Third mission & educational and research projects in universities of Kazakhstan

Astana, Kazakhstan
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Presenter: Arnold Sterenharz
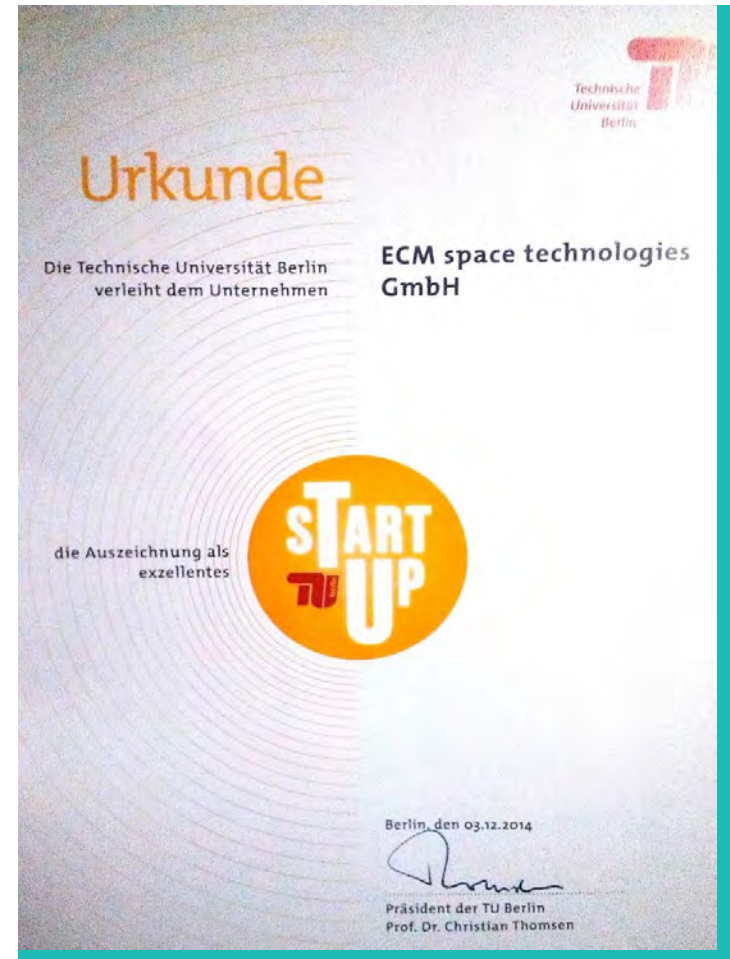Managing Director

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EXOLAUNCH

- EXOLAUNCH GmbH is an independent company, established in 2008 as a spin-off from the department of Aeronautics at the Technical University of Berlin.

Main activities:

- Launch service, space engineering, small satellite design & manufacturing

- EU research and International education projects (participant of 16 EU projects: 7 TEMPUS, 3 Erasmus+, 1 Erasmus Mundus and 5 FP7)

- Professional Trainings for various target groups

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Urkunde

Die Technische Universität Berlin verleiht dem Unternehmen

ECM space technologies GmbH

die Auszeichnung als exzellentes

START UP

Berlin, den 03.12.2014

Präsident der TU Berlin
Prof. Dr. Christian Thomsen

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The company cooperates with 13 universities of Kazakhstan in international educational and research projects:

- S.Seifullin Kazakh Agro Technical University
- Shokan Ualikhanov Kokshetau State University
- North Kazakhstan State University Named After M. Kozybayev
- Almaty University of Power Engineering and Telecommunication
- L.N.Gumilyov Eurasian National University
- Al-Farabi Kazakh National University
- Caspian Public University
- Shakarim State University of Semey
- Korkyt Ata Kyzylorda State University
- Karaganda State Technical University
- Kazakh National Medical University
- Karaganda State Medical University
- Semey State Medical University

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In such projects, a unit for connection reinforcement of the university with the job market was created (related to the Universities' Third Mission)
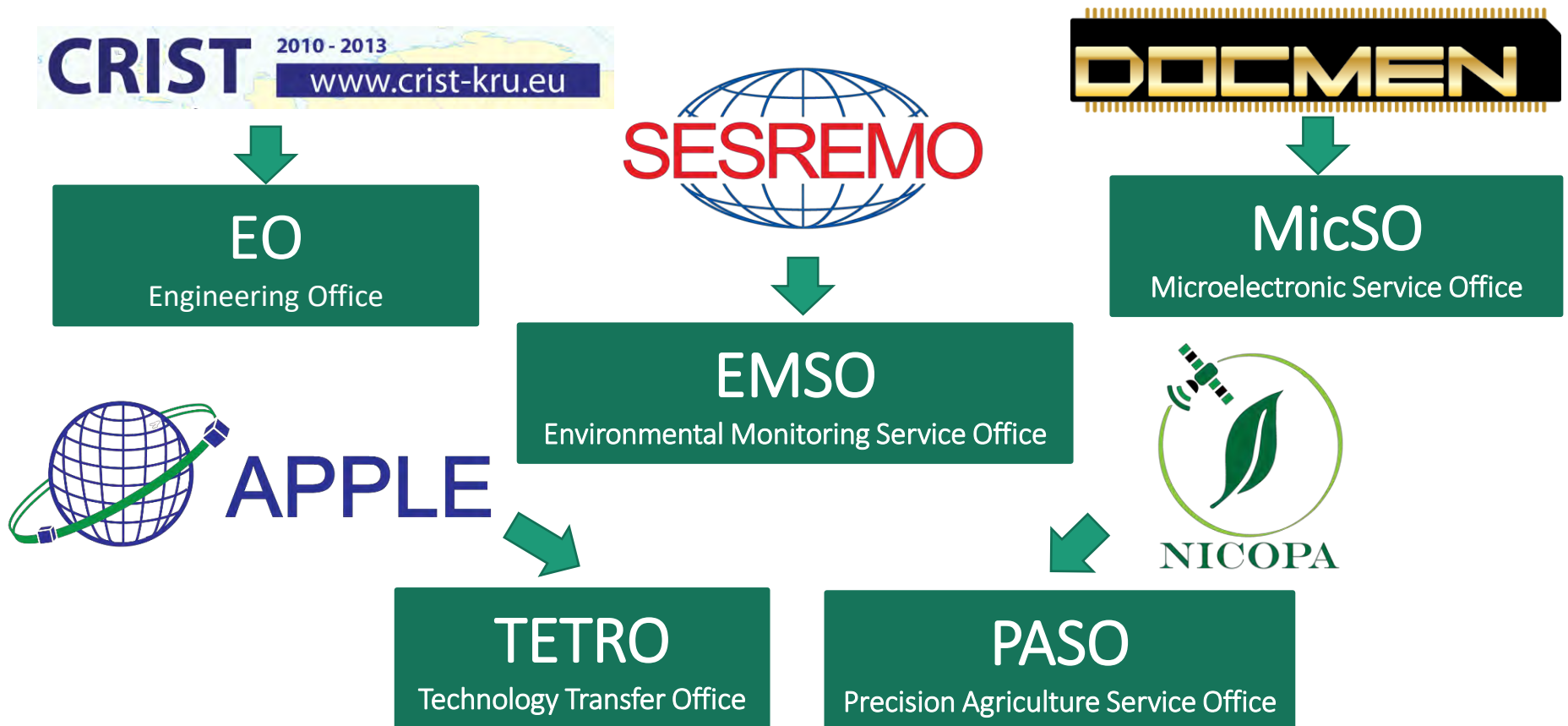
CRIST 2010 - 2013 www.crist-kru.eu

SESREMO

DOCMEN

EO
Engineering Office

MicSO
Microelectronic Service Office

EMSO
Environmental Monitoring Service Office

APPLE

NICOPA

TETRO
Technology Transfer Office

PASO
Precision Agriculture Service Office

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- Establishing links between university and the job market
- Connecting departments of universities in one regional or national network
- Connecting teachers, students, graduates, employers, young professionals
- Staff training in service office activities
- Professional trainings for various target groups of all ages
- Commercialization of the results of scientific work
- Marketing of educational services
- Analysis of employers' expectations and requirements to the future graduates
- Development of proposals for implementation of new curricula or modernization of the existing curricula
- Search for stakeholders for development of university capacities
- Increasing the role of university in the development of the region

Main principles of Bologna Process:

- Support modernization of higher education systems
- Bringing universities and society together
- Education for everyone
- Influence of education on culture and development of regions
- Fostering social awareness
- Ensuring life-long learning
- Creation of a society based on knowledge
- Education becomes a product/service available to everyone
- The role of the university is increasing

Bologna Process: Key Elements

- Three Degree Cycle
- Qualifications Frameworks
- European Credit Transfer and Accumulation System (ECTS)
- The Diploma Supplement
- Quality Assurance
- Joint Degrees
- Life-long learning for knowledge-based society
- Research and Innovation
- Internationalization of Higher Education and Research
- Governance, Autonomy & Funding

bologna process

Qualification Frameworks

- Achieve comparability and transparency within the EHEA
- Facilitate the movement of learners within, as well as between, higher education systems.
- Help HEIs to develop modules and study programmes based on learning outcomes and credits
- Improve the recognition of qualifications as well as all forms of prior learning.
- Encourage greater mobility of students and teachers and improve employability

Life-long learning built on a knowledge-based society

- Improving the recognition of prior learning, including non formal and informal learning;
- Creating more flexible, student-centered modes of delivery;
- Widening access to higher education.
- National qualifications frameworks are also an important tool in supporting lifelong learning.
- Lifelong learning implies that qualifications may be obtained through flexible learning paths, including part-time studies, as well as work-based routes.

**Governance,
Autonomy & Funding**

- Governance Reform
- Modernization of the University management and services for students.
- Development of the Institutional and financial autonomy and accountability

Internationalization of Higher Education and Research

- Strategy and action plan of Internationalization on University level
- Development of international relations
- International mobility for Students and Academics Staff
- Internationalization at Home (virtual mobility)
- International dimension in the curriculum
- Participation in the international education & research program

- BFUG (Bologna Follow-Up Group) work on vision and thematic priorities after 2020 (http://www.ehea.info/Upload/BFUG_vision_summary.pdf)

- The European higher education area in 2018. Bologna Process implementation report.

- Mobility scoreboard. Higher education background report, Eurydice Education, Audiovisual and Culture Executive Agency), 2018

- Capacity building in higher education: EU support to higher education institutions around the world, Eurydice, 2018
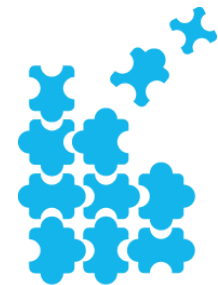
Useful links:
- 2018 Paris Communiqué
- 2015 Yerevan Communiqué

The societal role of higher education

- Universities should be protectors of freedom of speech and thought and promoters / guardians of valuable ideas and core values.

- Universities should act as motors for community or regional development, by enhancing links with their communities and hinterlands, and promoting civic engagement and democracy.

- HEIs should become regional hubs, centers of excellence: they should foresee the competences needed in the future. Education should shape character and transmit values.

- Universities should work to increase public understanding of their role and importance and should ensure that they deliver benefit to the public.

- Sustainable education can help us prepare for the future and contribute to increased environmental awareness and responsibility. HEIs should address the challenges of the 4th Industrial Revolution.

- Alumni should be valued by and involved in the academic community.

- Research activities should be creating a positive impact on society.

Innovative, flexible and relevant learning and teaching

- The teaching role of universities should be reinforced, and the value and importance of teaching and teachers recognized as deserved. Research based learning has to be a priority.

- Universities should enhance the capabilities of professors as facilitators of learning – there could be a common framework for teacher training in a learner-centered system, or an online platform for their training.

- Academic programs for the preparation of school teachers are of major importance, as they have the potential to influence the entire education system.

- Flexibility will be a key word and it must be seen in different ways: programmes need to be more flexible in order to adapt to societal changes, and to a greater diversity of students.

Innovative, flexible and relevant learning and teaching

- Curricula will need to be revised and updated frequently, with the involvement of all stakeholders, including students but also employers and local communities, to prepare students for future jobs.

- Study programs in line with the requirements of the labor market need to be developed, with more emphasis on short cycle studies.

- Soft skills are important: graduates will need such competences as creativity, critical thinking and the capacity for autonomous learning based on evidence and verified facts, resilience, team working abilities and leadership, communication and digital skills.

- Quality of learning & teaching is a major goal.

EUROPEAN
Higher Education Area

Lifelong learning

- Due to rapid change learning will become 'lifelong', that is people will not normally go through a single degree programme and expect to be employed for life in a single career path.

- Universities should be prepared to form knowledge, skills and competences that will be needed in the future in different stages of a student's life

- There is a need to raise learners' awareness that once students graduate, they will not have completed their learning: they must be equipped to become autonomous self-guided learners.

- Adaptation or innovation with respect to current Bologna tools is likely to be needed.

Digitalization
Potential of digital revolution for the implementation of the Third Mission

- Digitalization has an increasingly important role.

- Digitalization is a reality and should be used not solely to enhance L&T, but also for administration and for student mobility.

- Digitalization must not change the essential core of higher education, which is its human dimension.

- The quality assurance policies and practices will need to be updated to accommodate the potential offered by digitalization.

Internationalization and mobility

- In this area the EHEA should continue to set quantitative targets, and even increase the target for mobility above 20%.

- Funding the mobility of students should also be increased.

- Internationalization of the curricula (especially at EHEA level) - the promotion of joint degrees and common scholar curricula might be a priority. In many countries it is still difficult to accredit EU joint degrees and a proposed solution was to create an agency to evaluate the joint degrees and common scholar curricula.

- Joint supervision of doctoral theses must be reinforced.

Governance and autonomy

- Academic freedom and integrity, institutional autonomy, participation of students and staff in higher education governance, and public responsibility for and of higher education form the backbone of the EHEA

- Ensuring the long-term adequacy and diversity of sources of funding for universities, is a priority.

- Guidelines for academic freedom and institutional autonomy should be devised at EHEA level, thus supporting universities in maintaining their core role.

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Erasmus+

Capacity Building in Higher Education

PROGRAMME PRIORITIES

Developing the Higher Education sector within society at large	Improving management and operation of Higher Education Institutions
• Lifelong learning, continuous education • Non-university sector at tertiary education level • Development of school and vocational education at post-secondary non-tertiary education level • University-enterprise cooperation • Recognition of qualifications and Qualification frameworks • Knowledge triangle, innovation • New technologies in higher education • Definition, implementation and monitoring of reform politics	• Governance, strategic planning and management of HEIs • University services • Internationalization of HEIs • Equity's access to and democratisation of higher education • Development of research and innovation capacities

HORIZON 2020
### EU Framework Programme for Research and Innovation

Three priorities:

1. Societal challenges
2. Excellent science
3. Leadership in enabling and industrial technologies

- Participation in ERASMUS+, HORIZON 2020 and other international educational and research projects
- Development of university's capacities at the highest levels
- Ensuring the highest quality of the first and second missions (education and research)
- Autonomous commercialization (independent from the government funding) of the results of scientific work
- Development of university services for the society and the market
- Attraction of stakeholders
- Professional up-to-date skills for the university top management and staff
- Development of innovations: creation of spin-offs and start-ups which can facilitate commercialization of the results of scientific works
- Possibility of the university to influence decision-making on the national level (e.g. creation of a national association of universities / national board of academic experts, rectors)
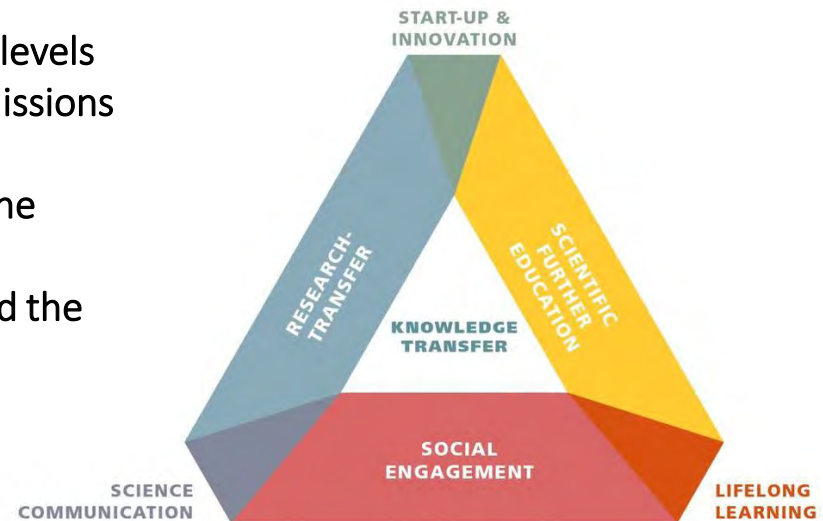
- Educational Mission and Student-Oriented Approach
- Internationalization
- Social Responsibility and Openness in Education
- University Research Profile
- Innovation and Technology Transfer
- External Communication
- Strategic Partnership Network, Cooperation with Industry and Employability
- Institutional Efficiency
- Employees and the Work Environment
- Building Infrastructure and Corporate Services
- Digitalization
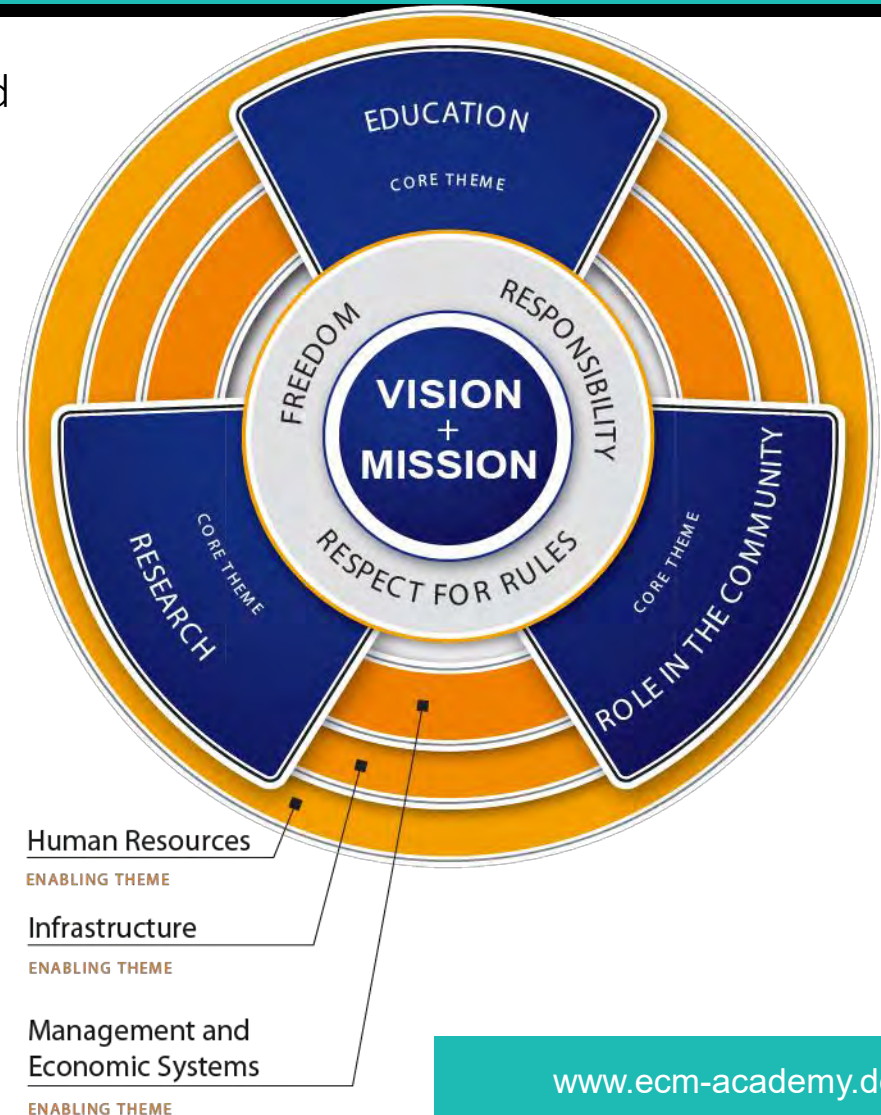
THANK YOU FOR YOUR ATTENTION!

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