BiG DAta for SmarT SociEty

Reporting

Project Information

GATE

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Project website

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Teaming of excellent research institutions and low performing RDI regions

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€ 14 999 497,50

Coordinated by
SOFIA UNIVERSITY ST KLIMENT OHRIDSKI
   Bulgaria

Periodic Reporting for period 3 - GATE (BiG DAta for SmarT SociEty)

Reporting period: 2022-03-01 to 2023-08-31

Summary of the context and overall objectives of the project   ⌃

Big Data for Smart Society - GATE project establishes the first in Bulgaria and Eastern Europe Centre of Excellence (CoE) to provide for scientific excellence, innovation and sustained Big Data and Artificial Intelligences (AI) growth at regional and European

level.

Within the thriving EU Data Economy, GATE is creating a unique research environment and a globally competitive Digital Hub for Big Data and AI Open Innovations for Future Cities, Intelligent Government, Smart Industry and Digital Health. The research targets the cutting edge areas of Data Management, Analysis, Visualization and Engineering, emphasizing on Data Spaces, Explainable AI, Federated Machine Learning, Semantic Interoperability, Real-Time Data Analytics, Digital Twins and DataOps.

Bulgaria and the region are not yet fully benefiting from the digital/data revolution and are experiencing severe brain drain. GATE accumulates significant expertise and inspires and cultivates the next generation AI and Data scientists and professionals. The research excellence is empowered by the strong global research network and the innovation potential by the sustainable stakeholders' community.

GATE is the Bulgarian International Data Spaces Association (IDSA) Hub Facilitator and the catalyst of national endeavor towards Data usage and Data sharing in industrial and public domains. By advanced platform and experimentation facilities, GATE is establishing trustable EU Data Spaces. The City Living Lab, Digital Twin Lab and Visualization Lab, are at the heart of a vibrant data sharing ecosystem where innovative ideas are generated, developed in projects and applied in effective collaboration with and for the benefit of the industry, government and society.

The overall objectives of the project are:

O1. To institutionalize GATE CoE as globally competitive ecosystem for Big Data and AI research and innovation in domains with high social impact.

O2. To strengthen the scientific potential in Big Data and AI and to become a model for attracting, educating, and motivating the next-generation of Young Researchers and Data Scientists.

O3. To strengthen the innovation potential through targeted Responsive Research and Innovation strategy and strong collaboration between University, Government, Industry and Society.

O4. To create a motivating entrepreneurship environment, fostering new business opportunities and stimulating the commercialization of scientific results through new ventures.

O5. To build advance, interoperable research infrastructure and open technological environment, integrating with strategic EU infrastructures.

O6. To integrate within European Research Area and to achieve high worldwide recognition.

Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far ⌄

GATE CoE is the first Research Institute of Sofia University. In 48 months it managed to build strong scientific capacity and innovation potential. This has been achieved through: Having managerial, administrative, financial, operational, HR and research autonomy, as well as supple governing and organizational structure and effective operational processes. The administrative and research units are fully operational. Polices fostering openness, respect and honesty, and transparent management practices empower staff and ensure integrity and engagement.

GATE infrastructure is crucial to enable operation and research. GATE building is expected to be ready by the end of 2023. GATE platform and Urban Data Space are implemented, exploiting open source.

The flexible human resource policy, including OTM-R recruitment, provides for competitive remuneration, career development opportunities and personal growth through training, mobility and research collaborations.

With 35 researchers and 12 business development and administration experts, the CoE has sufficient the capacity to support its challenging research projects and ambitious innovation plans. 13 young researchers and 37 interns were involved in international collaborative teams.

Diverse opportunities for virtual capacity building and training have been exploited and targeted knowhow transfer framework and environment have been set, to allow for more intense transfer.

Visionary agenda paves the way for prospective research and innovation, aligned with the global long-term trends, and with the national and EU priorities. It is also based on the collaborations with Big Data Value Association and IDSA. Data Management, Analytics and Engineering research groups started to produce strong results. The intense research within Future Cities, Digital Health and Intelligent Government resulted in turning the City Digital Twin, Alzheimer's Disease and Disinformation flagship projects into programmes, about 15 internal projects are underway, as well as 20 EU and nationally funded ones.

GATE strategic partnerships have been widened through new agreements, the stakeholders' community expanded, especially at national/regional level and with over 500 partners, GATE is having a strong research network from EU, America – US, Asia – Japan and Korea, Australia.

GATE visibility is growing through organized 16 events, including the Big Data and Artificial Intelligence Forums and Urban Data Space Inauguration (300 registrations each), through 87 conferences participations and 38 impactful scientific and media publications and through active social media presence.

The business models for collaborative and contractual research, professional training, membership, Digital Innovation Hub, Data Space, incubation and acceleration have been elaborated. They provision stable revenue streams to ensure independence from public funding. The collaborative research business model has been already

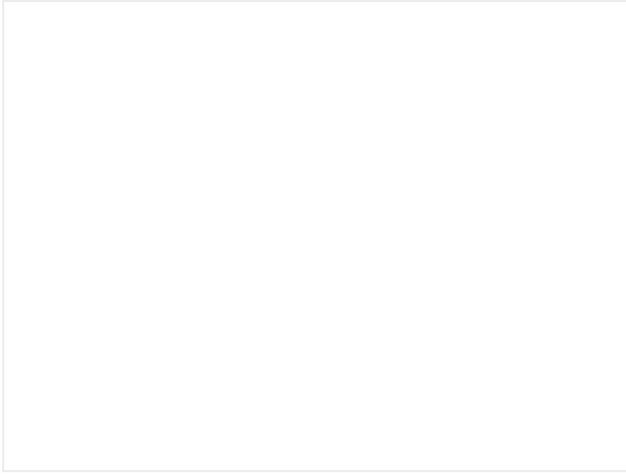implemented (through 54 proposals for EU and national funding) and managed to achieve significant income.

Progress beyond the state of the art and expected potential impact (including the socio-economic impact and the wider societal implications of the project so far) ⌄
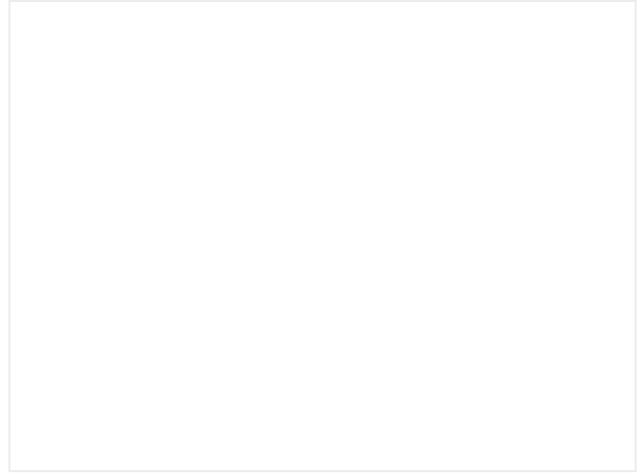
GATE is contributing towards:

• Increased scientific excellence and reputation - through high impact publications, research collaborations, and attracting leading and young researchers and reverse the brain drain.

• Increased capability to compete for research funding - with 20 projects funded out of 54 applications submitted.

• Improved international reputation – as IDSA Hub, recognized by BDVA as one of the most successful applications of Big Data at EU level and selected as NATO DIANA Test Centre.

• Having high societal and economic impact – Future Cities, Digital Health and Intelligent Government projects are contributing to fight challenges as COVID-19, climate change and disinformation.

• National and international recognition - GATE was proposed by EC as a success story for excellent research results and impact on the EU landscape and also awarded by Bulgarian Government for enhancing the international prestige of Bulgaria in H2020.

• Being recognized as a catalyst of the Big Data and AI endeavors at national level. GATE opinion matters – the team has been involved in working groups for defining EC Horizon Europe and Digital Europe priorities, for specifying the national scientific priorities, in defining the national AI strategy, as well as the Strategy for digitalization of Sofia city.
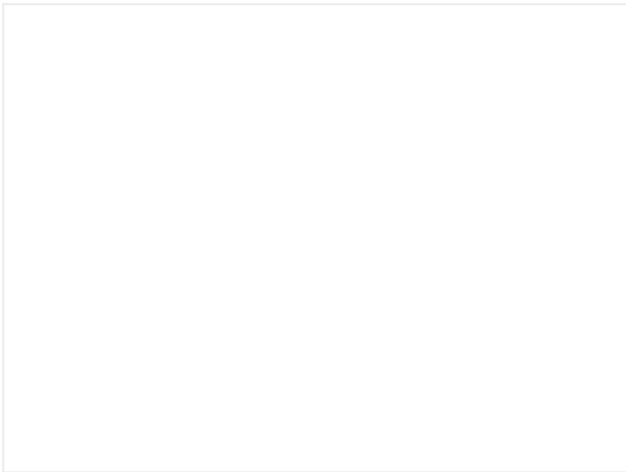
GATE project presents huge potential for success, as proven by its achievements, research results, impact on the national landscape attained to date, as well as the recognition at EU level.
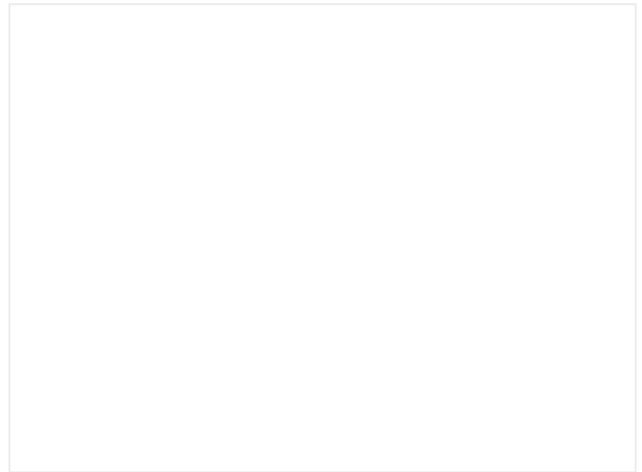
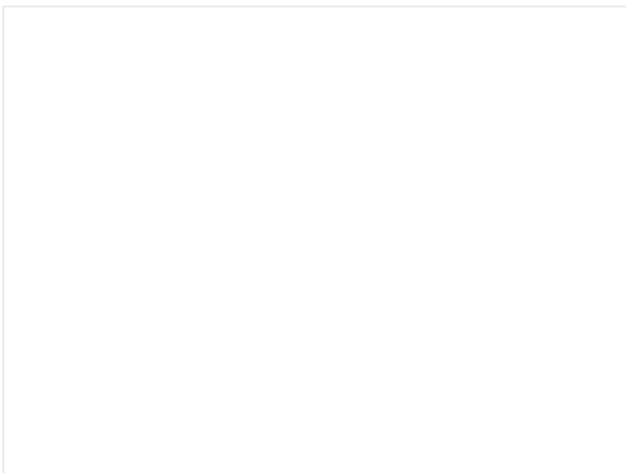Can automated fact-checkers clean up the mess?, Seminar, Gothenburg 2021

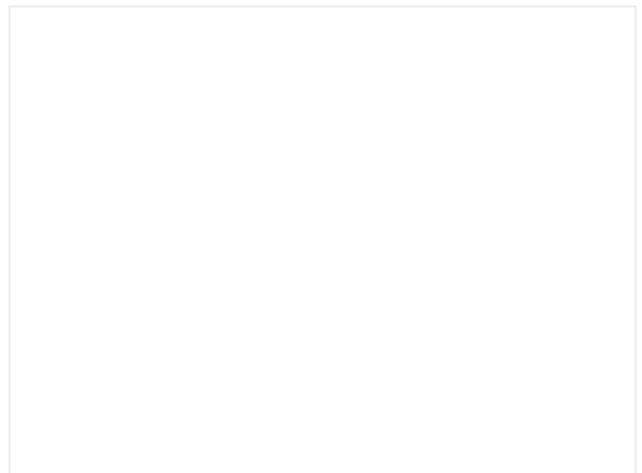GATE Research workshop at Chalmerska huset, Gothenburg
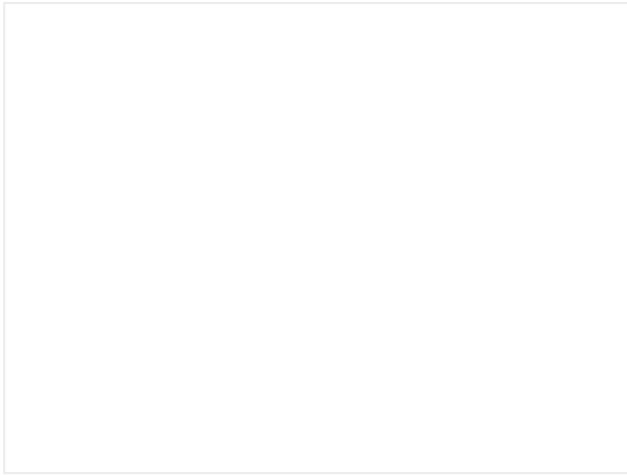

New building of GATE Institute
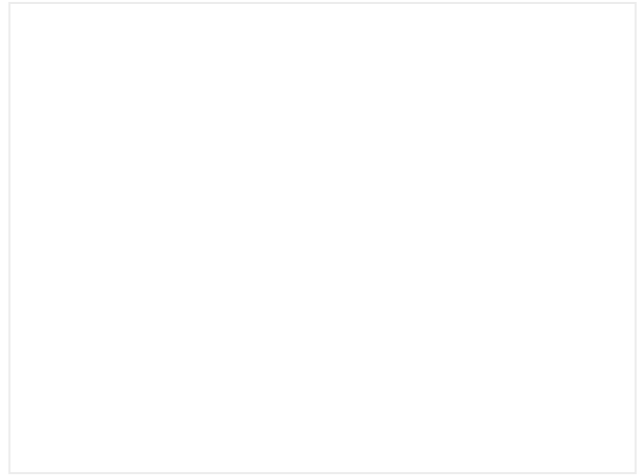

GATE Annual event 2021

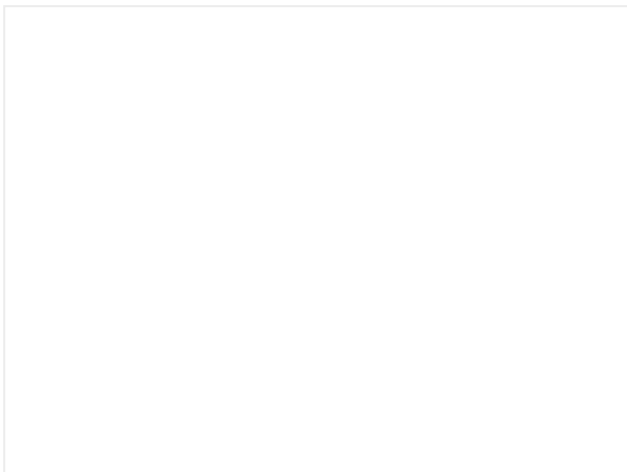GATE Annual event 2021, Disinformation panel

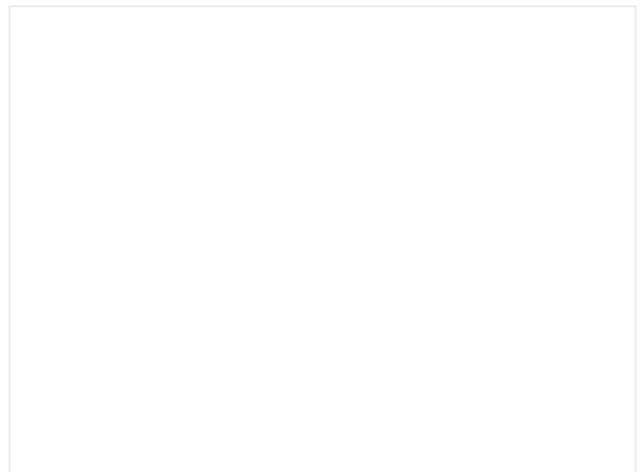
GATE laid the foundations of the new building 2021
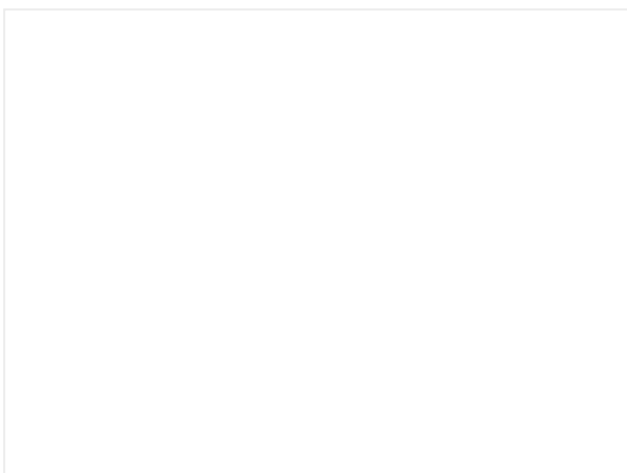
GATE mentorship at Global Goals Jam
2021

DTCC & GATE workshop in Gothenburg
2021

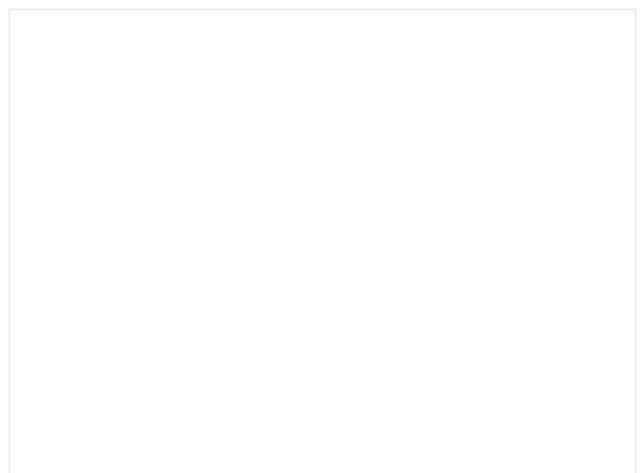GATE signed a MoU with the University of
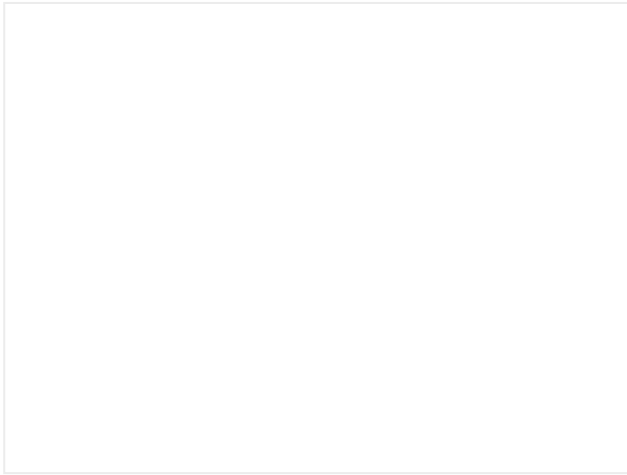Twente, 2021

Visit in Gothenburg 2021, Discussion on
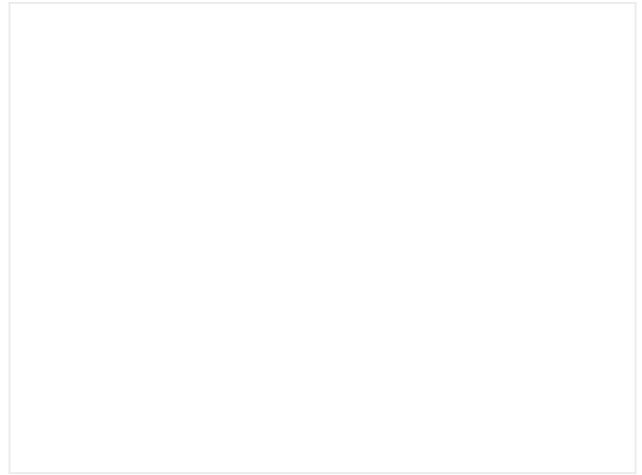innovations and intellectual assets

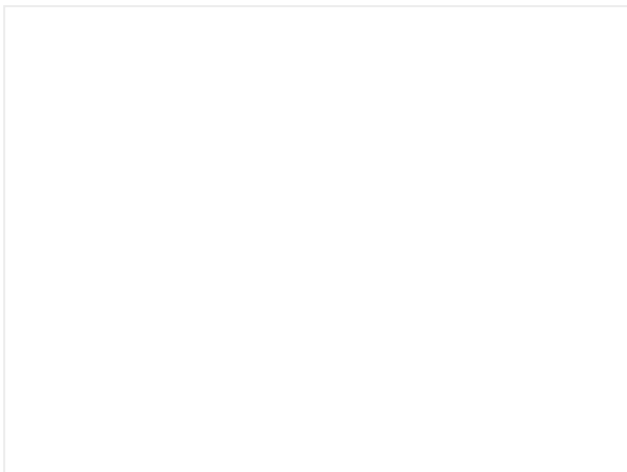GATE panel at Big Data Value Forum 2021

GATE Launching event

GATE Christmas party 2020

GATE laid the foundations of the new building 2021

DTCC Meeting on Data Models Milestone project 2022

Last update: 29 July 2024

Permalink: https://cordis.europa.eu/project/id/857155/reporting

European Union, 2025