

National Research University of Information Technologies, Mechanics and Optics

Technology areas for cooperation

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Development Program of NRU ITMO



Long-term goal of technological development in ITMO:

Creation of competitive advantages for Russia in the fields of information and optic technologies within the accelerating/speeding up science-and technology development and globalization of the world economy

Main perspective technological areas in ITMO

1. Photonics and Optical Information
2. Optical Nanotechnologies and Materials
3. Optical and Laser Systems
4. Intelligent Systems for Data Management and Processing
5. Technologies of Programming and Artificial Intelligence
6. Technologies of Highly Efficient Computing and Systems

1. Photonics and Optical Information

- Micro- and nanophotonics
- Embedded photonic solutions
- MEMS - Microelectromechanical systems
- Nano and quantum electronics
- Biomicrosystems

2. Optical Nanotechnologies and Materials



- Metamaterials
- Functional materials
- Functional polymers
- Materials and solutions for embedded sensing
- Fibers

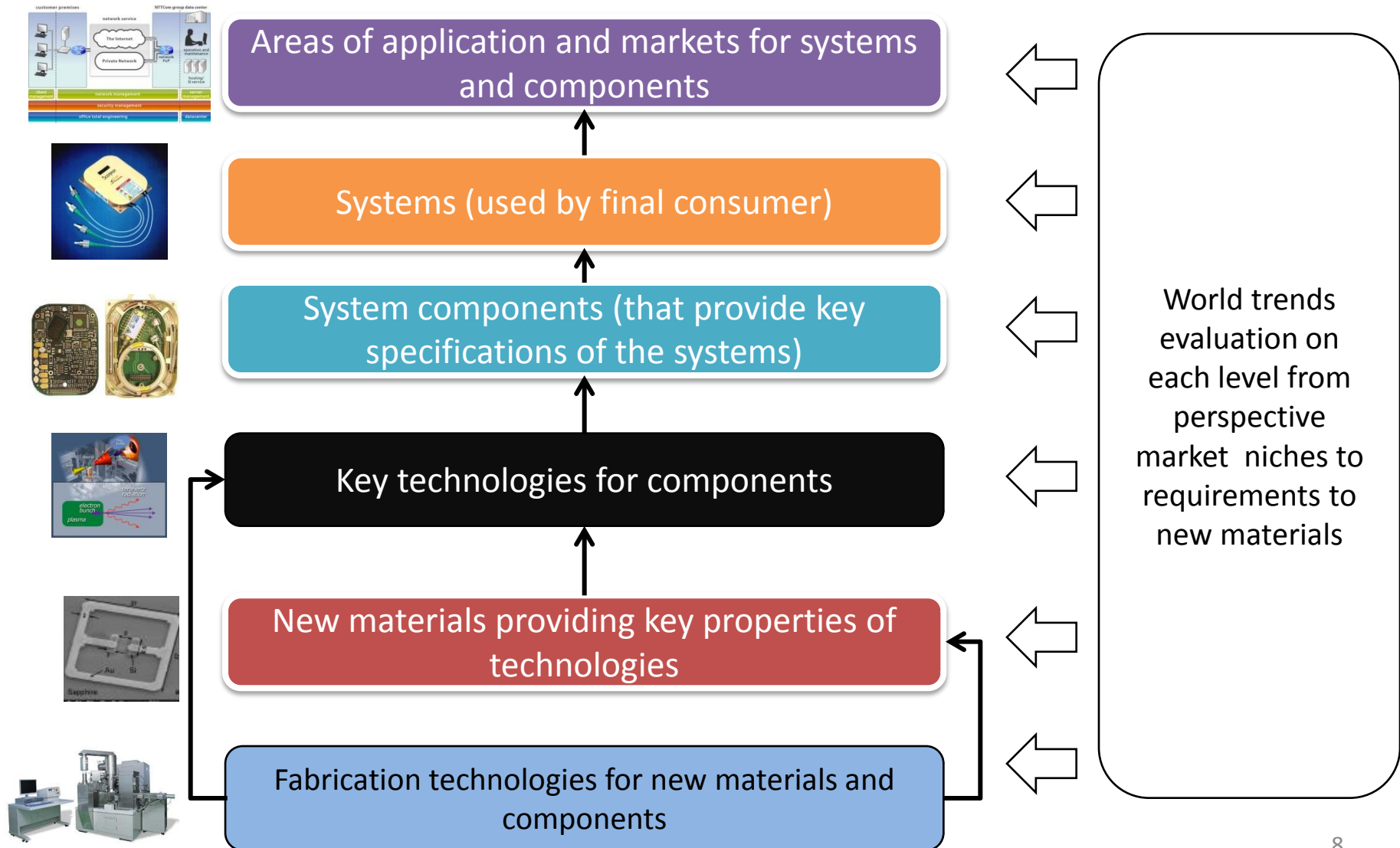
3. Optical and Laser Systems

- Laser processing of components and products
- Optical sensor and module technologies
- Optical fibers
- Optical measurements and device technologies

4. Intelligent Systems for Data Management and Processing

- Multiscale modelling of new materials
- Simulation of life-cycle management of materials, components and devices

Elements of technology chain that can be used in evaluating of world trends in area of photonics



Areas of cooperation

- Foresight
- Forming technology roadmaps
- Forming technology strategy for corporation and university
- Starting joint projects
- Start-ups

Innovation support infrastructure

ITMO



- Department of Strategic Planning and Development
- Department of Marketing
- Center for Projects Appraisal
- Department for Project Management Development

Thank you for your attention

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