Industrial Transformation in Bulgaria

First results POINT Review

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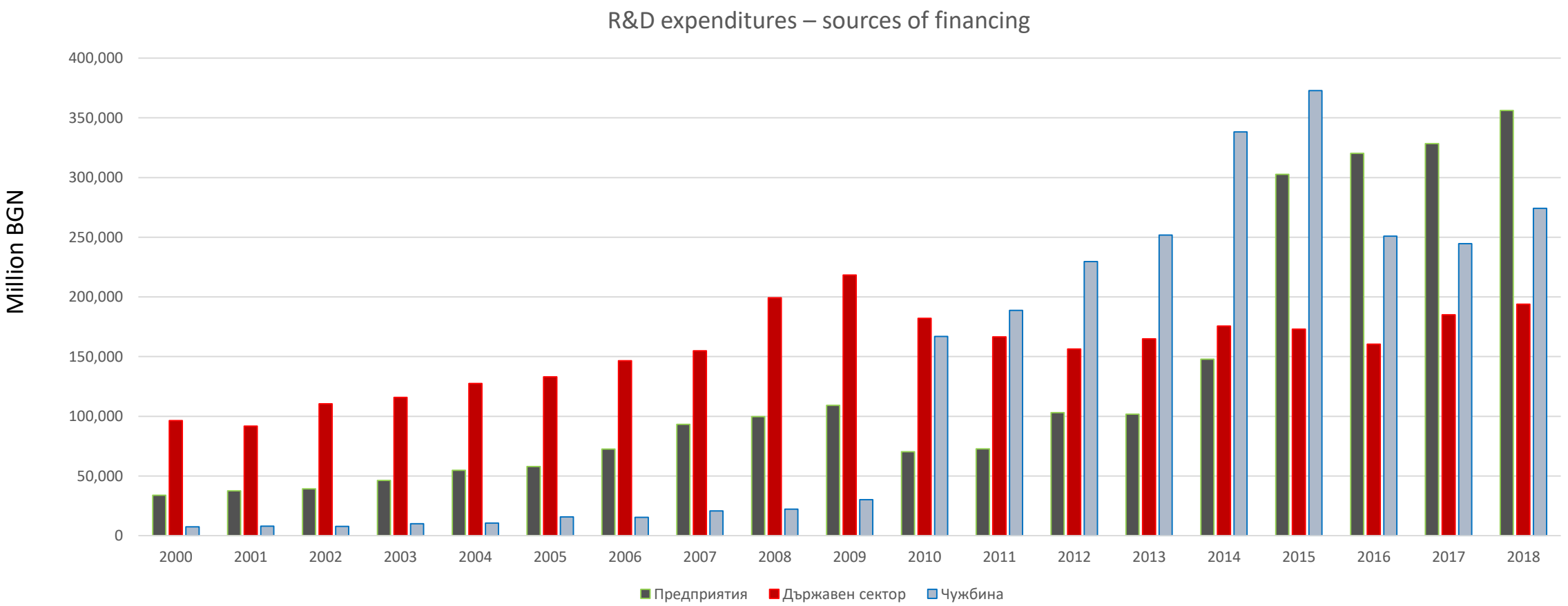
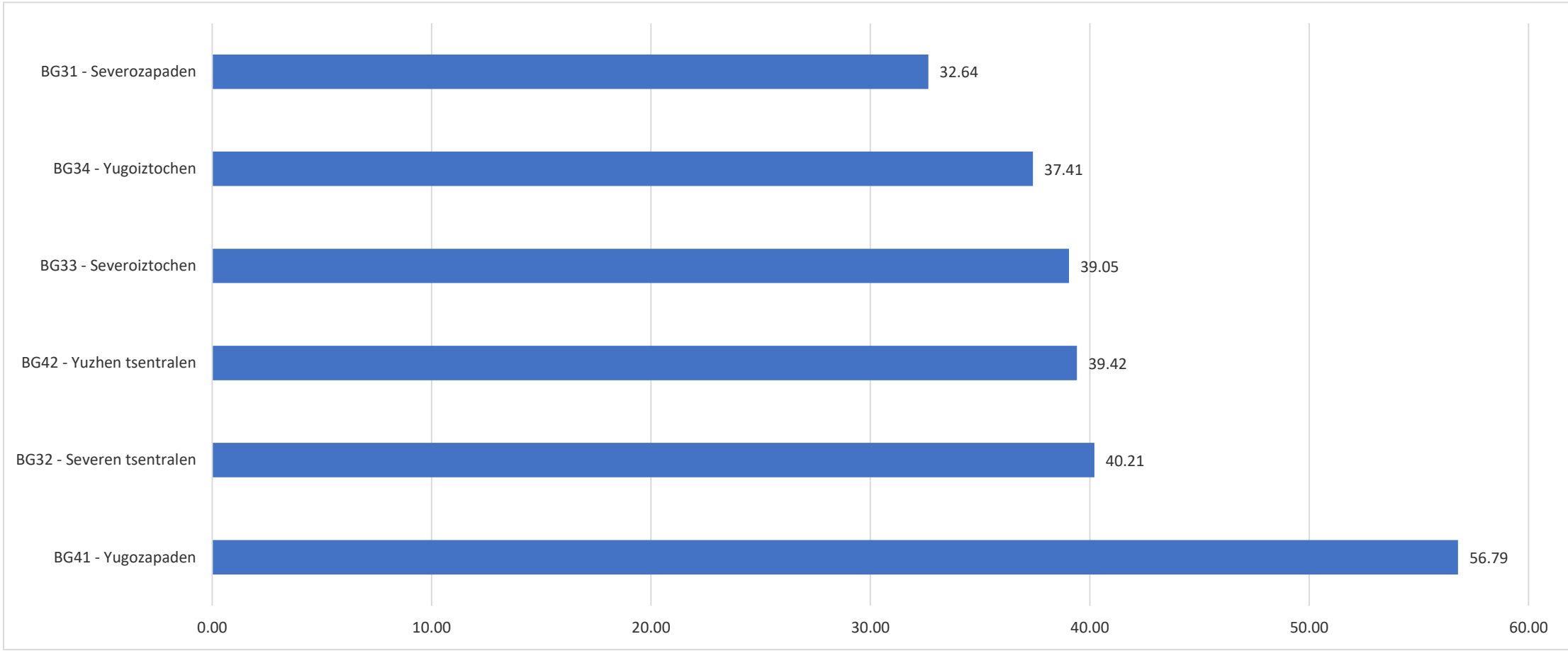
Some background to Bulgaria



***Source**: National Statistical Institute*

Innovation performance of Bulgaria’s regons



***Source**: Regional Innovation Scoreboard*

The first review meeting

- Total of 43 participants
- Distributed in 8 groups of stakeholders
- All groups well represented with less focus on consumers though
- Different business representatives: most from ICT but also from mechatronics (drones), venture capital, agriculture, clean-tech
- Government/public sector the most widely represented group

Some preliminary takeaways (1)

- Business:
  - **Depopulation** => lots of free space => **automation** => but to do this we need to tie IT to the real world => need of **PhDs**
    - … but also creates signals to employers – standard of living of some Bulgarian engineers higher than those in UK and even Germany
  - **Education** (quality and quantity) is a critical challenge; digitalization should start at school; businesses step in, e.g. in IT
  - Give us a clear **strategy** to follow

- Public sector:
  - **Silos** not only between ministries but also within, e.g. between education and science
  - Reliance on **OP** funding though moving from infrastructure to science – business links… but attitude is “keep calm, and give subsidies”
  - **Digitalisation** emerges as a unifying topic across ministries and regionally; DIHs helpful but only two in the country

Some preliminary takeaways (2)

- Knowledge supply and intermediaries:
  - Unrelated to the business world
  - Focus on fundamental science and no incentives to commercialize
  - International companies are not embedded enough in the local economy

- Consumers
  - Low sophistication and purchasing power => very high reliance on exports, including for IT
  - No public procurement strategy from the government to pull industrial transformation in S3 areas
  - Could be afraid of transformation/transition, e.g. job loss; Brussels bashing appearing, e.g. Horizon 2020 rules and participation

The thematic area

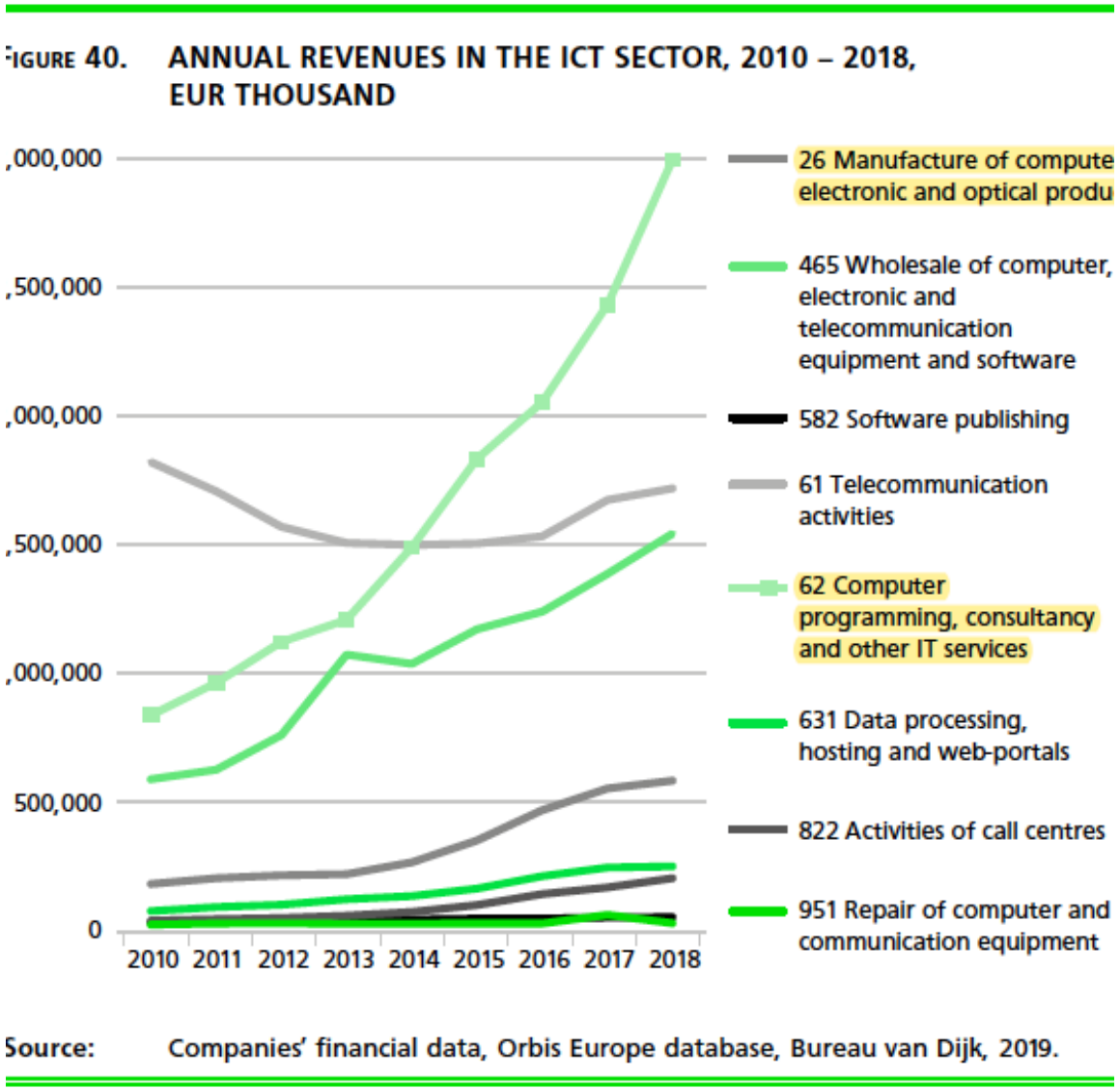
Bulgaria's RIS3 Priority areas 2014 -2020

Thematic areas:	Original Proposal for Point review Thematic Area	Focus for Point case
Informatics and ICT		
Mechatronics and Cleantech	✓	
Industries for a healthy life and biotechnology	✓	
New technologies in creative and recreational industries		

…. in the context of Industry 4.0

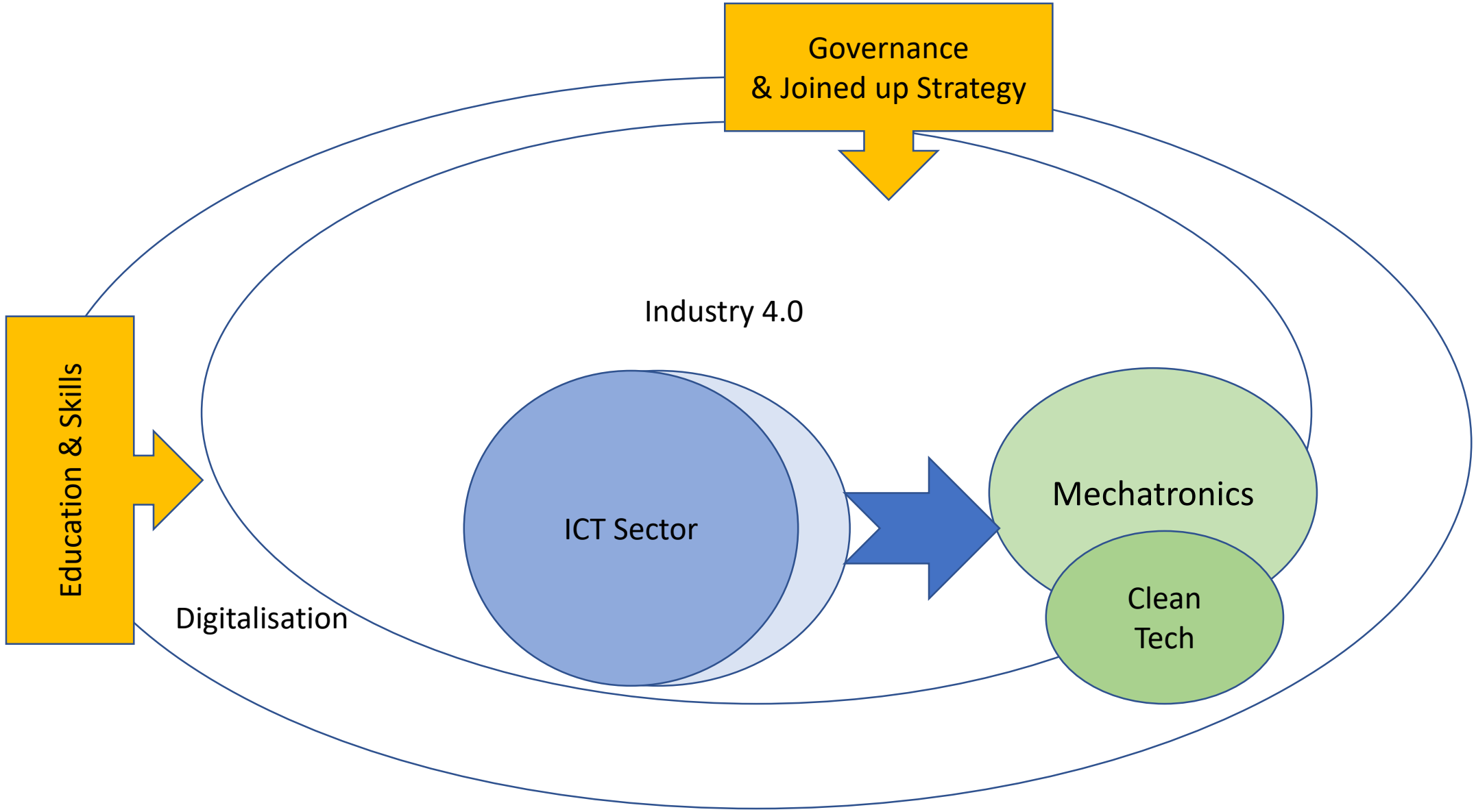
Growth in different niches of ICT sector

- ICT services growing fast
- Mainly outsourcing by foreign companies -> added value created elsewhere
- Coding on basis of client specifications
- Manufacturing of electronic and optical products on the rise (mechatronics)



From: Innovation BG, 2019

Focus of the thematic case Bulgaria



Tentative SWOT for Bulgarian case

	Strengths	Weaknesses	Opportunities	Threats
Orientation and planning	Export orientation Foreign investors in thematic domain	Governance in silos Poor directionality No objectives or targets in policy strategies Regionalisation still weak	Establishment of inter-institutional WG for Industry 4.0 and on digitalisation Moving thriving ICT to higher added value levels Connecting digitalisation with other parts of economy and society	No agreement on Joined up strategy Disconnect with sustainable transition Public perception of Industry 4.0 not always positive
Resource mobilisation	ICT talent Entrepreneurial spirit	Depopulation: shortage of human resources Pipeline of new talent thin Low level of public investment in education + R&I Skills mismatch	New Operational Programmes to be planned now Industry 4.0 Strategy in design Business taking initiatives to address education challenges	Education system not adapted fast enough to address challenges 50% of teachers retiring in 3 years
Production	ICT sector growing Pockets of strength emerging in other high-value areas (e.g. automotive, life sciences)	Outsource oriented Low level of product development and software engineering activities	Linking ICT-strengths with other sectors	Diaspora continues
Demand	Leisure and tourism growing	Low level domestic demand Low digitalisation in population Public procurement not a driver	Using domestic industry as demand for ICT services Building up digital skills in schools	ICT outsourcing moving to other low cost regions

Next Steps

- Write Chapters 1 & 2 in January / February
- Drafting Chapters 3 & 4 February /March
- Discussion with JRC and Bulgarian partners
- Have a second more focused stakeholder meeting early Spring
- Finalising the report

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