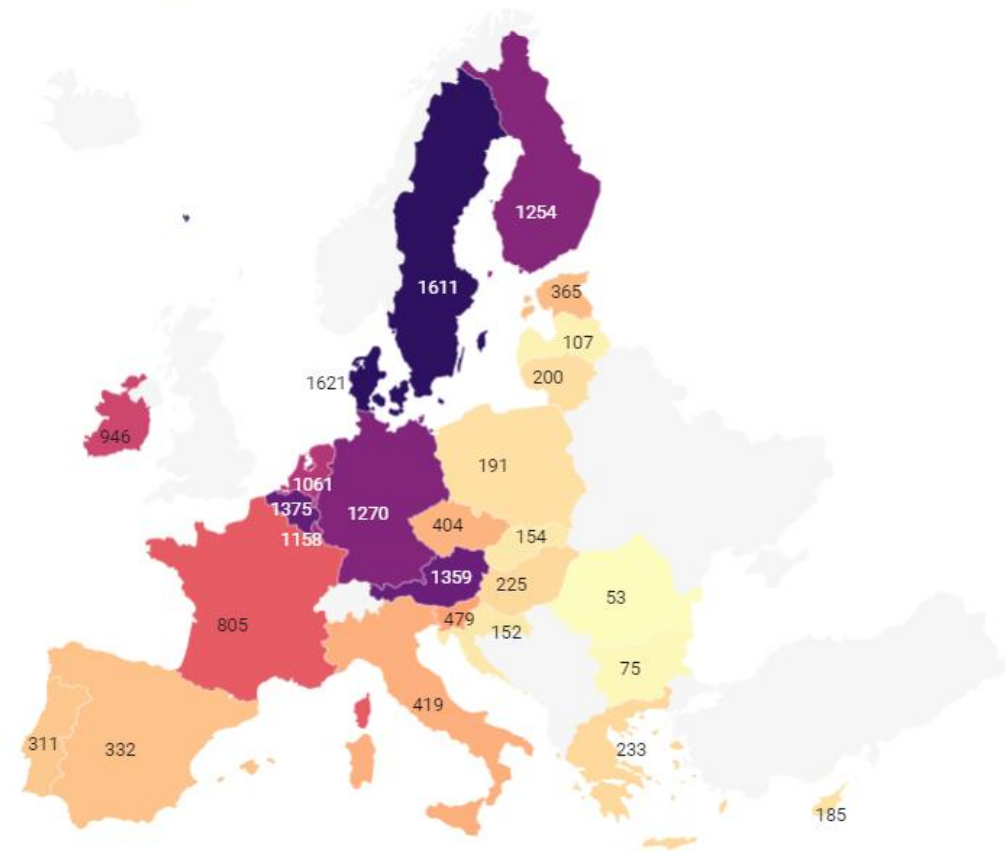


Gross domestic expenditure on R&D per capita

Euro. In 2020, provisional data

EU (27): 694 €

53 1,621



Inovația din România

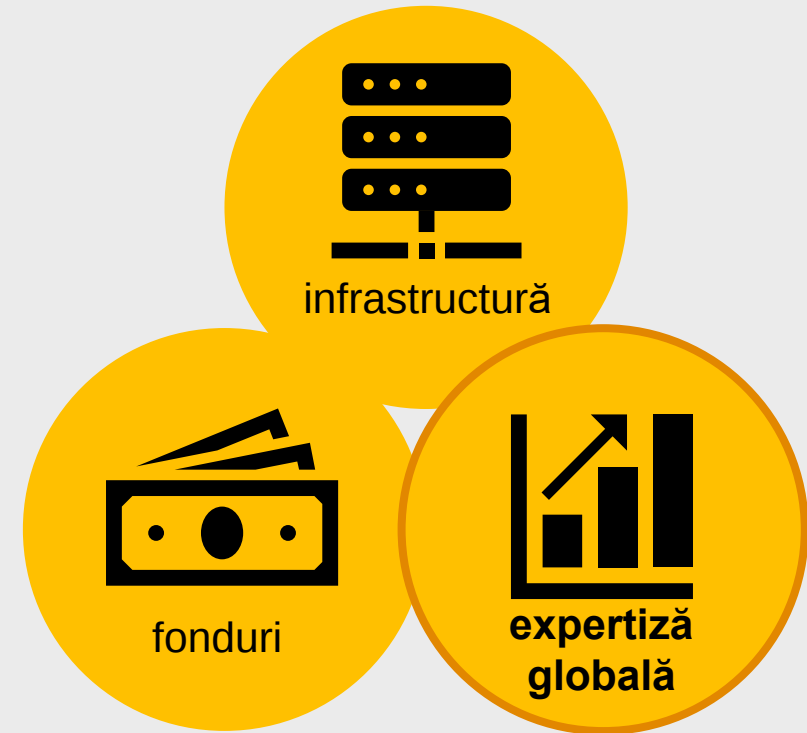
În context internațional

Ce caută jucătorii globali



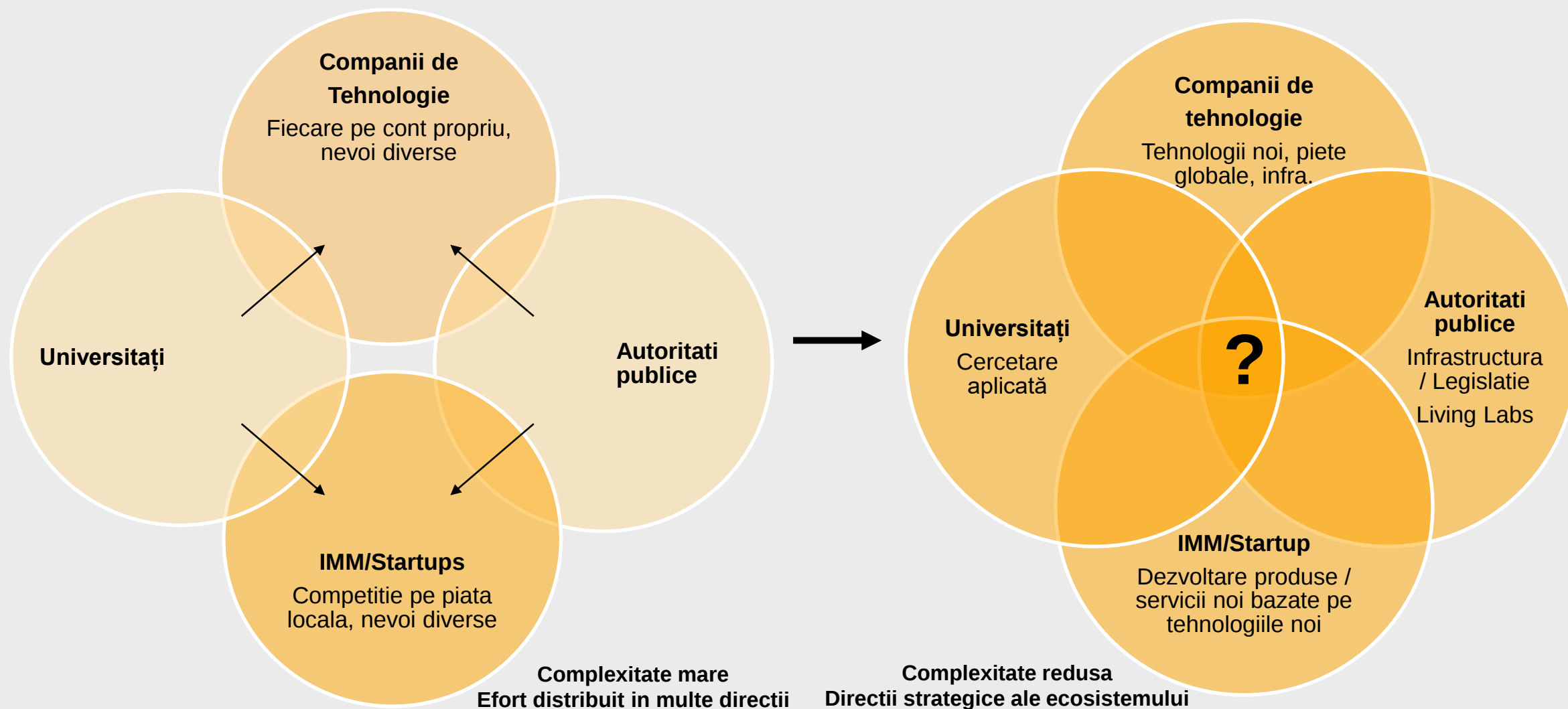
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Ce caută ecosistemele locale



Inovația din România

Cum putem dezvolta ecosistemul **local** de inovare?



Inovația din România

Pași următori?

- › **România: nou model de creștere economică**
(cost redus > **cost/valoare** > valoare adăugată mare)
- › **Reg.Vest: prima ce ar putea să piloteze sistemic:** cea mai avansată dpdv economic după București
- › **Inovația: un joc global de specializare regională** Peste 10 ani, în ce domeniu de inovare va da tonul Regiunea de Vest la nivel global?
- › **Companiile de tehnologie: cel mai accesibil acces** către subiecte de inovare globală, prezență în ecosistemul local, acces direct și rapid la informație
- › **Încurajarea colaborării prin metodologie și finantari**, crescând apetitul tuturor actorilor din ecosistemul local pentru conlucrare și identificarea direcțiilor strategice regionale.
- › **Colaborare îmbunătățită** Min Edu-CID-Ec pentru canalizarea educației și cercetării din universități către domenii strategice de **specializare inteligentă regională și tranziție spre creștere economică de valoare adăugată mare.**
- › **Index European de inovare:** scoaterea la suprafață, prin modul de raportare, a inovării reale ce se întâmplă în România

