Innovation Strategy for Smart Specialisation

BULGARIA

Geneva, 16 October 2014

Bulgarian achievements: 1. The Computer

- **John Atanasoff in 1942 developed the first circuit computer.**

- **This is the foundation for the future computer development.**

2. The Photoelectric Effect

- **Academician Georgi Nadzhakov in 1925 discovered the photo effect of electricity.**
- **This principle made possible the later invention of the photocopier machine.**

3. The Digital Watch

- **Peter Petroff – a NASA engineer invented the first digital watch.**

- **It was marketed under the brand Pulsar.**

Condition of the innovation system

- According to the ranking of the Innovation Union in 2014 **Bulgaria is in the group of modest innovators** and ranks last in the **EU28**

- According to the ranking of the Global Innovation Index 2014 **Bulgaria ranks 44 in the world** (before Poland, Romania and Greece)

Innovation efficiency

With respect to innovative efficiency (ratio test result and create conditions for innovation), Bulgaria ranks 25 in the world and ahead of 19 member states of the EU28 - extract more and better results from relatively unfavorable conditions for innovation (*Ranking of Global Innovation Index 2014***)**

Advantages and Challenges of Bulgaria as regards IS3

Advantages

- Macro-economic stability and favorable tax conditions
- Traditions in basic research fields
- High share of university graduates
- Qualified researchers in physics, chemistry, biology, computer science and bio-technologies
- Critical mass of fast-growing enterprises in specific sectors
- Good overall framework for staring new business

Key Challenges

- Low labor productivity
- Insufficient share of high added value exports
- High level of resource inefficiency
- Critical demographic situation
- Inadequate volume of domestic and foreign capital investments
- Weak and irregular relationships between academia and business community
- Substantial level of centralization

Vision

- **By 2020 Bulgaria must make a qualitative leap in its innovation performance at EU level to tackle public challenges in the field of demography, sustainable development, intellectual capital and the nation's health**

Strategic goal

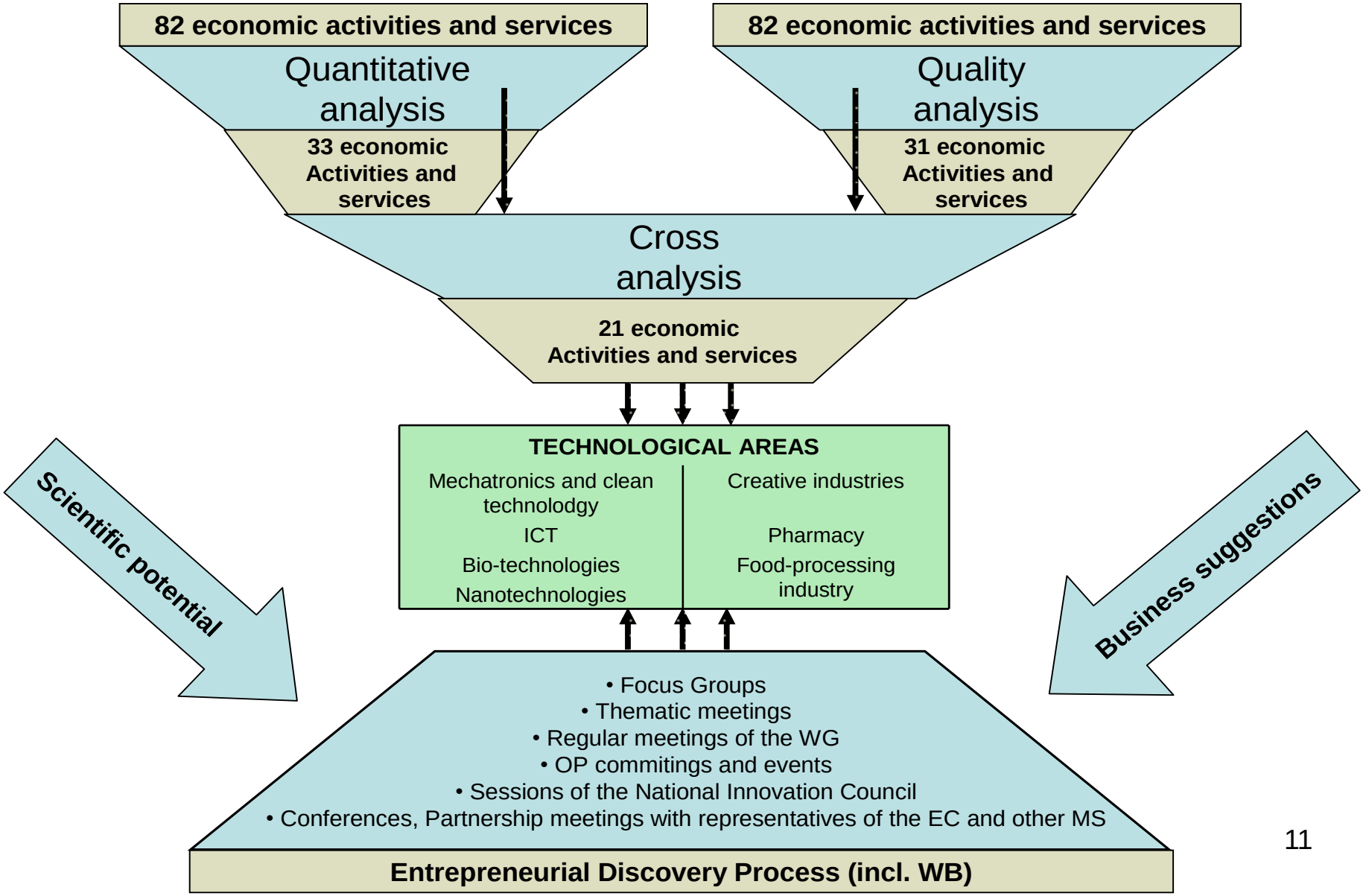
- **By 2020, Bulgaria will move from the group of “modest innovators" to the "moderate innovators" group**

Operational Goals

- **Focus the investment for the development of innovation potential in the smart thematic areas (for creation and development of new technologies, leading to competitive advantages and to the increase in added value of domestic products and services)**
- **Support for accelerated absorption of technologies, methods and others. Improving resource efficiency and application of ICT in enterprises from all industries**

Process of identification of technology areas

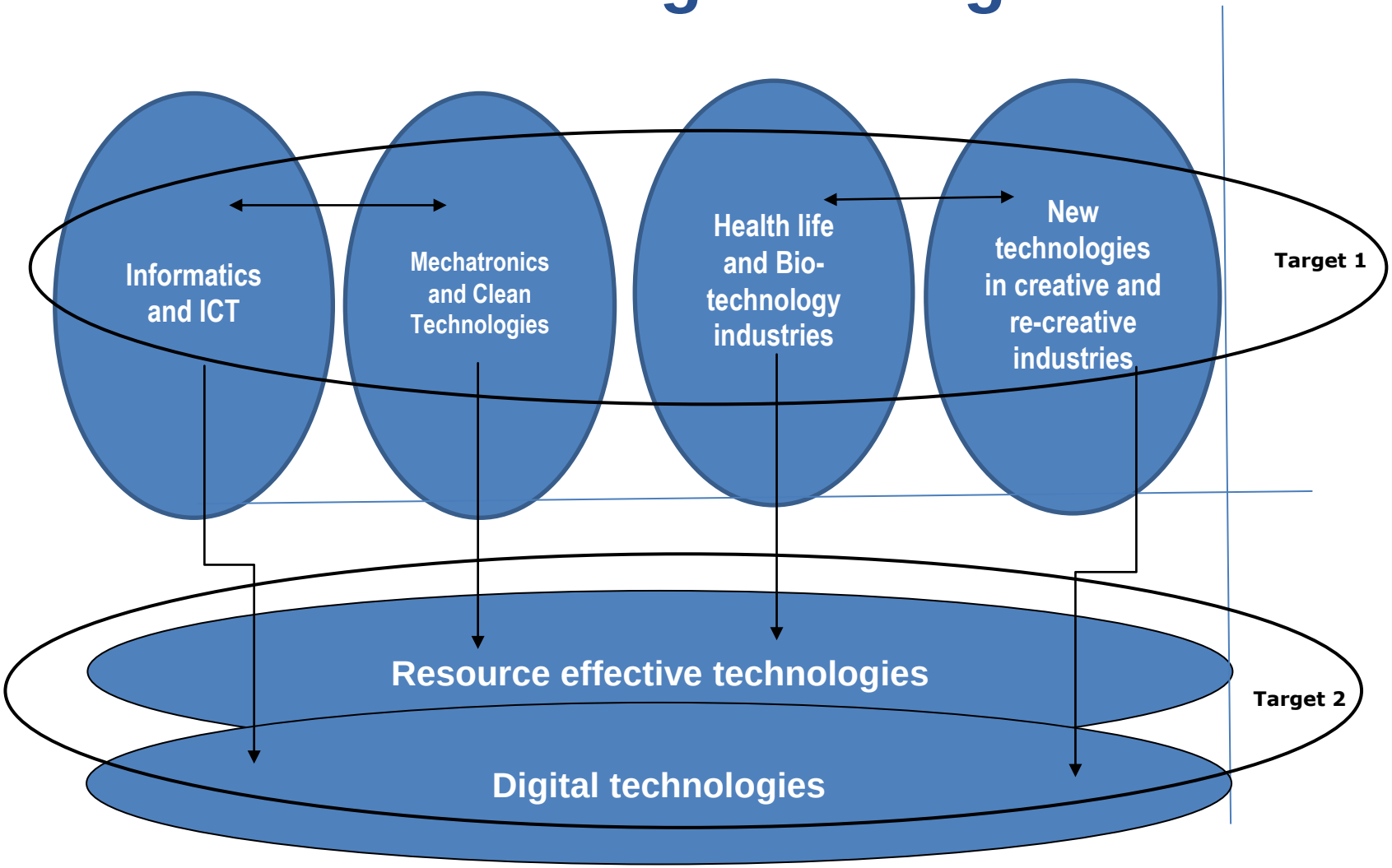
To identify potential areas for intensive technological innovation development (specialization)



From Technological areas to Thematic areas

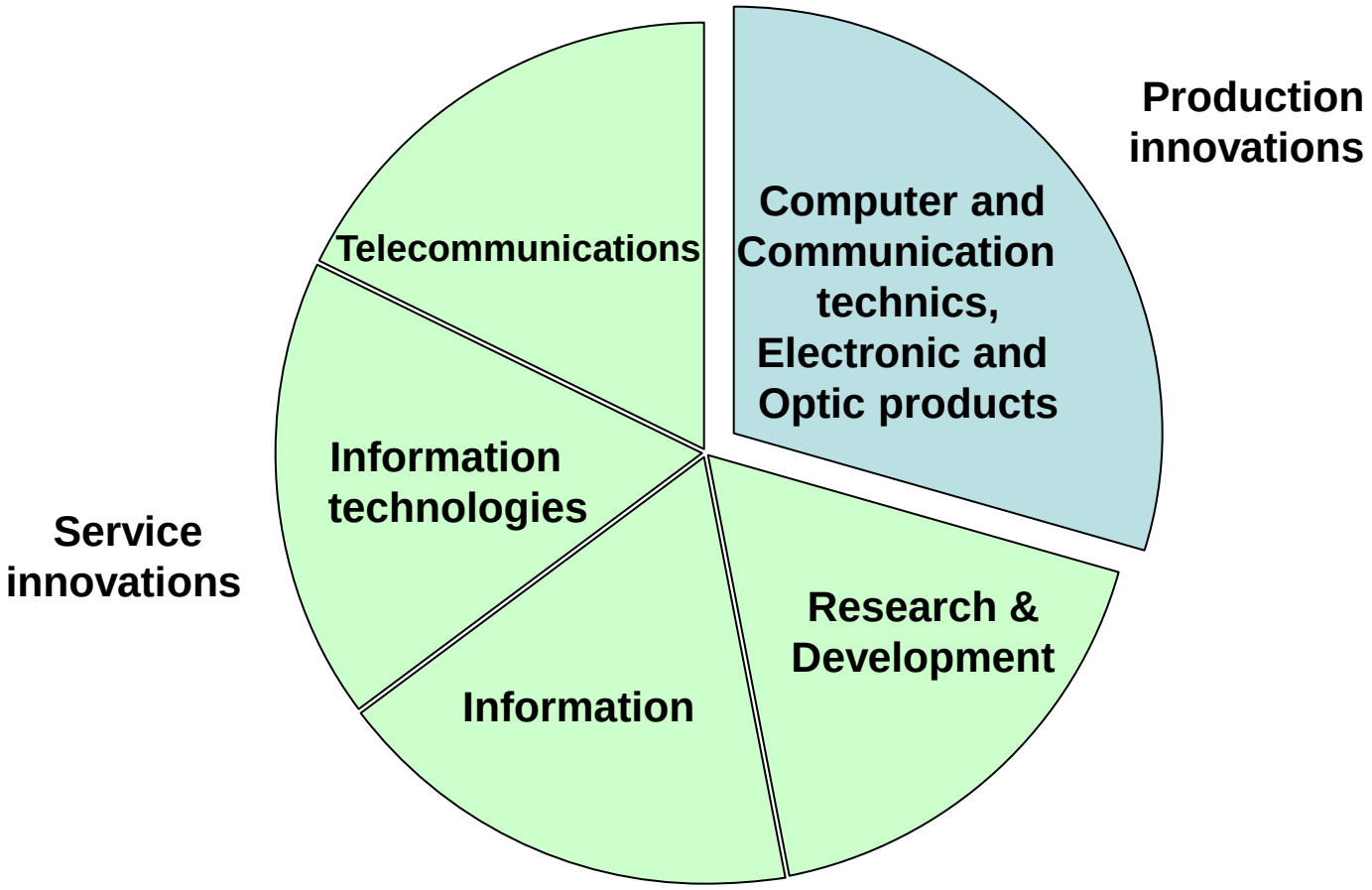
The cross-analysis and the e.d.p. are a starting point for identifying technology areas for smart specialization. The logic of identification is the finding of the intersection between the strong areas of scientific and technological development and entrepreneurial activity. The scientific areas are in line with National Strategy for Promotion of Scientific Research 2020. The areas received as a result should be seen through the prism of expectations for niche markets and market potential (EU and globally):

Addressing challenges

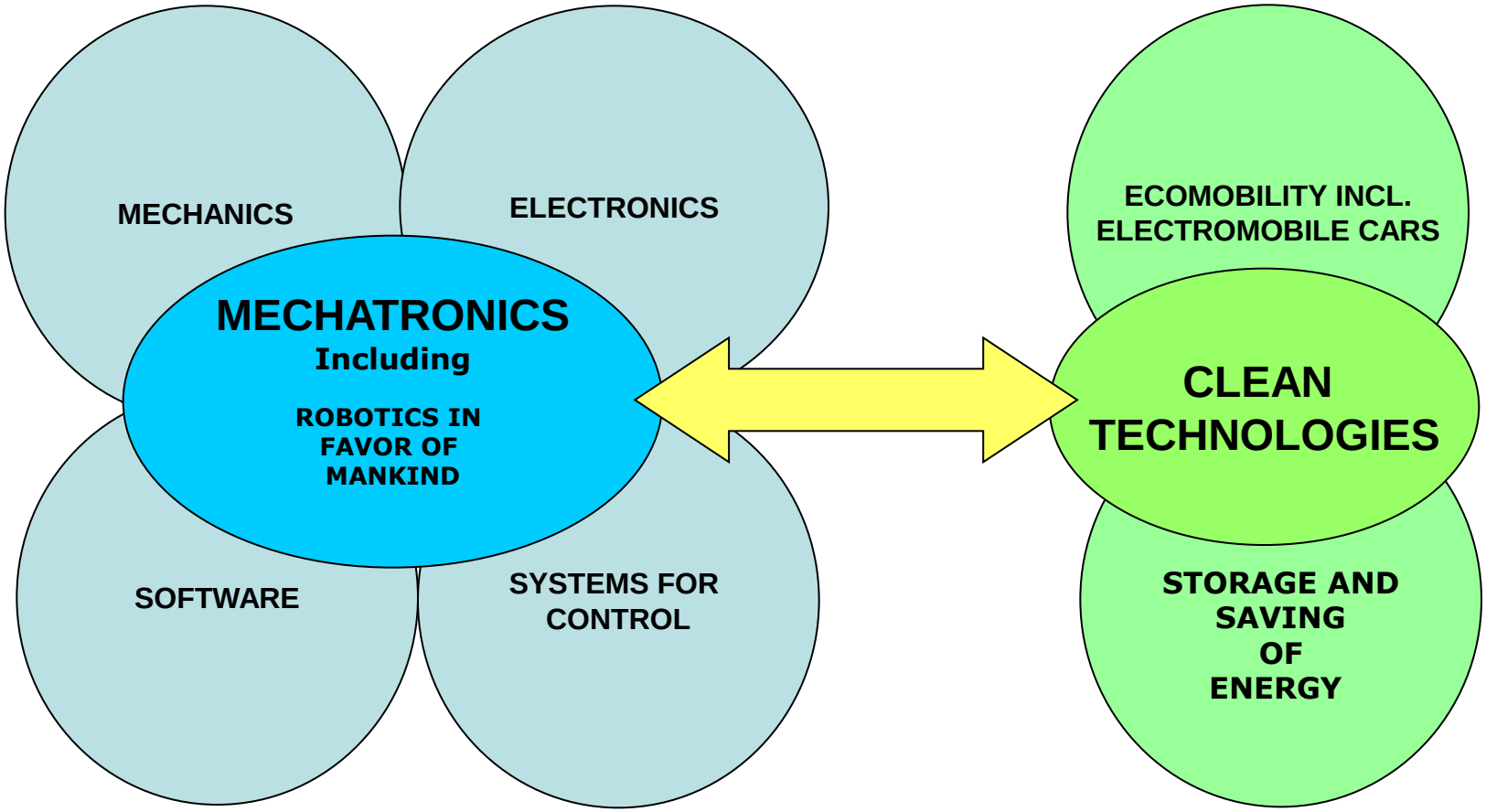


The following KETs are reflected in the process of identification - industrial biotechnology, micro-nano technologies, nano technologies and advanced materials.

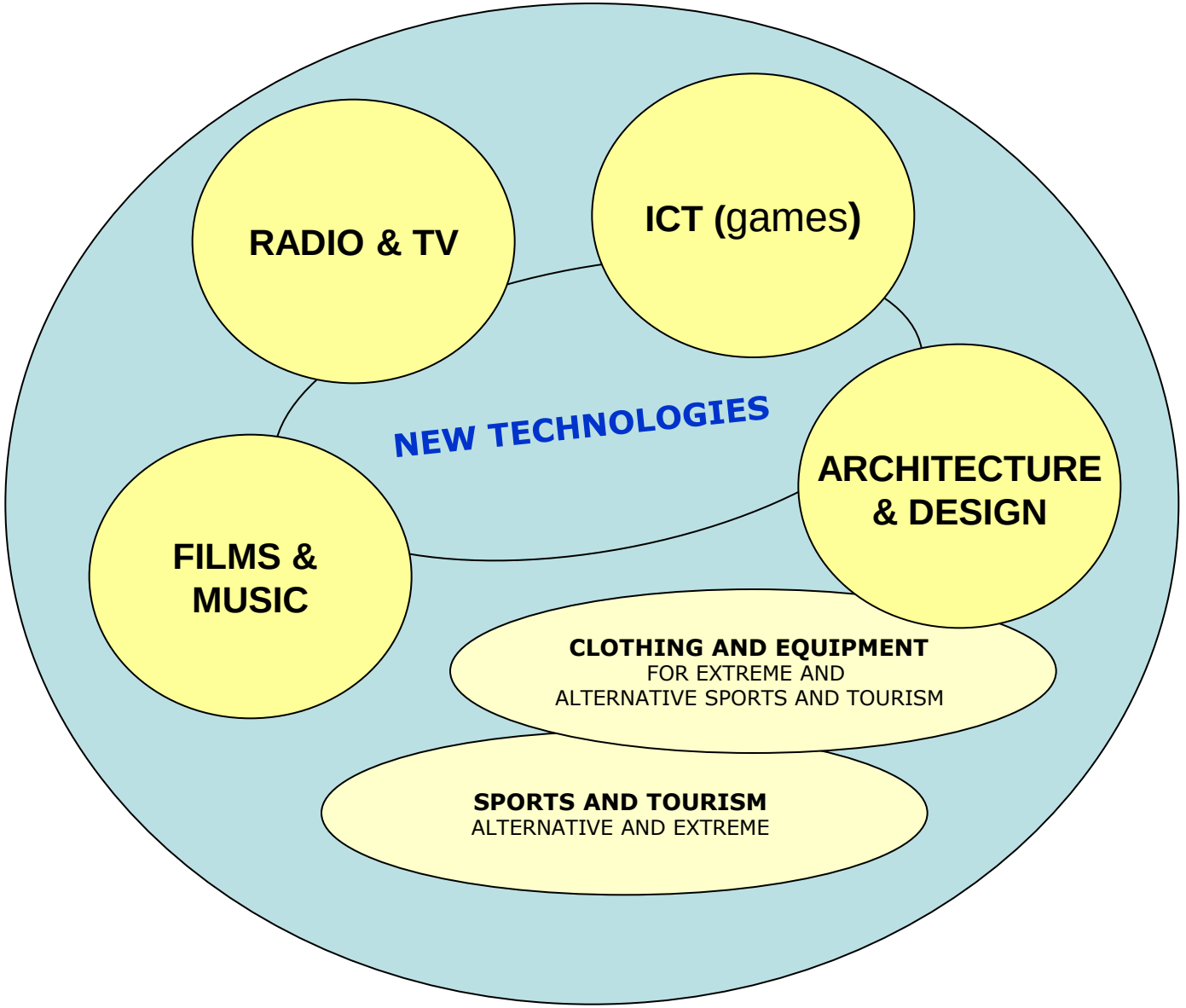
ICT AND INFORMATICS



MECHATRONICS AND CLEAN TECHNOLOGIES



NEW TECHNOLOGIES IN CREATIVE AND RECREATIONAL INDUSTRIES



HEALTH LIFE AND BIOTECHNOLOGY INDUSTRIES