

Joint Research Centre

the European Commission's in-house science service

*Serving society
Stimulating innovation
Supporting legislation*

**'Macro-Regional Innovation Week:
Focus on Technology Transfer linked to Smart
Specialization and Support to Policies and
uptake in the Western Balkans.'**

Prof. Dr. Atanas Kochov
University St Cyril and Mehtodius in Skopje, Macedonia
Ispira, Italy

24th-26th January 2018

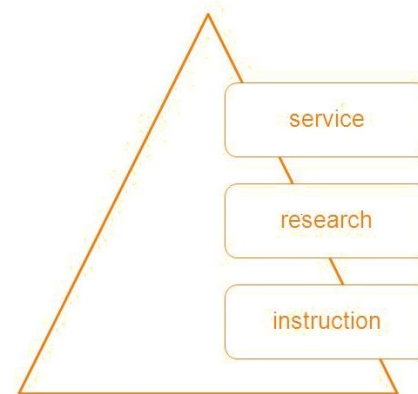
www.ec.europa.eu/jrc



TRADITIONAL UNIVERSITIES in WBC's !?

traditional university mission

- Protected places for research and teaching
- “looking for truth”
- Public funding
 - Tuition fees
 - State subventions...



Q:

0.22 % GDP
0.3% GDP
0.5% GDP

Challenges and changes in recent decades IN WESTERN BALKANS:

Mass increase (“massification”) of higher education institutions

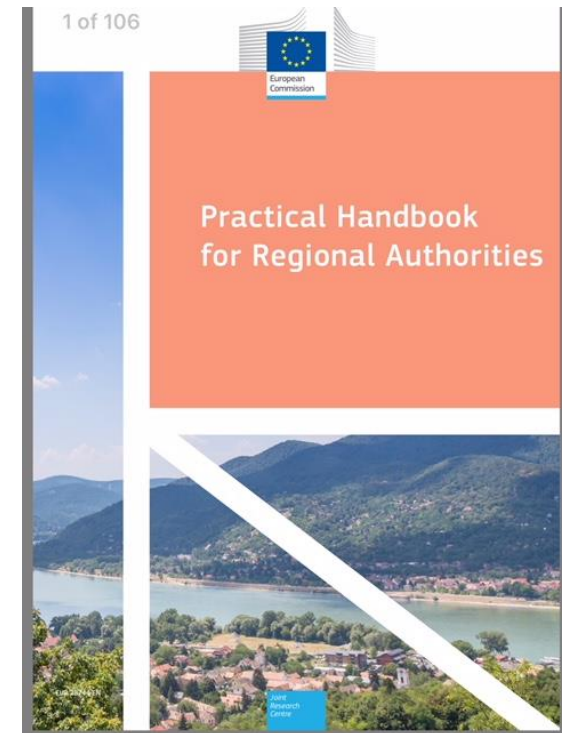
- Wide access to the population
- Growing number of higher education institutes (PUBLIC AND PRIVATE)
- Other sources of income
- Accountability of Public value
 - Economic value

Practical Handbook for regional Authorities:

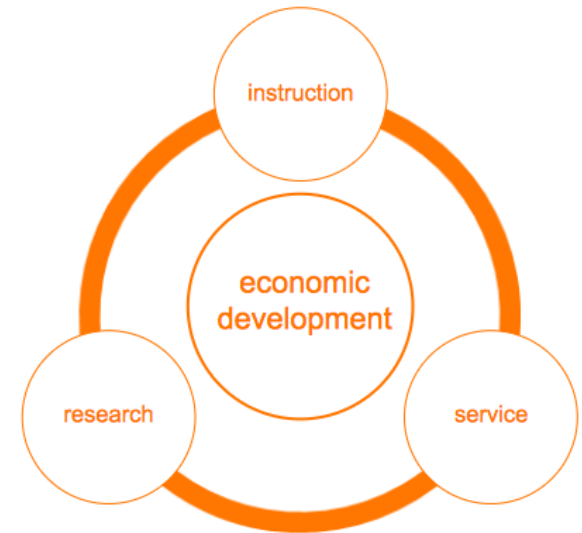
I. Smart Specialization

01. Smart Specialization Platform (S3P) services

02. *Higher Education for Smart Specialization (HESS)*



ACTION RESEARCH!



TRIPLEHELIX
UNIVERSITY INDUSTRY GOVERNMENT association

Targeted support to regional authorities on how to engage their local Higher educational Institutions (HEIs) in the process of design and implementation of Smart Specialization Strategies S3



DESIGN THINKING FOR ENTREPRENEUR EDUCATORS

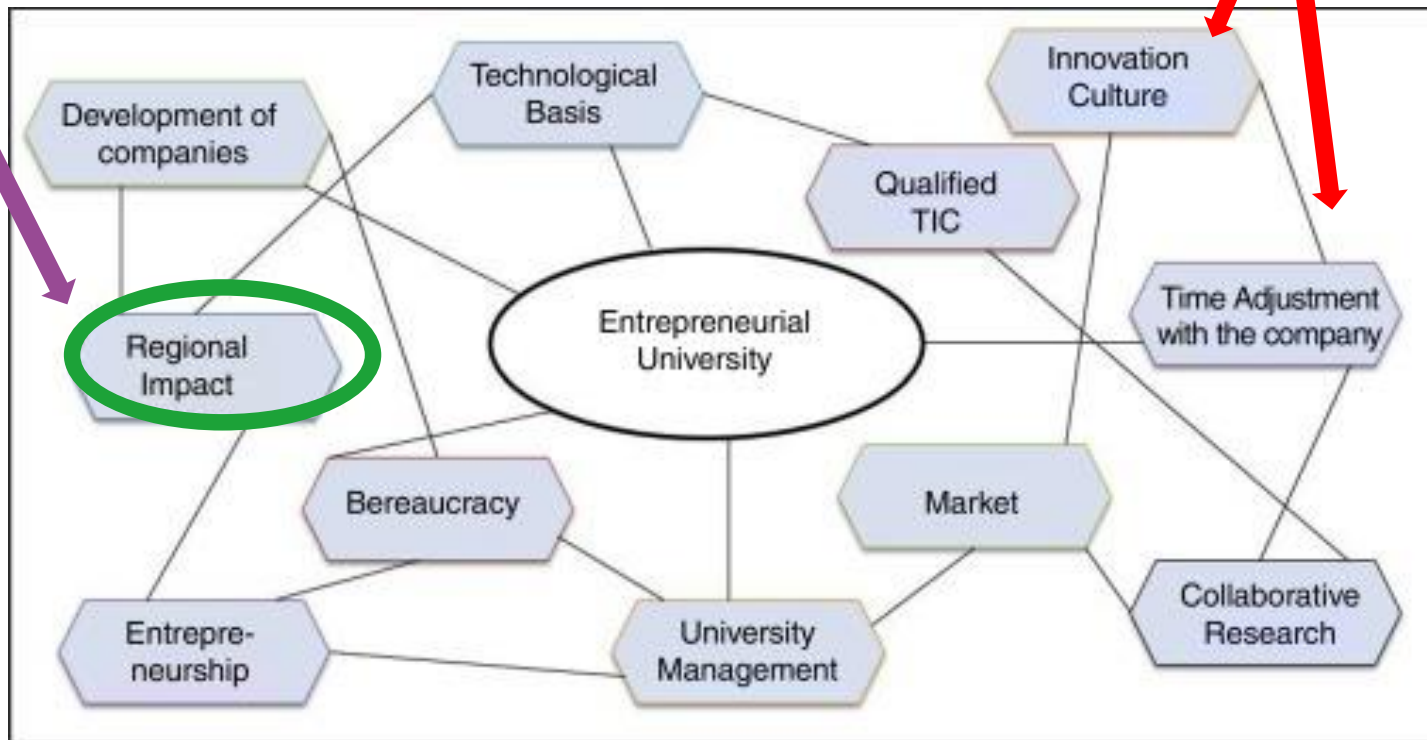
HOW MIGHT WE HELP STUDENTS GENERATE A MILLION DOLLAR IDEA?

Courtesy of :

http://lavincenter.sdsu.edu/images/newsimages/Edu_conf_2018_Idea.png



Entrepreneurial University / Department of ME



<https://ars.els-cdn.com>



European
Commission



The concept of Smart Specialization is 'smart' for two main reasons:

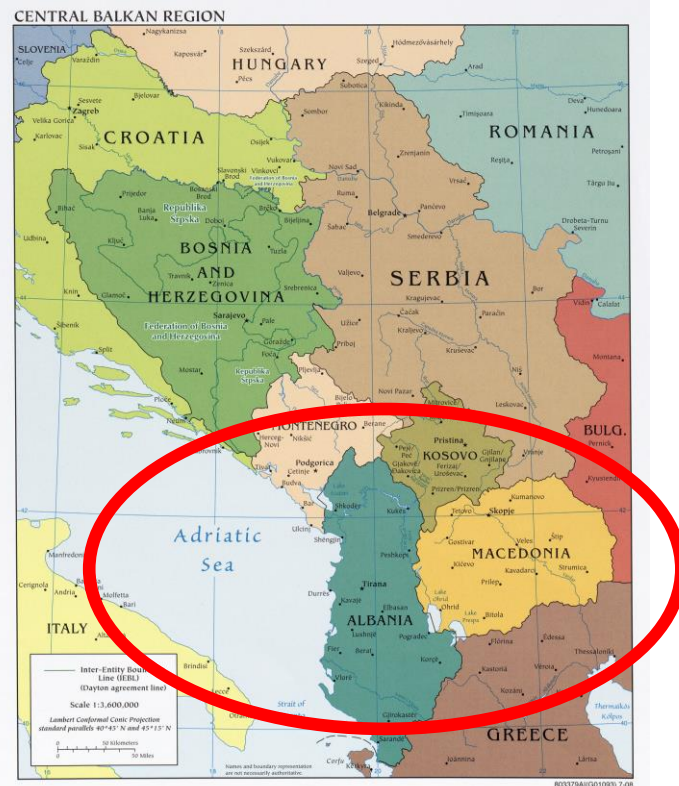
- **Firstly, it links research and innovation with economic development in novel ways such as the entrepreneurial process of discovery and the setting of priorities by policy makers in close cooperation with local actors.**
- **Secondly, this process is carried out with an eye on the outside world, forcing regions to be ambitious but realistic about what can be achieved while linking local assets and capabilities to external sources of knowledge and value chains.**

**MAKE A DIFFERENCE,
BECOME A CREATIVE SUPPORTER OF**



TIGER

**Technology Innovation for Greater Economic
Revitalization**



MCDM defining indicators for energy scenarios for WBC's



JRC CONFERENCE AND WORKSHOP REPORTS

Energy Scenarios for SE Europe: A close look into the Western Balkans

*Proceedings of the
Enlargement and Integration
Action Workshop, Vienna,
15th of December 2015*

Editors: Savvas Politis, Andreas Zucker

Contributors: Costis Stambolis, Zoran Vujasinović, László Szabó, Ana Ranković, Naida Taso, Mario Tot, Rocco De Miglio, Biljana Ramić, Dejan Ivezić, Aleksandar Dedinec, Viktor Andonov, Damir Pešut, Atanas Kochov, Daniela Mladenovska, Nadejda Komendantova

2016

ANALYSIS: discovery of the socio-economical and environmental indicators for policy makers in the region

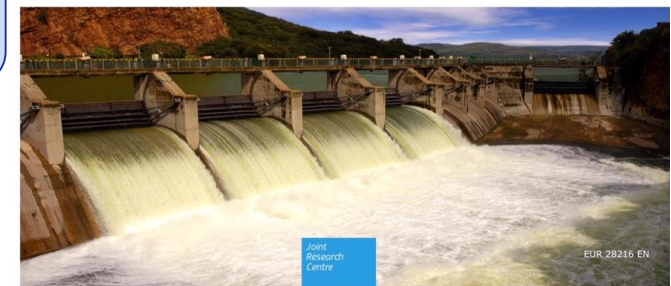
3 PhD thesis in Macedonia, Kosovo and Albania

2.3.2 Identification of technical indicators for creating natural gas supply policies:
The Balkan case (Atanas Kochov & Daniela Mladenovska, Ss. Cyril and Methodius University, Skopje) 38

Presentation Abstract 38


Resume 39

2.3.3 Impacts of financial de-risking strategies on costs of solar electricity (Mladenovska)





Defining indicators for regional cement industry TITAN in WBC's (GR, MKD, AL, MNE, SR-K)

Defining indicators for innovativeness of the SME's in WBC's (GIZ & World Bank)



Enterprise-Level Indicators for Resource Productivity and Pollution Intensity

A Primer for Small and Medium-Sized Enterprises

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNITED NATIONS
ENVIRONMENT PROGRAMME

- OUTCOMES:

 - ANALYSIS: defining indicators for** innovation engines of competitive advantages & weaknesses for
 - MAKING CHOICES:** identify the set of priorities for concentrate investment in new technologies
- BROAD VIEW OF INNOVATION:** support technological as well as practice-based and social innovation
 - MONITORING AND EVALUATION of the competitiveness of the companies**







Resource Efficient and Cleaner Production regional network for strengthening cooperation, fostering transfer and adaptation of resource efficient and cleaner production (RECP) in the South-Eastern European countries



Number of Assessments: 22 companies in the food processing agro-industry sector assessed

Options identified: 130 RECP options

Investment of € 13 million and a payback period of 4 years

Reduction in:

Energy: 132.733 [MWh/y]

Coal: 140 [t/y]

Natural gas: 3.300.000 [Nm³/y]

Oil: 600 [t/y]

Biomass: 198 [t/y]

Organic waste: 69.295 [t/y]

Water: 4,000,000 [m³/a]

CO₂ emissions by 9,000 t/year



www.unido.org

European Commission

Organising Committee

**Joint Research Centre
Ispra**

Biagio Ciuffo
M. Cristina Galassi
Marco Massa
Simone Serra

**REM 2015
Road-transport & Emissions
Modelling Workshop**

Skopje, 10-11 September 2015

**Faculty of Mechanical Engineering
Skopje**

Darko Danev
Milan Kiosevski
Aleksandar Kostikj
Radmil Polenakovik

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subject: 2015-IET-06

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**Attitude of European car drivers
towards electric vehicles:
a survey!**

Sustainable transportation the reduction of fuel/energy consumption, CO₂ and pollutant emission from road transport in WBC's

**Stabilizing Greenhouse Gas Emissions
Global Fuel Economy GFEI – GEF project**



REGIONAL ENVIRONMENTAL CENTER

<https://www.globalfueleconomy.org/blog?author=Global+Fuel+Economy+Initiative>





Concept:

- Promote **inclusive and sustainable growth and environmental friendly sustainable transportation**

PhD research realized by team of students at the University St. Cyril and Methodius in Skopje, Macedonia

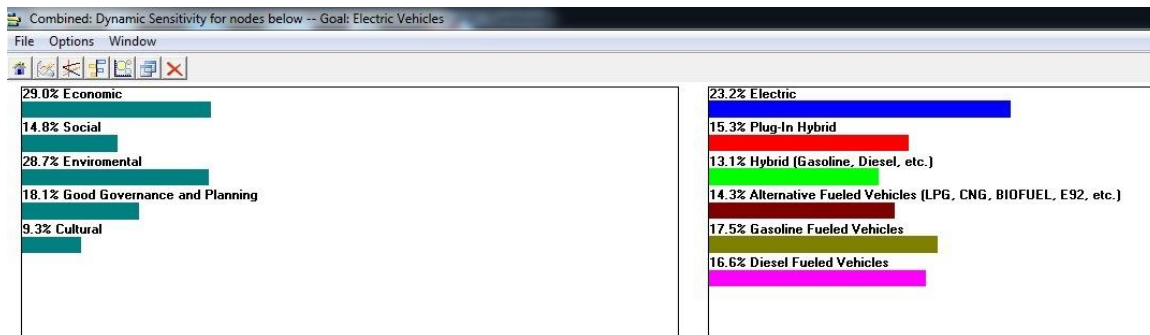
MCDC for defining indicators for implementing e-vehicles in WBC's for sustainable transportation and energy efficiency

Enable Governments and Local communities to develop the strategy for:

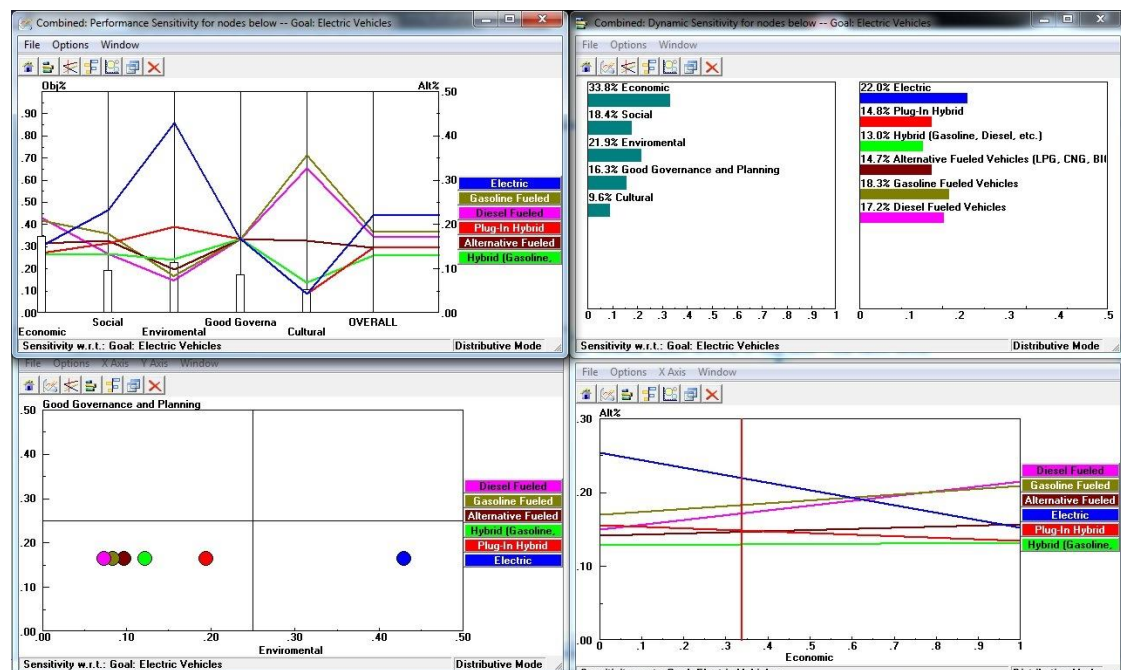
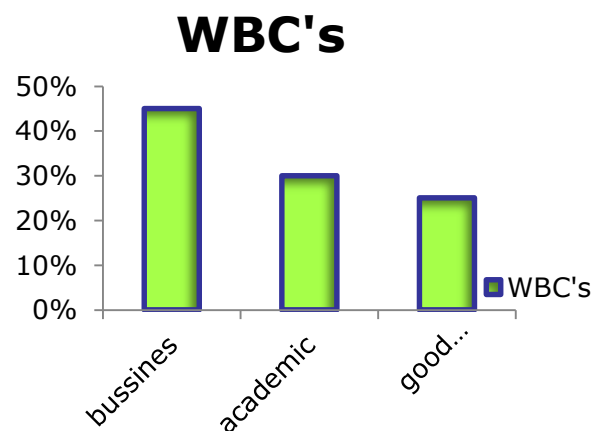
- National or regional **agenda for adopting set of economic, social or environmental policies;**
- **Coordinate financial resources** to support the selected activities toward promotion and implementation of e-vehicles in WBC's
- To define good **governance and monitoring mechanisms for sustainable transportation and environmental protection**

Public authority (Governments and Local communities) in WBC's would be able to prioritise those activities that:

- (i) Have critical mass of resources and capabilities for supporting e-vehicles buyers
- (ii) Are suitable to realize the strategic goals/meet the needs and challenges of the local economy, society, environment and culture for sustainable transportation and e-vehicles promotion



WBC's overall
MAKE CHOICES: identify the priorities for sustainable transportation and where to concentrate investment



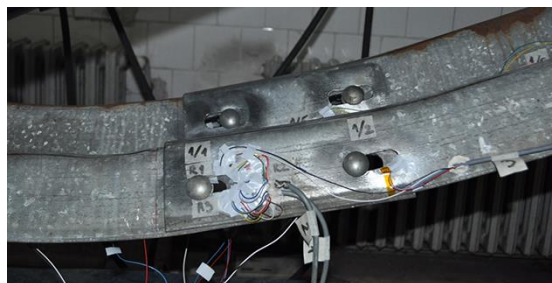
STAKEHOLDER INVOLVEMENT:
Business group



<http://www.testlab.mf.edu.mk/EN/regulative.html>

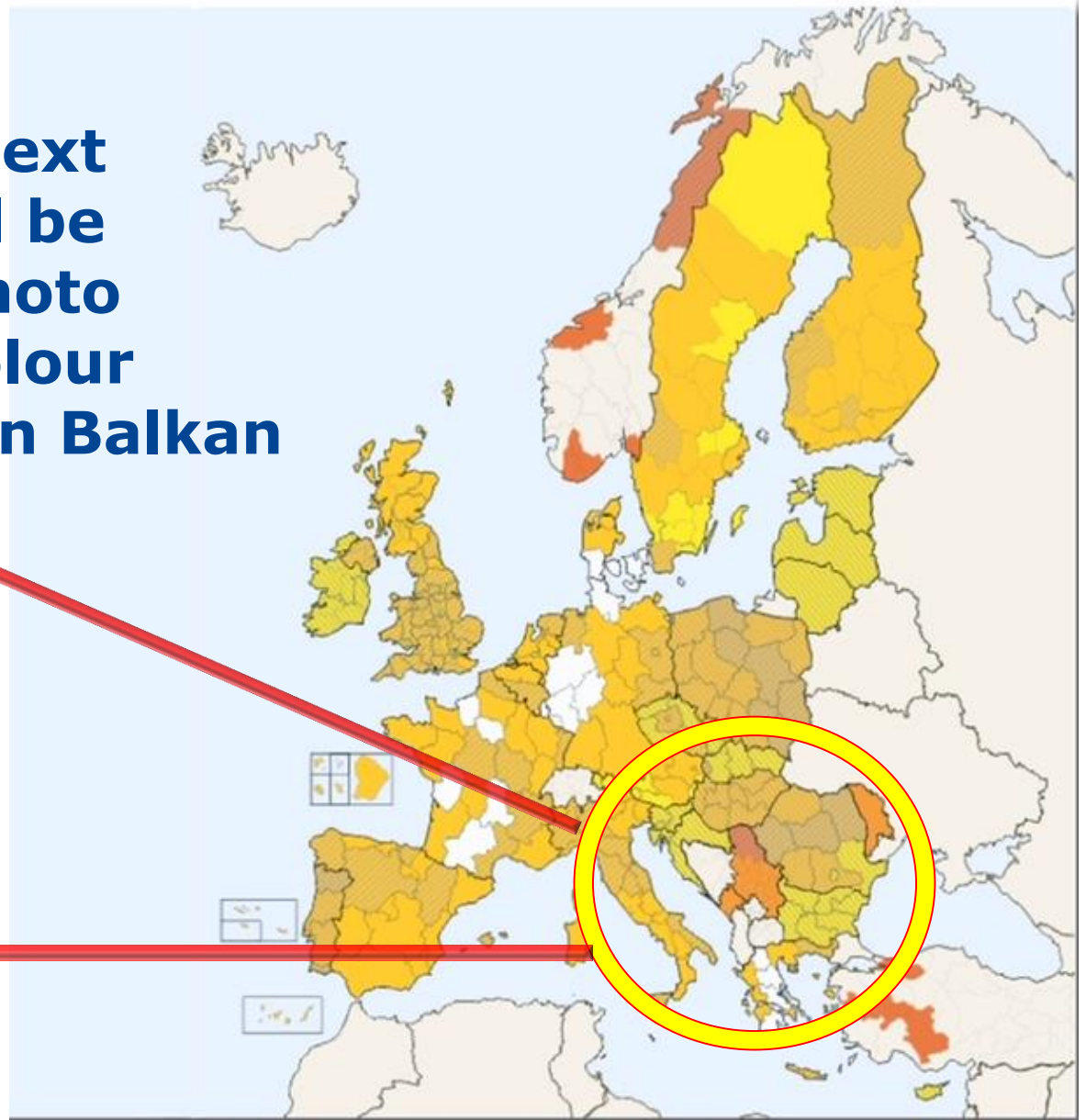
Laboratory for testing mechanical properties, machines and vehicles

Most commonly regulations are the technical specifications of the Republic of Macedonia, respectively to the regulative from the EU, the regulations of the Economic commission for Europe in the UN in Geneva, as well as the harmonized (EU) and other (ISO) standards.



Looking forward to get JRC label

Thank you!
With hope that next presentation will be started by the photo without white colour region in Western Balkan countries



<http://s3platform.jrc.ec.europa.eu>