



REPUBLIC OF ESTONIA
MINISTRY OF ECONOMIC AFFAIRS
AND COMMUNICATIONS

Estonian Smart Specialisation study results

Kaupo Reede

Economic Development Department / head of department

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Smart Specialisation principles

- A smart specialisation strategy should prioritise domains, areas and economic activities where regions or countries have a competitive advantage or have the potential to generate knowledge-driven growth and to bring about the economic transformation needed to tackle major challenges for the society and the natural and built environment.
- Priorities could be framed in terms of knowledge fields or activities (science-based, social, cultural and creative ones), sub-systems within a sector or cutting across sectors and corresponding to specific market niches, clusters, technologies, or ranges of application of technologies to specific societal and environmental challenges or health and security of citizens.

Smart Specialisation Platform, Joint Research Centre, European Commission



Estonian Smart Specialisation knowledge fields

Growth area	Growth field	Growth niche
ICT		Data analysis and information management
		Information security and cybersecurity
		Production automation, robotics, embedded systems
		Tools and methodologies in software development
Health technologies		E-Health
		Red biotechnologies
Valorisation of resources	Knowledge-based construction	Energy and resource efficiency in construction and buildings
		Wood valorisation: wood in construction
	Materials technologies	Nanotechnologies and coating technologies
		Valorisation of mineral resources: oil shale in the chemical industry
	Biotechnologies	Valorisation of food: healthy food



Smart Specialisation study preconditions

- In Estonia, the national principles of SS and its implementation have been developed since 2012. During this period priority areas have been developed, their electoral process has been analysed and a number of other analyses have been carried out.
- However, it has been unclear which companies belong to SS growth areas and what has been the development of growth areas since their selection.

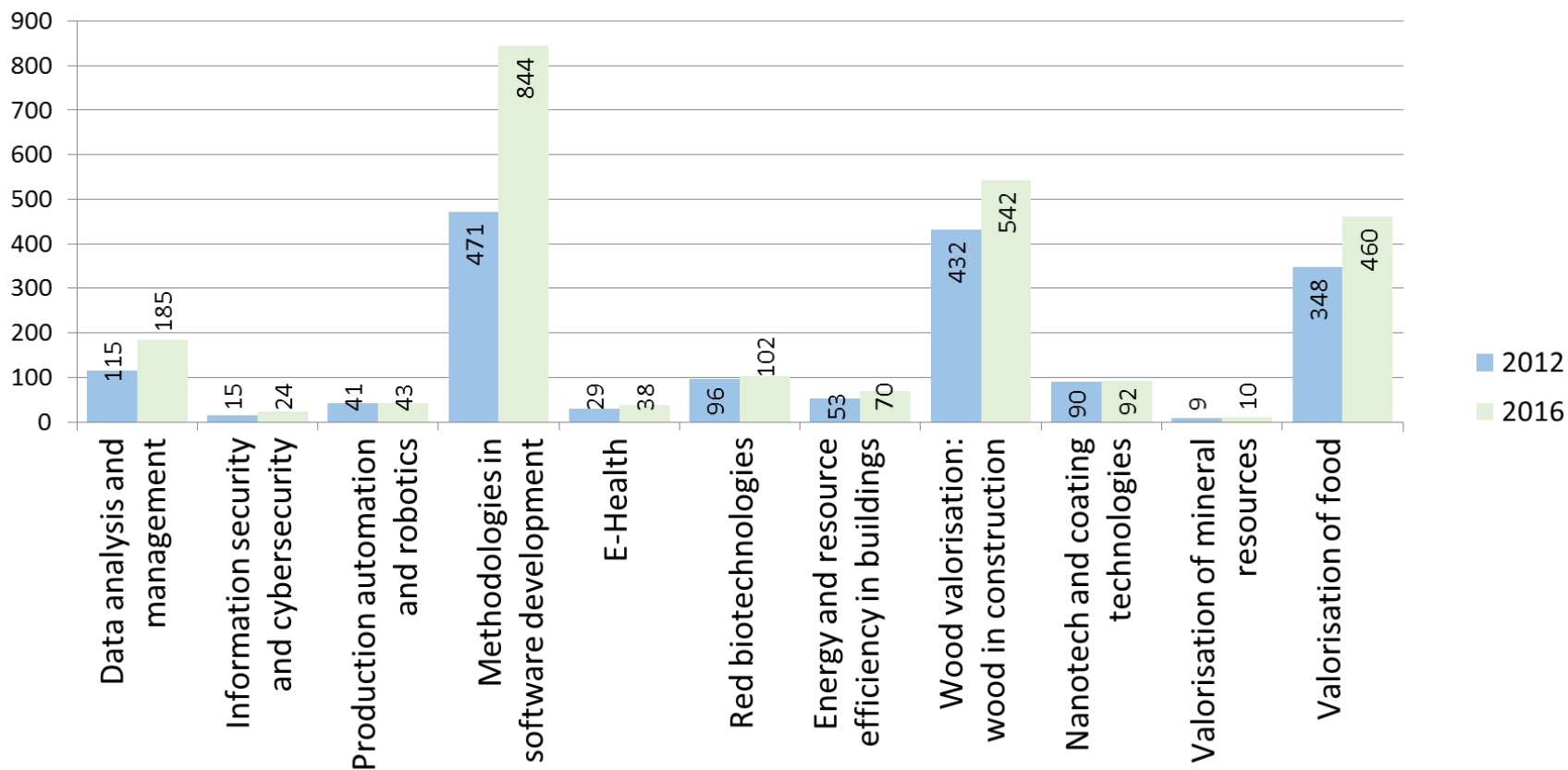


Smart Specialisation study aim

- In 2018, a Smart Specialisation growth areas progress study was carried through in Estonia.
- Aim of the study was to develop a basic methodology for assessing the progress of Smart Specialisation growth areas, which can be implemented both in Estonia and in other member states and which can be further developed in the future studies.
- The first part of the study defined the growth areas and identified the companies belonging to them, and analyzed the economic performance of these companies by growth niches, between the years 2012 and 2016.
- The second part of the study examined cooperation of the growth areas with research and development institutions and the factors that most affected sectoral development.



Number of enterprises in SS growth niches



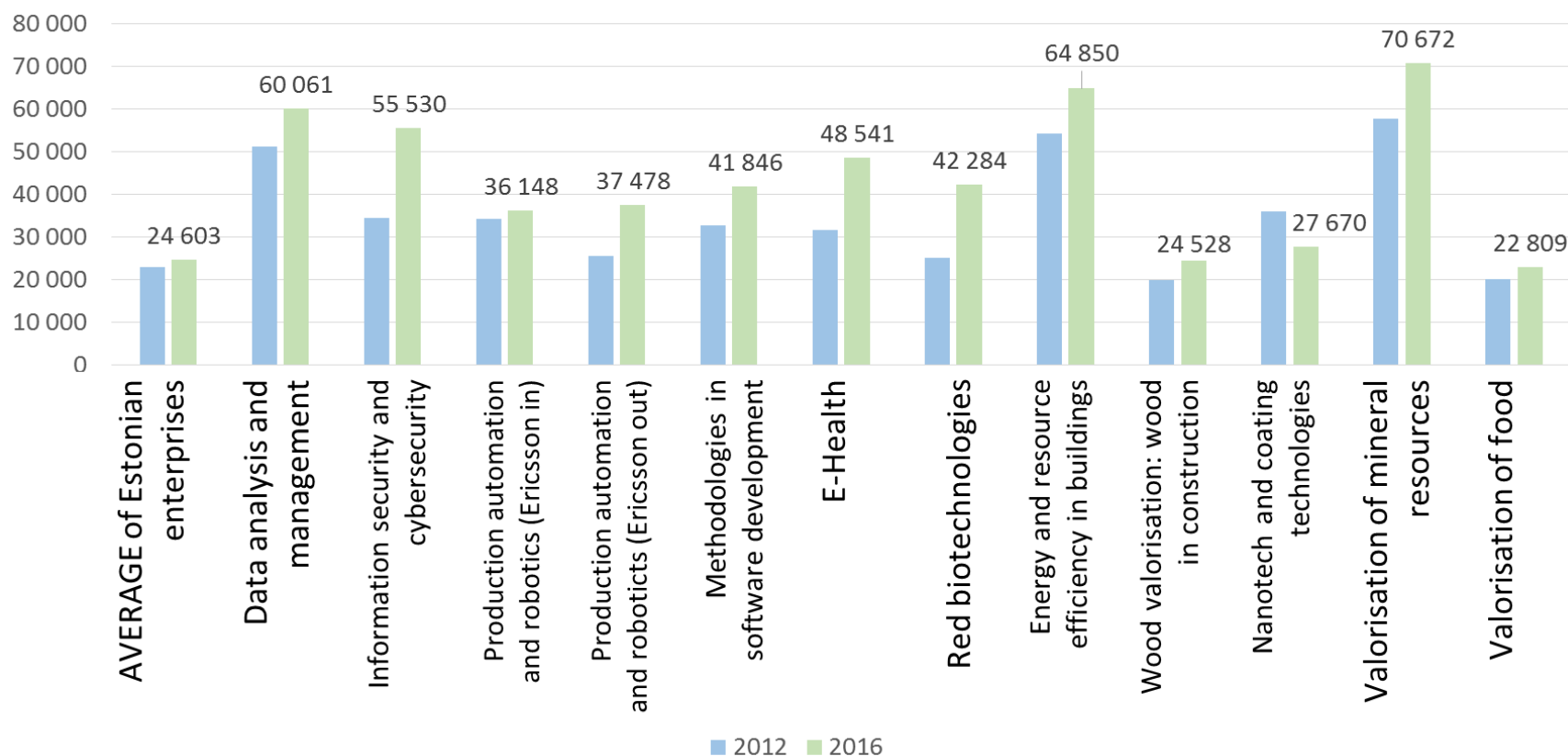


Results of quantitative analysis

- The analysis of economic indicators revealed that in most growth niche companies the sales revenue and average number of employees are higher than on average in Estonian companies.
- In most growth niches the value added per employee of these companies was also higher than Estonian average and had increased more. Labour costs have been higher than the Estonian average in all growth niches and in both of examined years. Therefore it can be stated that these companies also pay higher wages than Estonia's average.



Value added per employee in SS growth niches





Results of qualitative analysis

- The second part of the study concluded that R&D-based cooperation takes place through appropriate national support measures, but companies feel that national support measures are often not adapted to the needs of the SS growth areas and are inappropriate for the different target groups.
- The existence of R&D cooperation does not mean that it will produce a positive result, as the economic indicators by growth niches (including added value, revenue, exports and personnel costs) of companies who cooperate with R&D-institutions may not be the result of cooperation, but a prerequisite for cooperation.



Overall results and policy recommendations

- The results of the study revealed that in the light of the global and technological developments in recent years, the descriptions of the growth niches have become somewhat outdated and are no longer in line with developments in Estonian growth areas.
- At the same time, the classification of growth areas by the tree main themes (information and communication technology, health technologies and enhancement of resources) is still considered relevant and adequate.
- In considering new trends, the main challenge for growth niches is to find balance between fixing niches and ensuring flexibility. Entrepreneurs see support and monitoring in growth areas as a dynamic approach to technologies and business processes and they emphasize the need to focus on projects, initiatives and activities rather than growth niches.



Overall results and policy recommendations

- A multi-stage approach should be used to regularly monitor the development of growth areas, combining quantitative and qualitative approach.
- Smart specialization areas should be defined and monitored primarily at the level of growth field and growth niches should be seen as guiding actions which change over time.
- The growth niches should be reformed regularly in order to draw attention to developments in the fields.
- Base the smart specialization process more on the logic of entrepreneurial discovery process – the broader focus of smart specialization should be on enterprises' projects, initiatives and development processes that seek to speed up the development and increase added value and exports.



Smart Specialisation Steering Committee decisions following the study report

- Smart Specialisation monitoring system will be worked out by the end of 2019. Instead of statistical codes for enterprises, growth field, ambition, and orientation to technological development will be followed.
- Monitoring system will be organised to collect and analyse data from different existing data sources to a maximum extent; extra data gathering and human resource allocation to Smart Specialisation monitoring and administrative management will be avoided.
- In Smart Specialisation R&D cooperation measures options for partnership will be expanded.
- Focused measures for supporting intramural R&D in enterprises will be prepared.



Smart specialisation related measures in 2014-2020 OP (I)

Measure	Budget (EU + national co-financing, EUR)	Total commitments (EUR) (12.09.19)	Smart Spec. total commitments	Total payments (EUR) (12.09.19)	Smart Spec. total payments	Share of Smart Spec. (%)
	357 283 054	218 886 159	143 408 186	166 078 219	90 760 572	67%
4.1.1. Institutional package measure for R&D institutions and higher education institutions (ASTRA)	135 962 320	48 228 207	18 809 001	81 285 163	31 701 214	39%
4.1.3 Support for internationalisation, mobility and future generations in research and higher education - DORA PLUS and MOBILITAS PLUS	57 370 180	26 711 859	13 088 811	21 619 855	10 593 729	49%
4.1.2. Supporting Centres of Excellence to improve the international competitiveness and excellence of research	28 132 204	20 087 278	13 659 349	12 952 508	8 807 705	68%
4.1.4. Support for Research Infrastructure of national importance on the basis of a Roadmap	38 745 760	38 745 760	29 834 235	15 915 321	12 254 797	77%
4.1.5. Popularisation of research among young people and in society as a whole (TEAME+ and TEEME+)	5 393 588	5 393 588	3 451 896	3 252 758	2 081 765	64%
4.2.1 Supporting of applied research in the growth fields of Smart specialisation	29 432 757	29 432 757	29 432 757	7 598 633	7 598 633	100%
4.2.2. Specialised scholarships in higher education in the growth fields of smart specialisation	25 029 087	25 029 087	25 029 087	13 901 894	13 901 894	100%
4.2.3. Addressing societal socio-economic challenges through R&D (RITA)	37 217 159	25 257 623	10 103 049	9 552 087	3 820 835	40%



Smart specialisation related measures in 2014-2020 OP (II)

Measure	Budget (EU + national co-financing, EUR)	Total commitments (EUR) (12.09.19)	Smart Spec. total commitments	Total payments (EUR) (12.09.19)	Smart Spec. total payments	Share of Smart Spec. (%)
	1 132 616 836	813 231 459	572 295 178	477 064 160	324 249 053	89%
1.3.2 Schools' ICT infrastructure	13 017 867	13 017 867	13 017 867	4 744 274	4 744 274	100%
1.6.3 Increasing digital literacy	8 500 000	8 500 000	8 500 000	3 432 179	3 432 179	100%
11.1.1 Renewal of telecommunications infrastructure and construction of a new one	47 559 314	46 802 547	46 802 547	41 048 337	41 048 337	100%
11.2.1 Development of basic infrastructure of services supporting the creation and implementation of e-services	37 663 252	32 178 135	32 178 135	20 313 107	20 313 107	100%
11.2.2 Raising awareness of the information society	8 000 000	5 000 000	5 000 000	3 767 392	3 767 392	100%
12.3.2 Building of public services interoperability	3 529 412	3 529 412	3 529 412	899 897	899 897	100%
12.3.1 Smart development (including analysis) of existing and new information systems	93 815 944	47 638 586	47 638 586	25 263 819	25 263 819	100%
4.2.5 Demand-side policies (the state as a client of innovative solutions)	6 562 799	4 831 045	4 831 045	739 800	739 800	100%
4.2.4 State-funded cooperation structures (clusters and technology development centers)	100 000 000	78 976 465	78 976 465	47 378 787	47 378 787	100%
4.2.6 Boosting start-up entrepreneurship	7 000 000	5 656 874	5 656 874	2 620 658	2 620 658	100%
4.3.3 Raising awareness about energy and resource management	199 800	199 800	199 800	142 130	142 130	100%
4.3.2 Conducting trainings on energy and resource management	480 000	480 000	480 000	297 732	297 732	100%
4.4.1 Enterprise Development Programme	250 000 000	123 574 853	61 787 426	50 149 408	25 074 704	50%
4.4.2 Innovation and development vouchers	13 333 333	6 989 806	6 989 806	5 664 459	5 664 459	100%
5.1.2 Start-up assistance	7 911 809	7 911 809	3 164 724	6 362 755	2 545 102	40%
5.2.1 Issuing insurance for loans, security and export transactions	95 000 000	75 500 000	30 200 000	18 875 000	7 550 000	40%
5.2.2 Creating an early phase fund type instrument for providing risk capital	83 200 000	83 200 000	83 200 000	15 000 000	15 000 000	100%
6.1.1 Supporting the reconstruction of apartment buildings	340 000 000	258 203 538	129 101 769	225 195 500	112 597 750	50%
6.1.2 Supporting the development of construction projects of close-to-zero energy building	264 000	264 000	264 000	264 000	264 000	100%
6.4.1 Supporting the production of biomethane and its consumption in the transport sector	16 579 306	10 776 721	10 776 721	4 904 926	4 904 926	100%



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Thank you!

Kaupo Reede
kaupo.reede@mkm.ee