

Battery Industry in Czechia



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Czech Battery Industry

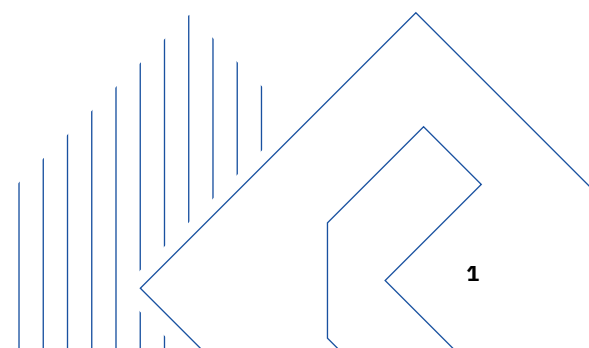
Czechia has a diversified economy with automotive/transport equipment, mechanical engineering and production of electrical apparatus being the main industrial sectors. Production of batteries has a long tradition in Czechia, with car batteries being produced here since 1904 and alkaline or zinc-chloride batteries being produced since 1919. More recently, this traditional production has been complemented by production of other types of batteries – Li-ion, AGM and VRFB – by Czech and international producers.

Although Czechia is yet to attract a major battery gigafactory, its significant automotive industry – the third largest in Europe – is rapidly shifting to the production of electrified vehicles. Two of three major carmakers in Czechia are already assembling battery packs not only for themselves but for other carmakers within their groups and the third carmaker will open its battery assembly facility at the turn of 2026/2027. Production of buses, trolleybuses and railway vehicles is also increasingly using batteries.

Furthermore, Czechia is also becoming a significant producer of battery energy storage systems. New legislation passed at the end of 2023 and 2024 started a massive wave of investment into stand-alone BESS. In a country with strong engineering and mechatronics, Czech-based companies are taking advantage of this trend and are producing not only BESS but also technologies for testing and optimisation.

Czechia is also planning to increase its independence in terms of battery materials. There are significant deposits of lithium on the border with Germany and a plan for their mining and processing. Manganese reserves from former pyrite mining are the largest source of manganese in the EU, with mining expected to begin around 2030. A Czech company and its Swedish partner will start producing cathode material for Na-ion batteries at its plant, with the goal of creating the first purely European chain independent of lithium imports.

Source: CzechInvest, 2026



Battery Value Chain



100
Companies in the battery value chain



22
Research institutions in the battery value chain

Source: CzechInvest, Czech Battery Cluster, 2026



\$ 230 mil.
Total FDI capex



1,600
Total jobs created by FDI projects

Source: fDI Markets, 2026, Timeperiod: 2003–2025

Strengths of the Sector

1

Geographical location and availability of raw materials

Czechia is strategically located in the heart of Europe and has significant resources of key raw materials, particularly lithium and manganese, which are essential for battery production. Lithium mining in Cinovec and manganese mining in Chvaltice have the potential to reduce import dependency and support the development of local industry.

2

Strong industrial base

Czechia has a developed industrial infrastructure and know-how in the field of materials production and processing, which facilitates the integration of new technologies into existing production processes. The industrial base includes companies of all sizes and is evenly spread across regions.

3

Research and development

Czech universities and research institutions are actively involved in the research and development of new materials and technologies for batteries. Cooperation between academia and industry supports innovation and technological progress.

4

Comprehensive value chain

Entities operating in Czechia are involved in all parts of the value chain: from raw material extraction, through material production, battery development and manufacturing, BMS modules, electromobility, safety, and storage, to recycling and second life of batteries. This comprehensiveness enables a multiplier effect and the development of the entire ecosystem.

5

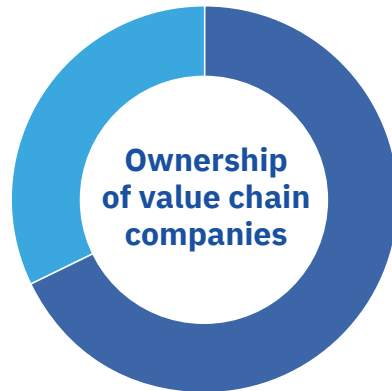
Opportunities for industrial transformation

There is a great opportunity to integrate companies from traditional industries (e.g., automotive) into new areas of the battery value chain, which can support employment and economic growth.

6

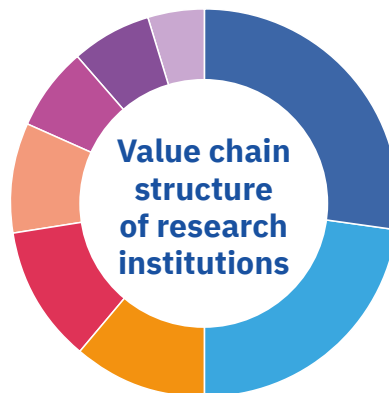
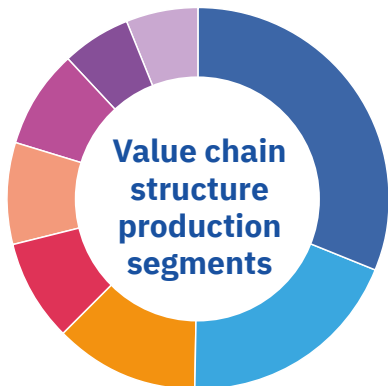
Promoting sustainability and recycling

Battery recycling technology and infrastructure are developing, contributing to the sustainability of the entire industry and reducing environmental impacts. Recycling is also supported by EU legislation.



- ◆ 90% Europe
- ◆ 6% Asia
- ◆ 3% USA
- ◆ 1% Africa

- ◆ 68% Domestic
- ◆ 32% Foreign

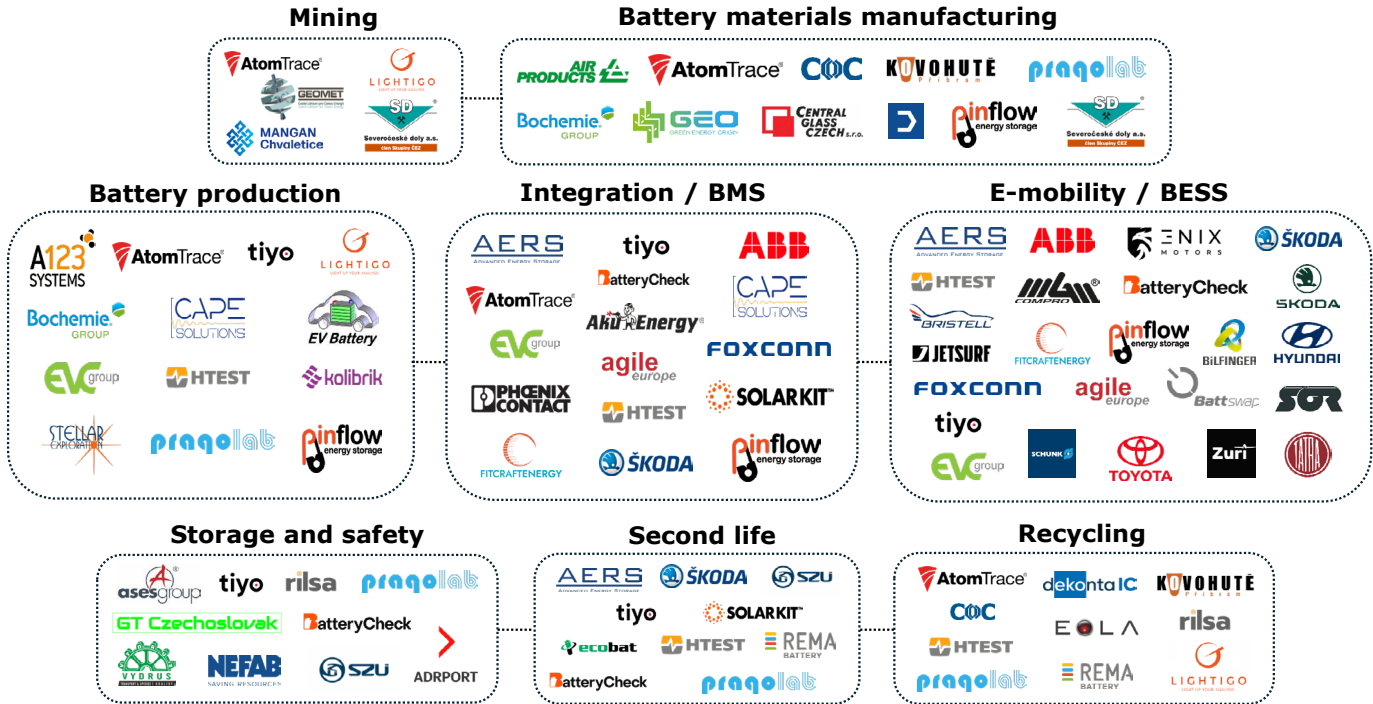


- ◆ 51.1% E-mobility and energy storage systems (ESS)
- ◆ 30.9% Manufacturing and development of modules including accessories (BMS)
- ◆ 20.2% Battery manufacturing and development
- ◆ 13.8% Battery second life
- ◆ 13.8% Materials processing, manufacturing and development
- ◆ 13.8% Recycling
- ◆ 9.6% Extraction of basic materials
- ◆ 9.6% Safety, storage and transportation

- ◆ 85.7% Materials processing, manufacturing, and development
- ◆ 71.4% Battery manufacturing and development
- ◆ 35.7% Manufacturing and development of modules including accessories (BMS)
- ◆ 35.7% Recycling
- ◆ 28.6% E-mobility and energy storage systems (ESS)
- ◆ 21.4% Battery second life
- ◆ 21.4% Safety, storage, and transportation
- ◆ 14.3% Extraction of basic materials

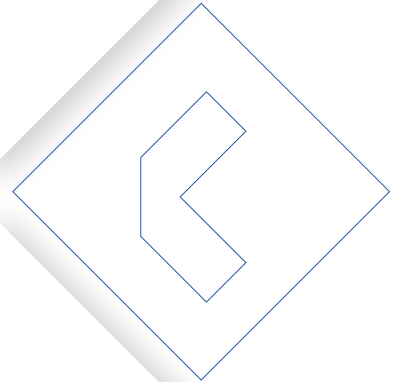
▶ **The total does not equal 100%, as companies and research institutions operate at multiple stages of the value chain.**

Czech Battery Value Chain



Source: CzechInvest, Czech Battery Cluster, 2026

Selected Investments in the Battery Sector



Selected Investments in the Battery Sector

Škoda Auto



The largest producer of cars in Central & Eastern Europe has been assembling battery packs for several brands in the Volkswagen Group – not just Škoda, but also Audi, Cupra/Seat and Volkswagen, since 2019. It produces more than 1,100 battery systems per day and with more than 600 employees in battery systems production is the largest manufacturing site for components for electrified vehicles within the Volkswagen Group and first in the Group to produce cell-to-pack systems.

Hyundai

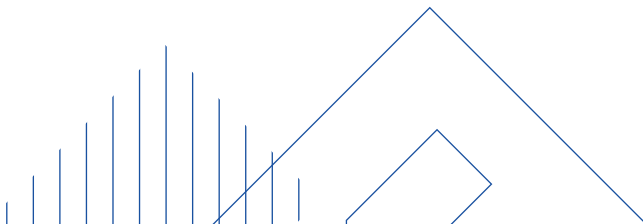


The second largest producer of cars in Czechia, also produces battery systems in its sole European car plant in Nošovice, plus for its sister KIA plant in Slovakia. It was the first car manufacturer in Czechia to produce fully-electric vehicles, in March 2020. Electrified vehicles accounted for 50% of its production in Nošovice in 2025. By mid-2026 annual capacity of battery production in Nošovice is expected to increase to 450,000 from the current 360,000 units.

Toyota



Toyota announced in September 2025 that it will switch production in its Czech plant (in operation since 2005) from fossil-fuel cars to electrified vehicles. A new building for battery pack production is under construction. The Czech plant will be Toyota's first in Europe to produce fully electric cars, the plan is 100,000 per year by 2028. It is already producing hybrids and its annual capacity is more than 225,000 cars.





Draslovka

The Czech producer of specialty chemicals has teamed up with Altris, a Swedish Na-ion battery developer, to build Europe's first industrial-scale Na-ion cathode value chain. The two companies will scale production of Altris' patented Na-ion cathode active material (CAM) at Draslovka's facility, supplying up to 350 tonnes of CAM annually, equivalent to around 175 MWh of Na-ion cell capacity. Production should commence in the second half of 2026.



Bochemie

Another Czech specialty chemicals company has been producing active materials for batteries for 70 years and since 2020 also electrode plates for nickel-cadmium cells. In 2019 Bochemie bought the German company GAZ Geräte- und Akkumulatorenwerk Zwickau, one of the three largest global manufacturers of nickel-cadmium energy storage systems. This allows Bochemie to expand in the sector of battery energy storage systems.



A123 Systems

A123 Systems, the Sino-American producer of Li-ion battery and cell technologies, is expanding its production of starting batteries in Ostrava, originally opened in 2017, and branching out into the production of stationary battery energy storage systems. The company supplies 1.8 million starting batteries annually to customers like Daimler, Fiat, Porsche, Audi, McLaren, Jaguar and Land Rover.

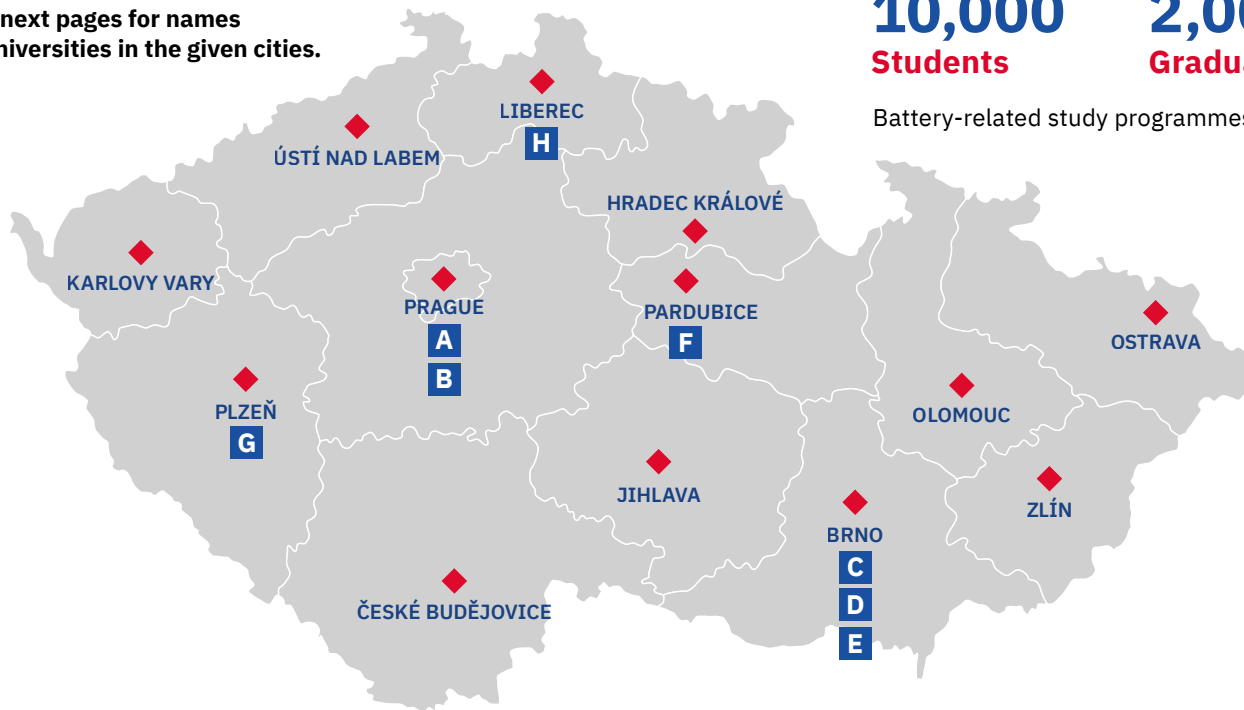


C-TECH United Corporation

The Taiwanese company C-TECH United Corporation, a global leader in the area of Li-ion and lithium-polymer battery modules, opened its first European representative office in Prague in the summer of 2025. The company intends to commence production in Czechia next year and is also considering the construction of a European research and development centre here.

Talent Availability

See next pages for names
of universities in the given cities.



Academic year 2024/2025

10,000
Students

2,000
Graduates

Battery-related study programmes

Notes: Data for universities with selected research units were identified as follows: the faculty of each research unit was specified first. In the next step, these data were filtered by the ISCED field of subjects guaranteed by these research units. Data for the University of Defence are not provided due to security issues.

Source: Ministry of Education, Youth and Sports, 2026



- Faculty of Electrical Engineering



- Department of Metals and Corrosion Engineering



- Faculty of Electrical Engineering and Communication

A

Czech Technical University in Prague

CTU (Czech Technical University) has strong, application-oriented battery R&D built around its Battery & Energy Storage Systems group, with core strengths in testing, diagnostics, modelling, second-life use, recycling, and emerging Na-ion technologies. CTU organizes the regular Battery Day forum.

B

University of Chemistry and Technology, Prague

VŠCHT Praha (University of Chemistry and Technology, Prague) is one of the Czech Republic's strongest chemistry-driven battery research institutions, with core strengths in electrochemistry, advanced materials, mining, recycling, water-based (aqueous) batteries and energy-storage technologies, including vanadium redox flow batteries. The university directly collaborated with industry on R&D of the Czech Cinovec lithium deposit extraction methods.

C

Brno University of Technology

BUT (Brno University of Technology) is one of the strongest Czech academic players in battery R&D, with leading expertise in lithium-ion, sodium-ion, and lithium-sulfur technologies, battery recycling, electromobility, and advanced material characterization, battery testing and simulations. BUT organizes the Advanced Battery, Accumulators and Fuel Cells conference.

MASARYK UNIVERSITY

- Department of Plasma Physics and Technology



University of Defence

- Department of Electrical Engineering

D

Masaryk University Brno

Masaryk University (MUNI) contributes a comprehensive, multidisciplinary perspective to the battery ecosystem. Its core expertise lies in the materials science of solid-state Li-ion and Na-ion batteries, while its research spans the entire battery value chain — from lithium resource mapping and raw-materials analysis, through advanced battery integration into medical wearables, to socioeconomic research and legal frameworks supporting sustainable battery deployment.

E

University of Defence

UNOB maintains a close and long-standing collaboration with the Armed Forces of the Czech Republic, enabling direct transfer of operational needs into research and technological development. Both UNOB and the military recognize the strategic importance of a strong Czech battery value chain, essential for energy security, advanced mobility, autonomous systems, and the resilience of defence infrastructure. Through partnerships with industry and research institutions, UNOB supports the development of modern battery technologies and contributes to strengthening the technological sovereignty and defence capabilities of Czechia.



UNIVERSITY
OF PARDUBICE

- Faculty of Chemical Technology



NEW TECHNOLOGIES RESEARCH CENTRE
UNIVERSITY OF WEST BOHEMIA
IN PILSEN

- New Technologies Research Centre

TECHNICAL
UNIVERSITY
OF LIBEREC

- Faculty of Mechatronics, Informatics
and Interdisciplinary Studies

F

University of Pardubice

UPCE (The University of Pardubice) contributes to the Czech battery ecosystem mainly through chemistry-driven research, its top European position in smart-battery printed sensing technologies and active layer printing and advanced organic materials relevant to next-generation electrochemical storage, including new electrolytes for Li-ion and Na-ion batteries.

G

University of West Bohemia

The University of West Bohemia in Pilsen (ZČU) has battery expertise focused mainly on research into renewable sources, advanced electrochemical systems (including metal-air and redox batteries), and applications for electromobility. Its RICE research center and ReEn department are among the most active in Czechia in the field of energy technologies.

H

Technical University of Liberec

TUL (Technical University of Liberec) contributes through its Institute for Nanomaterials, Advanced Technologies and Innovation (CXI) to the Czech battery ecosystem mainly through battery cell and pack testing, battery-management research, with some overlap in nanomaterials, and applied R&D for automotive and energy systems.

R&D & Innovation Infrastructure

Czech Academy of Sciences



Institute of Physics of the Czech Academy of Sciences

The Institute of Physics of the Czech Academy of Sciences research work spans multiple branches of electrochemical energy storage (battery and super-caps), including aqueous batteries based on multivalent metal ions, such as Zn^{2+} , Ca^{2+} , and Al^{3+} , along with the design of innovative electrolytes ranging from water-in-salt systems to hydrogel and suspension electrolytes. In parallel, we also develop new generations of Li-ion batteries, with a particular focus on advancing silicon-based anodes, creating novel electrolyte formulations and additives, and developing innovative battery architectures that offer improved safety and performance.



The J. Heyrovský Institute of Physical Chemistry, Czech Academy of Sciences

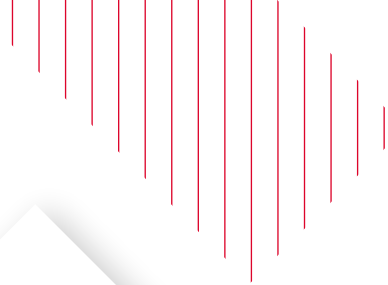
The J. Heyrovský Institute of Physical Chemistry, Czech Academy of Sciences, focuses on the research into various battery systems, ranging from Li-ion and Li-S batteries to next-generation aqueous batteries. We develop and test advanced electrode materials in combination with suitable electrolytes to ensure that the resulting systems exhibit high capacity stability, safety, and long operational life. The materials and prepared electrodes are thoroughly characterized using modern microscopic and spectroscopic techniques (SEM, TEM, AFM, Raman).



CEITEC

Battery R&D at CEITEC has become a Czech success story largely because its researchers built one of Europe's most advanced capabilities for non-destructive CT analysis of batteries, enabling multiscale 3D imaging from whole cells down to electrode particles. This unique strength allows CEITEC to support industry, accelerate materials research, and reveal degradation mechanisms that are otherwise invisible. Another asset is the material synthesis and material surface adjustment.

Battery Value Chain Startups





Volteek Solutions

Turnkey Engineering Solutions – the company combines design and engineering to deliver customized battery and e-drive solutions with unmatched speed and reliability. From concept to execution, it delivers end-to-end services designed to transform client visions into reality and consistently exceed expectations.



CAPE SOLUTIONS

CAPE Solutions provides services and digital products for your processes and equipment. Typical tasks include process simulation, flow and reaction characterization, digital twin development, and advanced data analysis.



ENIX Motors

ENIX Motors is an innovative startup focused on comprehensive engineering activities in the field of electromobility. It specializes in custom-built electric cars, offering clients unique solutions tailored to their needs. Its portfolio also includes the development of battery modules and battery boxes that ensure high efficiency, safety, and long service life. By combining design expertise and modern technologies, ENIX Motors strives to push the boundaries of sustainable transport and bring innovative products to the market with an emphasis on quality and performance.



Atom Trace

Atom Trace specializes in the use of LIBS (Laser-Induced Breakdown Spectroscopy) technology and in the development and manufacture of cutting-edge analytical instruments designed for rapid chemical analysis. Its technologies enable accurate and efficient sample processing in a short time, which finds application in areas such as industrial quality control, materials research, environmental monitoring, and forensic analysis.



BatteryCheck

Startup BatteryCheck goes beyond conventional BMS (Battery Management System) by offering comprehensive monitoring of more than 15 key battery factors. This provides users with a detailed overview of battery status in real time, while generating proactive alerts that allow them to respond before problems arise. This approach helps optimize performance, extend battery life, and minimize the risk of unexpected outages.



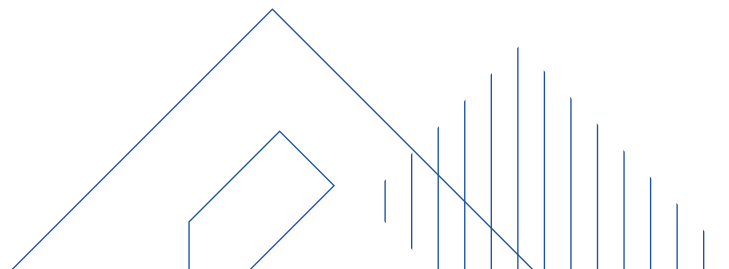
Lightigo

Lightigo specializes in the use of LIBS (Laser-Induced Breakdown Spectroscopy) technology for fast, flexible, and energy-efficient elemental analysis. This method enables accurate determination of material composition directly at the core of their analytical instruments, providing an effective solution for industrial and scientific applications. Combining high speed, low resource consumption, and versatility, Lightigo focuses on modernizing traditional analysis methods and providing users with tools that simplify processes and increase productivity.



Wattee

With Wattee's simple and intuitive mobile interface, Wattee enables customers to continuously monitor real-time data on their operations and control the system from anywhere using smartphones. Everything is aimed at enhancing energy system performance and more efficient energy strategy planning.



Battery Modules Systems (BMS)



Agile Europe

Agile Europe operates in Czechia in the field of modern energy solutions, particularly the production of battery storage and mini-grid systems. It focuses on providing comprehensive services, including turnkey battery storage supplies, which include design, installation, and integration into existing infrastructure. These systems are primarily intended for industrial applications where reliability and efficient energy management are key. The main areas of application include the energy sector and oil extraction, where battery storage helps stabilize energy supplies, optimize operations, and reduce costs. With its focus on innovation and sustainability, Agile Europe contributes to the development of modern energy and supports the transition to more efficient and environmentally friendly solutions.



EVC Group

EVC Group specializes in comprehensive solutions in the field of modern energy, including the development, manufacture, and sale of advanced energy storage systems, battery cells, and electric drives. The company focuses on innovative technologies that support efficient energy storage, increase the reliability and performance of electrical systems, and contribute to sustainable development. With its broad product portfolio and expertise, EVC Group provides solutions for industrial applications, electromobility, and renewable energy sources, helping its customers optimize energy processes and reduce their environmental footprint.



Foxconn

The global manufacturer FOXCONN is a world leader in providing complete IT solutions, consumer electronics production, and manufacturing components for communication and electronic devices. It manufactures all personal computer components except chips. Its customers include renowned companies of global significance.



ABB Czech Republic

ABB in Czechia focuses on the development and supply of battery systems for transport (especially railways) and energy storage in industry. The company concentrates primarily on traction battery systems for rail transport and cooperates in the production of light batteries for new electric units. It offers a BESS-as-a-Service, which allows companies to use battery storage without large initial investments and supports the development of renewable energy. ABB provides digital solutions for energy storage that help balance fluctuations in supply from renewable sources and increase the stability of the energy infrastructure.



ŠKODA Electric

Škoda Electric is a traditional Czech manufacturer of public transport vehicles and components for wheeled and rail vehicles. The company focuses on electric mobility, with trolleybuses, electric buses, trams, and trains being its typical products. Last but not least, the company is also active in the field of electricity storage.



TIYO

TIYO provides development services, CAD and CAE engineering, component testing, and an accredited testing laboratory that performs tests on batteries, cells, modules, and other components. These tests include functional, mechanical, climatic, electrical, safety, durability, chemical, and other tests.



Stellar Exploration

Stellar Exploration is a European company that ranks among the leaders in innovation for electric propulsion systems (EPS S/S) and chemical propulsion technologies. Thanks to its broad expertise, it focuses on the implementation of both commercial projects and projects for the European Space Agency (ESA). The company emphasizes cutting-edge research, reliability, and technological advancement, contributing to the development of modern space transportation and space exploration.

Industry Cluster

Czech Battery Cluster



The Czech Battery Cluster (CBC) was established in 2022 as a platform connecting the public, state and private sectors with the aim of developing the Czech battery ecosystem. It brings together companies, research institutions, and public organizations that work together on projects supporting a zero-emission economy, technological transformation of industry, and innovative entrepreneurship. CBC supports effective cooperation across the value chain, the creation of new know-how, and the emergence of spin-offs and startups. By connecting science and business, it helps to increase the long-term competitiveness of its members and develop technical education for the 21st century with an emphasis on market needs and talent support.



National and International Partnerships

Batteries European Partnership Alliance (BEPA)

Batteries European Partnership Alliance (BEPA) – the private-side association of the BATT4EU partnership under Horizon Europe. It represents the entire European battery R&I community and sets priorities for next-generation battery technologies. Czech Battery Cluster became in August 2025 its first Czech BEPA member. Czechia brings significant assets to Europe’s battery strategy: Second-largest lithium deposit in Europe (Cínovec); Europe’s only manganese deposit suitable for battery production (Chvaletice/Trnávka); Strong automotive and electrotechnical industries.



European Battery Alliance & EBA250+ Programme

European Battery Alliance & EBA250+ Programme – it is the industrial development arm of the European Battery Alliance, coordinated by EIT InnoEnergy. It brings together 800+ organisations across the entire battery value chain – from raw materials to recycling. Czechia is formally part of EBA since summer 2024 through the Czech Battery Cluster (CBC).



Important Projects of Common European Interest (IPCEI)

Important Projects of Common European Interest (IPCEI) – Czechia participates in several IPCEI initiatives, mainly through the Ministry of Industry and Trade (MPO) and CzechInvest, taking batteries as one of the four strategic sectors to focus on – the concrete areas of interest include Advanced materials and components; Battery cell development and production and the area of Recycling and circular economy. As for Czechia, the only currently active local university is the CIIRC CTU in Prague which participates as a partner in neighbouring Slovak project lead by ZTS – VÝSKUM A VÝVOJ, a.s. under the name “Regenerácia použitých batérií z elektromobilov”. Some of the Czech universities also participate in different EU Horizon battery-related projects.



Success Stories



Pinflow

Pinflow Energy Systems is one of Czechia's most notable deep tech success stories, growing from a West Bohemian University and University of Chemistry and Technology in Prague, university research team into a globally recognized developer of vanadium redox flow battery technology for long duration energy storage. Their rise comes from scientific expertise, scalable engineering, in-house technology and a sharp focus on the fast-growing market for safe, durable stationary storage systems.



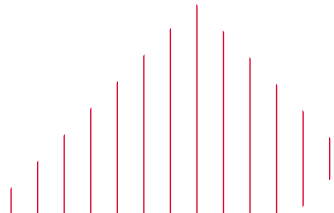
Agile Europe

Agile Europe's success story is rooted in a sharp focus on advanced solar, battery, and AI-driven energy systems, which allowed a Czech engineering company to grow into a globally active provider of industrial microgrids and smart power solutions. Their rise comes from combining strong technical expertise, international partnerships, and large-scale deployments across Europe, the Middle East, and public institutions worldwide.



Kovohutě Příbram

Kovohutě Příbram's success story is built on transforming a traditional Czech metallurgical plant into one of the country's most important players in modern battery recycling, including the launch of Czechia's first dedicated lithium-ion battery recycling line in 2022. Their rapid expansion – from a 249-ton pilot line to a planned 2,000-ton industrial facility – positions them as a key contributor to Europe's circular economy and the growing electromobility sector.



Success Stories



Mangan Chvaletice

Euro Manganese's Chvaletice project is one of Czechia's most remarkable modern industrial success stories: a Canadian-backed company turning 30-year-old mining waste into Europe's only significant domestic source of high-purity manganese for EV batteries. It is a unique combination of environmental cleanup, strategic raw-material production, and alignment with Europe's battery-industry boom.



Stellar Exploration

The Czech branch of Stellar Exploration has become a notable success story by transforming itself from a small Prague/Brno engineering office into a key European hub for developing electric power systems, chemical propulsion, and RF technologies for satellites—supporting missions for NASA, SpaceX, Blue Origin, and other global space players. Its rise is driven by strong Czech engineering talent, leadership with deep U.S. aerospace experience, and integration into the rapidly growing European space ecosystem.

Czech Investment Climate



FDI attractiveness

Highest FDI stock per capita in the CEE region



Educated and skilled labour force

21% of graduates in technical and ICT fields at universities



Industrial heritage

High production and export capacity



Strategic location

In the centre of Europe



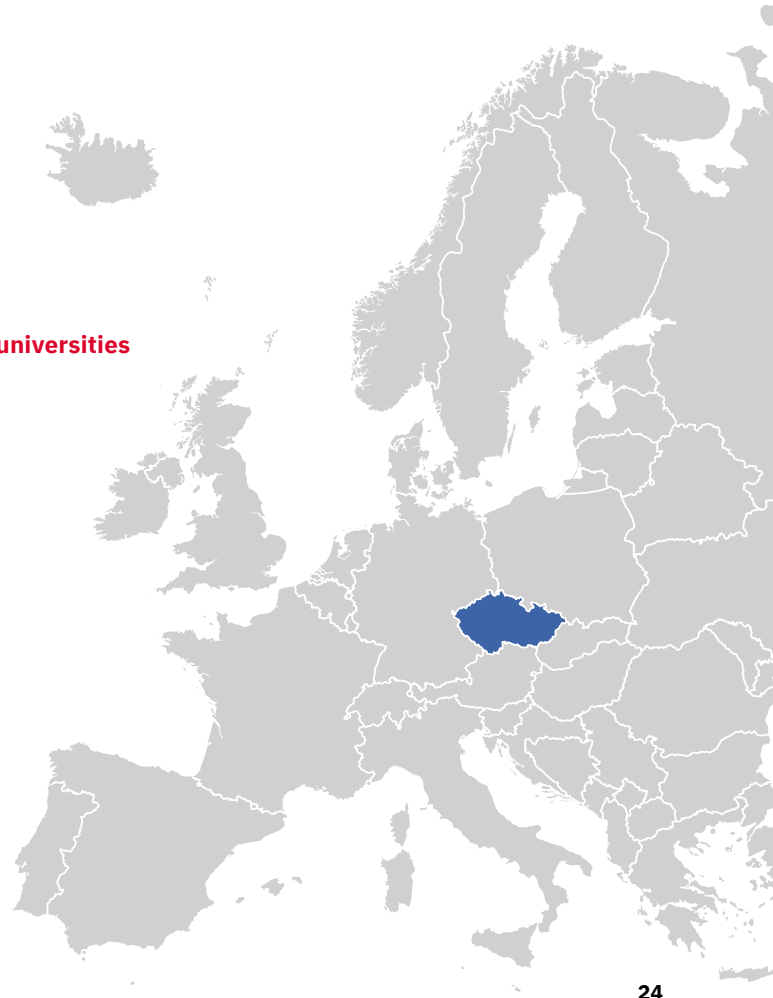
Diversity

Over 1 million foreigners living in Czechia



Strong R&D

1.8% of GDP invested in R&D



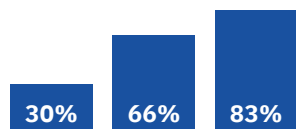
Innovative country

Gross domestic expenditure on R&D (2024)

Country	as % of GDP
Austria	3.26
Germany	3.13
Czechia	1.82
Poland	1.41
Hungary	1.31
Slovakia	0.98

Source: Eurostat, 2026

Open, export-oriented economy



- ▶ 30% of exports to Germany
- ▶ 66% to Euro Area
- ▶ 83% to rest of EU27

Source: Czech Statistical Office, 2026

Global Innovation Index 2025

2nd

in the CEE region

32nd

globally of 139 countries

Source: World Intellectual Property Organization (WIPO), 2026

Highly-industrialized country

25.4%

gross value added of industry
as % of GDP

Source: Eurostat, 2026

Global Peace Index 2025

11th

safest country in the world in 2025

Source: Institute for Economics & Peace, 2026

CzechInvest Global Presence



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