Charles University

BIOCENTRUM ALBERTOV

An Excellent Research and Educational Facility

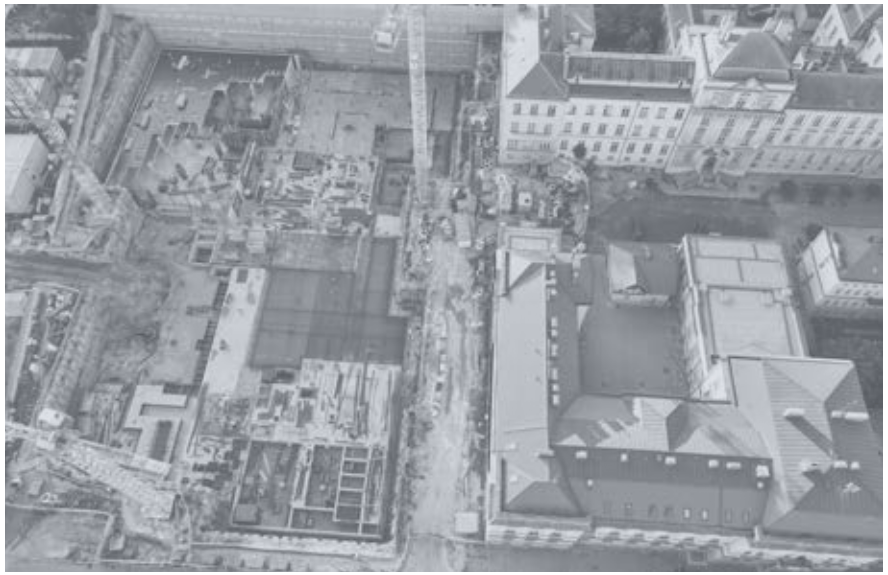
We create an open, inspiring, multidisciplinary, and international environment for both students and academic staff. Three faculties are collaborating on the project, for which the Biocentrum will serve as a collaborative platform. This represents the largest modern investment of Charles University. The Biocentrum will help increase the international visibility of the university and the participating faculties. It will enable us to attract strong teams, establish new research directions, and elevate the overall quality of science and education.

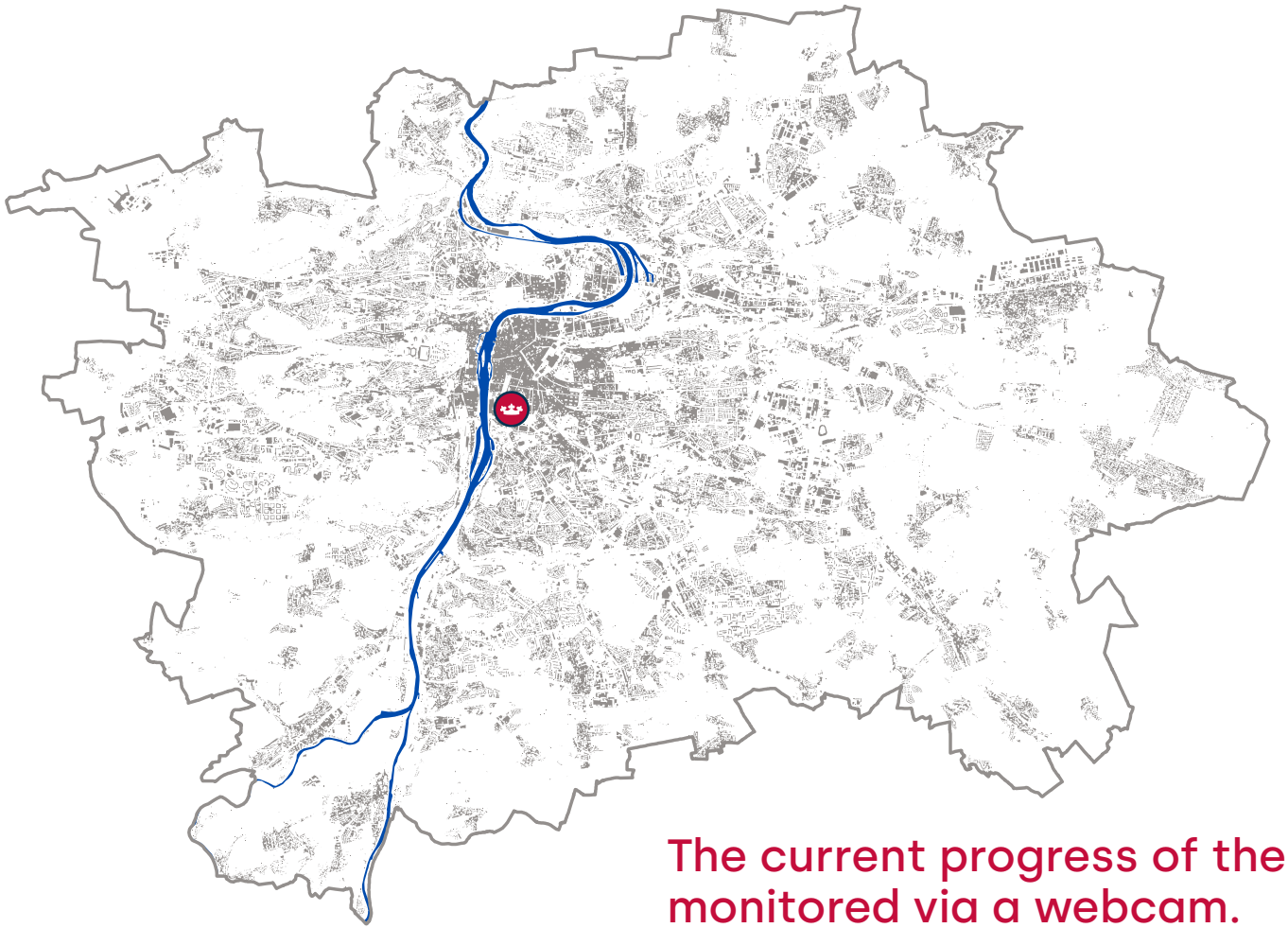
Biocentrum in numbers:

- Number of floors: 6 above-ground + 2 underground
- Built-up area: 5,710 m²
- Usable area of the building: 34,710 m²
- Usable area for classrooms: 1,009 m²
- Usable area for laboratories: 11,066 m²
- Number of offices and laboratories: 431
- Total number of employees: 810
- Maximum number of students in the building: ~ 700

Construction Schedule

Currently, the monolithic concrete shell of the building is being constructed. The entire concrete skeleton will be **completed in March 2027**. The completion of the building itself and its subsequent final building approval are scheduled for 2028. Students and researchers should begin fully utilizing the new, modern premises in the 2029/2030 academic year.





The current progress of the construction can be monitored via a webcam.

The new building will harmoniously complement the historical Albertov Campus. This university district offers the community an open space with extensive green areas (including the Botanical Garden), dining facilities, sports grounds, and a parent co-working hub. It represents immense potential for the future development of science and innovation, concentrated right in the city center.

Architecture and Building Capacity

The design of the new building was selected through an international architectural competition, paying respect to the *genius loci* and the functional requirements of the university. The new facility will offer 6 above-ground and 2 underground floors. The total usable area of the building will be approximately 34,710 m², of which roughly 5,000 m² will serve as shared infrastructure and 11,066 m² will be dedicated to laboratories. The building will accommodate approximately 810 employees and up to 700 students. The main section of the building consists of more than 430 offices and laboratories, designed in a flexible modular layout to allow for easy future modifications. The experimental facilities also include daytime relaxation rooms, kitchenettes, and seminar rooms.

The building will feature a central open atrium connecting its individual wings, which will be utilized for education, conferences, and building an academic community. It will house modern lecture halls, seminar rooms, an overnight study room, a buffet, and a café for refreshments and socializing. In line with the vision of modern sustainable architecture, the building's roof will be accessible and landscaped as a green relaxation zone. The entire building will achieve an energy performance certificate rating of B (a highly energy-efficient building). It will utilize an intelligent building management system (BMS), heat pumps, and geothermal wells for heat storage and recovery. All operational costs for energy, IT, utilities, and facility management will be fully covered by the budgets of the participating faculties, prorated based on actual metered consumption and realistically utilized space.

Project Financing

The total cost of the building and its furniture is approximately 5.5 billion CZK. A portion of the investment is co-financed by European sources through the National Recovery Plan and the state budget. The main portion of the budget (2,669 million CZK, representing ~60% of the investor's own funds) is covered by the participating faculties, while approximately 40% comes from central university funds.

Project financing is divided into two phases:

- **Investments in 2024–2028:** During this phase, the faculties will pay a total of 834 million CZK, which is securely covered by long-term financial reserves and allocated funds, ensuring the faculties are capable of meeting these obligations.
- **Long-term repayment in 2029–2048:** The loan portion and associated support amount to a total of 1,615 million CZK. For the Faculty of Science, this translates to a fixed annual cost of 49.5 million CZK for 15 years, followed by 48.1 million CZK for 5 years.

Future investments in laboratory instrumentation and Core Facilities will be gradually secured through the funds of specific departments, research group grant projects, and other external European sources (e.g., OP JAK ERDF, Horizon Europe), as well as through integration into large research infrastructures.

Scientific Directions and Core Facilities

The Biocenter is being established as a multidisciplinary center of excellence connecting three faculties, which together account for more than 50% of the university's scientific output and train over 45% of its doctoral students. These are the Faculty of Science (54% in Biocentrum), the First Faculty of Medicine (34%), and the Faculty of Mathematics and Physics (12%). Scientific activities here will focus on six key areas:

- **Biochemistry and metabolism**
- **Cellular systems in health and disease**
- **Infection and immunity**
- **Genetics, genomics, and bioinformatics**
- **Chemical synthesis, materials research, and nanotechnology**
- **Spectral and structural research of materials**

An integral component of scientific success will be the operation of specialized shared laboratories (Core Facilities), providing open access to the academic community. The terms of use for individual Core Facilities are determined by the faculties responsible for their financial and operational backing:

- **Biobanking** (jointly Faculty of Science, First Faculty of Medicine)
- **Imaging Systems and Electron Microscopy** (Faculty of Science)
- **Cell and Tissue Processing Center** (Faculty of Science)
- **Proteomics Service and Sequencing Center** '
  (First Faculty of Medicine)
- **Center of Experimental Applications** (Faculty of Science)
- **Central Media Preparation** (First Faculty of Medicine)
- **Computing Cluster and Data Storage**
  (jointly Faculty of Science, First Faculty of Medicine,
  Faculty of Mathematics and Physics)

Governing Board

Supreme governing body consisting of 9 members (faculty deans, other faculty representatives, and a RUK representative).

- Approves long-term operational and scientific strategies.
- Evaluates and approves the overall center budget.
- Governs the selection process of the central Director.
- Holds direct responsibility for the appointment of boards.

International Scientific Council

A highly specialized advisory body composed of up to 15 international experts.

- Provides high-level strategic development recommendations.
- Issues formal statements on concepts of prospective development.
- Actively participates in the quality evaluation of research groups.

Coordination Board

A core coordinating body led by the Director of the BioCenter.

- Acts as the primary bridge connecting faculties with the BioCenter.
- Represents departments whose employees belong to research teams.
- Resolves daily operational bottlenecks and performance evaluations.

Scientific director

The executive manager responsible for the leadership, growth, and outer representation of the Biocenter.

- Directs professional representation and brands the BioCenter.
- Coordinates scientific programs and inter-faculty synergy.
- Defines the criteria for regular research group performance reviews.
- Proposes new groups and nominates members for the IRC.
- Appointed for a 4-year renewable term of office.

Academic and scientific personel

- **Basic Functional Unit:** Research groups form the core scientific structure of the center.
- **Employment Framework:** Employees maintain their primary employment relationships with individual faculties.
- **Dual Affiliation:** All scientific staff hold official dual affiliations (respective Faculty + BioCenter).
- **Performance Evaluations:** Groups undergo regular scientific quality and performance reviews at the team level.

Operations Unit

A minimalist, highly efficient operational team led by the Operations Manager to drive support across everyday tasks.

- Minimalist team defined directly in the operational agreement.
- Handles administrative and complex technological setups.
- Manages everyday logistics, space utilities, and services.
- Offers continuous organizational backup for research teams.

Operational Agreement

- **Economic Model**
  Clearly delineates and calculates the economic model of operations and budget splits.
- **Organizational Setup**
  Arranges technological support, space utilization, and administrative support pipelines.
- **Director's Authority**
  Detailed definitions of executive competencies, reporting bounds, and leadership.

Governance Model and Selection of Research Groups

The Biocentrum will be governed using a decentralized matrix model. It will not be a separate, isolated university institute; rather, researchers will remain employees of their home departments. Laboratory allocations will be subject to a selection process coordinated by the Scientific Director and approved by the Management Board. While nominations from our existing teams will fill the majority of the space, at least 20% of the building's capacity will be reserved for the development of new scientific groups and directions.

The Scientific Director will play a pivotal role in team selection and evaluation. He will report to a nine-member Management Board consisting of deans and representatives from the faculties and the rectorate. Meanwhile, an International Scientific Council, comprising up to 15 foreign experts, will serve as a strategic advisory body for evaluating scientific quality. A Coordination Board will be established to coordinate with the departments where academic staff are legally employed. The Operations Department—a small team of specialists led by an Operations Manager—will be responsible for the facility's operational management, ensuring the building's core functions (technology, services, administration).

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