

Research & Development in the Czech Republic



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R&D Infrastructure



19

universities with STEMM focused faculties producing approx. **22,000** graduates in technical fields per year



54

institutes of the Academy of Sciences with more than **8,000** employees

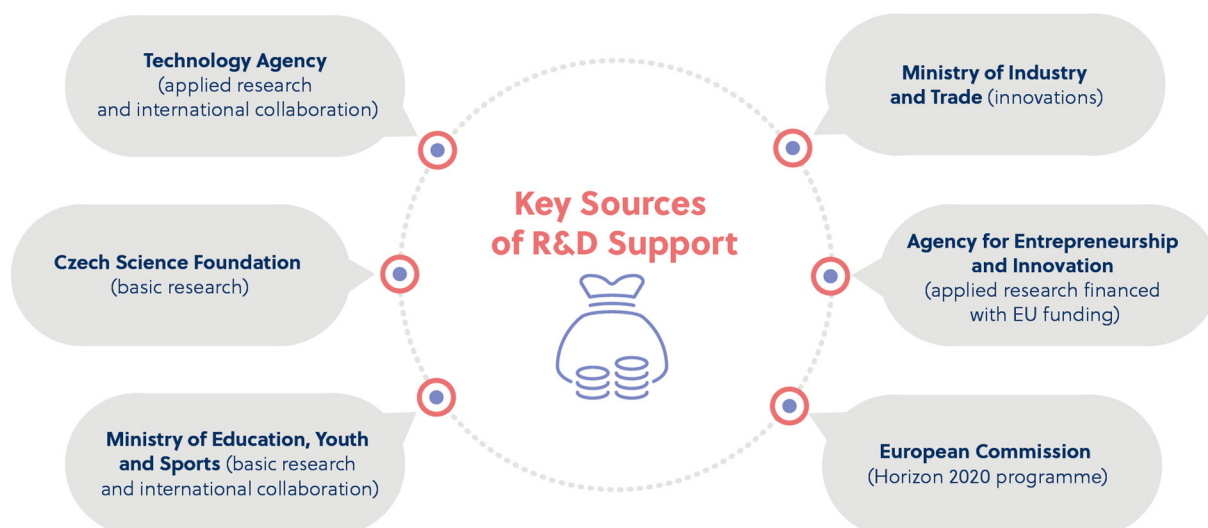


48

new research centres worth more than **EUR 2 billion**

Source: Ministry of Education, Youth and Sports, 2017 and www.avcr.cz

Sources of R&D Support



Historical Milestones



Prokop Diviš
invents the lightning rod



Gregor Johann Mendel
discovers the principal laws of heredity

1348

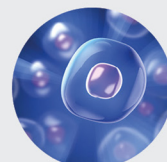
1837

1754

1866



Charles University, the oldest university in CEE region, is founded in Prague



Jan Evangelista Purkyně
formulates the cell theory

Major R&D Investments



GE Aviation has been successfully developing and manufacturing aircraft engines in the Czech Republic since it acquired certain assets of the local company Walter in June 2008. Since the acquisition, GE Aviation has already certified three new engine models and made significant investments in its Czech business. The company's engineering team has already more than doubled in size and is still expected to grow further as new development projects are coming down the pike. The Czech operation has become a turboprop center of excellence for GE Aviation.



The Czech Republic is the cornerstone of Honeywell's global engineering strategy in Europe. The Prague Laboratory opened in 1993 and the Brno Design Center followed ten years later. In 2006, the Brno Design Center was integrated into Honeywell Technology Solutions' international network of research, development and engineering centers. Honeywell also has two manufacturing sites in the Czech Republic: Aerospace in Olomouc and Environmental and Combustion Controls in Brno. More than 4,000 professionals work for Honeywell in the Czech Republic.



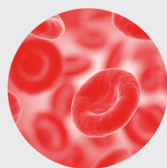
Red Hat's activity in Brno started in 2004. The company currently employs 900 people and has given more than 100 students their first professional experience. Red Hat Czech has become the largest software engineering facility in the world and an employer of choice for people who want to work and live the Open Source way. The Brno entity has received many internal and external awards including Best Engineering Site and Best Employer in the Czech Republic.

1897



Jára Cimrman

formulates the principles of a five-stroke engine



Jan Jánský

discovers the four blood types

1907

1912



Viktor Kaplan

invents the Kaplan turbine (patented in 1920)



Jaroslav Heyrovský

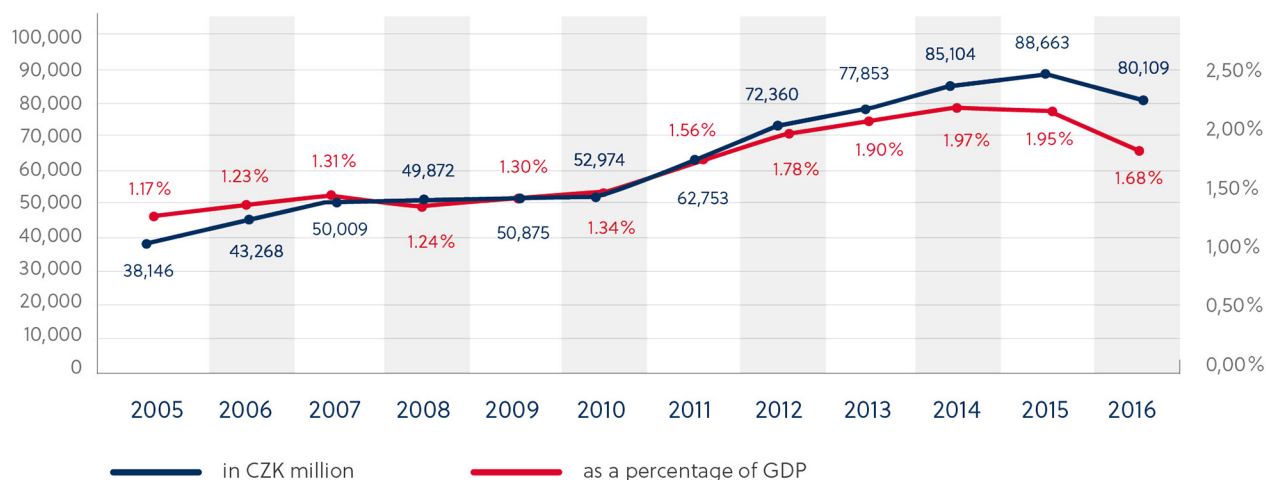
receives a Nobel prize for his invention of the polarographic method

1959

R&D Facts and Figures

Development of R&D expenditure

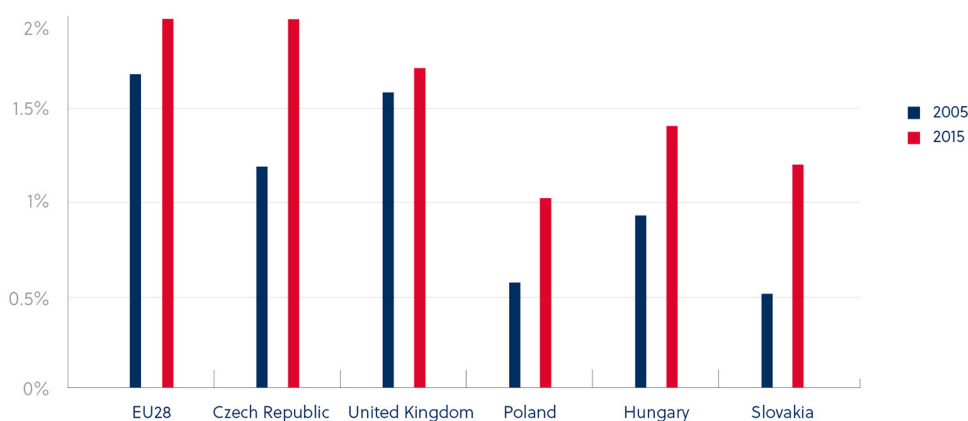
Gross domestic R&D expenditure in absolute numbers and as a percentage of GDP



Source: Czech Statistical Office 2017

International comparison of R&D expenditure

Gross domestic R&D expenditures as a percentage of GDP



Source: OECD 2017



Invention of Semtex

plastic explosive
in Pardubice

1961



FDA approves Atripla,

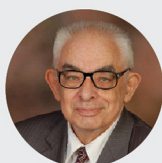
a once-a-day pill for treating HIV
based on a compound formulated
by Antonín Holý

2012



Otto Wichterle produces
the first soft gel contact lenses

1966



Jiří Čížek nominated
for a Nobel prize for his method
of calculating correlation energy

1998

2006



First surgery replacing the heart with two
support devices performed at the Institute
of Clinical and Experimental Medicine

Czech Strengths in R&D



The number of employees (FTEs) in R&D has risen by **50% in the past ten years to 66,433**, which amounts to 12.8 people per 1,000.

Source: Czech Statistical Office 2016



0.82% of the world's scientific papers are written in the Czech Republic (which accounts for 0.14% of the world's population)

Source: Scimago Journal and Country Rank 2016

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