### B R N O

# Smart City Brno



in.brno.cz



### **City of Brno**



The current challenges in energy, security and climate change significantly impact places with high concentrations of people in cities. Cities today are not only facing the impact of these crises but are delivering new solutions that open the door to a safer, greener and more sustainable future. New solutions emerge from systematically promoting R&D and innovations and the courage to experiment and try new ways. Cities today serve as living laboratories of our shared future. This short publication illustrates the approach of Brno to meet these challenges. How it encourages new solutions and strategies and the courage to experiment. In other words, what makes Brno a Smart City.



### **Brno in Numbers**



Brno is the second largest city in the Czech Republic and the main commercial centre of the South Moravian Region. It is a university city focused on innovation, research & development.

Population	403,000
Brno Metropolitan Area	730,000
Number of students	68,000
Average monthly wage	2,265 EUR
Unemployment rate	5.2%
GDP per capita (EU28=100%)	147%
Number of passengers at Brno airport per year	750,000
Green area per inhabitant of Brno	110 m <sup>2</sup>
For research and development from the Brno city budget	1.7 million EUR



### Regional Innovation Strategy

The **Regional Innovation Strategy** (RIS) is the basic policy of the **City of Brno** and the **South Moravian Region** for developing economic competitiveness and added value through innovation. It is addressed to all actors of the innovation ecosystem interested in improving the standard of living – to share and make coordinated decisions.

A partnership approach is crucial for the RIS – both for achieving its objectives and for successful implementation. The RIS intends to stimulate good conditions for innovative entrepreneurship in Brno. Mainly by improving the quality of education, encouraging researchers to engage more with businesses and the local environment.



strengthening the region's image, or directly supporting entrepreneurial activities in places where the market has failed.

RIS seeks to fulfil seven goals:

- A Home for Globally Successful Entrepreneurs
- Embedded Foreign Corporations with Strong Autonomy
- Youth Prepared to Change the World
- Sufficiency of Experts for the Knowledge Economy
- Research with an Impact on Business and Society
- An Open and Attractive Innovation Ecosystem
- #brnoregion as the Lab of the Future



#### **IN.BRNO**

#### **Brno invests in its future!**

The city supports innovative entrepreneurship with high-added value as part of the Regional Innovation Strategy. It prevents brain drain, attracts talented students and scientists, and looks after foreign expats. It promotes science and technology to the general public as attractive, world-changing fields and promising careers. It works closely with research centres to transfer knowledge and insight into the everyday functioning of the city.



Last but not least, it **digitises city services** and invests in caring for newcomers to make them feel at home in Brno. It is fearless to experiment with new solutions that emerge in the municipality and use them in the daily running of the city.

**Brno simply remains IN!** And national and international awards prove it.



# Strategy #brno2050

Brno is developing systematically according to Strategy **#brno2050**. It defines strategic values and goals that the city wants to achieve in **5 thematic areas**:

- Environment
- Prosperity
- Services
- Resources
- Governance



For easier implementation, Strategy #brno2050 is divided into 3 parts: **Vision 2050**, **Plan 2030**, and **Projects 2021+**.

We are currently working on Projects 2021+, which contains activities for the coming years. The implementation of these activities is ensured by the Action Plan, which collects projects not only of the city, but also of other stakeholders operating in Brno.

### Strategic planning at metropolitan level

The City of Brno does not see itself as unit enclosed in its functional and administrative boundaries, but as a part of a wider **metropolitan area**.

The **Brno Metropolitan Area** (Functional urban area) consists of **184 municipalities** with about **730 thousand inhabitants**. Brno cooperates with the municipalities in its hinterland for the purpose of the **coordinated and interrelated development of the entire territory**.

The metropolitan area has ensured funding through the Integrated Territorial Investments (ITI) tool, and it has developed the Integrated Strategy for the Brno Metropolitan Area.



BMA has helped finance more than **230 integrated projects** through the ITI tool, with a total value of more than **EUR 480 million**. These include, for example, investments in the development of transport terminals, an integrated network of cycle paths, new kindergartens, and the expansion of green infrastructure.

The City of Brno also leads the current **national discourse on metropolitan** development in the Czech Republic.



#### data.Brno

#### City data portal

Since 2018, the City of Brno has been operating the **data.brno.cz** portal to make city data available to the public. The portal promotes transparency, improves the quality of city services and encourages innovation. Anyone can use city data – whether for their own projects, academic research, process control or to get an overview of what's going on in the city.

One important part of the portal is "Brno in Numbers". Interactive statistics give an overview of different aspects of life in the city. It offers information on population, housing, transport, economy and the environment. Data is presented in the form of clear dashboards and maps that allow data to be easily filtered and compared.



The data.brno.cz portal is a valuable resource for developers and students who can use a wide range of open datasets. These are available in different formats and can be further processed for applications, visualisations or analytical tools.

The website also offers **interactive maps and applications** that show things such as the location of public services, traffic situation, cycle paths or air quality. These tools make it easier to navigate the city and some provide real-time updates.



# URBIS The Smart Cities Meetup

**URBIS** is a smart combination of a trade fair and an exclusive conference programme, which this year presents **three main themes**: cities and municipalities in the face of climate change, community resilience and health, and future mobility.

It is held annually **in June** at the **Brno Exhibition Centre**.

Over the course of three days, dozens of representatives of Central European cities and municipalities and innovation experts will get together with the sole aim of sharing experiences, ideas and examples of practical solutions and finding ways to improve the lives of citizens. It is a platform for networking, collaboration and new



partnerships across the public and private sectors.

The groundbreaking 2024 event attracted over 3,800 visitors from more than 20 countries, including over 500 representatives of cities, municipalities and regions. One major part of the event was the conference programme, with over 130 speakers from the Czech Republic and abroad sharing their experience. More than 80 exhibitors showcased examples of innovative solutions.

Thanks to **URBIS** and last year's first official Czech participation at the **Smart City Expo World Congress in Barcelona**, the Czech Republic has become a major player in urban innovation.



### **Brno iD**

#### City services online

#### Brno iD is an e-shop for city services.

It operates in Czech and English 365 days a year, 24 hours a day, 7 days a week. It brings together selected services offered by Brno City Municipality, municipal companies and contributory organisations of the city of Brno. The city has been developing it since 2017 and is a recognised Central European leader in this area.

Brno iD offers **16 standard modules** – public transport, the integrated transport system of the South Moravian Region, municipal waste, family vouchers, tourist card, library, zoo, sport, observatory, museum, resident parking, Brno Trade Fairs, municipal cemeteries, participatory budget, support for trees in the city and gift vouchers.



The Brno iD electronic account has **over 700,000 users** – residents and visitors of Brno, of whom more than 60% are in the verified "full" version. The advantage for the user is that all the services on offer are linked to their Brno iD account. For those that are linked to a carrier, such as prepaid tickets, everything can easily be transferred to another carrier if the identification carrier is lost.

In 2024, a total of 1,324,200 payments were made through Brno iD, increasing turnover to a record EUR 53,8 million.

### **BrnoiD**

### **BVV Living Lab**

#### Testing in a real environment



The Living Lab in the unique setting of the Exhibition Centre enables collaboration between universities, research institutions, companies, startups, public administration, local government and users themselves.

The present day brings some major challenges for cities, especially in terms of transport, technical infrastructure,



security, education and environmental sustainability. The project represents **the strategic response of the City of Brno and the management of BVV Trade Fairs Brno** to the development and needs of the city and the regional innovation ecosystem.

BVV Living Lab is home to several companies and negotiations with other interested parties are underway. Clients will have access to the new 5G network. **Open 5G Hub Brno** will be operated on a non-commercial basis as an open private campus-type network.

For the development of the city, the platform has a clear benefit in supporting innovation with an impact on the economic growth of Brno and improving the quality of life of its inhabitants.

#### **Brno PhD Talent**

### The city supports science and top young talents

The Brno PhD Talent programme is a unique grant initiative of the City of Brno, which supports talented PhD students in the fields of science, technology, engineering, and mathematics (STEM). Not only does it offer financial support in the form of a three-year scholarship, it also develops students' skills in scientific communication, strategic research planning and international collaboration.



The programme is also a means of **retaining and attracting top talents** from home and abroad to Brno. Since 2009, **307 students** have received scholarships thanks to the programme, to which the city has contributed almost **CZK 107 million**. Today, many of them are prominent scientists, lecturers or researchers in prestigious institutions and the business sector.

Brno is thus strengthening its position as a city of research, innovation and a smart future.



### Brno Expat Centre

The expat centre assists qualified foreign professionals and their families both before their arrival and during their stay in Brno. With the support of the City of Brno it provides free services.

**Expats come to the Centre to address** a variety of issues related to their new life in Brno. They can use the services and assistance of experts on-site or find answers in online guides on the website.

The Centre also organises several events focused on networking, education, or culture. A key annual event is Expat Fair: "Living in Brno". For more information and updates on events in Brno relevant to expats, you can subscribe to their monthly newsletter



#### Helping with:

residence permits, medical services, housing, family, taxes, business, driving, schools, leisure.

A new project implemented by the Brno Expat Centre is **Talent Attraction and Integration Management**. It focuses on systematic support for professionals arriving from abroad and their integration in Brno. The aim is to strengthen the city's competitiveness as an attractive destination for international talent, especially in the fields of science, research and innovation.



# Innovative business

### We help put good ideas into practice

Brno is a place where innovative ideas with a positive impact are implemented and turned into services and products with high added value. Thanks to the **Prototype and Verify project**, we can help to do this at an early stage of development.

**Collaboration is a key role**, and we facilitate connecting actors from the private, academic and public sectors. An example is the new **Life Sciences 4.0 platform** which brings together stakeholders from the life sciences industry.



It is important to share the results of our work, which is why we support cross-border networking and external partnerships between institutions in our region through the International Trade Centre.

The new **Czech Semiconductor Centre** at the Brno University of Technology will connect academics with industry, support chip development especially in smaller companies and startups and accelerate innovation. Its mission is mainly to provide quality education in the field of chip design and manufacturing, to deepen



collaboration between universities and private companies, to promote talent and attract new students to microelectronics and related fields. The Centre has the ambition to strengthen not only Czech but also European technological sovereignty.

Brno is also home to a number of technologically and scientifically ambitious projects **in the space industry**. The private and public sectors, universities, the Brno Observatory and Planetarium and the Brno Space Cluster work together on these. From **BRNOsat**, the first urban experimental satellite with a gamma-ray detector, **QUVIK**,

the first Czech space telescope, to **CIMER**, the first Czech student satellite, designed to test the survival of cyanobacteria in space. Another ambitious project is the **AMBIC** satellite mission, which will take highresolution images of the Earth and then analyse them in orbit using AI, enabling an immediate response to, for example, natural disasters or changes in the landscape.





## Popularization of science

### Brno invests in future generations

Curiosity, love for science and technology and the desire to improve the world are awakening in the youngest generation. The unconventional activities of the **Brno Observatory and Planetarium** are helping to make this happen.

The **space and electron microscopy industries** have their own festivals in the city for the general public so that people can be proud to live in a city that produces 30% of the world's electron microscopes.



The popularization of scientific and technical fields (STEM) is brought to life by the entertainment park **VIDA!** science centre near the Brno Exhibition Centre, and the innovative **FabLab Brno**. The other offers a digital prototyping workshop for schools and the public, and also coordinates activities aimed at popularizing STEM fields, which may inspire the young generation to study these fascinating areas.







# Creative Industries

The City of Brno supports creative industries to encourage the growth and entrepreneurship of **talented creatives** and involve them in the development of the city.

Creative Brno helps **creatives both informatively and financially**. It also presents Brno as a city of creativity and innovation.

One of the main sources of support for creative entrepreneurs is the **Pro Kreativní Brno** grant programme, which helps to fund various activities in the creative industries.



The **Brno Creative Days** festival has become a key event for the presentation of creative projects, linking science, art and technology.

The opening of the **Brno Creative Centre**, which will provide facilities for creative activities, will further the development of the city.

### KREAT**IVNÍ BRNO**

### **Prepare Brno**



Brno has signed the Covenant of Mayors and since 2019 has a Sustainable Energy and Climate Action Plan SECAP. It is doing its best to lead by example in its implementation. We want Brno to be greener and healthier.

Reducing CO<sub>2</sub> emissions by 40% by 2030 is a big commitment, so citizens are informed about 10 simple steps to follow. They can also take advantage of subsidy programmes, such as those supporting the creation of green roofs or the revitalisation of inner courtyards, with an allocation of almost EUR 3 million.

A lot of Brno companies and organisations have also joined in. The aim is to reduce

greenhouse gases in energy consumption, production and operation, building use or construction activities.

Brno also has a specific memorandum for the occasion, which already has more than 100 signatories and 10 steps on how a specific company can contribute.

The city is promoting the expansion of blue-green infrastructure necessary for climate change adaptation.

As part of its educational efforts, it runs environmental education programmes in schools and organises awareness-raising events for the public, such as Earth Day.

### **#PripravBrno**

priprav.brno.cz ekodotace.brno.cz

# Other smart projects

### Brno is a laboratory of the future

**Dáme na vás! (We give it to you!)** As of 2017, nearly 130,000 residents have voted in the participatory budget. They have helped implement more than 80 projects that have improved the quality of life in the city and fostered cooperation between local communities.

The **C-ROADS project** utilises cooperative intelligent transport systems for citizens' safety on the streets. Smoother and safer transport is vital to the quality of life in cities.

**Technology Park Brno** allows startups to implement their first contracts in a place that aspires to be the green, technological heart of Brno's digital industry.



The city is also developing a long-term strategic partnership with the non-profit organization **Czechitas**, which opens the world of IT to women. It inspires, provides training, and helps women achieve better careers.

Since 2023 the Chief Executive Director's Innovation Challenge has been a unique internal pro-innovation programme for designing and implementing improvement proposals and small innovations at Brno City Municipality. It enables all employees of the municipality to easily submit their innovation proposals online straight to the office management, and at the same time enables the best innovations to be implemented.

#### Dáme na vás







damenavas.cz bkom.cz/smart-city technologypark.cz/en czechitas.cz/en in.brno.cz/en



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Chytré Brno



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