



Big Data for Smart Society

Spreading excellence for Society

GATE

Gate Vision

GATE Teaming 1 project vision is oriented towards the establishment and long term sustainability of a Big Data Centre that will produce excellent science by seamlessly integrating connected fields and associating complementary skills. GATE will play a dynamic role in the surrounding innovation system by adding value to knowledge, will boost the next-generation of early-stage researchers and will achieve high level of international visibility and scientific and industrial connectivity.

Gate Objectives

The general objective of GATE is to establish Centre of Excellence on Big Data in Bulgaria as a real joint venture initiative between Sofia University, Chalmers University of Technology and Foundation Chalmers Industrial Technology. The development and implementation of a robust Business plan will ensure a reasonable long term stability of funding and operating conditions over time, as the basis for investing in people and building strategic research and business partnerships.

Project Data

GATE: Big Data for Smart Society

Funding programme

Horizon 2020 WIDESPREAD-2016-2017 TEAMING Phase 1 programme

Acronym

GATE

Start date

1 September 2017

Duration

12 months

Project partners

Sofia University "St. Kliment Ohridski"

Chalmers University of Technology

Chalmers Industrial Technology

Contacts

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SOFIA UNIVERSITY
ST. KLIMENT OHRIDSKI



CHALMERS
UNIVERSITY OF TECHNOLOGY

CHALMERS
INDUSTRITEKNIK



The project has received funding from the European Union's Horizon 2020 WIDESPREAD-2016-2017 TEAMING Phase 1 programme under Grant Agreement No. 76356

GATE crosscutting components

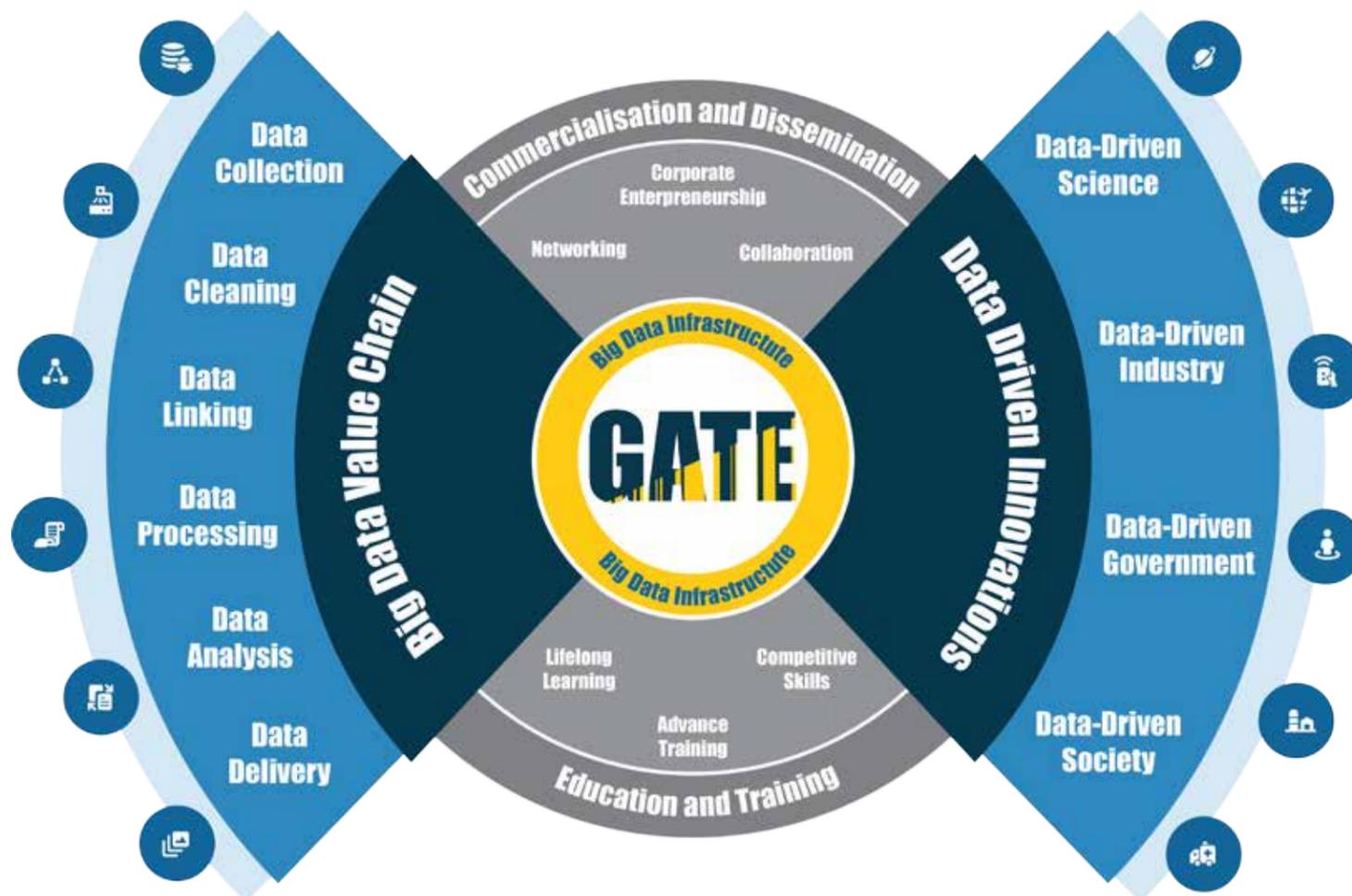
Education and Developing Big Data skills

To answer the need of data expertise GATE will research the demand for particular Data Science skills and expertise in RIS3 priority sectors. This will be done in collaboration with the stakeholders' community. Based on the analysis of the results obtained, multidisciplinary training and learning materials will be developed. New methods and methodologies for Data Science training will be applied, using advance teaching tools such as serious games, virtual worlds and simulations. Furthermore, creation of competences and training will be provided also for companies that want to experiment with digital technologies inside their products.

Innovation and Commercialization of GATE Big Data research results

A primary goal of the CoE GATE is not only to raise the research in advanced area such as Big Data, but using the outcomes of that research to force innovations in a wide range of industries (Data-Driven Innovations). The CoE GATE will follow the five key elements in the Open Innovation 2.0 process:

- ▶ Networking through a wide research network and community;
- ▶ Collaboration: involving partners, competitors, universities, and users;
- ▶ Corporate Entrepreneurship: enhancing corporate venturing, start-ups and spin-offs;
- ▶ Proactive Intellectual Property Management: creating new markets for technology;
- ▶ Research and Development (R&D): achieving competitive advantages in the market.



Interdisciplinary Research Approach

The following have been outlined by RIS3 and selected by project team as sectors that are especially promising with regard to Big Data Value and form GATE Data Driven Innovation Pillars:

1 Data Driven Government Public services based on Open Data

The collection and exploitation of real-time data from people, public authorities, public registries, etc. will be the basis for the creation of new ICT services and networks. The advanced value-added Open Data services will facilitate access, navigation, searching and reuse of data for citizens and will increase efficiency in public administrations processes.

2 Data Driven Industry Manufacturing and Production

With the advent of smart factories with intelligent and networked sensor-equipped machinery (Internet of Things), the production sectors in 2020 will be one of the major producers of (real-time) data. The application of Big Data into this sector will bring efficiency gains, predictive maintenance and entirely new business models.

3 Data Driven Society Smart and Sustainable Cities

City mobility, transport and logistics are among the most complex Big Data settings. In addition to sensor data from infrastructure, vast amounts of mobility and social data are generated by smart phones, C2x technology (communication among and between vehicles), and end-users with location-based services and maps. Big Data will open up opportunities for innovative ways of monitoring, controlling and managing more effectively the whole city ecosystem.

4 Data Driven Science New Generation Data Scientists

The scientific community is rapidly moving forward with the adoption of the Big Data technology stack. Big Data is steadily merging with traditional High Performance Computing architectures. Today significant amounts of data can be collected and analyzed in the pursuit of unparalleled understanding of nature and the universe.

Main Research Objective

GATE main research objective is to advance the state-of-the-art in the whole Big Data Value Chain, including development of advanced methods and tools for:

- 1 Data collection, structuring and storing
- 2 Data consistency checking and cleaning
- 3 Data aggregation and linking
- 4 Data processing, modeling and analysis
- 5 Data delivery by providing both accessibility and visualization