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Executive Summary

This deliverable outlines the results of a survey conducted as part of the WBC-INCO.NET project initiative to support innovation capacities in the WB region. The survey aimed to pinpoint both present and likely future research and market needs, as well as identify possibilities for collaboration in the region.

The survey was carried out in two rounds, the second building on the results of the first. Two questionnaires were jointly designed by JRC-IPTS and Ivo Pilar. These addressed consecutively market and research stakeholders.

Questionnaires aimed to identify research and innovation needs both of today and in the future in order to support the design of a joint action plan for the region towards 2030.

A dedicated workshop shall take place in the near future with both industry and research regional stakeholders. The aim is to refine and complement the findings presented in this report based upon a mutual appreciation of different viewpoints and expectations.

The identified potential needs for the region to be further considered in order to trigger joint innovation are related to:

- Investments in knowledge and technology sharing, expert consultations and collaborative research
- Decrease in regulation
- Strengthen human resources capacities
- Improve infrastructures (including ICT)
- Build awareness on innovation benefits
- Foster mobility
- Enhance communication between different stakeholders

These seems to be all critical to increase mutual understanding, support the identification of common interests, build mutual appreciation and achieve at a joint agenda. Finally, potential research topics to be further considered in the region to trigger joint innovation are:

- Environment surveillance through ICTs
- Automation of information management systems through artificial intelligence and agent based software
- New approaches and frameworks to enhance FDI and cross-regional investments in the region

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Finally, thanks to all project partners for disseminating the survey and to the industry and research regional stakeholders who have taken the time to provide their inputs.

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Abbreviations

WB	Western Balkan
WBC	Western Balkan Countries
EU	European Union
FP7	Framework Programme 7
JRC-IPTS	Joint Research Centre Institute for Prospective Technological Studies
MS	Microsoft
ICT	Information and Communication Technologies
RI	Research and Innovation
FDI	Foreign Direct Investment
SRA	Strategic Research Agenda
SMART	Specific, measurable, achievable, realistic and time-based

1 Introduction

This report presents the results of a survey conducted as part of the WBC-INCO.NET project initiative to support innovation capacities in the WB region. The survey aimed to pinpoint both present and likely future research and market needs, as well as identify possibilities for collaboration in the region.

The findings shall support other activities that together will provide a clear overview of the region's current situation and future needs with regards to innovation. These activities together should then help to prepare an Action Plan for further WBC cooperation in innovation and to establish closer cooperation between research and innovation stakeholders (i.e. public funded researchers and innovative companies). This should include competence from the industrial sectors and the fields of innovation management and market entry, as well as to explore EU programmes other than FP7 and to support programmes of other institutions which aim to increase innovation in the WBC.

2 Methodology

Two questionnaires were jointly designed by JRC-IPTS and Ivo Pilar. These addressed i) market and ii) research stakeholders, including selected firms and entrepreneurial researchers. Questionnaires can be respectively found in Appendixes 1 and 2. These aimed to identify research and innovation needs both of today and in the future in order to support the design of a joint action plan towards 2030.

The methodology employed consists of five main phases:

1. Initially a literature review on innovation was undertaken to identify important aspects to take into account when designing the questionnaires. The selected aspects were:
 - i) Importance of different stakeholders in the innovation process;
 - ii) Specific actions that can improve regional cooperation as well as innovation;
 - iii) Factors necessary to stimulate regional cooperation divided in human resources, entrepreneurship infrastructure, expert assistance and cooperation between industry and research, fiscal and financial obstacles, and both national and local regulations;
 - iv) Likely outcomes of enhanced regional cooperation.
2. The first questionnaire was submitted to selected firms in the WB region.

3. Building on the results of the first questionnaire and also aiming to compare results, a second questionnaire was sent to research stakeholders in the region¹.
4. A statistical analysis² was conducted for both questionnaires, and results crossed with one another.
5. Results were circulated within the consortia for final refinements.

It must be outlined that findings point only to potential needs in the region which should be discussed with both industry and research regional stakeholders in order to be refined and complemented. This shall take place in a dedicated workshop in the months to come and results will then be complemented with further analysis.

3 Industry Questionnaire

Initially a database of contacts was devised by partners in the consortia, mainly Ivo Pilar. However, all partners with company contacts in the region were requested to forward the questionnaire, in which a link was also posted in the projects' and a few partners' websites, as well as newsletters.

Likely respondents had about two weeks to fill in the questionnaire that was comprised of fifteen questions and took around fifteen minutes to be completed. Due to a low response rate a decision to extend the questionnaire for another two weeks was taken. Moreover, all partners that had contacts in the region decided also to send the questionnaire in MS Word format in order to try to get more responses through a personal approach.

Nevertheless, by the end of the four weeks period there were only twenty responses to the questionnaire. It is difficult to say the reason(s) for such a low response rate beyond speculation such as a regional business culture of secrecy or a culture of face-to-face interaction rather than by other means even when contact is done personally, etc.

In spite of such a low response, a few analyses can be made out of the results obtained, according to overall results outlined in Appendix 3.

Questions 1 and 2: participants come mainly from Croatia (35%) and from the ICT sector (45%).

The analysis of results to question 3 shows that the number of employees, companies can be roughly divided into three groups, according to Table 1 below.

¹ The first questionnaire was designed between February and March 2011, was tested in March 2011, and was launched in the beginning of April 2011. Results were analysed towards the end of April 2011 and such analysis was used to design the second questionnaire, which was launched in the beginning of June 2011 and was open for one month. Final results were analysed in July 2011 when the first draft of the report became available for refinements, which took place until September 2011.

² Using SPSS and STATA.

Number of Employees ³	
1 to 10	7
11 to 100	8
101 to 200	2

Table 1: Table presenting number of employees per participating firm

Results to question 3 also show that the share of research personnel in total number of employees is very high in average – 21.65% (Table 2). This becomes less surprising if we bear in mind that almost half of companies in the sample are from ICT sector. Only two companies do not fit this category– both the largest by the number of employees: one from energy sector with 174 employees where 75 persons are involved in research and the other from environment sector with 109 employees but none one dealing with research.

Share of Research Personnel ⁴			
A	10	J	33
B	10	K	75
C	5	L	19
D	43	M	35
E	10	N	53
F	14	O	0
G	7	P	20
H	6	Q	14
I	14		
Average		21,65	

Table 2: Table presenting share of research personnel per participating firm

By looking at the results to question 4, surprisingly, the expenditure of participating firms in Research and Innovation (RI) are around the EU target of 3% with only 25% of companies outlining expenditure between 0 and 1%.

The analysis of results to question 5 shows that on market orientation, almost all of the companies' sales are to the customers from their own countries with just one company from Serbia giving business services in development being an exception by selling 85% of their services to the customers outside the region. It would seem that

³ Please note that only 17 participants answered this question.

⁴ Same as footnote 3.

companies are dominantly oriented towards domestic market, but unfortunately data is both inconclusive and allows no generalization.

In question 6, there is an overall average of 2,71 importance value for all given stakeholders on a 1-4 scale (ranging from 1 or no importance to 4 or high importance). Hence, we can say that companies regard most factors / stakeholders in their environment as rather important for their innovation capacity pointing out Employees in their own enterprise or enterprise group and professional and industrial associations as probably the most important ones. Table 3 below shows average values meanwhile individual values appear next.

Stakeholders' Importance for Firms' Innovation Capacity			
Employees in your enterprise or enterprise group	3	Institutions such as Chamber of Commerce & Development Agencies	2,65
Professional and industrial associations	2,94	Banks	2,65
Universities and colleges	2,88	Research institutes	2,59
Conferences, trade fairs, exhibitions	2,88	Business incubators or entrepreneurship centres financed by the government	2,53
International suppliers and customers outside the WB region	2,82	Cluster networks	2,53
Consultants and professional service firms	2,76	Suppliers and customers from the WBC region	2,47
Suppliers or customers in your country	2,71	Venture capital firms/angel investors	2,47
TOTAL		2,7057	

Table 3: Table presenting average of stakeholders' importance for innovation capacity

In question 7 on actions that can improve cooperation between business and research, companies seem to understand the significance of industry – university cooperation and so when asked about possible actions they regard them as very important – total average of 3,245 on a 1-4 scale (ranging from 1 or no importance to 4 or high importance). Three factors stand out seen as particularly important: more funding for collaborative research between universities and businesses, more funding for knowledge/technology transfer activities and expert consultations and greater understanding by researchers of the needs of business companies and industry.

Table 4 below shows average values meanwhile individual values can be seen in Appendix 3.

Actions that Improve Cooperation between Business and Research	
More funding for collaborative research between universities and businesses	3,6
More funding for knowledge/technology transfer activities and expert consultations	3,5
Greater understanding by researchers of the needs of business companies and industry	3,4
Greater understanding by researchers of intellectual property rights (IPR) and its implications	3,3
Development of local partnership/inclusion of universities in clusters or business associations	3,3
Easy access to professional technology transfer officers (or similar staff)	3,2
Organization of specialized training courses by universities for the needs of industrial sectors and companies	3,1
Better mobility (exchange) of researchers between universities and industry	3,1
Financial incentives for university staff which cooperate with companies	3,1
Establishing of university incubators or science parks	3,1
Creation of specialised large-scale programmes for cooperation of companies and research institutions with a wider impact on economic and technological development (e.g. technology platforms, joint technological/industrial activities)	3
Introduction of regular business/technical advising services at universities for the needs of businesses	2,9
TOTAL	3,245

Table 4: Table presenting average of actions that can improve cooperation between business and research

In question 8, factors which are important for improving cooperation between firms and the research sector were divided into five groups: Human resources, Entrepreneurship infrastructure, Expert assistance and cooperation with universities, Fiscal and financial obstacles, State and local administrative regulations. All groups of factors were estimated as rather important. Table 5 below shows average values meanwhile individual values can be seen in Appendix 3.

Factors that Improve Regional Cooperation	
State and Local Administrative Regulations	3,5
Fiscal and Financial Obstacles	3,4667
Expert Assistance and Cooperation with Universities	3,36
Entrepreneurship Infrastructure	3,057
Human Resources	3,038

Table 5: Table presenting average of factors that can improve regional cooperation

In question 9, out of different possible outcomes of regional cooperation that participants were asked about, respondents value or would benefit the most the following ones: Access to new markets, The availability of the regional financial initiatives (e.g. Regional Investments Bank, e.g. Western Balkan Investments Fund), Lower costs of doing business – increase of the firm's efficiency (e.g. the cost of real estate, utilities, lower labour costs, etc.), Consistent legal framework aimed at facilitating foreign direct investments in the WB region. Table 6 below shows average values (1-4, being 1 not important and 4 of high importance), and in Appendix 3 are the responses per possible outcome.

Outcomes from Regional Cooperation	
Access to new markets	3,5
The availability of the regional financial initiatives (e.g. Regional Investments Bank, e.g. Western Balkan Investments Fund)	3,5
Lower costs of doing business - increase of the firm's efficiency (e.g. the cost of real estate, utilities, lower labour costs, etc.)	3,5
Consistent legal framework aimed at facilitating foreign direct investments in the WB region	3,4
The access to colleges/universities available in the region for innovation development	3,1
Mobility of skilled workers in the region	3,1
Mobility of engineers and researchers in the region	3,1
Mobility of managers in the region	3,1
TOTAL	3,288

Table 6: Table presenting average of outcomes from regional cooperation

In Question 10, regarding public support for innovations (in the last three years), the large majority of respondents claims it received none. Only two respondents answered positively naming the following names for possible support: 3TreCon.spa, Almer.spa, RAZUM and BICRO. Data on this topic remains insufficient and allows for no further elaboration.

In question 11, although the difference between ranks is rather small, it is possible to create a common rank of importance of proposed actions as shown in the Table 7 below.

Rank of Actions that Improve Firm's Innovation Performance	
Importance of regional innovation actions for improving the innovation performance of companies	Rank (1-12)
Establishing regional venture capital fund	1
Creating a joint financing programme for innovation development at the regional level	2
Developing regional initiatives for large infrastructural projects	3
Common large scale technology programmes (e.g. technology platforms, joint technological/industrial activities)	4
Joint regional approach towards international institutions and funding programmes (e.g. World Bank) and EU programs	5
Harmonisation and opening of the government's procurements markets	6
Strengthening regional innovation clusters in selected sectors	7
Common apprentice (trainee) programmes of young experts	8
Common educational programmes for technical skills, innovation management, etc.	9
Common programmes for mobility of personnel in the region between universities and business to establish cooperation between science and industry	10&11
Consistent legal framework aimed at facilitating foreign direct investments in the WB region	10&11
A progressive liberalisation and mutual opening of the service market within the WB region	12

Table 7: Table presenting rank of actions that improve firm's innovation performance

Questions 12 to 15 asked about respondents' innovation ideas as well as their opinion on actions and policies necessary to realise such innovation ideas. Table 8 below includes all answers by citation.

Innovation Ideas and Related Necessary Actions and Policies			
12. From the perspective of your organisation and/or your area of work please name one innovation idea that could contribute to an innovative region in the Western Balkans by the year 2030:	13. Please describe this innovation idea:	14. Please outline what research and skills should be developed to enable this innovation idea to flourish:	15. Please outline what policies should be in place to ensure this innovation idea is fully mature by 2030:
eNature	Using the power of Internet, communications, surveillance and controlling to serve the nature.		
automation of information management systems	The process consists in developing an information management system which uses software agents in order to think rapidly in decision making processes. The system performs more services and functionalities as price display changes, new order messages, sales information, automation of transportation through robotic vehicles, ect.	artificial intelligence, agent based software, software analyst, designer, programmer, economist	
New way of selling properties true social networks and on-line data mining	The main benefit is legalisation of whole market / real estate / especially sales and rent part (commercial and residential)	We are in process of developing	
Make an agreement for trade of IT services & product within WB			
	creativity		

Bringing powerful and middle power companies to invest in our companies to improve our offer of products, giving us new distributions, franchises etc. Making loan more accessible.	It is not some innovation it is most important task for us. Without loan - money, new investors - angels or franchising companies we can not even work properly here or meet new customers demands and wishes. Innovation in tourism: more different options from cal, peace option for offer: place, trips, houses to extreme options: extreme sports, adrenaline sports and trips. And above all more investment in luxury tourism; yachting, brand hotels, improving knowledge of workers- languages: English for the first place, etc. Making easily top managers to exchange not only in region than in other European countries as well.	Ministry of economies must take part an active steps to bring and make easily foreign investors to invest in our country: donating projects to agriculture, project for tourism, small productivity etc.	Government should make and ensure policies to make this area more attractive on all possible ways.
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Table 8: Table presenting innovation ideas and related necessary actions and policies for their realisation

Through the above inputs to questions 12 to 15 it was possible to draw a few ideas stemming from industry to check whether research stakeholders in the region would have an interest in, as well as with whom they could collaborate in undertaking such research. These research topics are:

- Environment surveillance through ICT.
- Automation of information management systems through artificial intelligence and agent based software.
- Selling of goods and services through social networks and on-line data mining.
- Legal research to reach an agreement for trade of ICT services and products within the Western Balkans.
- Research on new approaches and frameworks to enhance FDI and cross-regional investments in the region.

4 Questionnaire targeted at research stakeholders

The questionnaire addressing the WB research community had a much higher response rate. This might have happened possibly because the questionnaire was shortened to make it easier to understand and to be completed faster. On the speculative side, there might exist also a different culture between entrepreneurs and researchers in the region, being the latter more inclined to more openness and collaboration. If this is the case, constructing spaces for these communities to share their views and interests, as it is planned in a second step following up the application of these questionnaires, would be highly beneficial for the region.

General results are shown in Appendix 4, and a cross-cutting analysis⁵ is made by country below.

The cross-cutting analysis provides an overview of what either individual countries or the whole region perceive as relevant to trigger innovation. This is compared to the analysis undertaken above for the WBC region as well as with the results of the industry questionnaire, which highlights potential needs in the region. Later on, these should be discussed in dedicated workshops with industry and research regional stakeholders as well as research funding bodies and policy makers in order to be refined and complemented. The final result shall then provide support to the definition of an Action Plan for the WBC with regards to innovation needs and to establish closer cooperation between research and innovation stakeholders.

⁵ Such analysis will present the percentage of respondents that have considered a certain action or aspect of high relevance, medium relevance, little relevance, or of no relevance. Percentages will be shown only to the criteria most voted. In a few cases, when no consensus is achieved, percentages for the second most voted criteria will be also shown.

Question 4: According to the literature the cooperation of companies and universities is crucial for innovations. Please, estimate the importance of the following actions for improving cooperation between the companies in your country and research sector.

Cooperation between business and research sector per country															
Actions for improving cooperation between business and research in your country	Importance	Actions Today (%)							Actions in 2030 (%)						
	High Medium Little No	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL
Introduction of regular business/technical advising services at universities for the needs of businesses	High Importance	87.50	66.67	40	54.55	50	55	55.74	66.67	71.43	72.73	70	100	68.42	70
Organization of specialized training courses by universities for the needs of industrial sectors and companies	High Importance	63.64	66.67	30	63.64	50	45.45	51.52	71.43	85.71	63.64	55.56	50	61.90	64.41
More funding for knowledge/technology transfer activities and expert consultations	High Importance	80	66.67	50	72.73	75	45.45	61.54	100	83.33	87.50	75	0	71.43	82.86
More funding for collaborative research between universities and businesses	High Importance	66.67	100	100	100	33.33	66.67	73.91	33.33	100	100	100	66.67	83.33	81.82
Easy access to professional technology transfer officers (or similar staff)	High Importance	44.44	33.33	33.33	63.64	50	19.05	35.48	50	57.14	70	70	50	36.84	51.72
Greater understanding by researchers of the needs of business companies and industry	High Importance	75	80	20	63.64	50	35	46.67	55.56	71.43	50	45.45	50	47.37	51.67
Better mobility (exchange) of	High	70	66.67	33.33	54.55	50	42.86	49.21	50	57.14	63.64	63.64	100	57.89	60

researchers between universities and industry	Importance														
Greater understanding by researchers of intellectual property rights (IPR) and its implications	High Importance	66.67	40	40	50	33.33	33.33	41.67	40	42.86	55.56	50	33.33	55	47.54
Financial incentives for university staff which cooperate with companies	- High Importance	50	50	44.44	45.45	66.67	42.86	45	42.86	42.86	70	40	0	42.11	43.10
	- Medium Importance								57.14	57.14	10	50	66.67	47.37	44.83
Establishing of university incubators or science parks	- High Importance	42.86	40	40	45.45	33.33	38.10	38.98	33.33	50	54.55	70	0	47.37	48.33
	- Medium Importance	42.86	40	40	27.27	33.33	38.10	37.29	55.56	50	36.36	30	66.67	42.11	41.67
Development of local partnership/inclusion of universities in clusters or business associations	High Importance	55.56	60	22.22	63.64	33.33	38.10	43.33	50	50	54.55	50	33.33	50	48.33
Creation of specialised large-scale programmes for cooperation of companies and research institutions with a wider impact on economic and technological development (e.g. technology platforms, joint technological/industrial activities)	High Importance	85.71	33.33	40	62.50	0	40	46.43	60	42.86	54.55	57.14	33.33	52.63	53.70

Table 9: Table presenting percentages of how respondents' value actions with regards to enabling a better cooperation between business and research sector per country, both today and in 2030

The above analysis (Table 9) show that funding as well as consultations and dialogue between stakeholders in the region seems to be perceived as the most important action for improving cooperation between business and research in the region, both presently and in the future. This is highlighted in the actions: i) More funding for knowledge/technology transfer activities and expert consultations (61.54% think this is critical today and even more so in the future 82.86%) and ii) More funding for collaborative research between universities and businesses (73.91% think this is critical today and 81.82% believe it will become more important in the future).

Question 5: Regional innovation cooperation could be beneficial for your institution /company and the whole WB region. To our own knowledge, please, estimate the importance of the following factors which should be improved to foster regional cooperation

Factors that foster regional cooperation per country															
Factors to foster regional cooperation	Importance	Factors Today (%)							Factors in 2030 (%)						
	High Medium Little No	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL
HUMAN RESOURCES															
The availability of workers with the skills your institution/business requires - in the region	- High Importance	75	33.33	30	41.67	50	40.91	42.86	77.78	57.14	63.64	72.73	100	66.67	68.85
	- Medium Importance	12.50	16.67	30	33.33	50	40.91	33.33							
The availability of top managers with the qualifications your institution /business requires - in the region	- High Importance	75	50	20	63.64	75	36.36	46.77	71.43	57.14	45.45	70	50	55	57.89
The availability of scientists and engineers with the qualifications your institution /business requires - in the region	- High Importance	75	66.67	30	72.73	75	47.62	55.74	80	85.71	63.64	100	100	85	83.64
The availability of information technology professionals with the qualifications your institution	- High Importance	71.43	66.67	20	54.55	50	42.86	46.67	71.43	85.71	45.45	77.78	0	61.11	62.96

/business requires - in the region															
The overall quality of the technical universities and colleges in the region	- High Importance	83.33	66.67	40	66.67	75	55	59.32	71.43	85.71	63.64	81.82	100	84.21	78.95
The availability of college and university apprenticeship/ internship programs in the region	- High Importance	71.43	50	20	63.64	75	38.10	46.67	37.50	71.43	63.64	50	100	57.89	57.89
The effectiveness of regional programmes to train entrepreneurs	- High Importance	42.86	33.33	20	45.45	50	40	37.29	42.86	57.14	27.27	50	0	63.16	48.21
	- Medium Importance	42.86	50	30	27.27	25	30	32.20	57.14	42.86	45.45	40	50	31.58	41.07
The improvements of foreign languages proficiencies	- High Importance	57.14	83.33	30	50	100	47.62	52.46	71.43	85.71	54.55	70	50	42.11	58.93
ENTREPRENEURSHIP INFRASTRUCTURE															
The cost of doing business in the WBC region (specifically, the cost of real estate, wages and salaries, and utilities))	- High Importance	66.67	80	33.33	72.73	75	21.05	48.15	66.67	66.67	50	50	50	35.29	49.02
	- Medium Importance	16.67	20	33.33	9.09	25	47.37	29.63	33.33	16.67	40	40	50	52.94	41.18
The overall quality of the region's communications Infrastructure (e.g., telephone, wireless, high-speed internet)	- High Importance	57.14	80	55.56	50	75	42.11	53.57	75	66.67	90	63.64	50	70.59	72.22
The overall quality of the region's energy supply	- High Importance	85.71	60	66.67	45.45	75	45	57.14	71.43	66.67	80	44.44	0	61.11	61.54
The overall quality of the region's transportation (e.g., roads, air transport, railroads and ports)	- High Importance	85.71	80	44.44	50	66.67	55	58.93	71.43	60	60	54.55	33.33	72.22	62.96
Enhancing the level of entrepreneurial motivation in the region	- High Importance	57.14	40	33.33	63.64	0	47.37	47.17	71.43	83.33	50	60	0	47.06	53.70

Availability of the regional business assistance and services (e.g. marketing, accounting, etc.)	- Medium Importance	28.57	60	22.22	18.18	50	50	37.50	42.86	33.33	50	30	100	38.89	41.51
	- High Importance	42.86	20	33.33	45.45	50	20	32.14	57.14	66.67	30	50	0	44.44	45.28

Availability of the regional export promotion agencies	- High Importance	50	20	22.22	45.45	50	20	30.91	50	50	10	50	0	41.18	37.25
	- Little Importance	0	40	55.56	45.45	25	25	32.73	0	33.33	20	40	0	11.76	13.73
	- Medium Importance	16.67	40	22.22	9.09	25	50	30.91	50	16.67	70	30	100	47.06	47.06

EXPERT ASSISTANCE AND COOPERATION WITH UNIVERSITIES

Overall quality of technical assistance offered by colleges and universities to businesses in the region	- High Importance	71.43	66.67	22.22	66.67	50	47.37	51.92	44.44	100	50	62.50	25	66.67	60.71
Strengthening the interest of universities for cooperation with businesses in the region	- High Importance	62.50	66.67	33.33	80	75	55	59.65	55.56	100	40	88.89	100	66.67	69.09
Strengthening the interest of business for cooperation with universities in the region	- High Importance	71.43	66.67	44.44	66.67	50	63.16	61.11	37.50	100	50	62.50	100	76.47	67.31
The overall quality of R&D collaboration between businesses and college/university researchers in the region	- High Importance	71.43	50	44.44	70	33.33	47.37	53.70	71.43	50	44.44	70	33.33	47.37	53.70
Strengthening the institutions like university science parks, technology transfer centres, etc.	- High Importance	33.33	33.33	33.33	77.78	33.33	42.11	44.23	44.44	71.43	60	100	0	47.06	57.41

FISCAL AND FINANCIAL OBSTACLES															
The availability of loans and capital from the banks in the region	- High Importance	66.67	33.33	33.33	60	50	36.84	45.61	57.14	28.57	40	66.67	0	58.82	50
Lowering the interest rates	- High Importance	66.67	66.67	33.33	50	0	45	47.17	44.44	71.43	30	55.56	0	58.82	48.21
The availability of risk/investment capital in the region	- High Importance	71.43	40	22.22	70	50	36.84	46.30	57.14	66.67	40	77.78	0	47.06	52.94
The availability of regional subsidies and programmes for innovation	- High Importance	71.43	40	55.56	60	50	36.84	50	75	83.33	70	75	50	52.94	66.67
Harmonisation and reduction of tax incentives for innovation (relative to other regions)	- High Importance	50	66.67	44.44	40	33.33	44.44	46.15	44.44	71.43	60	44.44	0	56.25	51.85
	- Medium Importance								33.33	28.57	40	55.56	66.67	43.75	42.59
Harmonisation and reduction of personal income tax (labour costs, social security, etc.) (relative to other regions)	- High Importance	71.43	50	44.44	40	33.33	31.58	42.59	42.86	71.43	60	50	0	47.06	50
STATE AND LOCAL ADMINISTRATIVE REGULATIONS															
Improvements of state and local administrative burdens and permitting procedures for regional cooperation	- High Importance	75	66.67	66.67	60	66.67	52.63	61.82	50	85.71	70	77.78	33.33	47.06	61.11
Improvements and harmonisation of labour market regulation at the regional level	- High Importance	87.50	33.33	33.33	60	75	31.58	48.21	85.71	71.43	40	66.67	100	47.06	59.62
Access to other markets of the WB region	- High Importance	66.67	33.33	33.33	44.44	0	36.84	38.46	57.14	71.43	40	44.44	33.33	64.71	54.72
	- Medium Importance	16.67	50	33.33	22.22	100	31.58	34.62							

Improvements and harmonisation of the technology transfer regulation (Intellectual property rights)	- High Importance	57.14	50	44.44	63.64	75	38.89	50.91	66.67	85.71	50	70	0	56.25	62.26
Common regional measures against corruption in state and local administration	- High Importance	83.33	66.67	55.56	50	50	57.89	59.62	42.86	85.71	80	55.56	25	70.59	64.81

Table 10: Table presenting percentages of how respondents' value factors that foster regional cooperation per country, both today and in 2030

The above analysis (Table 10) shows that developing skills and qualified personnel (i.e. scientists and engineers) will be key in the future to enable regional cooperation to take place (83.64%). At the same time, the quality of regional research institutions (i.e. technical universities and colleges) needs to be improved (78.95%) as it needs its communications infrastructure (72.22%). Perhaps facilitating mobility both towards the region through proper incentives and of regional researchers to go abroad and return better qualified can enable the region to become more competitive and innovative by 2030. In this regard, enhancing collaboration with research institutes abroad, which can be much facilitated by ICTs, seems to be paramount.

The needs highlighted above differs from what is perceived today as important to foster regional cooperation, which seems mainly related to assistance and incentives to stimulate and strengthen business interest to collaborate with universities (61.11%) or to improve current administrative burdens in order to enable more loose and flexible procedures for regional cooperation (61.82%).

Question 6: Please, estimate the importance of the following outcomes of the possible regional innovation cooperation?

Outcomes of regional cooperation per country			
Outcomes of regional innovation cooperation	Importance	Outcomes Today (%)	Outcomes in 2030 (%)

	High Medium Little No	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL
Access to new markets	- High Importance	37.50	33.33	50	50	75	50	48.21	57.14	71.43	57.14	66.67	100	57.89	62.75
The availability of the regional financial initiatives (e.g. Regional Investments Bank, e.g. Western Balkan Investments Fund)	- High Importance	60	60	62.50	70	50	45	55.77	75	66.67	55.56	55.56	0	50	55.77

Lower costs of doing business - increase of the firm's efficiency (e.g. the cost of real estate, utilities, lower labour costs, etc.	- High Importance	87.50	80	62.50	60	50	40	58.18	66.67	100	55.56	44.44	50	50	58.49
Consistent legal framework aimed at facilitating foreign direct investments in the WB region	- High Importance	71.43	50	50	50	0	61.11	52.83	66.67	85.71	44.44	56.56	0	68.75	61.54
The access to colleges/universities available in the region for innovation development	- High Importance	85.71	50	50	63.64	33.33	44.44	54.72	71.43	71.43	44.44	60	0	56.25	55.77
Mobility of skilled workers in the region	- High Importance	57.14	60	25	50	33.33	50	47.17	44.44	83.33	22.22	55.56	66.67	50	50
Mobility of engineers and researchers in the region	- High Importance	75	80	14.29	63.64	50	42.11	51.92	85.71	100	33.33	90	50	52.94	66.04
Mobility of managers in the region	- High Importance	50	60	25	70	66.67	26.32	43.40	57.14	83.33	22.22	77.78	3.33	38.89	50

Table 11: Table presenting percentages of how respondents' value outcomes of regional cooperation per country, both today and in 2030

The above analysis (Table 11) shows there is not much consensus on which outcomes of regional innovation collaboration would be more relevant. This could suggest that there would be a need to build awareness and a culture of innovation in the region, which opens up a lot of opportunities to invest in educational campaigns and in bringing stakeholders together in order to foster collaboration in the near future. Looking at the analysis there is also a difference on what seems to be perceived as relevant at present (i.e. reduce costs of doing business and increase firms' efficiency – 58.18%) and what might be important to foster innovation through regional cooperation in the future (i.e. access to new markets – 62.75% – and mobility of engineers and researchers in the region – 66.04%). This is in line with the previous analysis performed in question 5 and suggests mobility as an important element to improve the region's innovation capability.

Question 7: Please, rank the importance of the three most important regional innovation actions for improving the innovation activities in your country! (ranks by marks where 1 - is the highest importance and 3 - is least importance)

Actions to improve innovation in the region		
Regional innovation actions	Average (rank 1 – 3)	
	TODAY	In 2030
Creating a joint financing programme for innovation development at the regional level	1.85	1.79
Common large scale technology programmes (e.g. technology platforms, joint technological/industrial activities)	2.03	1.85
Common educational programmes for technical skills, innovation management, etc.	1.95	1.82
Common apprentice (trainee) programmes of young experts	1.89	1.86
Common programmes for mobility of personnel in the region between universities and business to establish cooperation between science and industry	1.83	1.65
Strengthening regional innovation clusters in selected sectors	2.00	1.91

Consistent legal framework aimed at facilitating foreign direct investments in the WB region	1.69	1.68
A progressive liberalisation and mutual opening of the service market within the WB region	1.82	1.74
Harmonisation and opening of the government's procurements markets	1.87	1.77
Establishing regional venture capital fund	1.88	1.89
Developing regional initiatives for large infrastructural projects	1.93	1.72
Joint regional approach towards international institutions and funding programmes (e.g. World Bank) and EU programs	1.98	1.80

Table 12: Table presenting average of how respondents' value actions that improve innovation, both today and in 2030

From the above analysis (Table 12) four actions seem to be important to improve innovation in the region: i) Common programmes for mobility of personnel in the region between universities and business to establish cooperation between science and industry is third in importance today (1.83) and becomes the most important action in the future (1.65); ii) Consistent legal framework aimed at facilitating foreign direct investments in the WB region is the most important action today (1.69) and remains as important in the future but ranking second (1.68); iii) A progressive liberalisation and mutual opening of the service market within the WB region is second in importance today and seems to become more important in the future but ranking fourth then (1.74); and iv) Developing regional initiatives for large infrastructural projects does not rank among the most important today (1.93) but becomes third in importance in the future (1.72).

Question 8: Please outline your interest to work in a few research topics/fields⁶:

Interest in research topics per country		
Research topics/fields	Interest Today (%)	Interest in 2030 (%)

⁶ These were identified as a result of the analysis of the industry survey.

	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL	Albania	Bosnia & Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	TOTAL
Environment surveillance through ICTs	100	100	70	80	100	66.67	77.59	80	75	55.56	87.50	100	71.43	73.08
Automation of information management systems through artificial intelligence and agent based software	100	60	70	60	66.67	57.89	64.81	83.33	80	66.67	77.78	66.67	72.22	72.55
Selling of goods and services through social networks and on-line data mining	75	80	22.22	60	50	35.29	45.83	100	100	44.44	77.78	66.67	29.41	57.14
Legal research to reach an agreement for trade of IT services & product within WB	100	75	40	62.50	0	43.75	53.33	100	75	40	66.67	50	57.14	58.54
Research on new approaches and frameworks to enhance FDI and cross-regional investments in the region	100	75	77.78	63.64	50	44.44	64.71	100	100	87.50	87.50	50	37.50	70.45

Table 13: Table presenting interest of researchers to work on topics of interest to industry per country, both today and in 2030

The above analysis (Table 13) shows that regional research stakeholders share interest with industry stakeholders in three research topics which were outlined by the latter as relevant to trigger innovation in the region through cooperation. The most attractive seems to be environment surveillance through ICTs which appears to be currently the most interesting (77.59%) and remains interesting in the future (73.08%). The second would be automation of information management systems through artificial intelligence and agent based software which has an interest rate of 64.81% today which increases to 72.55% in the future. Finally, research on new approaches and frameworks to enhance FDI and cross-regional investments in the region also seems appealing in pursuing with an interest rate of 64.71% today which increases to 70.45% in the future.

5 Potential future research and innovation needs in the WBC region to be fulfilled through cooperation

Combining the results achieved through the consultations targeted at the research and industry stakeholders, it can be highlighted that:

- The most important actions for improving cooperation between business and research in the region, both presently and in the future are: **more funding for knowledge/technology transfer activities and expert consultations and more funding for collaborative research between universities and businesses.**
- A move from state and local administrative regulations as well as expert assistance, which is presently regarded as important to both business and research stakeholders, towards that of **investing in human resources and in infrastructure** seems to be critical to enhance cooperation in the region in the future.
- The analysis of the questionnaire targeted both to research and business stakeholders reflect a lack of consensus or understanding on which outcomes of enhanced regional innovation collaboration would be more relevant. The only outcome that appears as important from improved regional innovation cooperation would be **access to new markets**. This suggests the need to build both **more awareness and (new) capabilities** in the region. To this end, improved **communication**, including in infrastructure (e.g. ICT), and **mobility** seems to be important.
- When checking the answers given by industry and those given by researchers on the most important actions for improving regional innovation activities, they seem to differ substantially. The three actions least important for industry are among the four more important for researchers: common programmes for mobility of personnel in the region between universities and business to establish cooperation between science and industry, consistent legal framework aimed at facilitating foreign direct investments in the WB region, and a progressive liberalisation and mutual opening of the service market within the WB region. The only action which comes as important for both business and researchers

stakeholders ranks third for both of them, and is that of **developing regional initiatives for large infrastructural projects**. Such an outcome highlights the **need for enhanced communication and understanding** between these two different groups of stakeholder in order to **build mutual appreciation and achieve at a joint agenda**.

- Finally, from the research topics posted by industry stakeholders as important to trigger regional innovation through collaboration, those by which researchers seem to be interested in working together with industry are: **environment surveillance through ICTs, automation of information management systems through artificial intelligence and agent based software, and new approaches and frameworks to enhance FDI and cross-regional investments in the region**.

6 Further Considerations

As previously outlined, a dedicated workshop shall take place in the near future with both industry and research regional stakeholders in order refine and complement the findings above based upon a mutual appreciation of different viewpoints and expectations.

However, further consultations with policy makers and research funding organisations will become paramount in order to provide clear guidance and support to the preparation of a Joint Action Plan for the WBC. This is important to bring together the needs and opportunities for regional innovation cooperation identified as important for both business and researchers in alignment with future RI calls likely to be launched, as well as with policy measures that can frame a proper environment that will allow collaboration to take place on issues of importance for the region.

Such an approach is in line with the joint programming framework being fostered by the EU Commission, which is summarised by three generic phases:

1. Development of **a common vision**: This vision should set the longer-term objective(s), to be defined by authoritative experts in the field and politically endorsed. It would be developed on the basis of credible evidence (possibly including (joint) foresight activities) and broad stakeholder (public) consultations, in particular with the scientific and industrial communities. It could equally be based on a preliminary (joint) evaluation of existing programs and capacities.
2. Once the vision has been established, it should be translated into a **Strategic Research Agenda (SRA)**, entailing specific, measurable, achievable, realistic and time-based (SMART) objectives. The strategic research agenda should make the vision operational and link the implementation of the vision's objectives with existing competences in Europe (or in the region) or new ones to be developed. A good knowledge of existing programs and competences across Europe (and beyond) will be essential.
3. **Implementation** of the SRA: All participating public authorities orient their programs and funding to contribute in a coherent manner to the implementation of the SRA. The full tool box of public research instruments (national and regional

research programs, intergovernmental research organizations and collaborative schemes, research infrastructures, mobility schemes, etc.) should be explored and used to implement the individual Joint Programming Initiatives. Regular monitoring and evaluation of progress against the SMART objectives should be ensured, and its results reported to the political level.

7 Conclusions

The future research and market potential needs highlighted in this report were identified through two consecutive surveys, the first targeted at industry stakeholders and the second at researchers. These are needs which call for regional collaboration to be fulfilled and thus trigger regional innovation.

To sum up, potential needs for the region to be further considered in order to trigger joint innovation are:

- **Funding** knowledge/technology transfer activities, expert consultations, as well as collaborative research between universities and businesses
- State and local administrative **decrease in regulation**
- Strengthen **human resources capacities**
- Improve **infrastructures** (including ICT)
- Build **awareness** on innovation benefits as well as **new capabilities** in the region
- Foster **mobility** both within the region and across the globe
- Increase **communication** between different stakeholders to increase mutual understanding, support the identification of common interests, build mutual appreciation and achieve at a joint agenda

Finally, potential research topics to be further considered in the region to trigger joint innovation are:

- Environment surveillance through ICTs
- Automation of information management systems through artificial intelligence and agent based software
- New approaches and frameworks to enhance FDI and cross-regional investments in the region

Appendix 1: first questionnaire targeted at business stakeholders

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Survey for a research and innovation agenda for the WBC region

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▶ Questionnaire on multiple pages

I. GENERAL INFORMATION

In this section, we are interested in some general features of your company

1. Country of residence* (compulsory)

Albania
 Bosnia & Herzegovina
 Croatia
 FYR Macedonia
 Kosovo / UN Res. 1244
 Montenegro
 Serbia
 Other

if 'Other' please specify: (optional)

2. Main economic activity* (compulsory)

Energy
 Food
 Agro & Environment
 Health
 ICT (Information and Communication Technologies)
 Transport
 Other

if 'Other', please specify: (optional)

3. Please indicate the following general information about your firm in the last year

Total number of employees* (compulsory)

Number of research personnel* (compulsory)

Gross revenues (approx.) (in €) (optional)

4. Please estimate the average expenditure on research and innovation (as % of gross revenue)* (compulsory)

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0 - 1%
 1 - 5%
 5% and above

5. Please, estimate what is the share of your company's sales to:
 Customers in your country (in %) (optional)

Customers within the WBC region * (in %) (optional)

Customer in foreign countries outside the region (in %) (optional)

II. CURRENT INNOVATION * NEEDS

In this section we are interested in your opinion about the different factors which can foster innovation capacities of your company at local and regional level.

* Innovation includes developing and commercialising new products, as well making improvements to existing products, services, production or business processes.

6. Are the following stakeholders of any importance to the innovation capacity of your company?

	No importance	Little importance	Medium importance	High importance
Suppliers or customers in your country* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suppliers and customers from the WBC region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International suppliers and customers outside the WB region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Employees in your enterprise or enterprise group* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Universities and colleges* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research institutes* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consultants and professional service firms* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business incubators or entrepreneurship centres financed by the government* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional and industrial associations* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Cluster networks* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Institutions such as Chamber of Commerce & Development Agencies* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Banks* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Venture capital firms/angel investors* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conferences, trade fairs, exhibitions* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (optional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please describe 'Other': (optional)

7. According to literature, cooperation of companies with universities and research institutes is crucial for innovation performance. In your opinion, which of the following actions are important for improving cooperation between your company and the research sector?

	No importance	Little importance	Medium importance	High importance
Introduction of regular business/technical advising services at universities for the needs of businesses* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organization of specialized training courses by universities for the needs of industrial sectors and companies* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More funding for knowledge/technology transfer activities and expert consultations* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More funding for collaborative research between universities and businesses* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Easy access to professional technology transfer officers (or similar staff)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Greater understanding by researchers of the needs of business companies and industry* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better mobility (exchange) of researchers between universities and industry* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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Greater understanding by researchers of intellectual property rights (IPR) and its implications* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial incentives for university staff which cooperate with companies* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Establishing of university incubators or science parks* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Development of local partnership/inclusion of universities in clusters or business associations* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creation of specialised large-scale programmes for cooperation of companies and research institutions with a wider impact on economic and technological development (e.g. technology platforms, joint technological/industrial activities)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Regional innovation cooperation could be beneficial for your company and the whole WB region. Please estimate the importance of the following factors in improving regional cooperation.

	No importance	Little importance	Medium importance	High importance
HUMAN RESOURCES:				
The availability of workers with the skills your business requires - in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The availability of top managers with the qualifications your business requires - in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The availability of scientists and engineers with the qualifications your business requires - in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The availability of information technology professionals with the qualifications your business requires - in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The overall quality of the technical universities and colleges in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The availability of college and university apprenticeship/ internship programs in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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The effectiveness of regional programmes to train entrepreneurs* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The improvements of foreign languages proficiencies* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ENTREPRENEURSHIP INFRASTRUCTURE:				
The cost of doing business in the WBC region (specifically, the cost of real estate, wages and salaries, and utilities)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The overall quality of the region's communications Infrastructure (e.g., telephone, wireless, high-speed internet)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The overall quality of the region's energy supply* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The overall quality of the region's transportation (e.g., roads, air transport, railroads and ports)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enhancing the level of entrepreneurial motivation in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of the regional business assistance and services (e.g. marketing, accounting, etc.)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of the regional export promotion agencies* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EXPERT ASSISTANCE AND COOPERATION WITH UNIVERSITIES:				
Overall quality of technical assistance offered by colleges and universities to businesses in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthening the interest of universities for cooperation with businesses in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthening the interest of business for cooperation with universities in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The overall quality of R&D collaboration between businesses and college/university researchers in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strengthening the institutions like university science parks, technology transfer centers, etc.* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FISCAL AND FINANCIAL OBSTACLES:				
The availability of loans and capital from	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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the banks in the region* (compulsory)				
Lowering the interest rates* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The availability of risk/investment capital in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The availability of regional subsidies and programmes for innovation* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Harmonisation and reduction of tax incentives for innovation (relative to other regions)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Harmonisation and reduction of personal income tax (labour costs, social security, etc.) (relative to other regions)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
STATE AND LOCAL ADMINISTRATIVE REGULATIONS:				
Improvements of state and local administrative burdens and permitting procedures for regional cooperation* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvements and harmonisation of labour market regulation at the regional level* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to other markets of the WB region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvements and harmonisation of the technology transfer regulation (Intellectual property rights)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Common regional measures against corruption in state and local administration* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Please, estimate the importance of the following outcomes of the possible regional cooperation

	No importance	Little importance	Medium importance	High importance
Access to new markets* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The availability of the regional financial initiatives (e.g. Regional Investments Bank, e.g. Western Balkan Investments Fund)* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lower costs of doing business - increase of the firm's efficiency (e.g. the cost of real	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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estate, utilities, lower labour costs, etc. * (compulsory)				
Consistent legal framework aimed at facilitating foreign direct investments in the WB region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The access to colleges / universities available in the region for innovation development* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mobility of skilled workers in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mobility of engineers and researchers in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mobility of managers in the region* (compulsory)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (optional)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please describe 'Other': (optional)

10. Have you received any public support for innovation in the last three years? If so, please provide up to 3 examples mentioning the names of the programme and/or the instrument, the organization providing the support and indicate how important you think this policy action is for increasing the innovation performance of your country.

Example 1:
Name of the programme/instrument (1): (optional)

Name of the supporting organisation (1): (optional)

Importance (1): (optional)

Low Medium High

Example 2:
Name of the programme/instrument (2): (optional)

Name of the supporting organisation (2): (optional)

Importance (2): (optional)

Low Medium High

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Example 3:
Name of the programme/instrument (3): (optional)

Name of the supporting organisation (3): (optional)

Importance (3) (optional)

Low Medium High

**11. Please, rank the importance of the following regional innovation actions for improving the innovation performance of your company
Please, rank it by marks where 1 - is the highest importance and 12 - is least importance**

Creating a joint financing programme for innovation development at the regional level* (compulsory)

Common large scale technology programmes (e.g. technology platforms, joint technological/industrial activities)* (compulsory)

Common educational programmes for technical skills, innovation management, etc.* (compulsory)

Common apprentice (trainee) programmes of young experts* (compulsory)

Common programmes for mobility of personnel in the region between universities and business to establish cooperation between science and industry* (compulsory)

Strengthening regional innovation clusters in selected sectors* (compulsory)

Consistent legal framework aimed at facilitating foreign direct investments in the WB region* (compulsory)

A progressive liberalisation and mutual opening of the service market within the WB region* (compulsory)

Harmonisation and opening of the government's procurements markets* (compulsory)

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Establishing regional venture capital fund* (compulsory)	<input type="checkbox"/>
Developing regional initiatives for large infrastructural projects* (compulsory)	<input type="checkbox"/>
Joint regional approach towards international institutions and funding programmes (e.g World Bank) and EU programs* (compulsory)	<input type="checkbox"/>

III. FUTURE INNOVATION NEEDS

In this section you are asked to name and describe an innovation idea and outline both research and policies needed to enable this innovation idea to flourish by 2030

12. From the perspective of your organisation and/or your area of work please name one innovation idea that could contribute to an innovative region in the Western Balkans by the year 2030: (optional)

13. Please describe this innovation idea:
 E.g.: What are the main characteristics of the innovation?
 What are the main benefits of the innovation?
 Are there already first approaches in that area?
 Why this innovation is best addressed through cooperation in the region? (optional)

14. Please outline what research and skills should be developed to enable this innovation idea to flourish:
 E.g.: What are the research and skills needs to enable this innovation idea to thrive? (optional)

15. Please outline what policies should be in place to ensure this innovation idea is fully mature by 2030: (optional)

IV. CONFIDENTIALITY

The completed questionnaires will be coded and used for analysis by the WBC.INCO-NET project and only the aggregate results will be publicly available. No individual company's responses will be published and no data will be released in any way that permits ranking of institutions.

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You should provide us with personal information which shall remain confidential from other participants of the survey in case you would like to (please tick):

receive the results of the survey (optional)	tick here <input type="checkbox"/>
participate in the following stages of the project, if possible (i.e. workshops); (optional)	<input type="checkbox"/>
to be listed in the report as a participating company in the survey (optional)	<input type="checkbox"/>

Personal data:
Name (optional)

Name of organisation and job position (optional)

Telephone (optional)

Email (optional)

SUBMIT

Appendix 2: second questionnaire targeted at research stakeholders

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Survey for a research and innovation agenda for the WBC region

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▶ Questionnaire on multiple pages

I. GENERAL INFORMATION

In this section, we are interested in some general features of your company

1. Country of residence* (compulsory)

Albania Bosnia & Herzegovina Croatia FYR Macedonia Kosovo / UN Res. 1244 Montenegro Serbia Other

if 'Other' please specify: (optional)

2. Type of your organisation* (compulsory)

If 'Other' please specify: (optional)

3. In which field do you work?
* (compulsory)

if 'Other', please specify: (optional)

II. INNOVATION AND COLLABORATION NEEDS

4. According to literature, cooperation of companies with universities and research institutes is crucial for innovations. Please estimate the importance of the following actions for improving cooperation between companies and the research sector in your country, both today and in 2030.

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Please select two options per row being one for today and one for 2030

	No importance (TODAY)	Little importance (TODAY)	Medium importance (TODAY)	High importance (TODAY)	No importance (2030)	Little importance (2030)	Medium importance (2030)	High importance (2030)
Introduction of regular business/technical advising services at universities for the needs of businesses (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organization of specialized training courses by universities for the needs of industrial sectors and companies (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More funding for knowledge/technology transfer activities and expert consultations (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More funding for collaborative research between universities and businesses (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy access to professional technology transfer officers (or similar staff) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greater understanding by researchers of the needs of business companies and industry (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better mobility (exchange) of researchers between universities and industry (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greater understanding by researchers of intellectual property rights (IPR) and its implications (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial incentives for university staff which cooperate with companies (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Establishing of university incubators or science parks (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Development of local partnership/inclusion of universities in clusters or business associations (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creation of specialised large-scale programmes for cooperation of companies and research institutions with a wider impact on economic and technological development (e.g. technology platforms, joint technological/industrial activities) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

if 'Other', please specify: (optional)

5. Regional innovation cooperation could be beneficial for your organisation and the whole WB region. Please estimate the importance of the following factors in improving regional cooperation, both today and in 2030.

Please select two options per row being one for today and one for 2030

	No importance (TODAY)	Little importance (TODAY)	Medium importance (TODAY)	High importance (TODAY)	No importance (2030)	Little importance (2030)	Medium importance (2030)	High importance (2030)
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HUMAN RESOURCES:								
The availability of workers with the skills your organisation requires - in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of top managers with the qualifications your organisation requires - in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of scientists and engineers with the qualifications your organisation requires - in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of information technology professionals with the qualifications your organisation requires - in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The overall quality of the technical universities and colleges in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of college and university apprenticeship/ internship programs in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The effectiveness of regional programmes to train entrepreneurs (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The improvements of foreign languages proficiencies (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENTREPRENEURSHIP INFRASTRUCTURE:								
The cost of doing business in the WBC region (specifically, the cost of real estate, wages and salaries, and utilities) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The overall quality of the region's communications Infrastructure (e.g., telephone, wireless, high-speed internet) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The overall quality of the region's energy supply (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The overall quality of the region's transportation (e.g., roads, air transport, railroads and ports) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enhancing the level of entrepreneurial motivation in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of the regional business assistance and services (e.g. marketing, accounting, etc.) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of the regional export promotion agencies (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXPERT ASSISTANCE AND COOPERATION WITH UNIVERSITIES:								
Overall quality of technical assistance offered by colleges and universities to businesses in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening the interest of universities for cooperation with businesses in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening the interest of business for cooperation with universities in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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The overall quality of R&D collaboration between businesses and college/university researchers in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening the institutions like university science parks, technology transfer centers, etc. (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FISCAL AND FINANCIAL OBSTACLES:									
The availability of loans and capital from the banks in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lowering the interest rates (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of risk/investment capital in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of regional subsidies and programmes for innovation (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harmonisation and reduction of tax incentives for innovation (relative to other regions) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harmonisation and reduction of personal income tax (labour costs, social security, etc.) (relative to other regions) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STATE AND LOCAL ADMINISTRATIVE REGULATIONS:									
Improvements of state and local administrative burdens and permitting procedures for regional cooperation (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improvements and harmonisation of labour market regulation at the regional level (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to other markets of the WB region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improvements and harmonisation of the technology transfer regulation (Intellectual property rights) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common regional measures against corruption in state and local administration (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

if 'Other', please specify: (optional)

6. Please, estimate the importance of the following outcomes of the possible regional innovation cooperation, both today and in 2030.
 Please select two options per row being one for today and one for 2030

	No importance (TODAY)	Little importance (TODAY)	Medium importance (TODAY)	High importance (TODAY)	No importance (2030)	Little importance (2030)	Medium importance (2030)	High importance (2030)
Access to new markets (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The availability of the regional financial initiatives (e.g. Regional Investments Bank, e.g. Western Balkan Investments Fund) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Lower costs of doing business - increase of the firm's efficiency (e.g. the cost of real estate, utilities, lower labour costs, etc. (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consistent legal framework aimed at facilitating foreign direct investments in the WB region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The access to colleges/universities available in the region for innovation development (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility of skilled workers in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility of engineers and researchers in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mobility of managers in the region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

if 'Other', please specify: (optional)

7. Please, rank the importance of the three most important regional innovation actions for improving the innovation activities in your country.
Please, select only three today and three in 2030 (tick only one box per column), where (1) is the highest importance, (2) is medium importance and (3) is least importance

	1 (TODAY)	2 (TODAY)	3 (TODAY)	1 (2030)	2 (2030)	3 (2030)
Creating a joint financing programme for innovation development at the regional level (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common large scale technology programmes (e.g. technology platforms, joint technological/industrial activities) (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common educational programmes for technical skills, innovation management, etc. (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common apprentice (trainee) programmes of young experts (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common programmes for mobility of personnel in the region between universities and business to establish cooperation between science and industry (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strengthening regional innovation clusters in selected sectors (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consistent legal framework aimed at facilitating foreign direct investments in the WB region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A progressive liberalisation and mutual opening of the service market within the WB region (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harmonisation and opening of the government's procurements markets (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Establishing regional venture capital fund (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing regional initiatives for large infrastructural projects (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint regional approach towards international institutions and funding programmes (e.g World Bank) and EU programs (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

if 'Other', please specify: (optional)

8. Please outline your interest to work in a few research topics/fields and, if so, with whom you would like to collaborate with

Environment surveillance through ICTs: (optional)

<input type="checkbox"/> Yes (TODAY)	<input type="checkbox"/> Yes (2030)
<input type="checkbox"/> No (TODAY)	<input type="checkbox"/> No (2030)

With whom you would be willing to work in collaboration in the region (i.e. individual or institution) (optional)

Automation of information management systems through artificial intelligence and agent based software: (optional)

<input type="checkbox"/> Yes (TODAY)	<input type="checkbox"/> Yes (2030)
<input type="checkbox"/> No (TODAY)	<input type="checkbox"/> No (2030)

With whom you would be willing to work in collaboration in the region (i.e. individual or institution) (optional)

Selling of goods and services through social networks and on-line data mining: (optional)

<input type="checkbox"/> Yes (TODAY)	<input type="checkbox"/> Yes (2030)
<input type="checkbox"/> No (TODAY)	<input type="checkbox"/> No (2030)

With whom you would be willing to work in collaboration in the region (i.e. individual or institution) (optional)

Legal research to reach an agreement for trade of IT services & product within WB: (optional)

<input type="checkbox"/> Yes (TODAY)	<input type="checkbox"/> Yes (2030)
<input type="checkbox"/> No (TODAY)	<input type="checkbox"/> No (2030)

With whom you would be willing to work in collaboration in the region (i.e. individual or institution) (optional)

IPM

<http://ec.europa.eu/yourvoice/ipm/forms/dispatch>

Research on new approaches and frameworks to enhance FDI and cross-regional investments in the region: (optional)

<input type="checkbox"/> Yes (TODAY)	<input type="checkbox"/> Yes (2030)
<input type="checkbox"/> No (TODAY)	<input type="checkbox"/> No (2030)

With whom you would be willing to work in collaboration in the region (i.e. individual or institution) (optional)

9. Please insert a few research topics/fields you believe are important to be developed in the WBC either today or in 2030 (please specify) and with whom you would like to collaborate with within the region: (optional)

III. CONFIDENTIALITY

The completed questionnaires will be coded and used for analysis by the WBC.INCO-NET project and only the aggregate results will be publicly available. No individual company's responses will be published and no data will be released in any way that permits ranking of institutions.

You should provide us with personal information which shall remain confidential from other participants of the survey in case you would like to (please tick):

	tick here
receive the results of the survey (optional)	<input type="checkbox"/>
participate in the following stages of the project, if possible (i.e. workshops); (optional)	<input type="checkbox"/>
to be listed in the report as a participating company in the survey (optional)	<input type="checkbox"/>

Personal data:
Name (optional)

Name of organisation and job position (optional)

Telephone (optional)

Email (optional)

SUBMIT

Appendix 3: results of first questionnaire targeted at business stakeholders

Europa - IPM - Consultation

<http://ec.europa.eu/yourvoice/ipm/forms/dispatch?userstate=charts>

Response charts for 'Survey for a research and innovation agenda for the WBC region'

▶ Current search:

Query definition

All data requested

Result pages

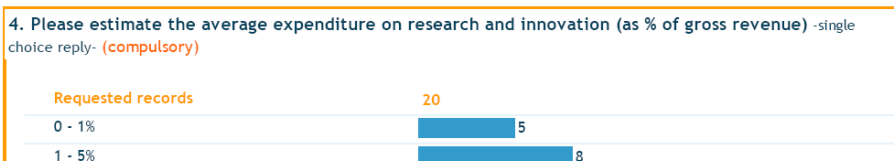
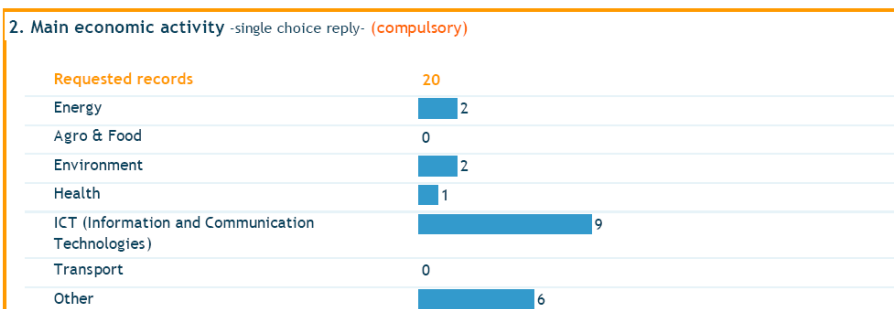
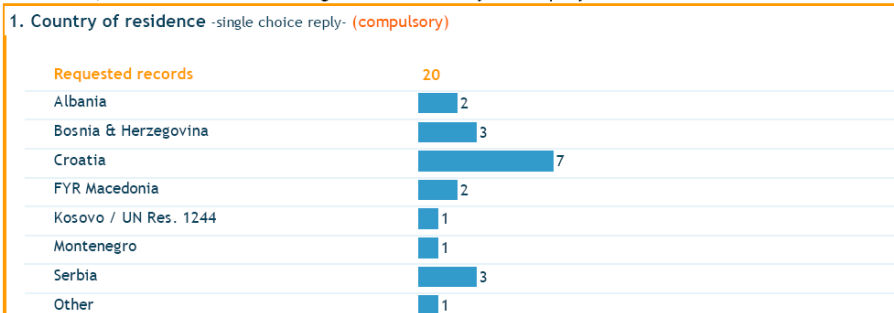
▶ There are 20 responses matching your criteria of a total of 20 records in the current set of data.

▶ Expand all - Collapse all

Sorted answers Original order

I. GENERAL INFORMATION

In this section, we are interested in some general features of your company



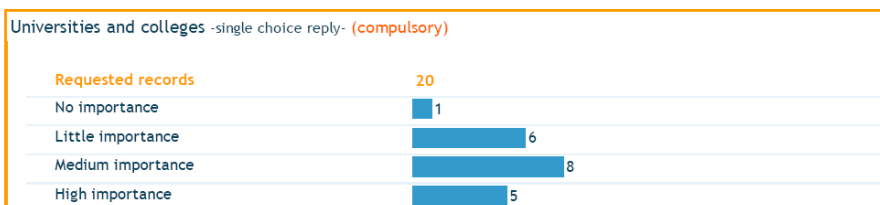
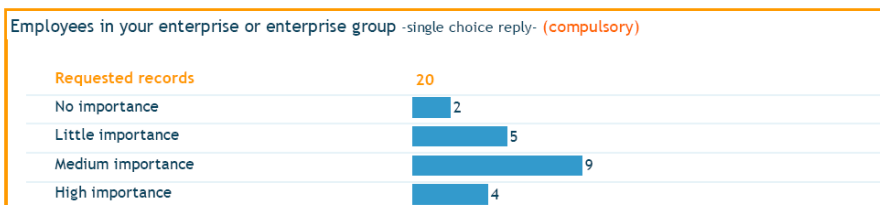
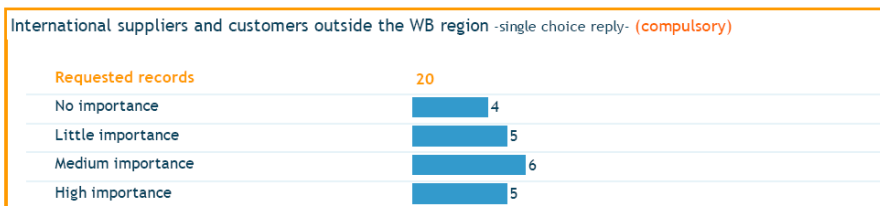
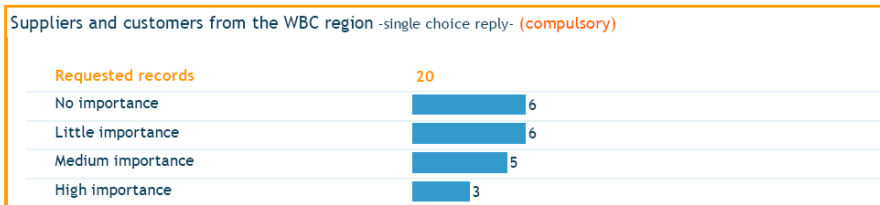
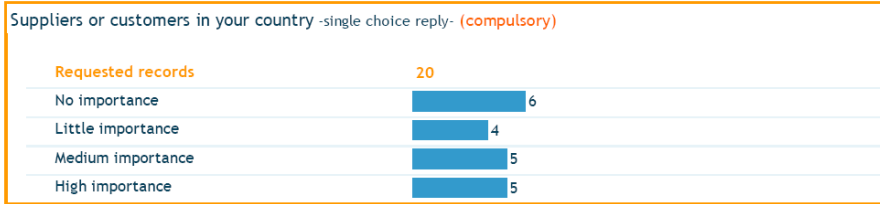


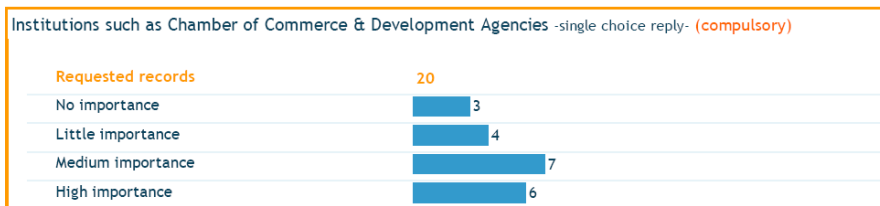
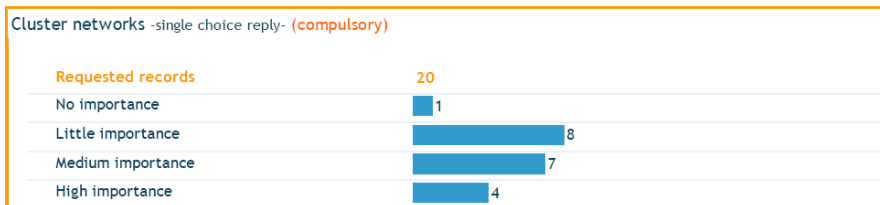
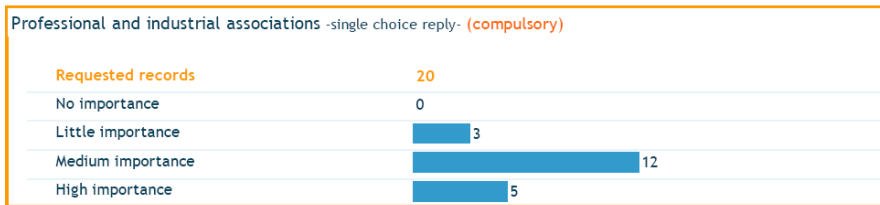
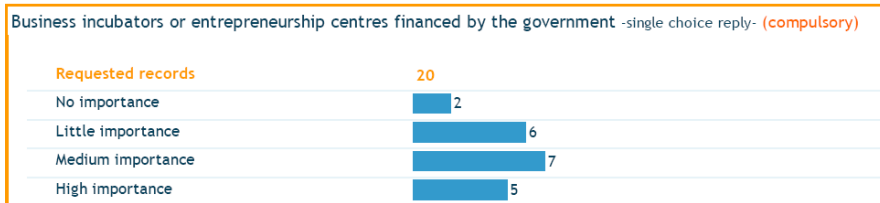
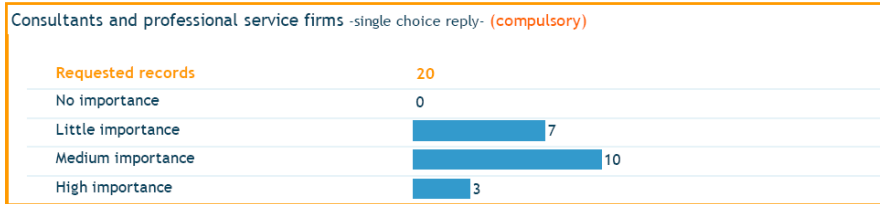
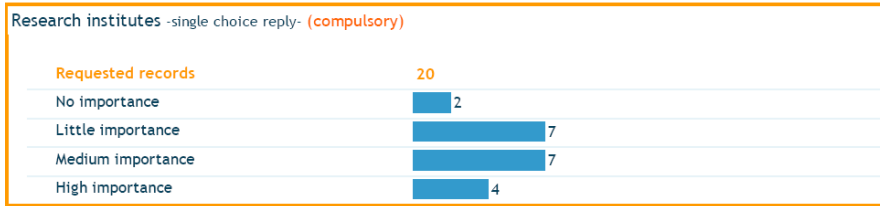
II. CURRENT INNOVATION * NEEDS

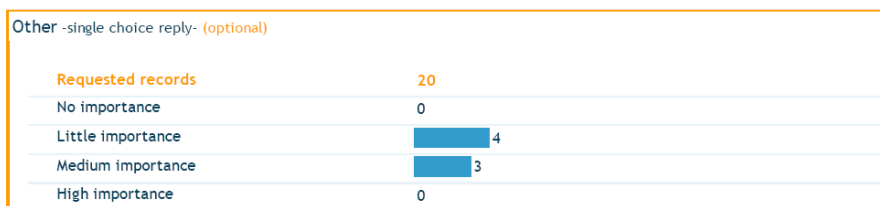
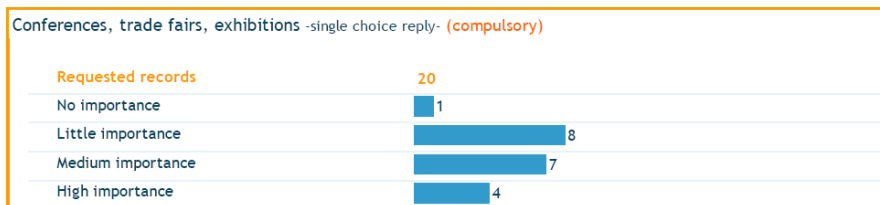
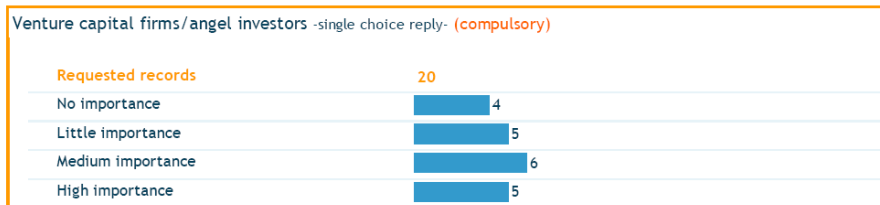
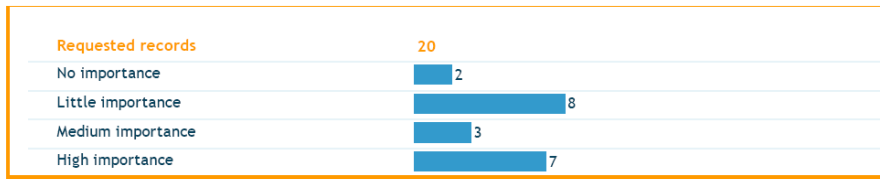
In this section we are interested in your opinion about the different factors which can foster innovation capacities of your company at local and regional level.

* Innovation includes developing and commercialising new products, as well making improvements to existing products, services, production or business processes.

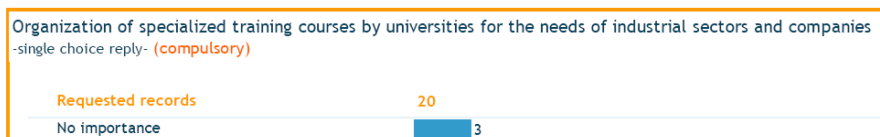
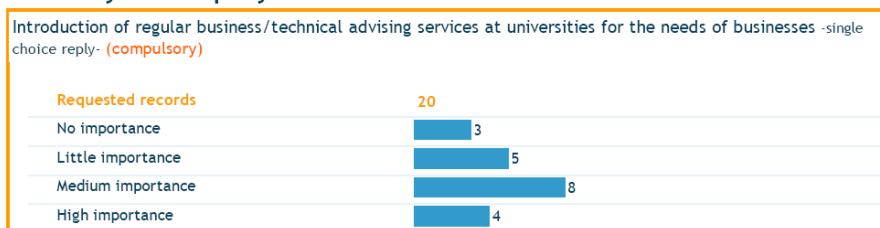
6. Are the following stakeholders of any importance to the innovation capacity of your company?

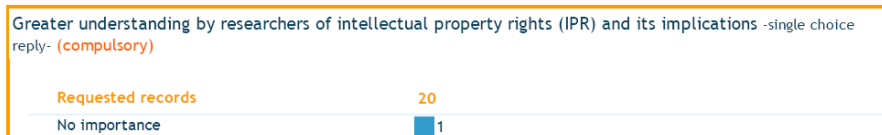
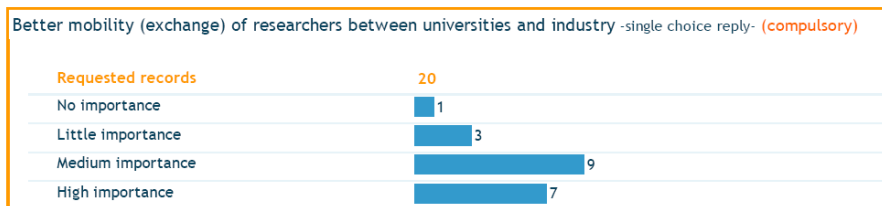
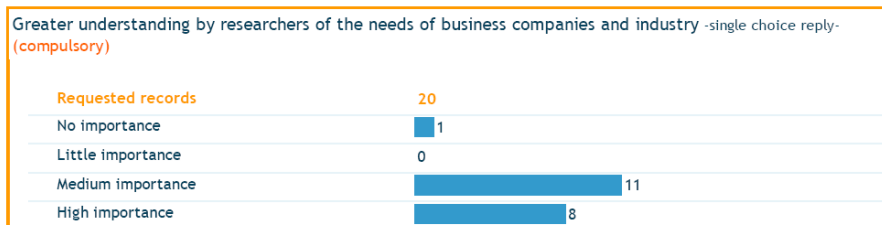
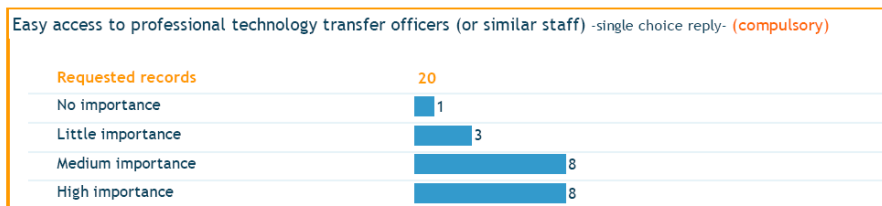
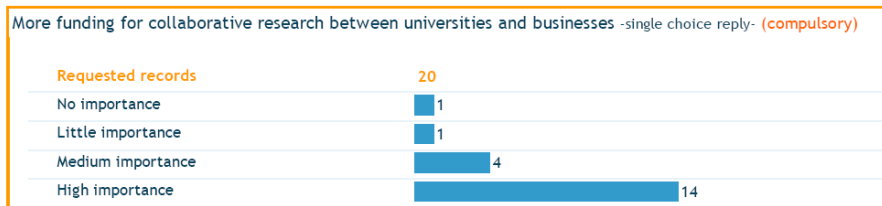
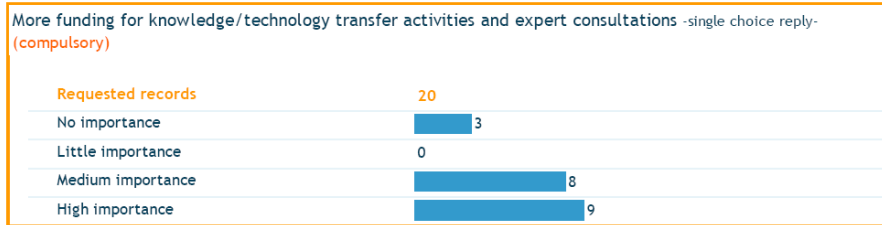
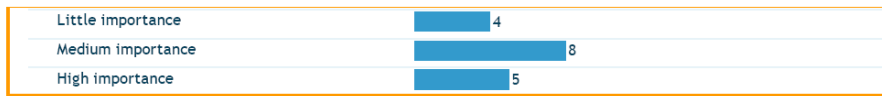


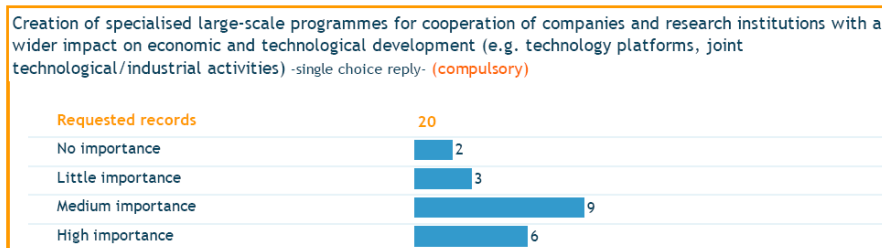
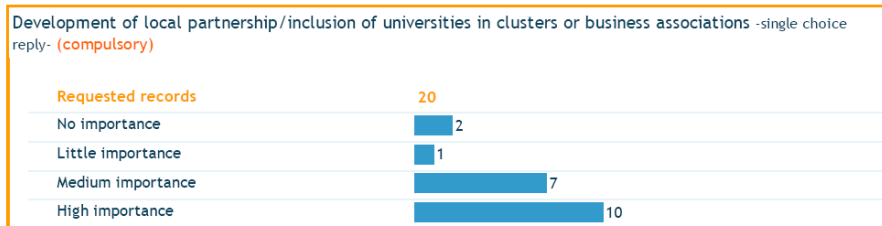
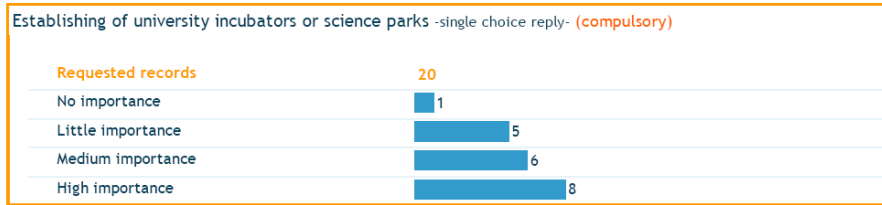
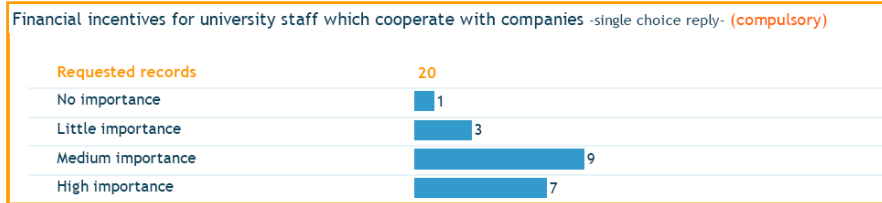
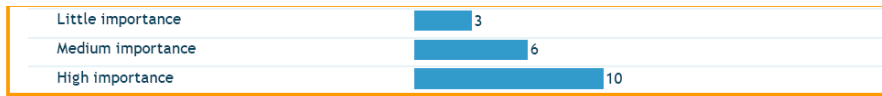




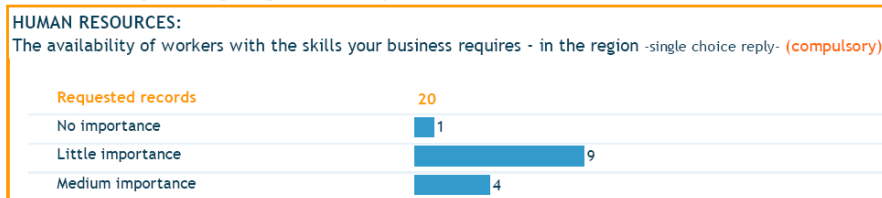
7. According to literature, cooperation of companies with universities and research institutes is crucial for innovation performance. In your opinion, which of the following actions are important for improving cooperation between your company and the research sector?

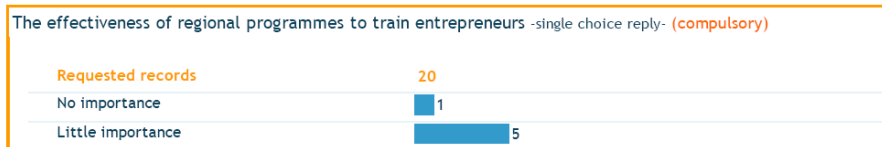
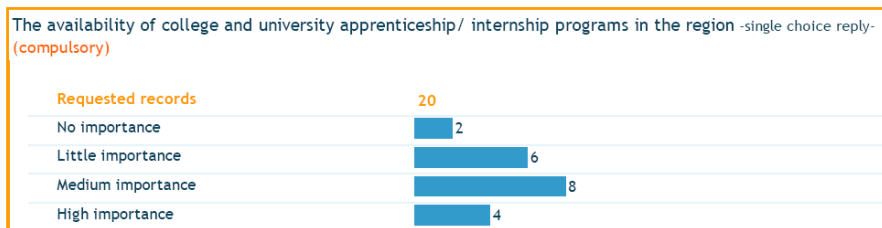
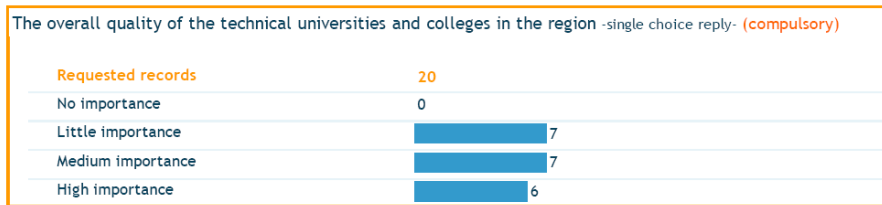
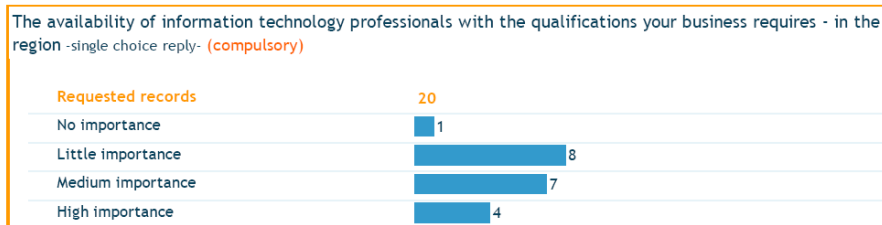
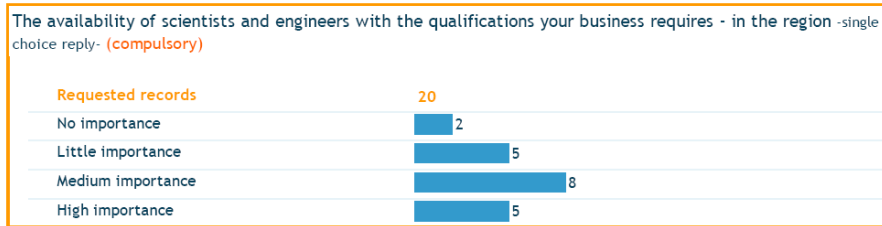


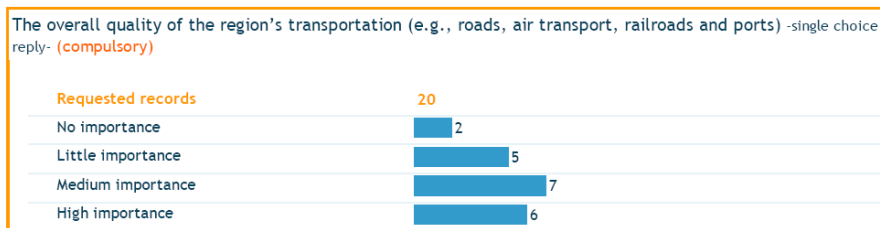
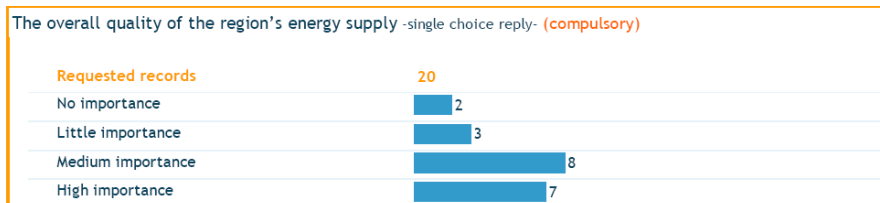
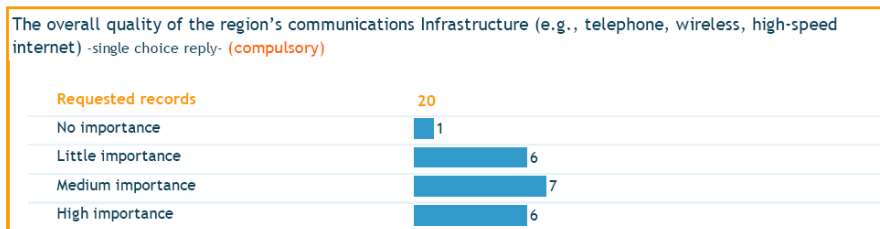
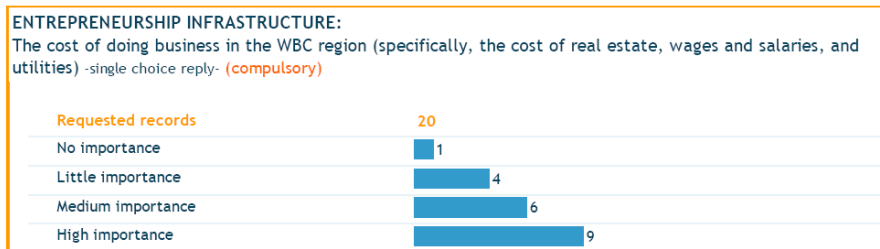
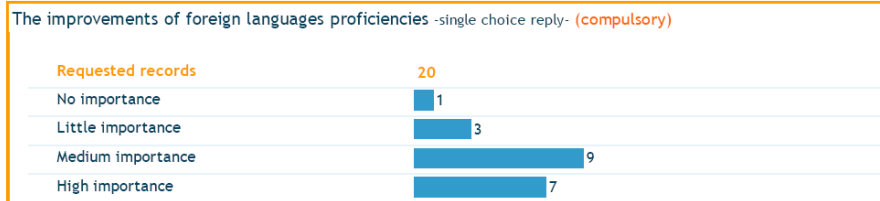


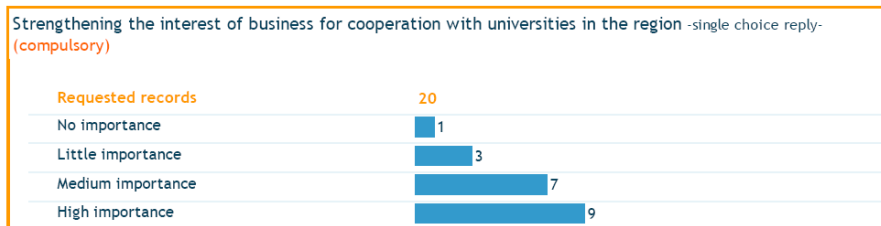
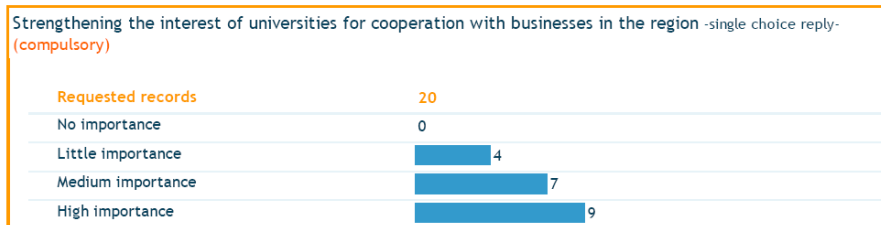
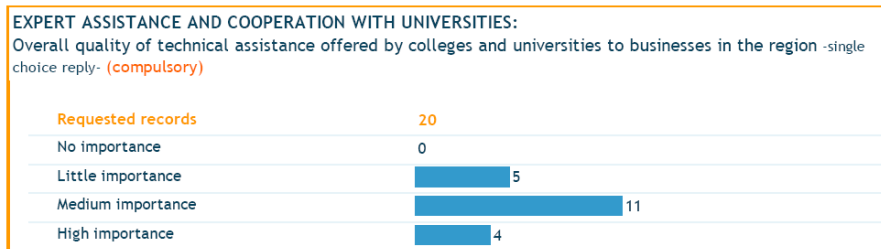
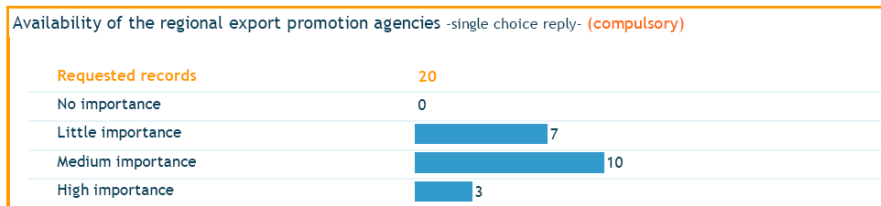
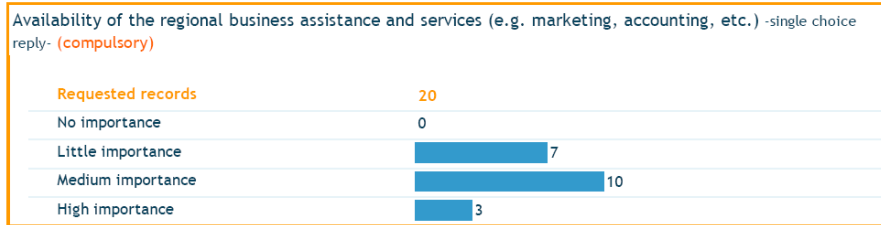
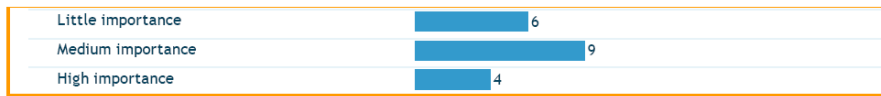


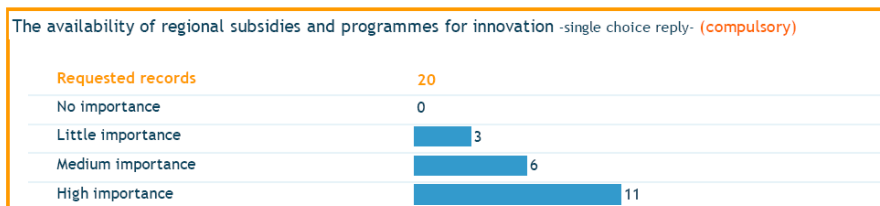
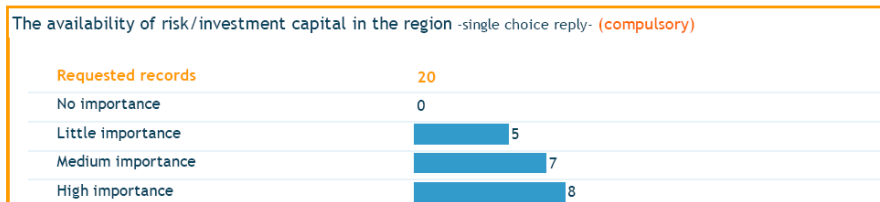
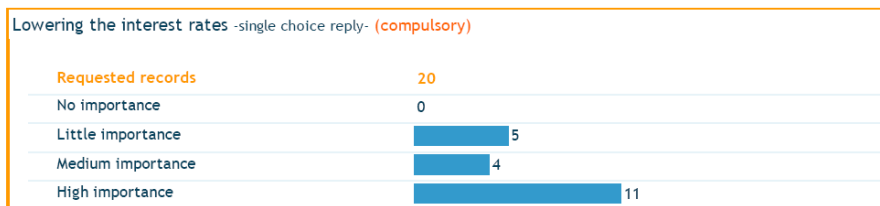
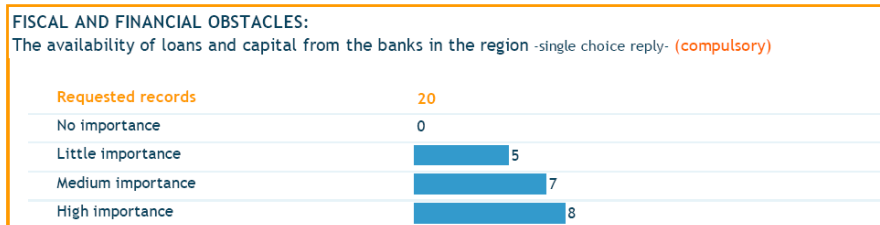
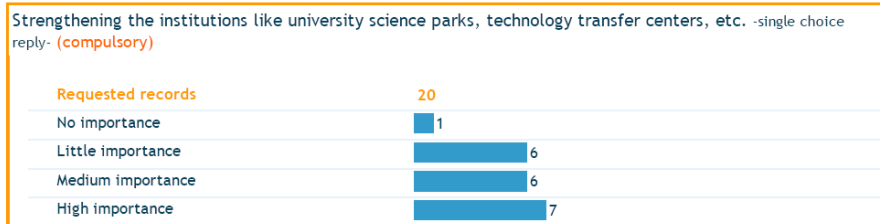
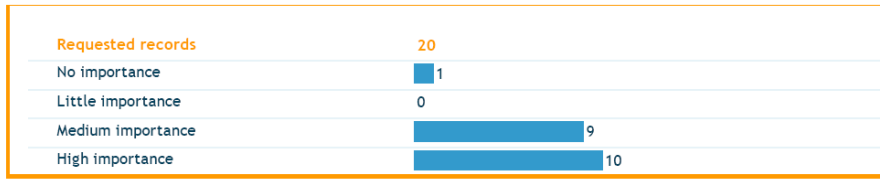
8. Regional innovation cooperation could be beneficial for your company and the whole WB region. Please estimate the importance of the following factors in improving regional cooperation.

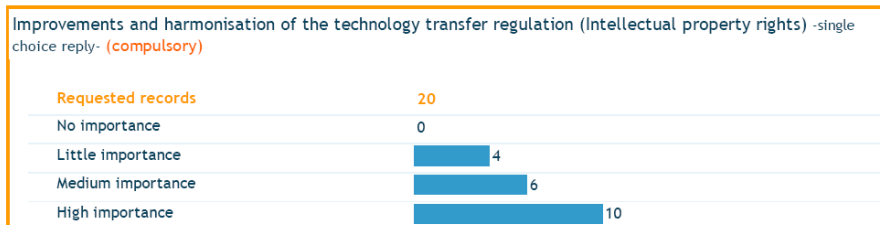
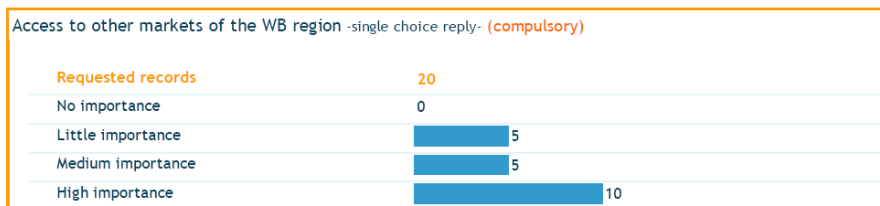
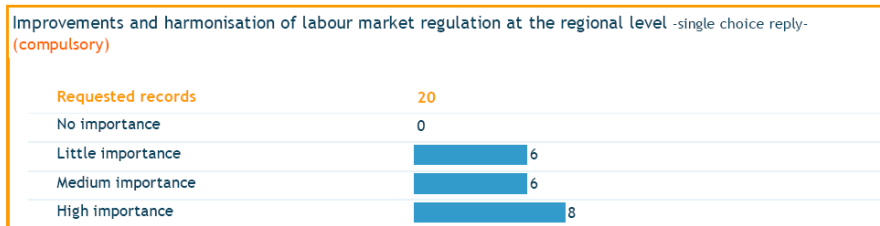
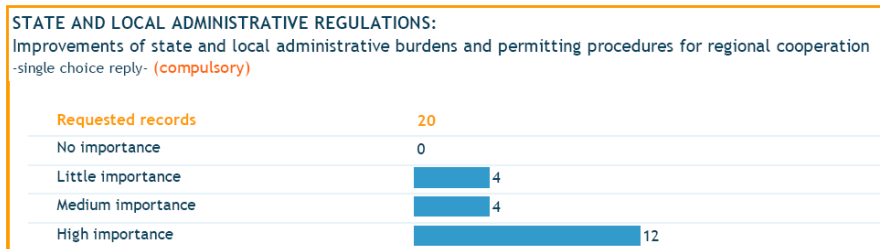
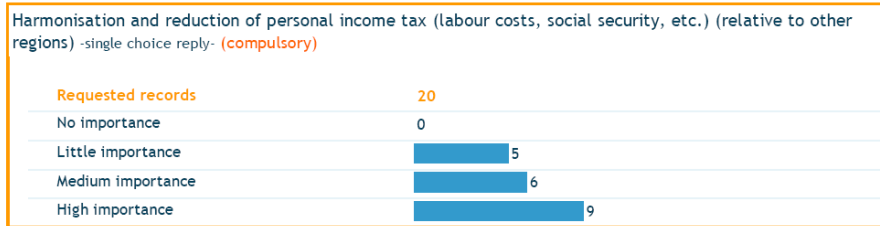
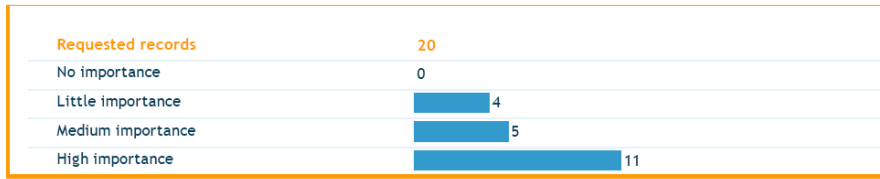


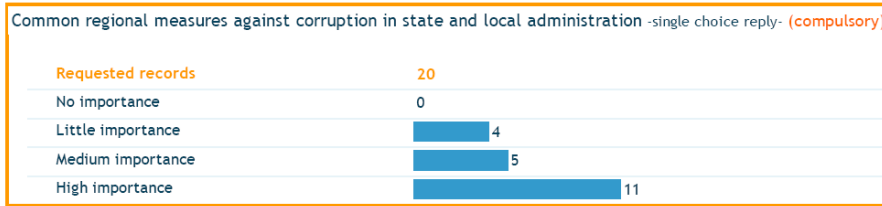




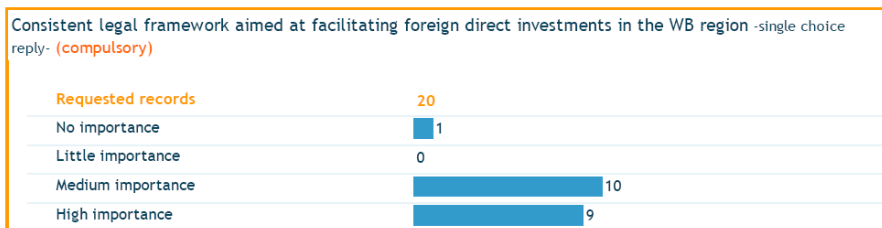
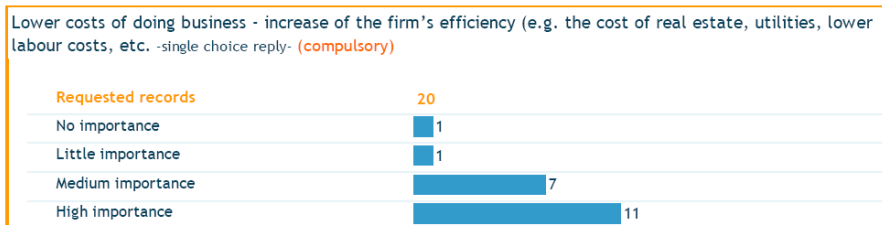
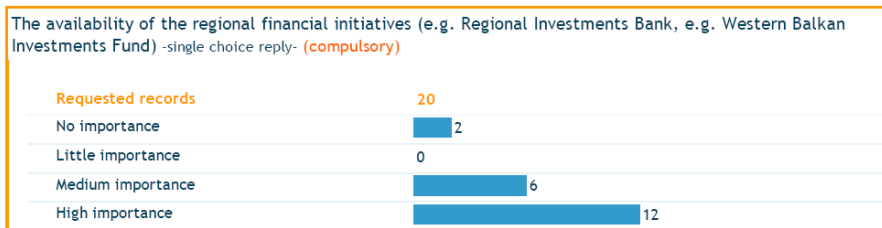
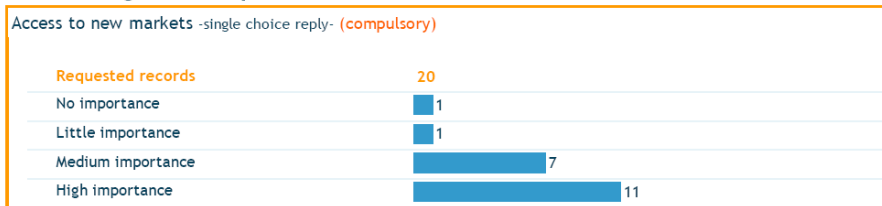


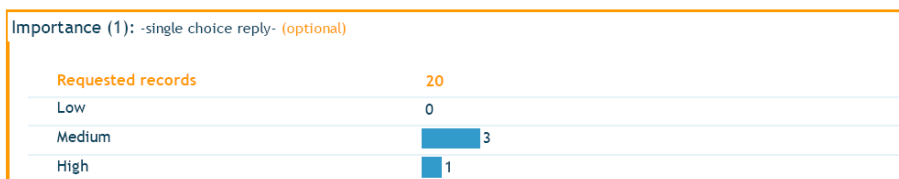
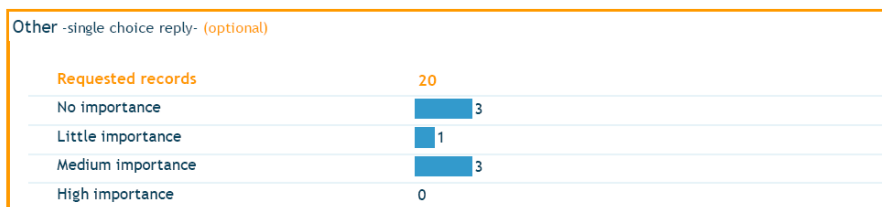
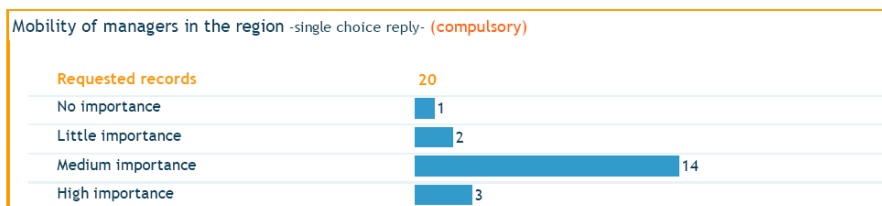
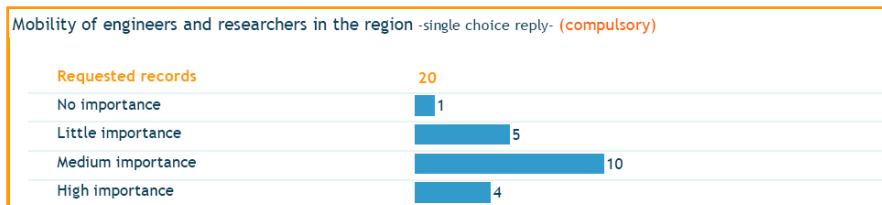
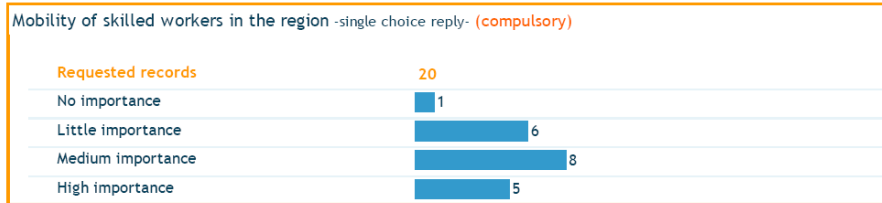
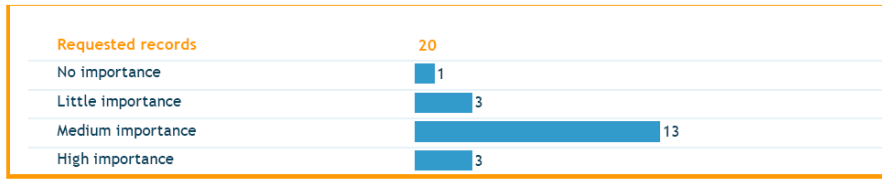






9. Please, estimate the importance of the following outcomes of the possible regional cooperation





Low	0
Medium	1
High	0

Importance (3) -single choice reply- (optional)

Requested records	
Low	0
Medium	0
High	0

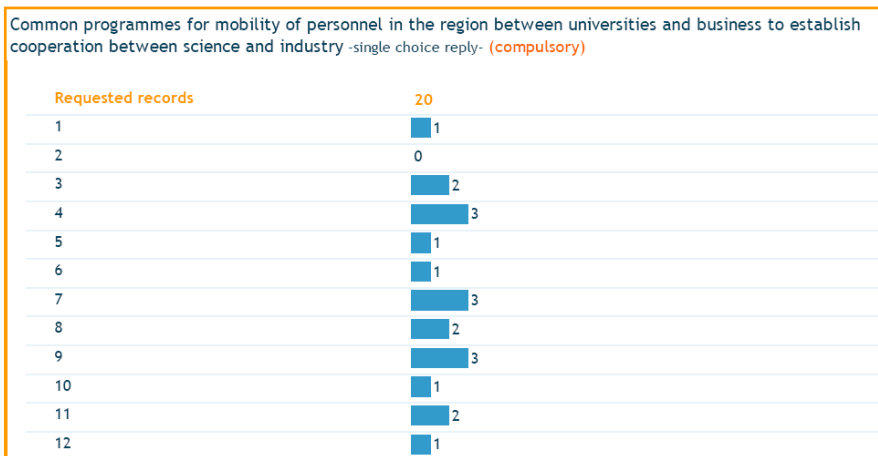
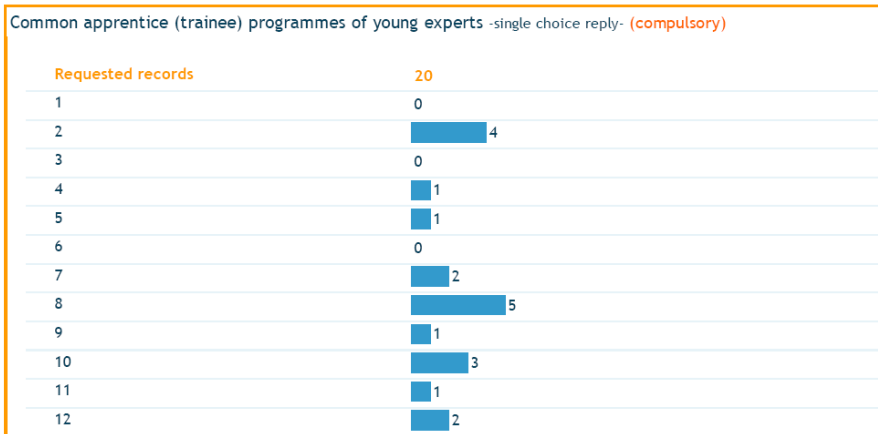
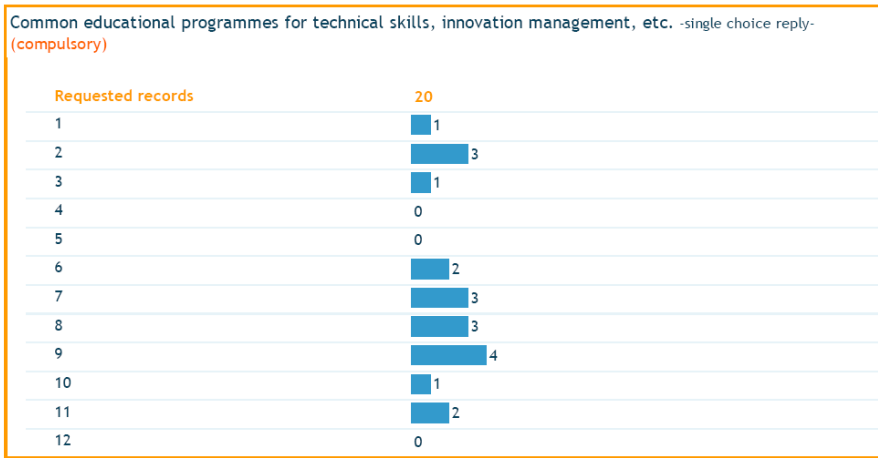
11. Please, rank the importance of the following regional innovation actions for improving the innovation performance of your company
Please, rank it by marks where 1 - is the highest importance and 12 - is least importance

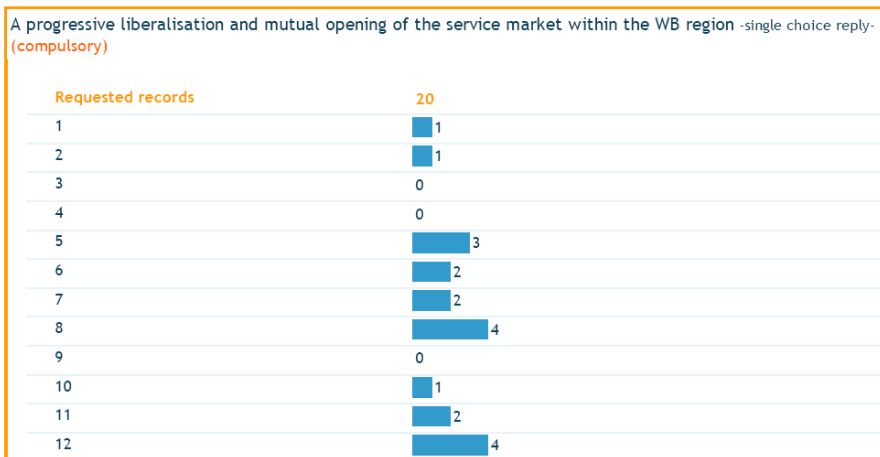
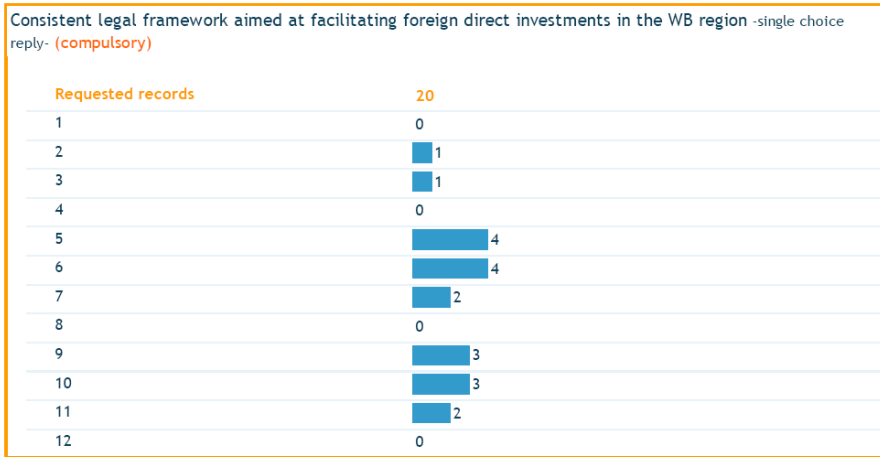
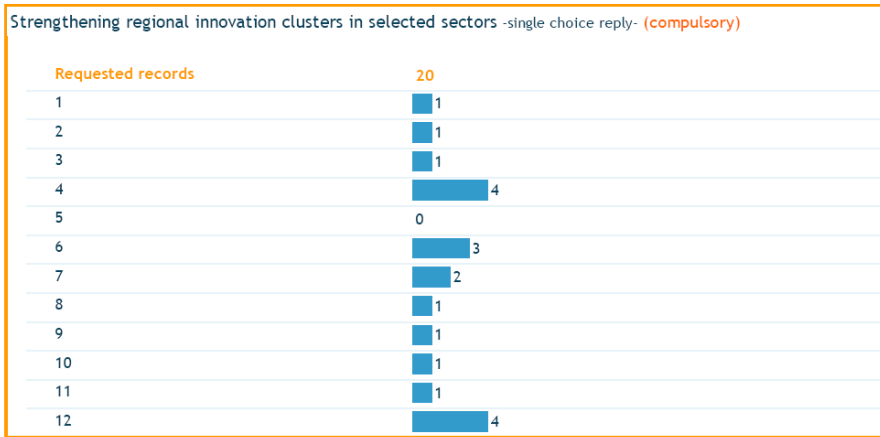
Creating a joint financing programme for innovation development at the regional level -single choice reply- (compulsory)

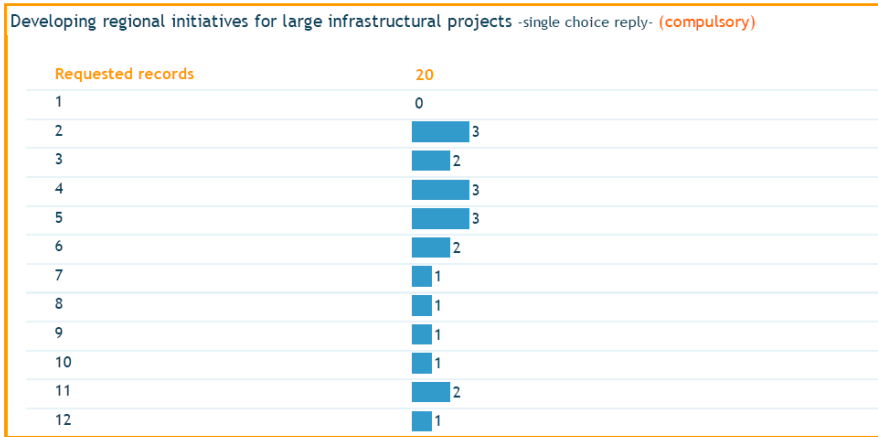
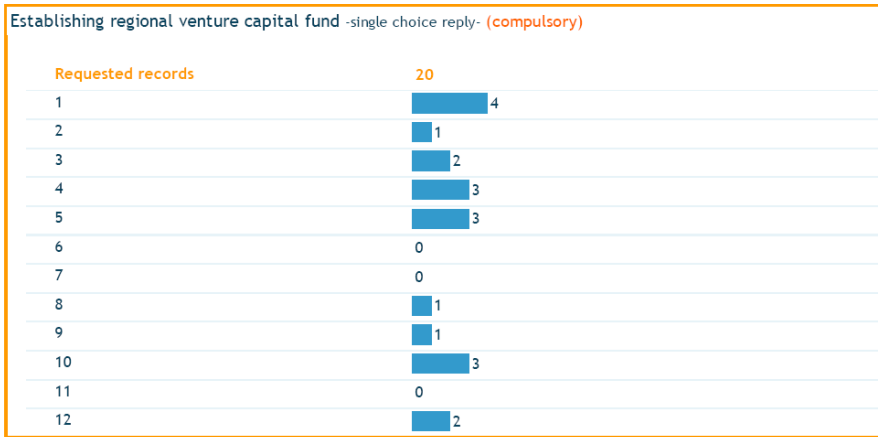
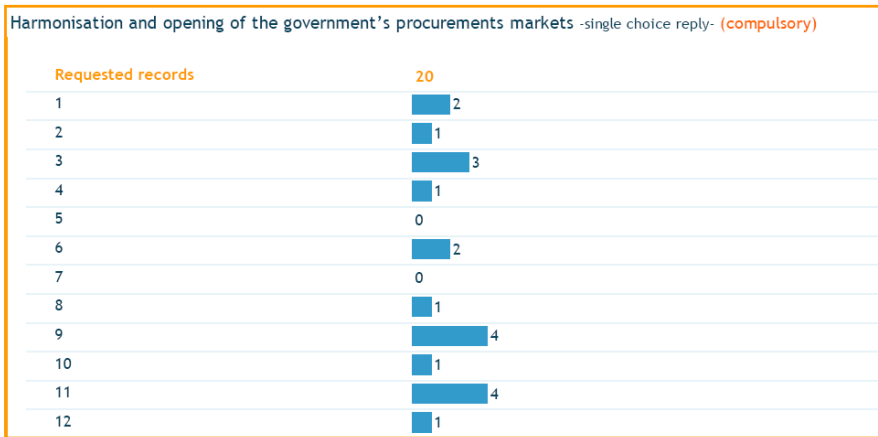
Requested records		20
1	4	
2	2	
3	3	
4	1	
5	2	
6	2	
7	2	
8	0	
9	0	
10	0	
11	1	
12	3	

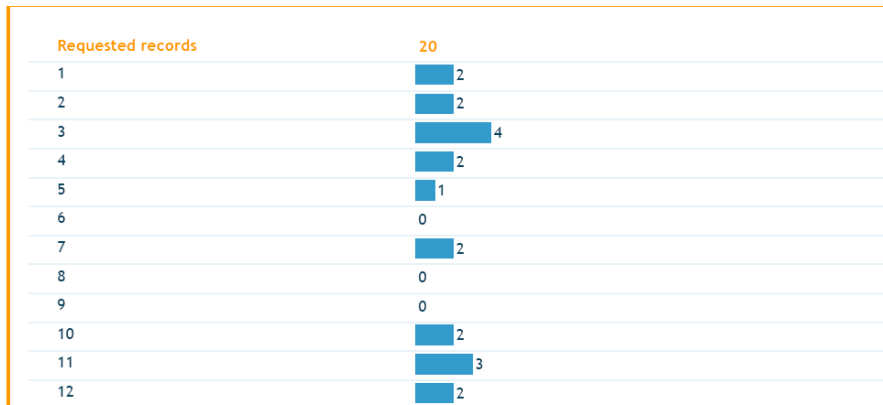
Common large scale technology programmes (e.g. technology platforms, joint technological/industrial activities) -single choice reply- (compulsory)

Requested records		20
1	4	
2	1	
3	1	
4	2	
5	2	
6	2	
7	1	
8	2	
9	2	
10	3	
11	0	
12	0	









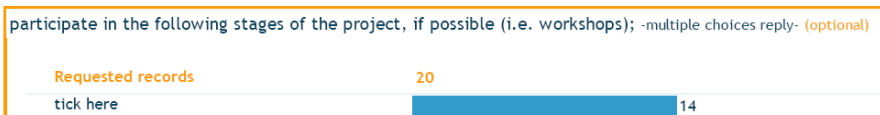
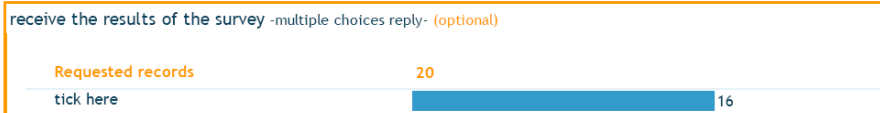
III. FUTURE INNOVATION NEEDS

In this section you are asked to name and describe an innovation idea and outline both research and policies needed to enable this innovation idea to flourish by 2030

IV. CONFIDENTIALITY

The completed questionnaires will be coded and used for analysis by the WBC.INCO-NET project and only the aggregate results will be publicly available. No individual company's responses will be published and no data will be released in any way that permits ranking of institutions.

You should provide us with personal information which shall remain confidential from other participants of the survey in case you would like to (please tick):



Appendix 4: results of second questionnaire targeted at research stakeholders

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<http://ec.europa.eu/yourvoice/ipm/forms/dispatch?userstate=charts>

Response charts for 'Survey for a research and innovation agenda for the WBC region'

▶ Current search:

Query definition

All data requested

Result pages

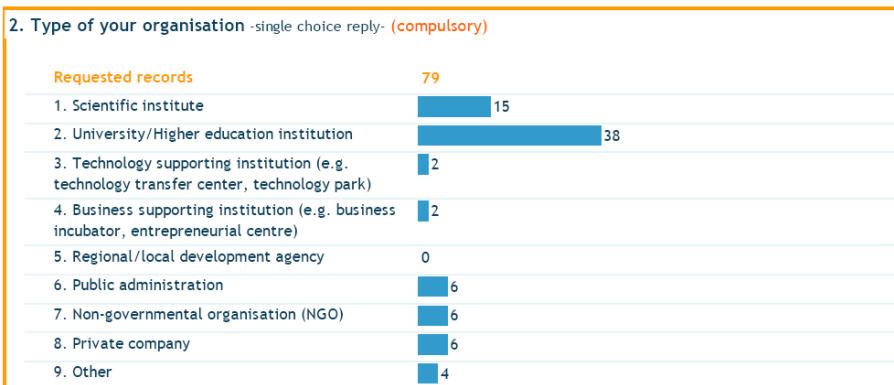
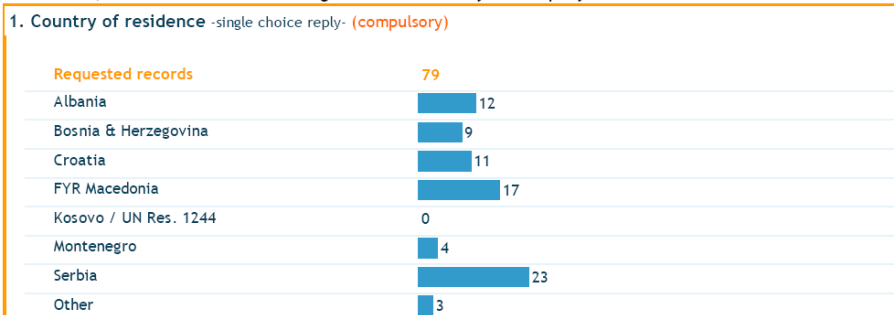
▶ There are 79 responses matching your criteria of a total of 79 records in the current set of data.

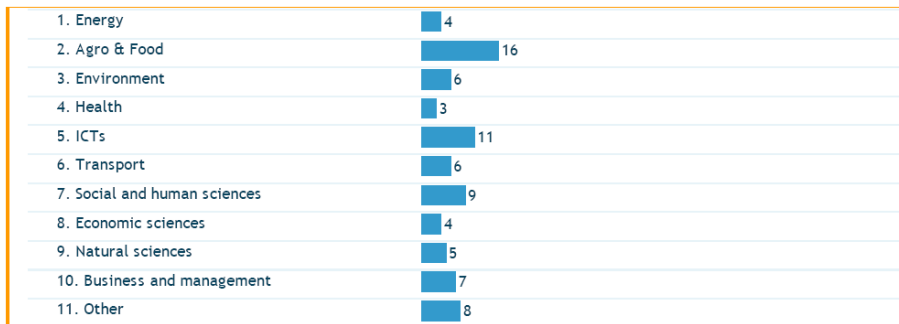
▶ Expand all - Collapse all

Sorted answers Original order

I. GENERAL INFORMATION

In this section, we are interested in some general features of your company



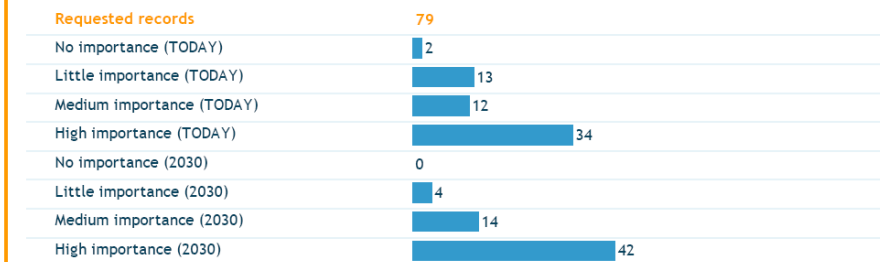


II. INNOVATION AND COLLABORATION NEEDS

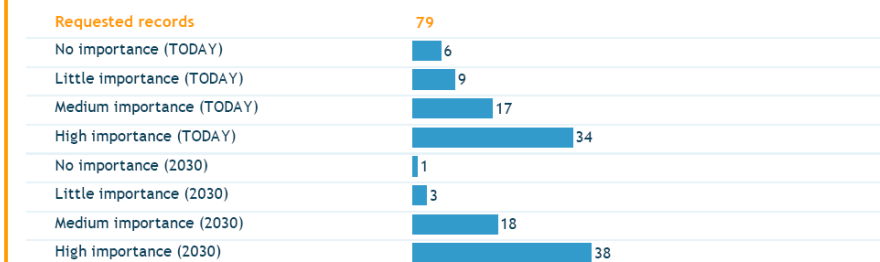
4. According to literature, cooperation of companies with universities and research institutes is crucial for innovations. Please estimate the importance of the following actions for improving cooperation between companies and the research sector in your country, both today and in 2030.

Please select two options per row being one for today and one for 2030

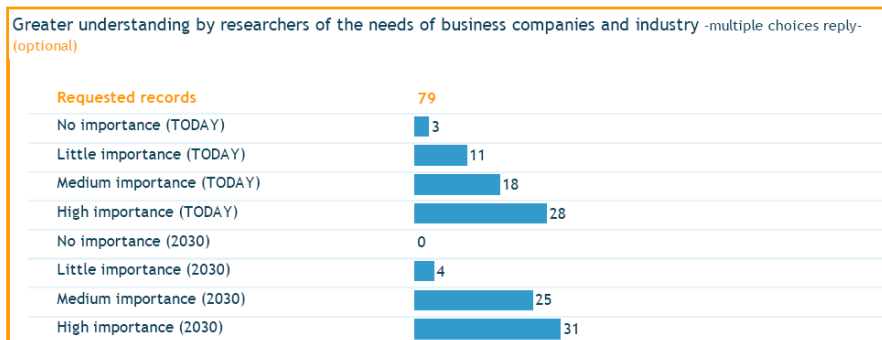
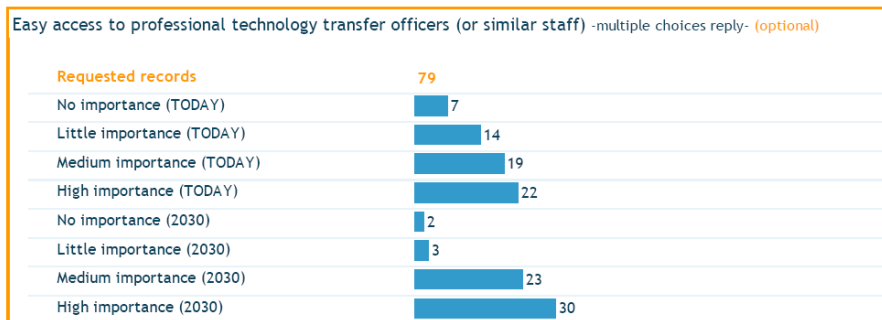
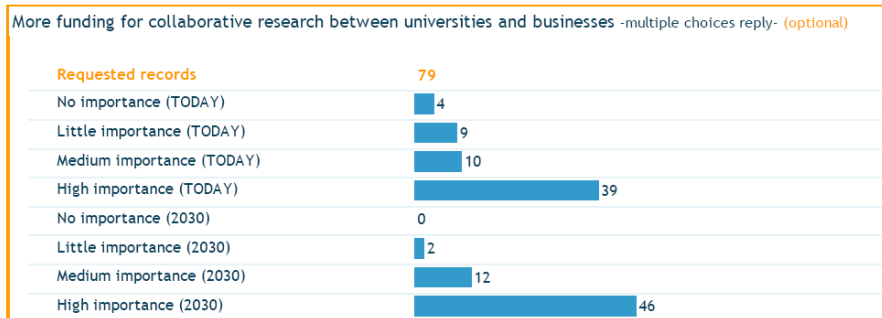
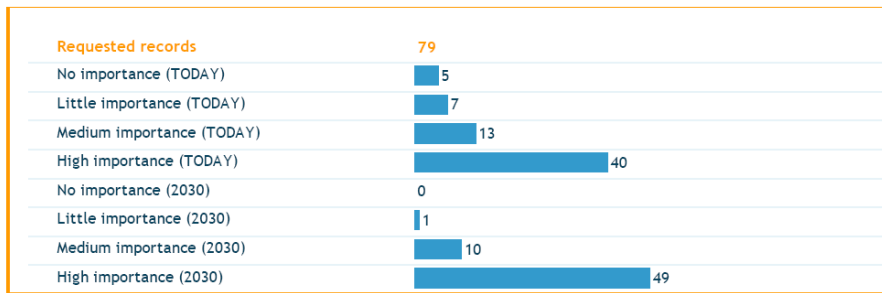
Introduction of regular business/technical advising services at universities for the needs of businesses -multiple choices reply- (optional)

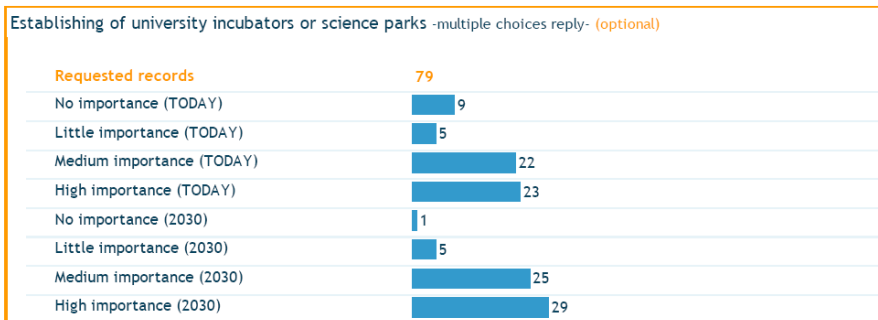
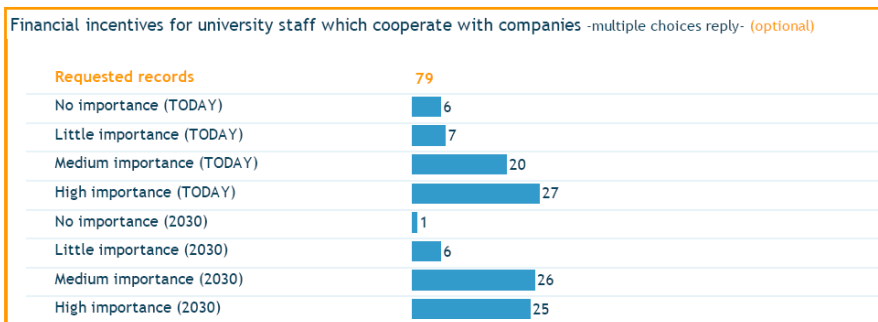
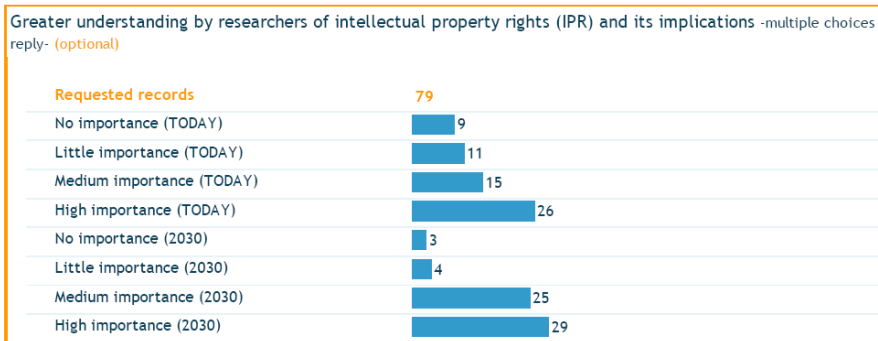
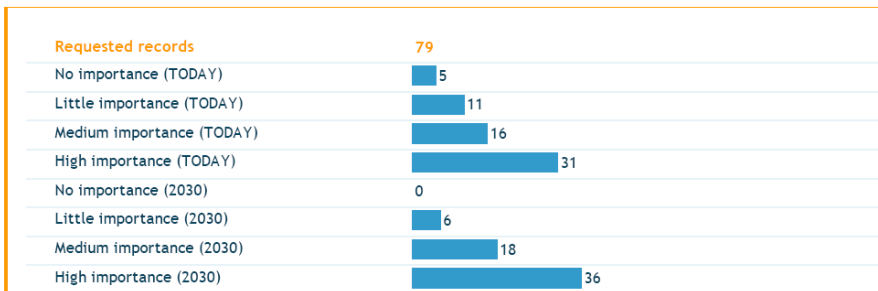


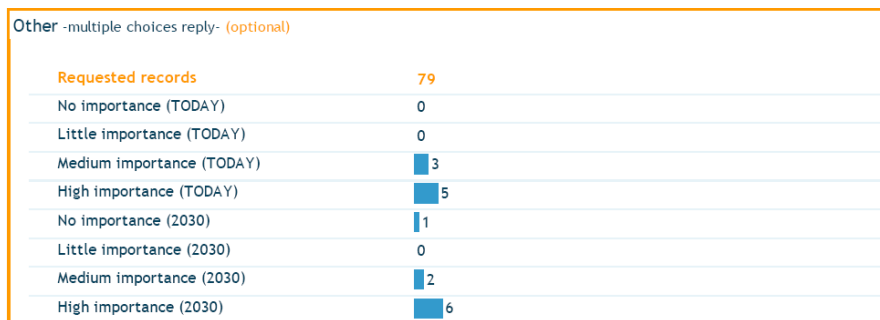
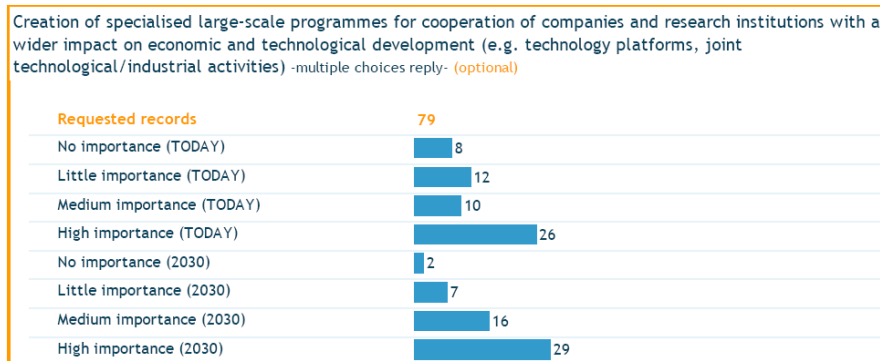
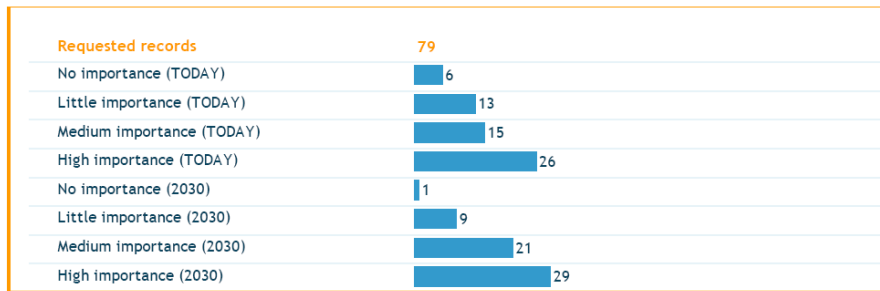
Organization of specialized training courses by universities for the needs of industrial sectors and companies -multiple choices reply- (optional)



More funding for knowledge/technology transfer activities and expert consultations -multiple choices reply- (optional)







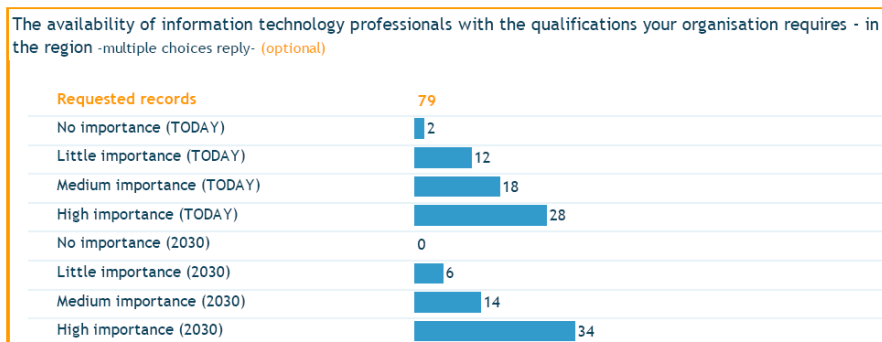
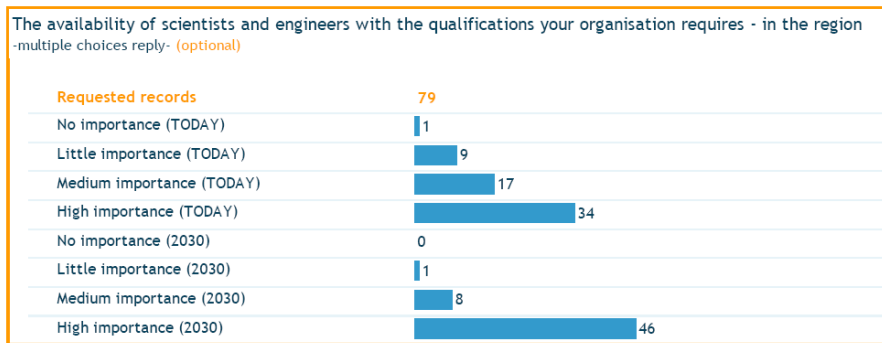
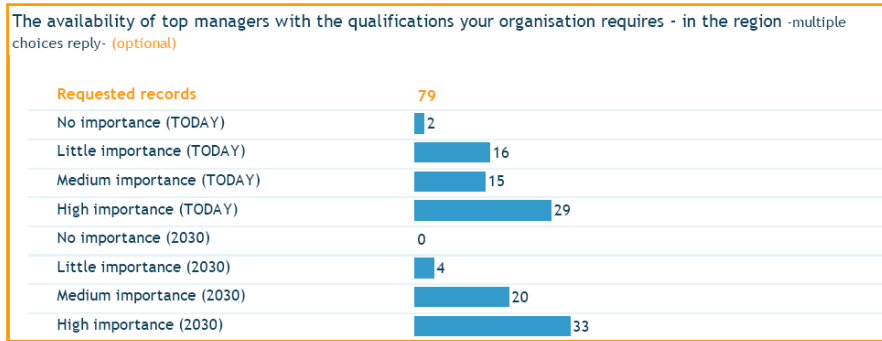
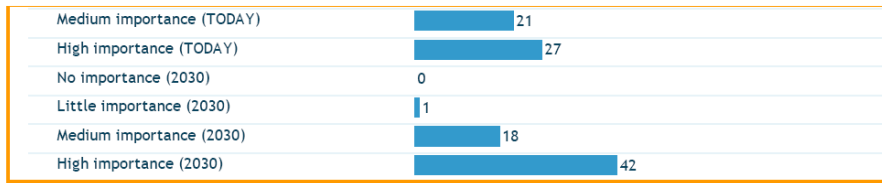
5. Regional innovation cooperation could be beneficial for your organisation and the whole WB region. Please estimate the importance of the following factors in improving regional cooperation, both today and in 2030.

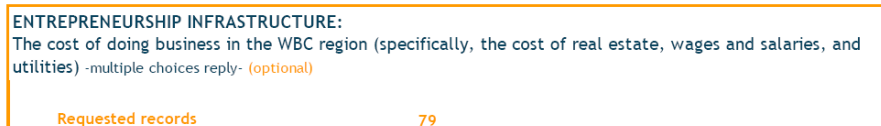
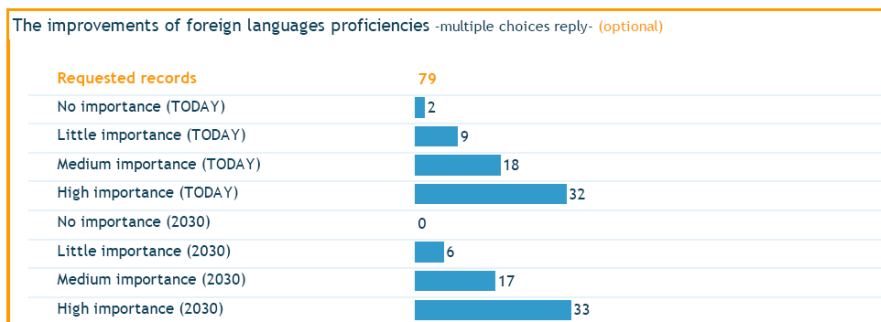
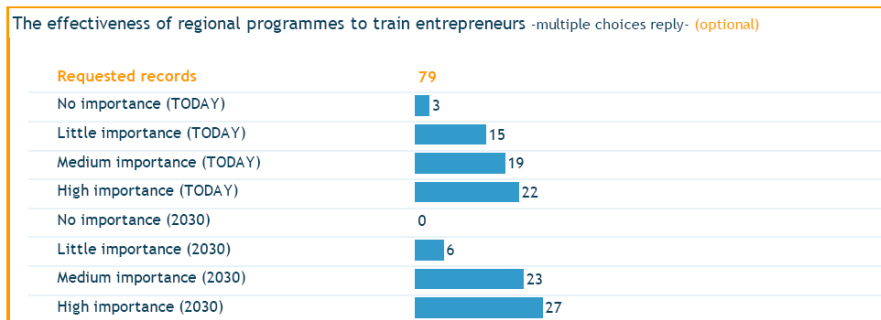
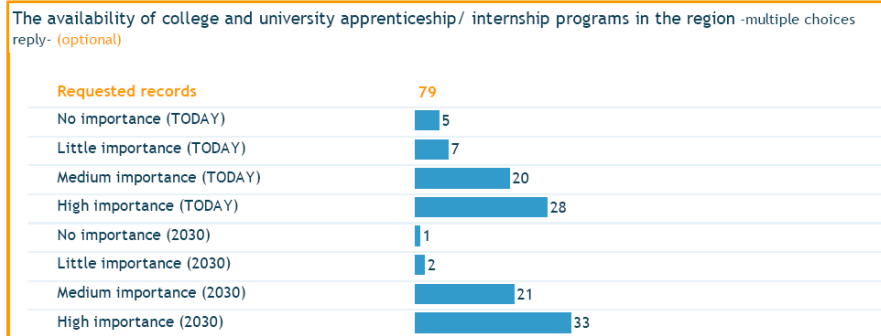
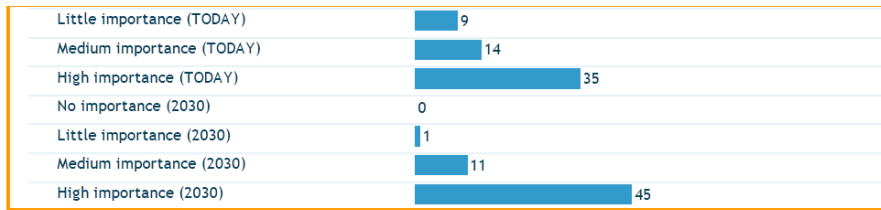
Please select two options per row being one for today and one for 2030

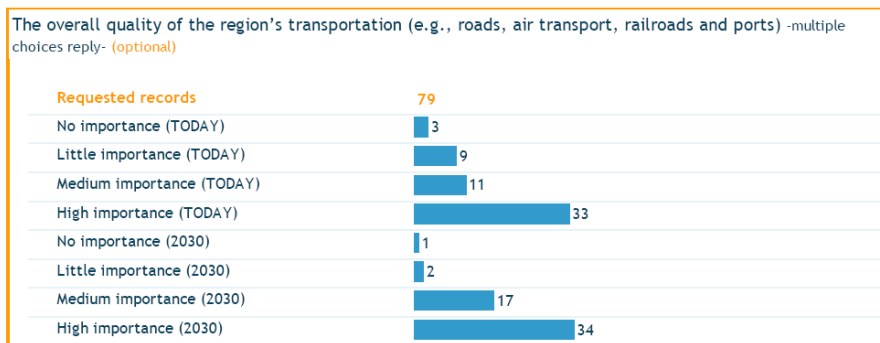
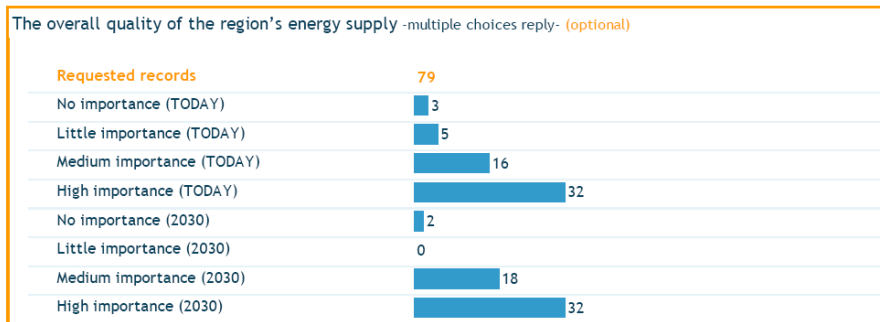
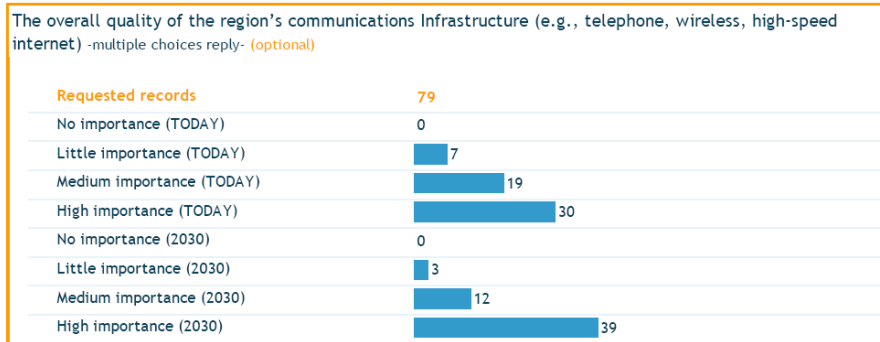
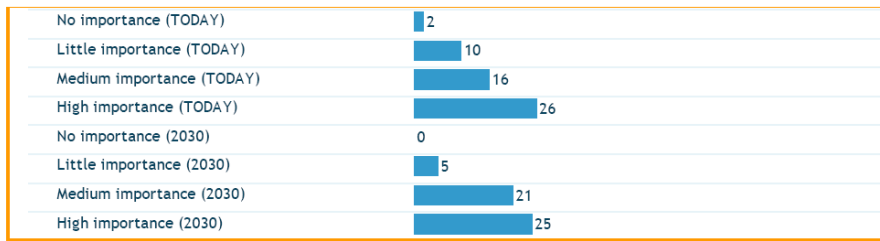


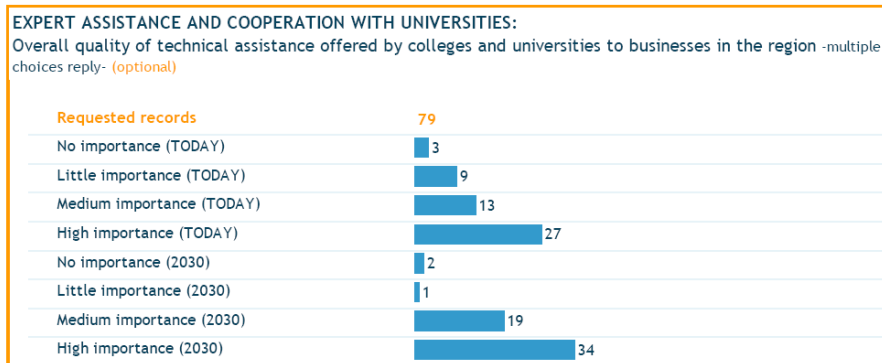
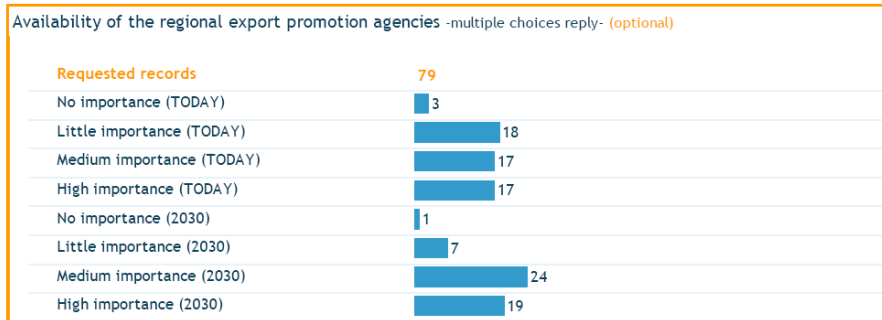
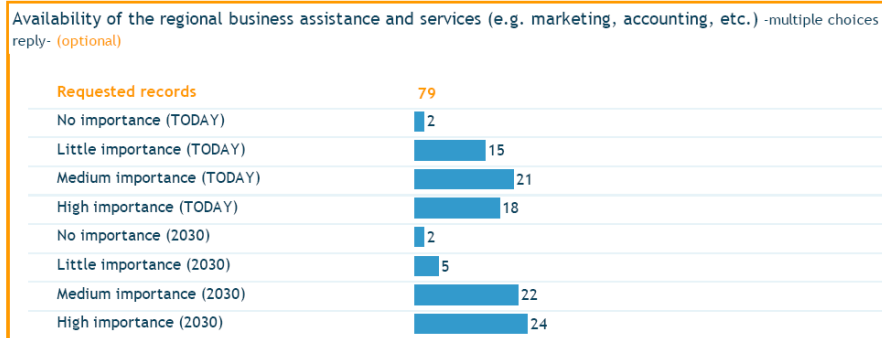
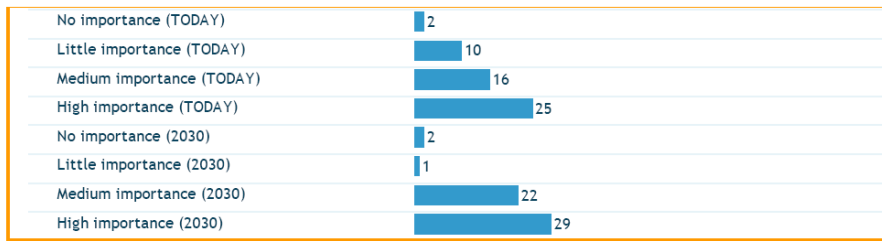
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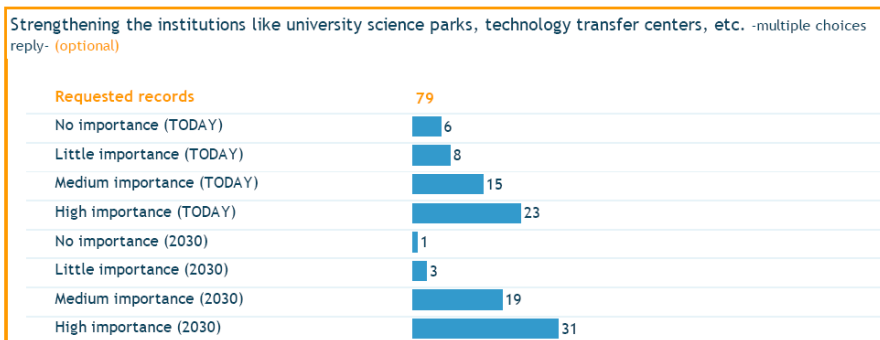
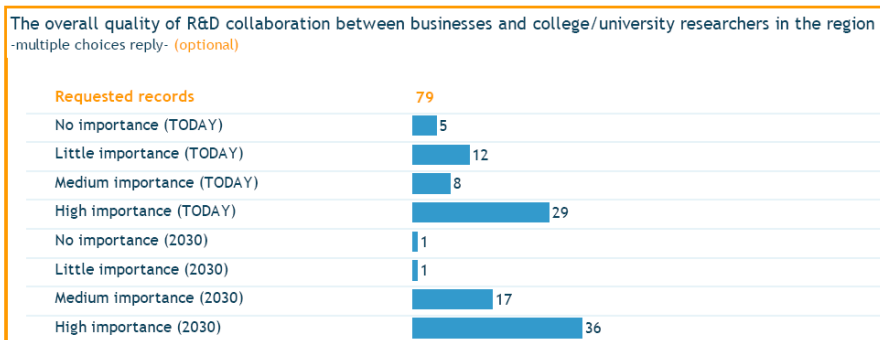
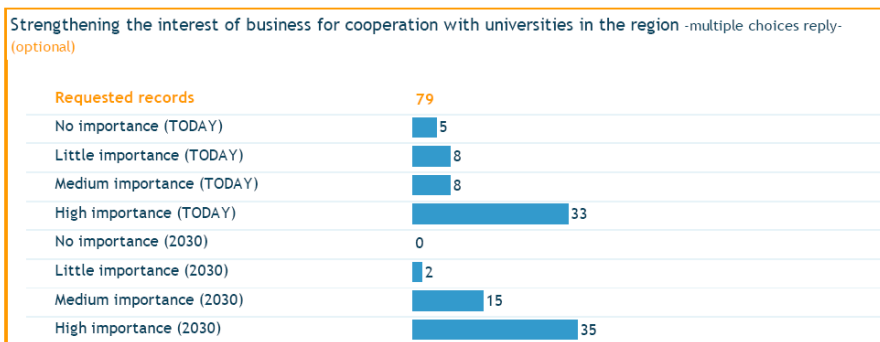
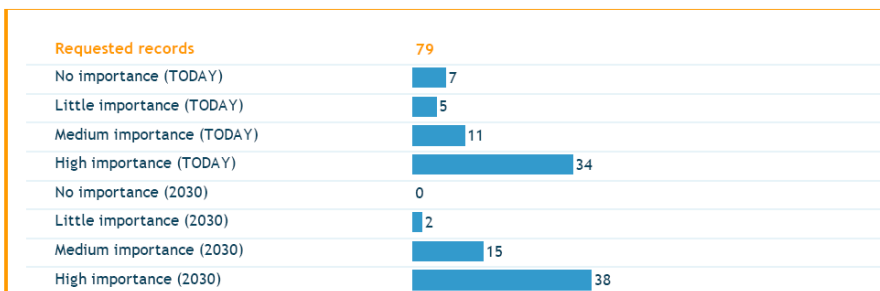
<http://ec.europa.eu/yourvoice/ipm/forms/dispatch?userstate=charts>





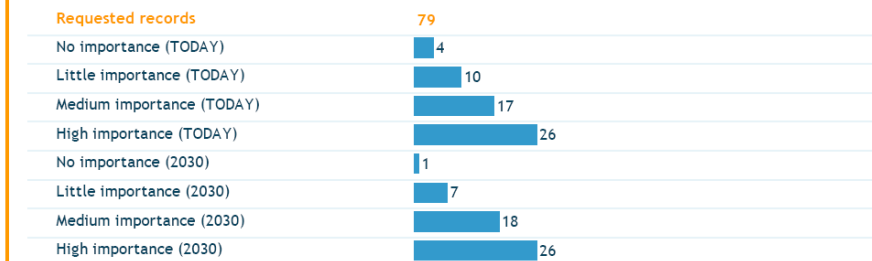




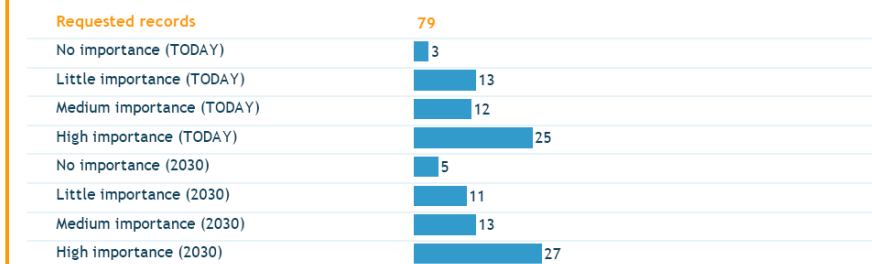


FISCAL AND FINANCIAL OBSTACLES:

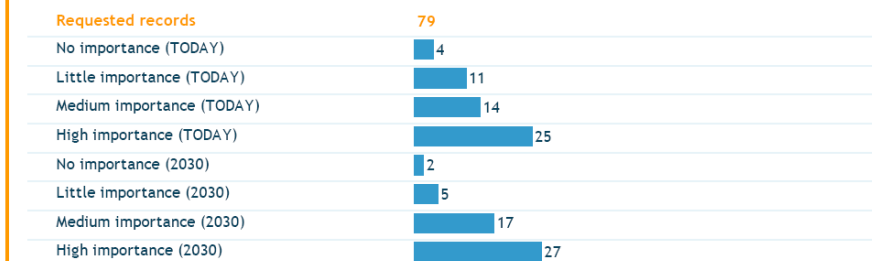
The availability of loans and capital from the banks in the region -multiple choices reply- (optional)



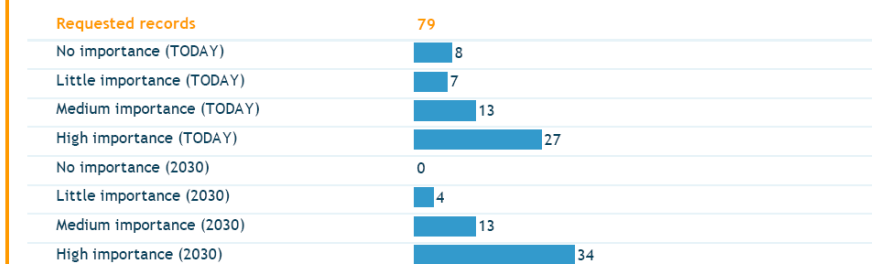
Lowering the interest rates -multiple choices reply- (optional)



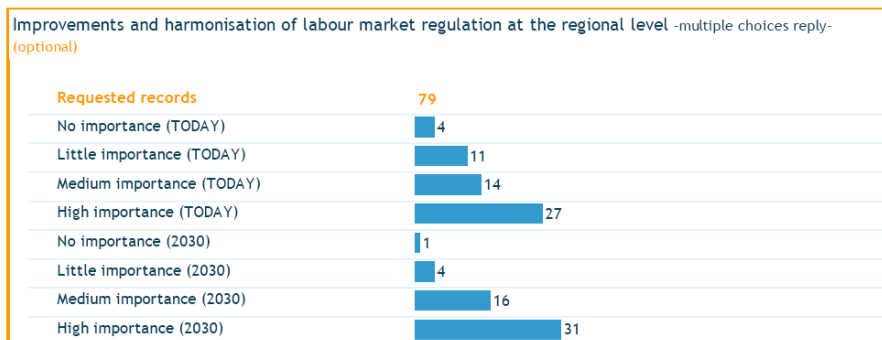
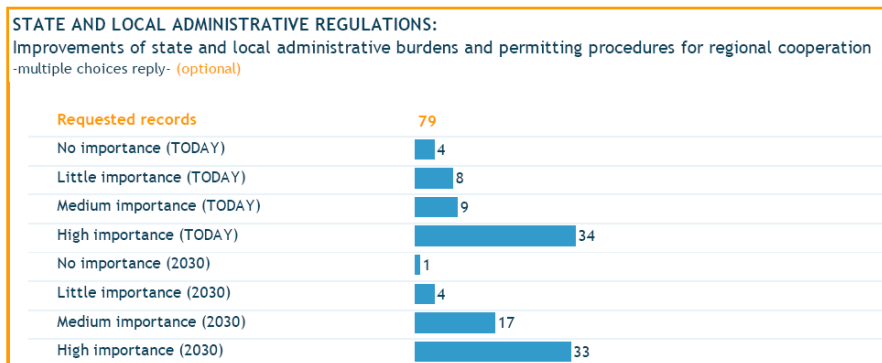
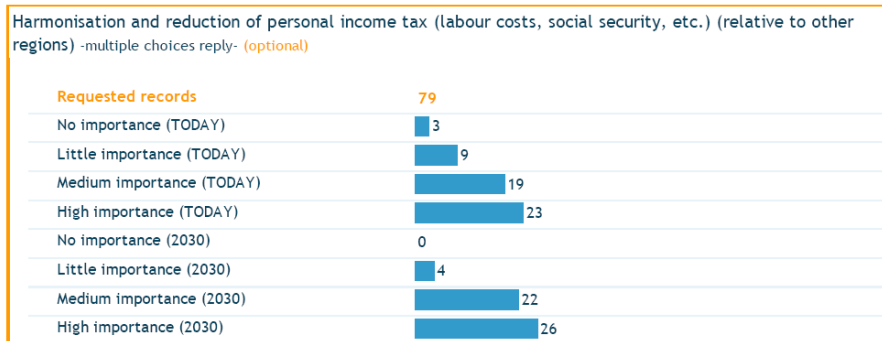
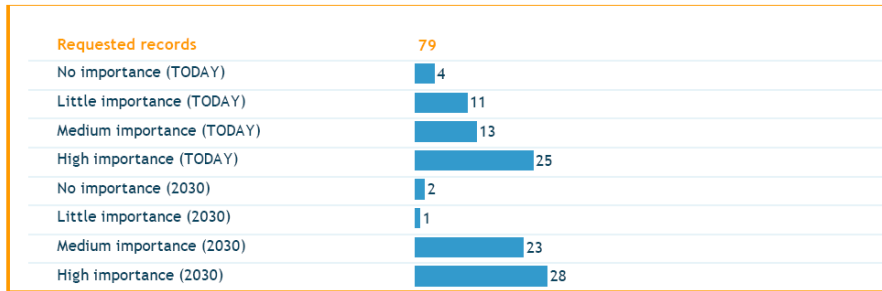
The availability of risk/investment capital in the region -multiple choices reply- (optional)

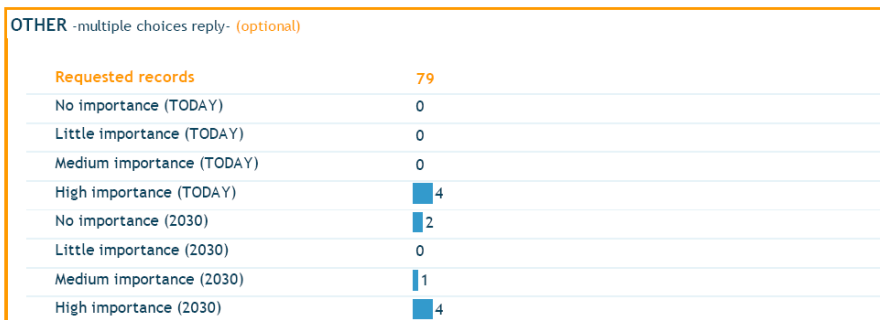
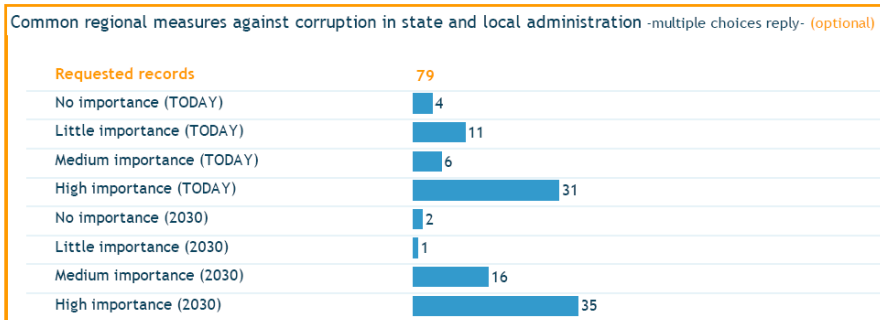
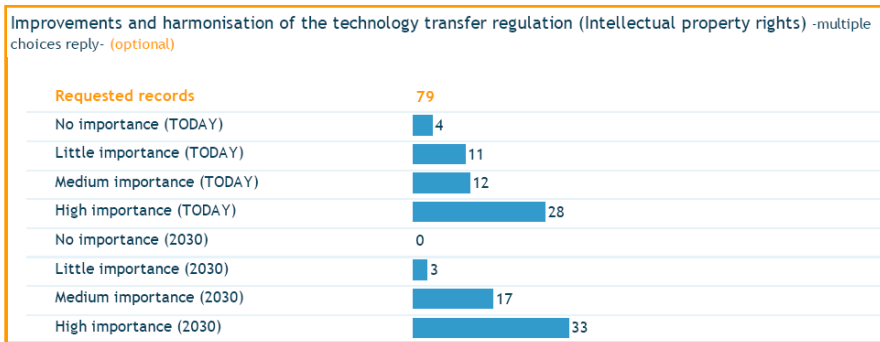
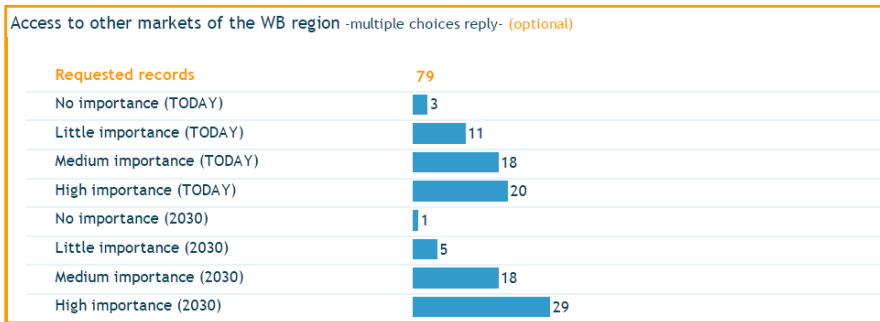


The availability of regional subsidies and programmes for innovation -multiple choices reply- (optional)



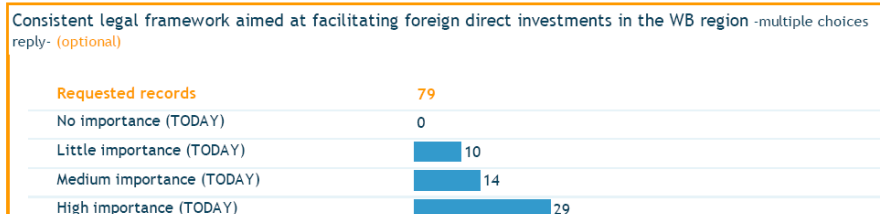
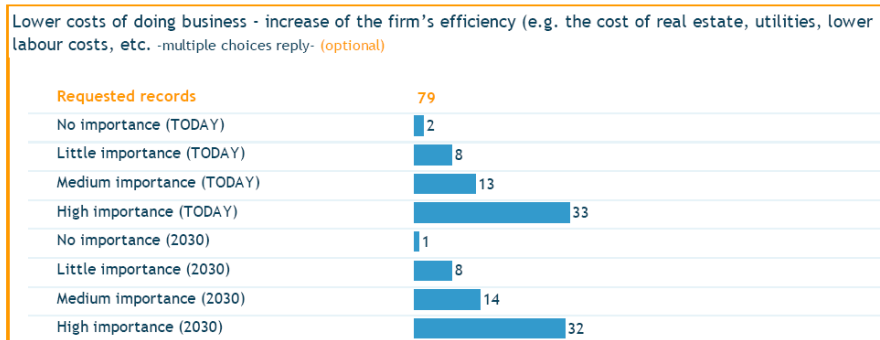
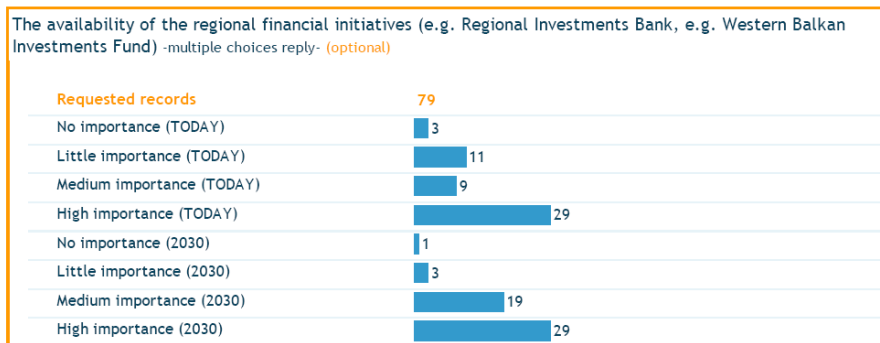
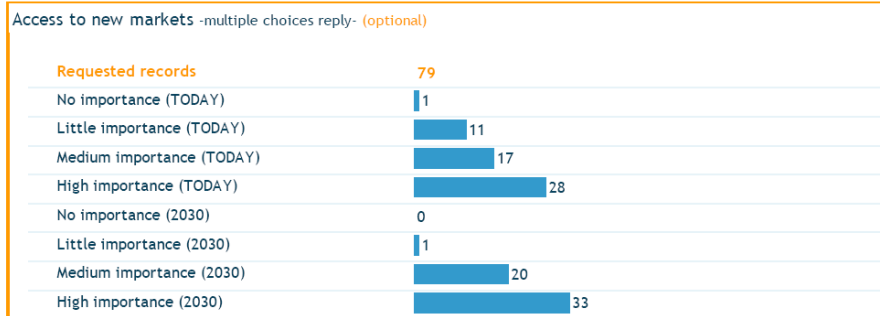
Harmonisation and reduction of tax incentives for innovation (relative to other regions) -multiple choices reply- (optional)

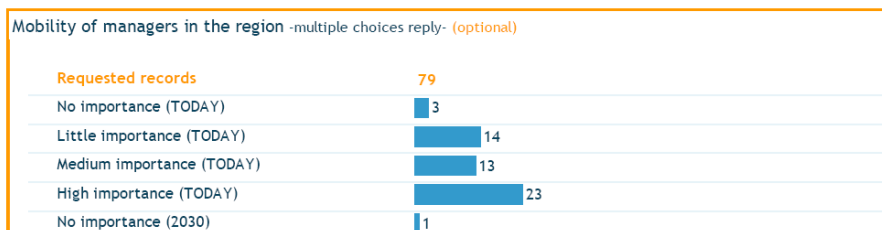
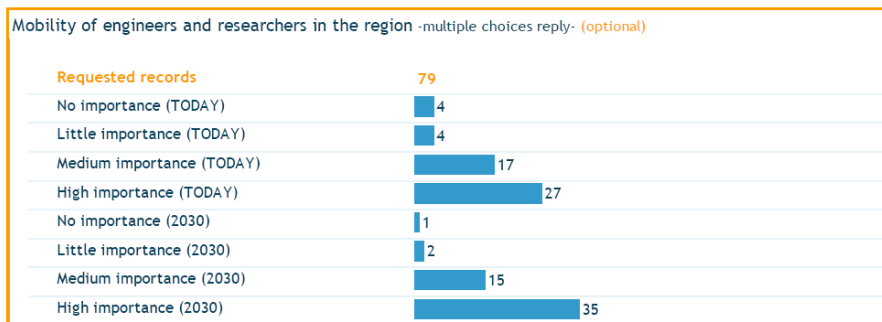
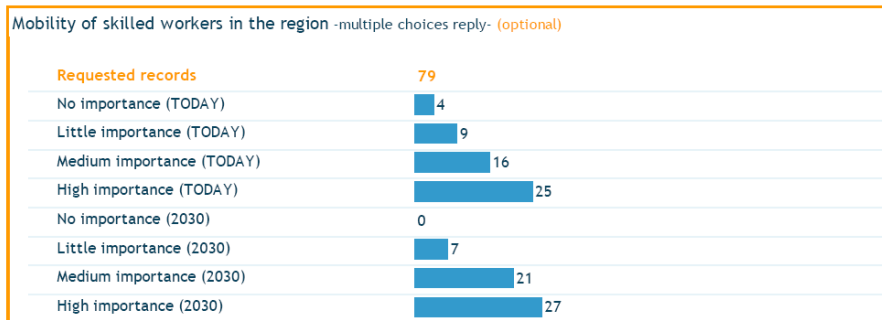
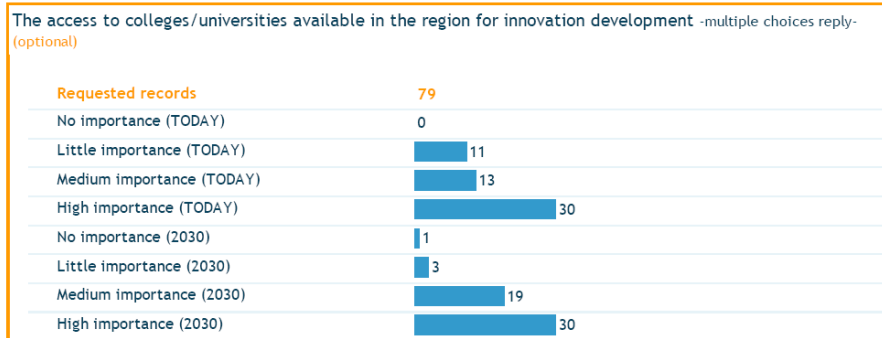
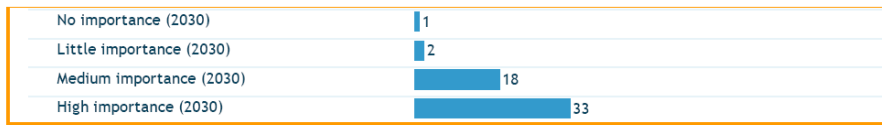


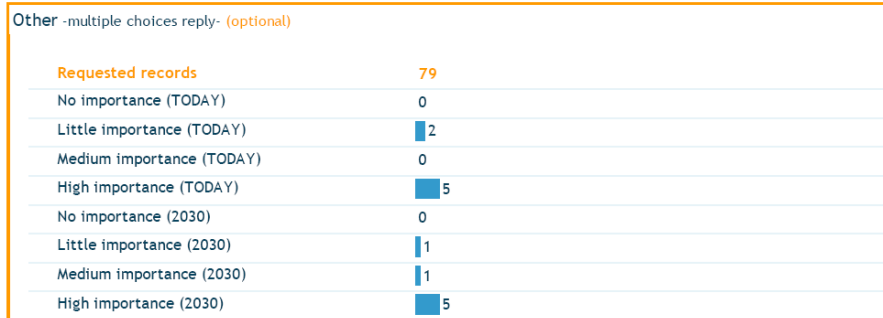
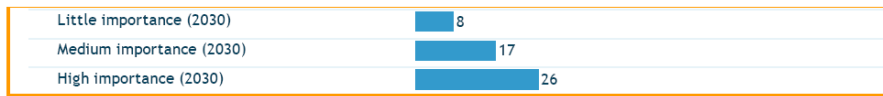


6. Please, estimate the importance of the following outcomes of the possible regional innovation cooperation, both today and in 2030.

Please select two options per row being one for today and one for 2030

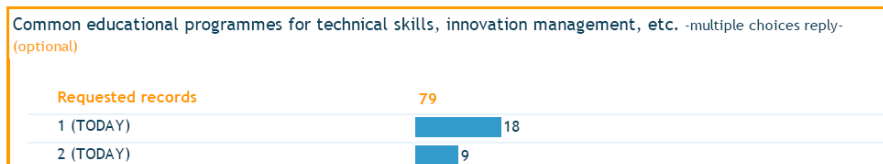
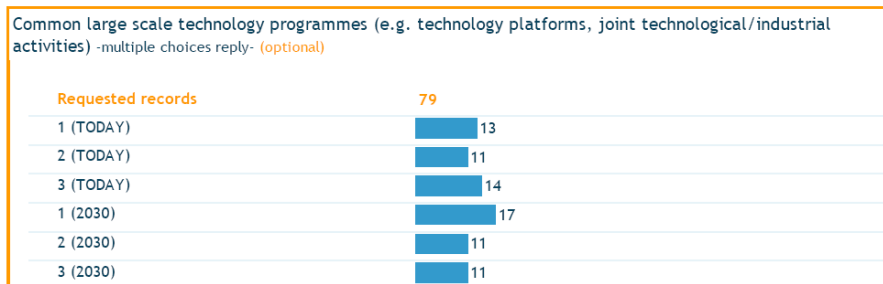
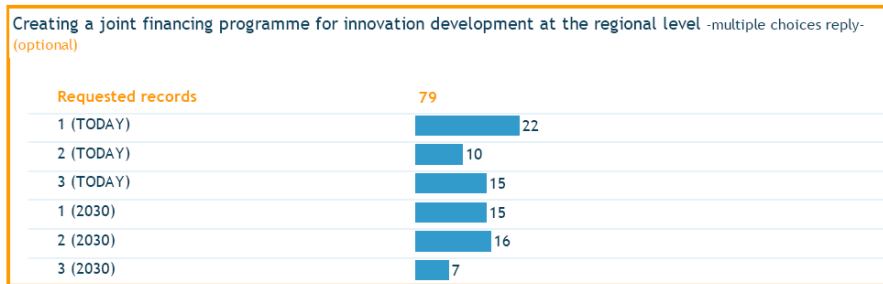


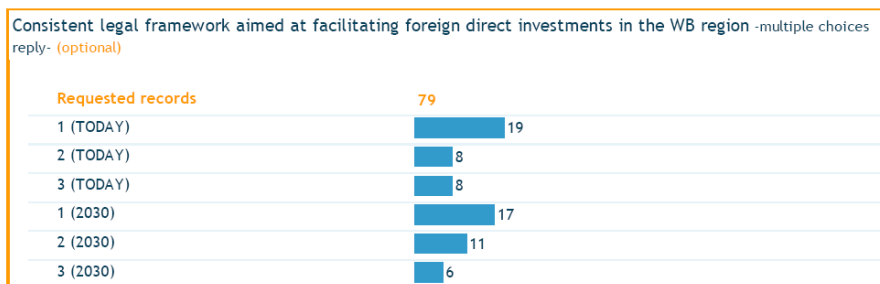
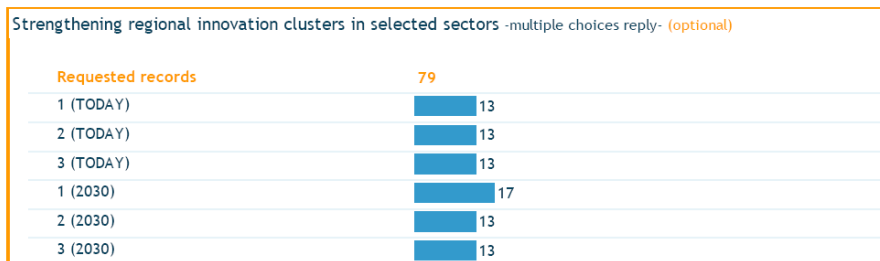
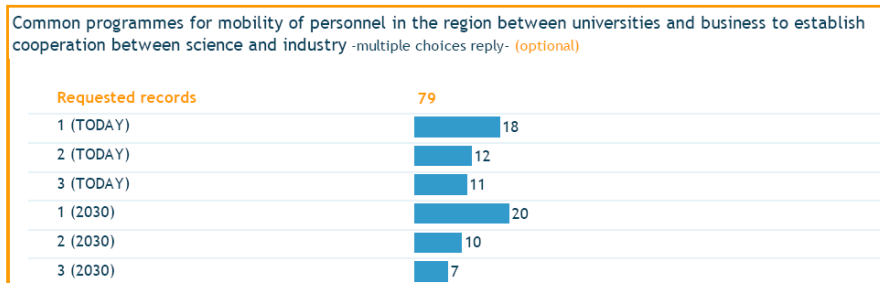
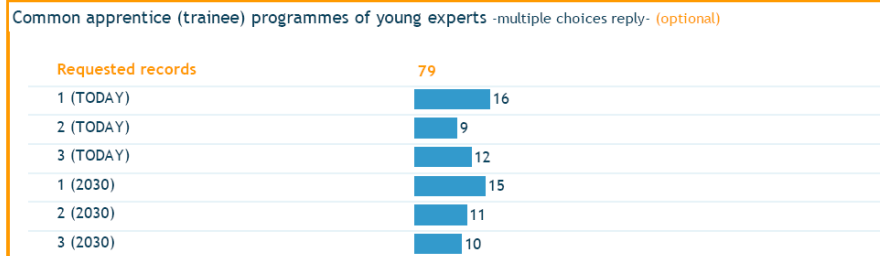
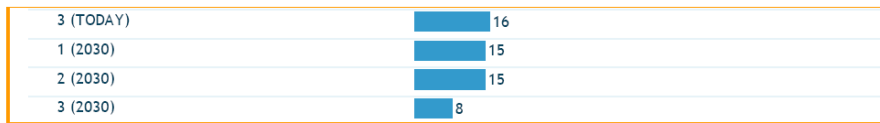


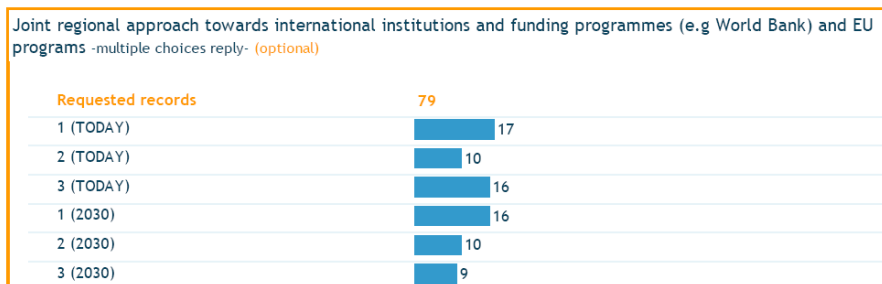
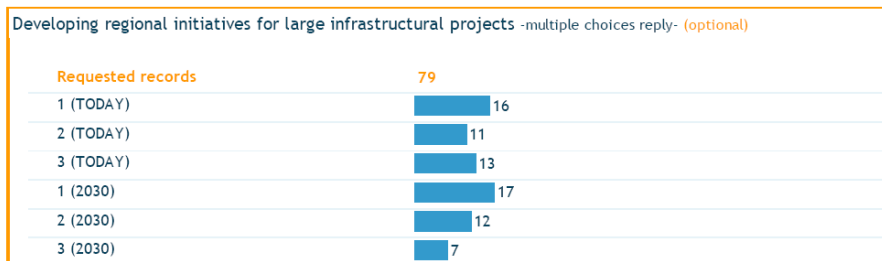
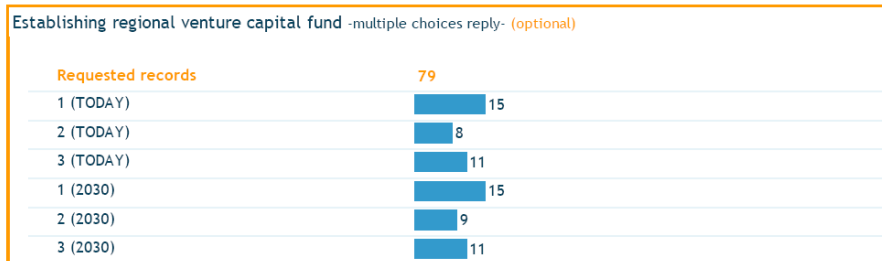
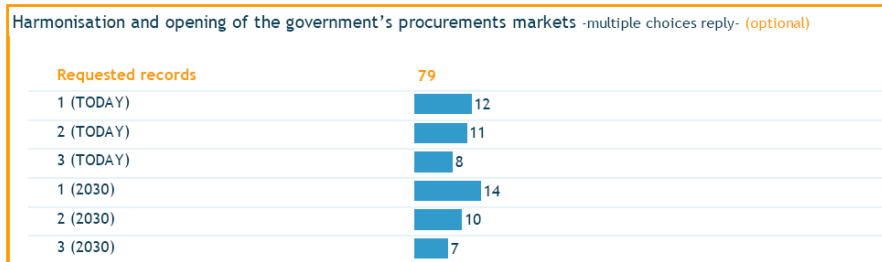
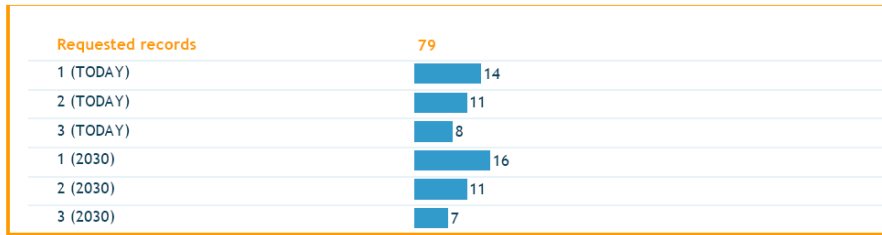


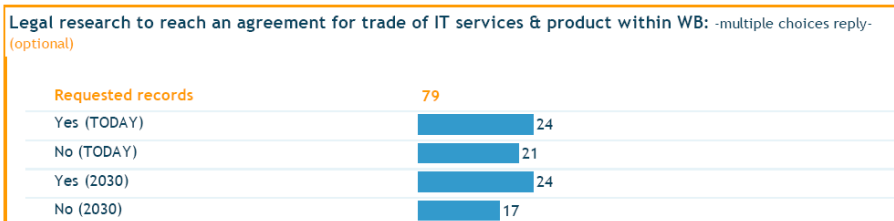
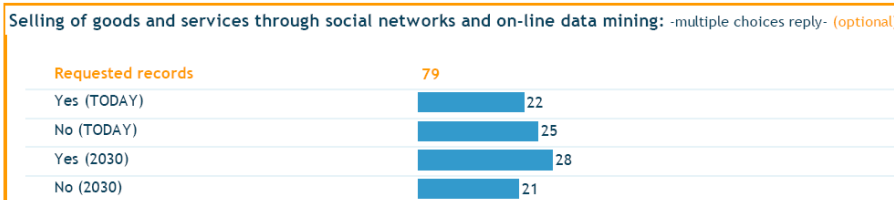
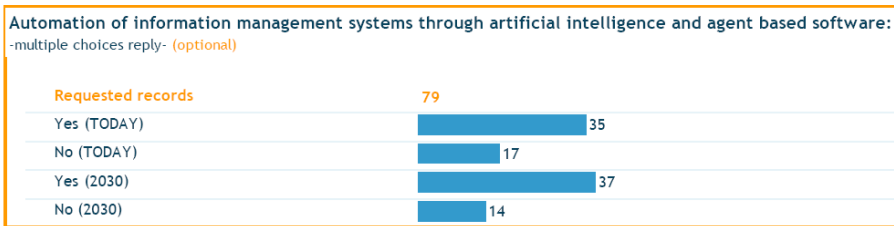
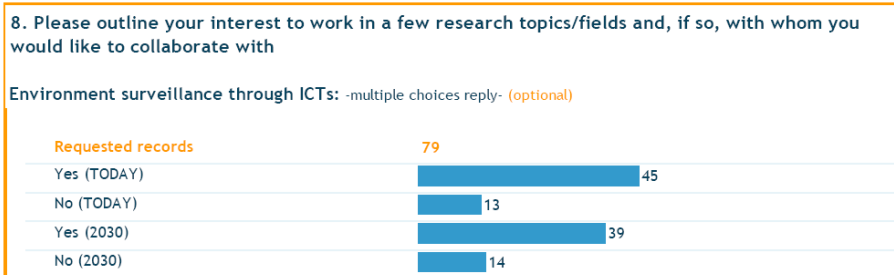
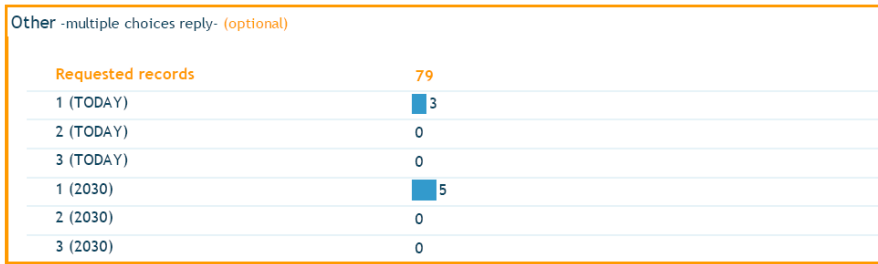
7. Please, rank the importance of the three most important regional innovation actions for improving the innovation activities in your country.

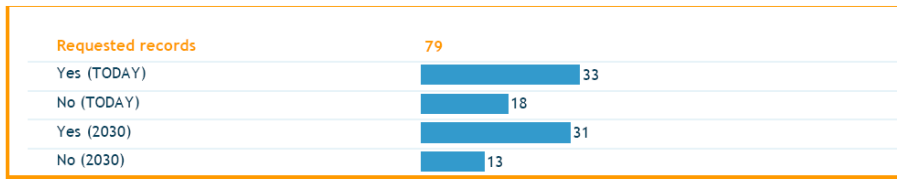
Please, select only three today and three in 2030 (tick only one box per column), where (1) is the highest importance, (2) is medium importance and (3) is least importance











III. CONFIDENTIALITY

The completed questionnaires will be coded and used for analysis by the WBC.INCO-NET project and only the aggregate results will be publicly available. No individual company's responses will be published and no data will be released in any way that permits ranking of institutions.

You should provide us with personal information which shall remain confidential from other participants of the survey in case you would like to (please tick):

