Development of one of the biggest educational project between Germany and Russia –

1. Administration and Teaching Staff
2. Education and Key Features
3. Future Steps and Goal
4. Partners and their contribution
5. GRIAT – platform for collaboration
6. GRIAT – changing the spin
1. Administration and Teaching Staff

- Institute within Kazan National Research Technical University n.a. A.N. Tupolev – KAI (TU Kazan)

- **President:** Prof. Dr. Albert Gilmudtinov (Rector TU Kazan)

- **Vice-Presidents:**
  - Prof. Dr. Peter Scharff (Rector TU Ilmenau)
  - Prof. Dr. Jens Strackeljan (Rector OvGU Magdeburg)

- **Directors:**
  - Dr. Sven Rost (German Director)
  - Dr. Ekaterina Egoshina (Russian Director)

- **Teaching staff:** 12 German Professors, 30 Russian Professors // 70 GRIAT coworkers

- **Students:** 137 Students in 8 MSc programs
Education Basis: MSc Programs from German partner universities

- Communications and Signal Processing
- Research in Computer and Systems Engineering
- Automotive Engineering

- Electrical Engineering and Information Technology
- Chemical and Energy Engineering
- Systems Engineering and Engineering Cybernetics

- Embedded Computing Systems
  - Quantum Technologies (09/18)
  - Software Engineering in Embedded Systems (09/18)

- Aerospace Engineering (09/17)
  - Aircrafts (09/18)

- Microelectronics (09/18)
- Computer Vision Systems (09/18)

- Modern Photonics (09/18)
2. Education and Key Features

2.2 Key Features

- **Engineering education according to the German standards:**
  - German curriculum as the basis for MSc programs
  - Educational cycle of all MSc Programs:
    - 2 Semesters at TU Kazan
    - 1 Semester at German partner university
    - 1 Semester at TU Kazan

- **Medium of Instruction:** English + basics of German

- **Flying Faculty:** Two German professors per MSc program hold lectures at GRIAT 10-14 days per year

- **Double Degree:** From TU Kazan and from the German partner university

- **Research with German universities**
  - Double degree PhD programs
  - Academic and research mobility, Ru > < GE (Algarysh, Erasmus+ grants)

- **Collaboration with German and Russian Industry**
  - Engineering Centers (SIEMENS, Thuringia, KUKA, Fanuc)
  - Financial support with scholarships for MSc students (SIEMENS: 6 full scholarships)
  - Laboratory support (e.g. SIEMENS: Big Data, Automatization and Electrical Engineering Lab)
3. Future Steps and Goal

Final goal: GRIAT as a full bi-national university in Kazan
- 30-35 MSc Programs
- 10-12 R&D Centers
- 1000 Students

First 4 double degree MSc Programs
- Communications and Signal Processing
- Research in Computer and Systems Engineering
- Electrical Engineering and Information Technology
- Systems Engineering and Engineering Cybernetics

First 4 double degree MSc Programs
- Chemical and Energy Engineering
- Automotive Engineering
- Embedded Systems
- Aerospace Engineering

1st Graduation Ceremony
- 37 Graduates

+2 MSc Programs
+1 MSc Program
+1 MSc Program
+2 R&D Centers

2013
2014
2015
2016
2017
2025

Infrastructure & Documentation

German-Russian Institute of Advanced Technologies
GRIAT as a full bi-national university in Kazan
GRIAT.KAI.RU
4. Partners and their Contribution

**Strong partners on board:**

- **TU Kazan**
  - Provides state of the art research and teaching facilities
  - Provides highly qualified academic and research staff

- **Russian Industry**
  - IT Park, Technopolis, BARS Group, ...

- **German Industry**
  - SIEMENS Engineering Center
    - Full 6 semester scholarships
  - Thuringia Engineering Center

- **Republic of Tatarstan**
  - Scholarships for MSc Students
  - Scholarships for Scientists

- **RU Federation: Ministry of Education**
  - Grants for Russian and international Students
  - Budget Places

- **German Universities**
  - MSc courses as curricula basis
  - Flying Faculty teaching staff

- **German Academic Exchange Service**
  - Provides German Director and Teacher
  - Flying Faculty financial support

- **Support Russian side**
- **Support German side**

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German-Russian institute of advanced technologies

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External factors:
- Tatarstan – 1st place in the amount of attracted investments
- A lot of foreign companies, that currently employ expatriots
- A lot of local companies starting to work with foreign markets
- Huge outflow of youth to Moscow and Saint-Petersburg
- No HR for managing high-tech companies (Economical Zone Corporate University)
- No engineers speaking English

Internal factors
- Several Engineering centers: Siemens, Industry 4.0, KAI-Laser
- Techtransfer Engineering Center “Tatarstan – Thuringia”: list of needs of Tatarstan companies – sent to LEG Thuringia – looking for partners
Need for imprinting new graduates and changing the culture of local companies together with Universities
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- KamAZ – distant office, project work
- Setevaja Company – shifting to project management
Need for imprinting new graduates and changing the culture of local companies together with Universities

-> KamAZ – distant office, project work
-> Setevaja Company – shifting to project management

Need for students, willing to work with German companies and represent them at the Tatarstan market
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- Management and Economics master programs aimed at preparing workforce for Techtransfer Engineering Center “Tatarstan – Thuringia”
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New challenges in the industry
5. GRIAT – platform for collaboration

- Need for imprinting new graduates and changing the culture of local companies together with Universities
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  -> Management and Economics master programs aimed at preparing workforce for Techtransfer Engineering Center “Tatarstan – Thuringia”

- New challenges in the industry
  -> GRIAT PhDs - potential for commercialization of scientific projects
Management and Economics in high-tech companies master programs

Common core for all engineering courses. Courses for PhDs about commercialization

Multidisciplinary teams with management/economics students for working on the projects of the companies -> training project management work

Pre-accelerator

Management program aimed at high-tech entrepreneurship. Business plan as a master thesis

Internships for the students at the techtransfer center
Expected results:

- Projects teams for employment by the companies
- GRIAT – intermediary between Thuringia and Tatarstan companies
- Projects for commercialization and spinoffs, international student acceleration program

**GRIAT – a competence and knowledge center for modern industries**
German-Russian Institute of Advanced Technologies

– We would be glad to collaborate with your university! –

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