Presentation of draft Western Balkans R&D Strategy for Innovation

SOME PROJECT MILESTONES

- 4th Advisory Body Workshop, Tirana, November 19-20, 2012
- Midterm Review Consultation with European Commission, Brussels, October 15-17, 2012
- Midterm Internal World Bank Review Meeting, October 10, 2012
- 3rd Advisory Body Workshop, Dubrovnik, June 18-19, 2012
- 2nd Advisory Body Workshop, Sarajevo, March 27-28, 2012
- Launching Event, Belgrade, November 23-25, 2011

OUTLINE

- Background
- The diagnosis
- The Strategy
- Next steps

BACKGROUND

- In October 2011 the **European Commission (EC) committed funds** to a two year project for the development of **a regional strategy on research and innovation in the Western Balkans.**
- The project is a **response to the Joint Statement** issued at the Ministerial Conference – Developing a Regional Strategy on Research and Development for the Western Balkans, in Sarajevo April 2009.

"Consensus to develop a Regional Strategy on Research and Development for the Western Balkans in order to foster regional cooperation within the knowledge triangle (research, education and innovation) and national research policies through the exchange of experience and good practice and facilitate integration of the region into the ERA."

Joint Statement, 24 April 2009

A REGIONAL STRATEGY FOR RESEARCH AND INNOVATION

THE CONCEPTION PROCESS (I)

Creating a platform for project consultations, coordination and collaboration

Advisory Body

STEERING COMMITTEE

A decision making body, providing guidance on the use of available resources and supervising the implementation of the strategy.

Strategy Drafting Team

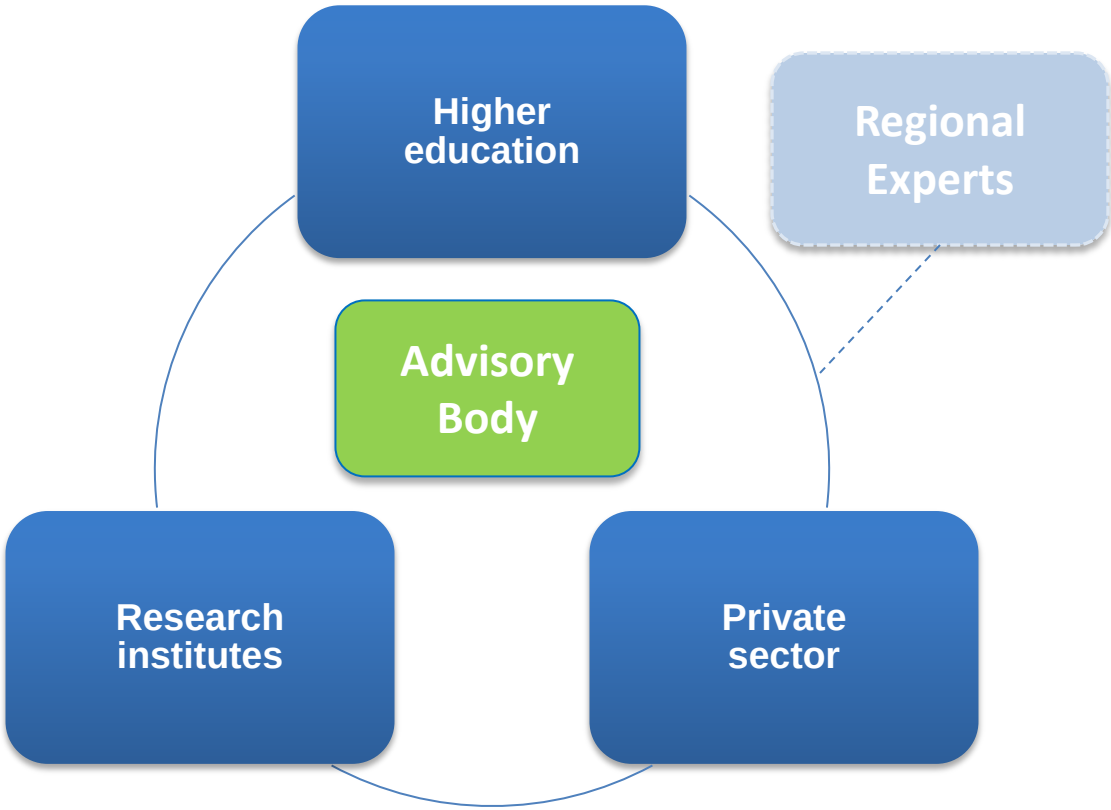
- **World Bank**
- **European commission** (DG Research and Innovation, DG Enlargement)
- **Regional Cooperation Council**
- **Beneficiary entities representatives**

A REGIONAL STRATEGY FOR RESEARCH AND INNOVATION
THE CONCEPTION PROCESS (II)

Advisory Body

- One **representative** from each beneficiary in:
  (i) Higher Education;
  (ii) Research Institutes
  (iii) the Private Sector.

- **Main function:** Providing support and advice to the Steering Committee and ensuring engagement with regional stakeholders 20



BODY OF WORK

- Prepared an *Inception Report – Regional R&D Strategy for Innovation in the Western Balkan Countries: Key Issues and Implications for Technical Assistance"*, World Bank (2011).
- Reviewed policies and programs implemented by governments in the region (January – March 2012).
- Prepared country *policy* profiles for each beneficiary entity (being updated).
- Commissioned the following studies: The State of Scientific Performance of the WBCs; Legal assessment of IPR framework for public research organizations ; Survey of the status of research Infrastructure and technology transfer activities; and Assessment of the situation of data availability on research and innovation.
- Organized visits to two research centers in the region.
- Drafted a 'Strategy' and action plan outline.

RESEARCH AND INNOVATION ARE IMPORTANT BECAUSE THEY DRIVE GROWTH

International recognition of R&D and innovation as main drivers of competitiveness and economic catch-up

Higher sales and productivity growth	At the country level, research and development explains up to 75 percent of the differences in total factor productivity growth rates, once externalities are taken into consideration.
Firm competitiveness	Increases firm competitiveness as reflected in increased propensity to export. This effect is much stronger in small and medium sized firms than in large ones.
Employment growth	Product innovation, which results from R&D efforts, by expanding demand and new business opportunities, leads to employment growth, more qualified and better paid jobs.
Absorptive capacity	Fundamental to enhance the “absorptive capacity” of firms – capacity to screen, absorb, fully exploit and learn from external technology-

HIGH POTENTIAL IN WESTERN BALKANS TO GROW THROUGH INCREASED INNOVATION INVESTMENT

R&D investments pay off in developing countries

Data for the Western Balkans

- **Innovative firms grow faster:** 15 percent faster (in sales) and 8 percent faster in labor productivity than non-innovative firms.
- **Firm R&D expenditures significantly contribute** to performance**:** raises sales (by 14 percent) and labor productivity growth (by 7 percent).
- When **firm R&D**, training and infrastructure services sales are compared, R&D is shown to have the **highest correlation to sales growth.**

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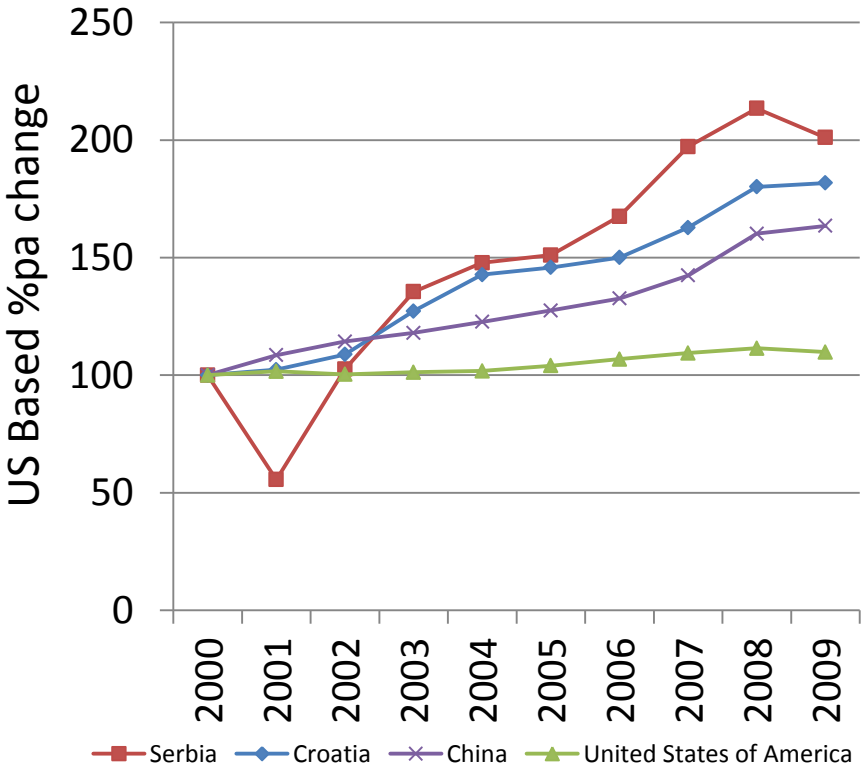
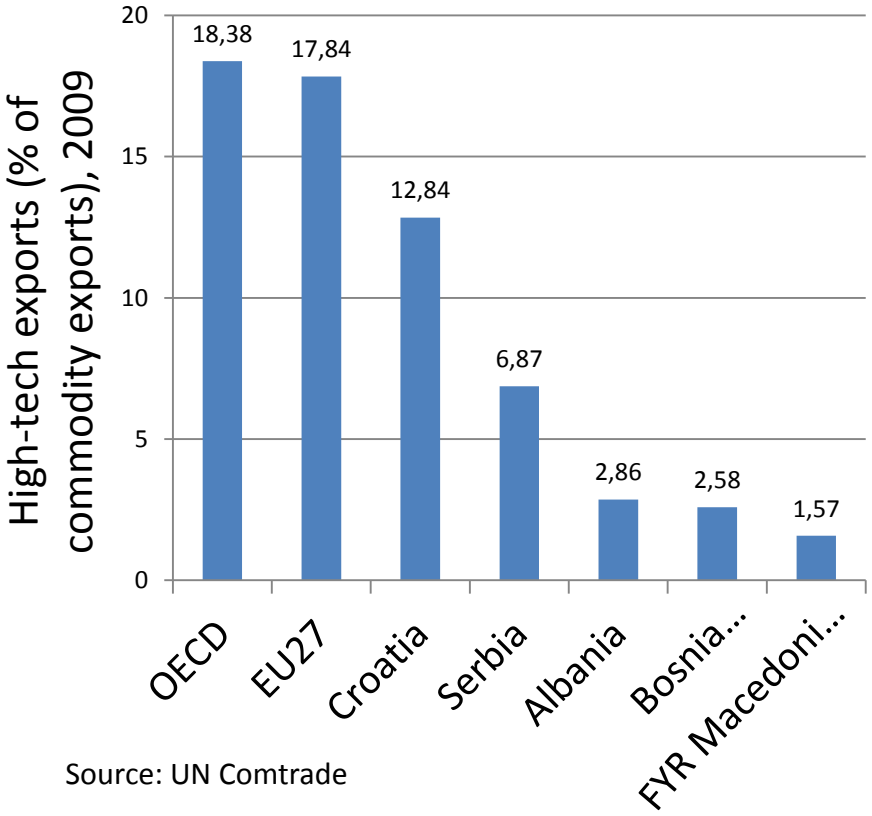
RESEARCH AND INNOVATION AS POLICY PRIORITY: CAN THE WESTERN BALKANS COMPETE?

Unit Labor Cost Index 2000=100



Source: Economist Intelligence Unit

High-tech exports (% of total commodity exports) 2009



Source: UN Comtrade

THE DIAGNOSIS

The Legacy of Unfinished Reforms

- **Stock of "inputs" :**
  - Available public funding for R&D too low
  - Substantial brain drain since the mid-1990s
  - Deteriorating research infrastructure
- **Scientific and Innovation performance**
- **Research and university systems**
- **Demand for knowledge** from the enterprise sector. Transition to market economy significantly reduced the share of traditional research-intensive industries
- **Integration** with the global scientific community

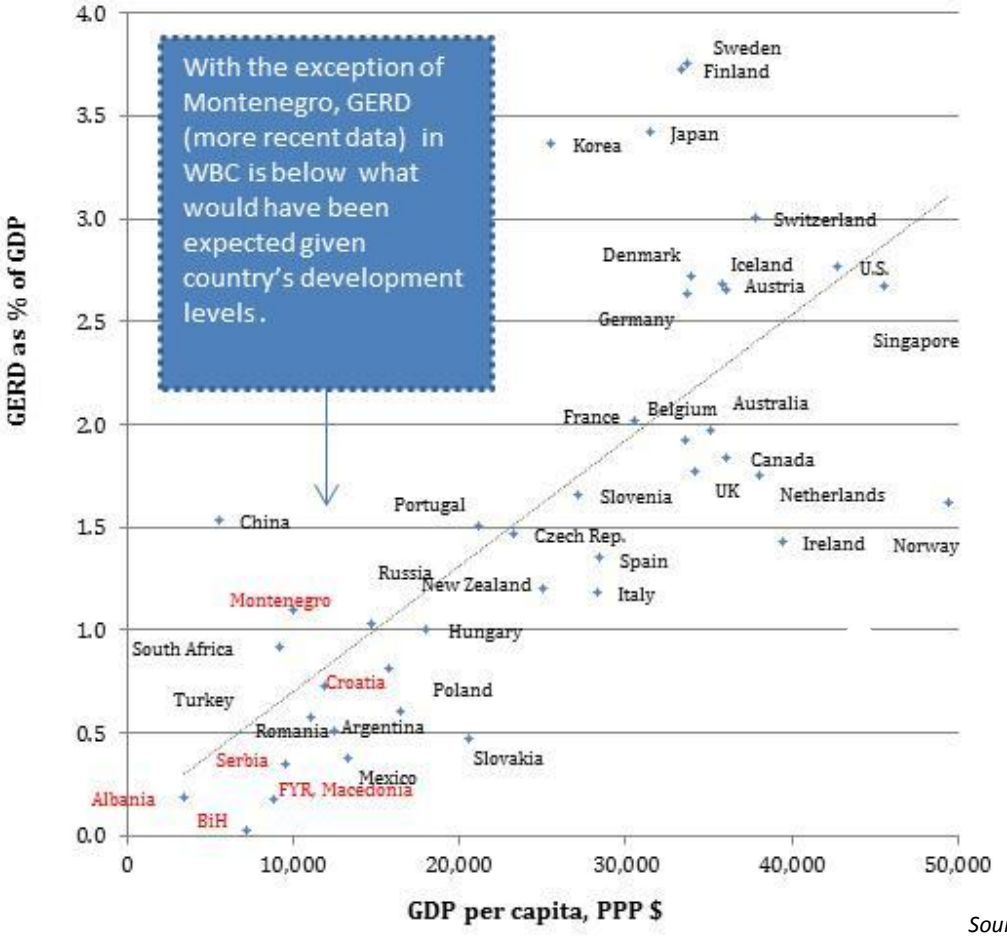
Embryonic National Innovation Systems

- **Reform efforts are partial and not sustained over time**
- **Weak incentives** in Policy frameworks or lack of policy directions:
  - **Incentives for research performance** are severely constrained by rigid salary structures, job classification, promotion rules, etc.; and
  - **Regulatory frameworks and funding** practices discouraging efficient management of Public Research Organizations and industry-science collaboration
  - **Legal Frameworks for ownership and commercialization** of results from public-funded research (e.g. Intellectual Property Rights) are weak or unclear
- **Governance challenges when building National Innovation Systems common to all countries.**

STATE OF RESEARCH AND INNOVATION

A Snapshot (1)

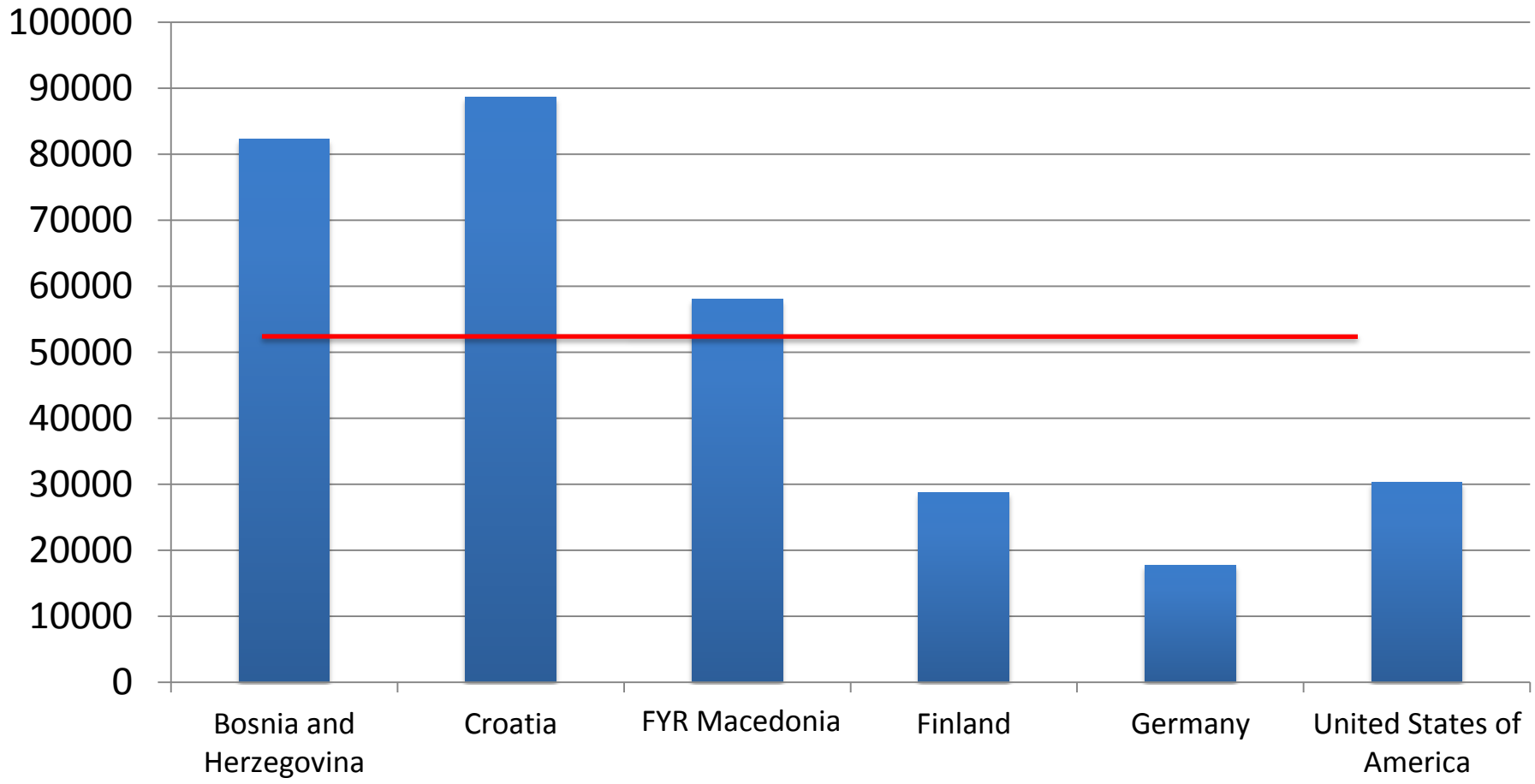
Low Investments in R&D…



Sources: OECD STI; UNESCO; national statistical offices.

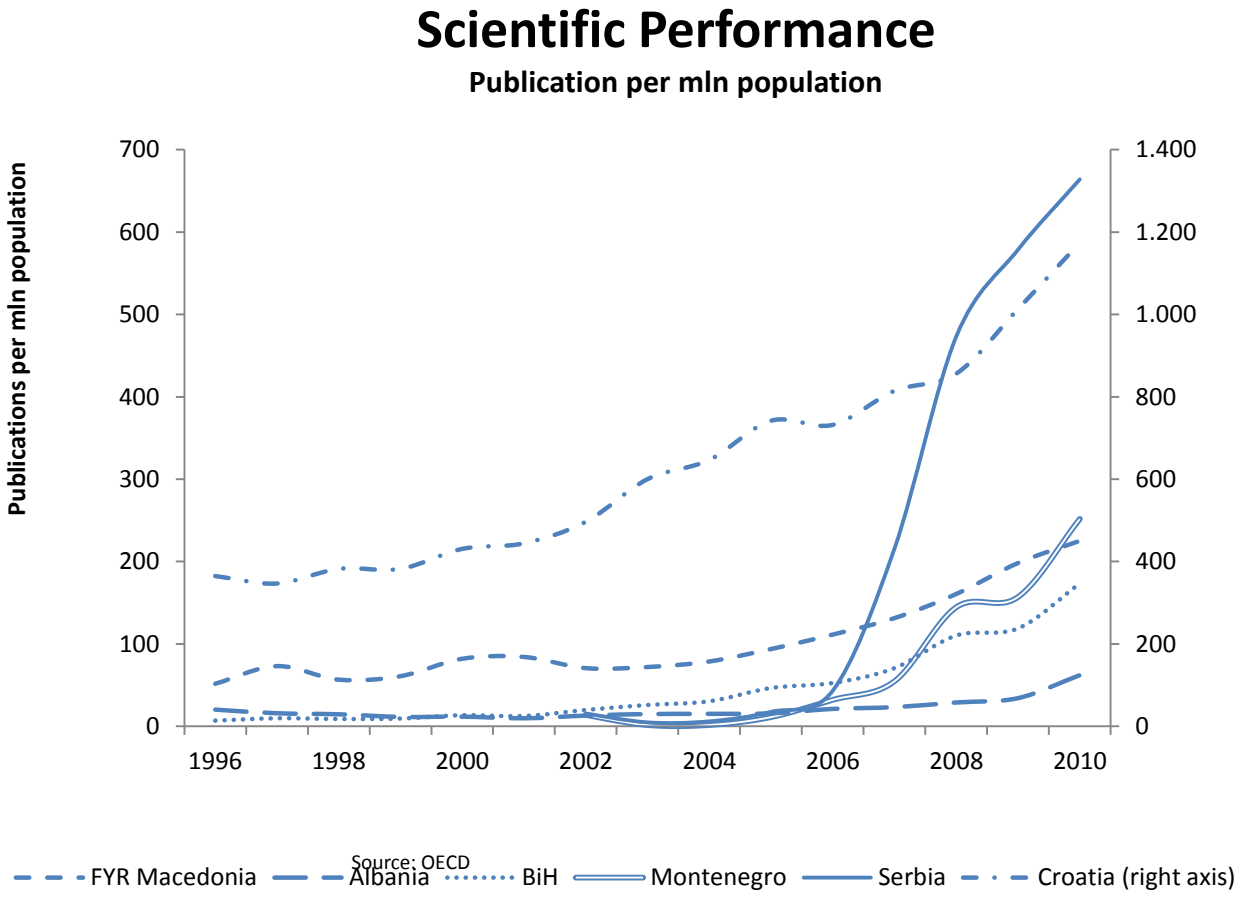
STATE OF RESEARCH AND INNOVATION
A Snapshot (2)

Low R&D efficiency development: GERD per triadic patent



STATE OF RESEARCH AND INNOVATION

A Snapshot (3)

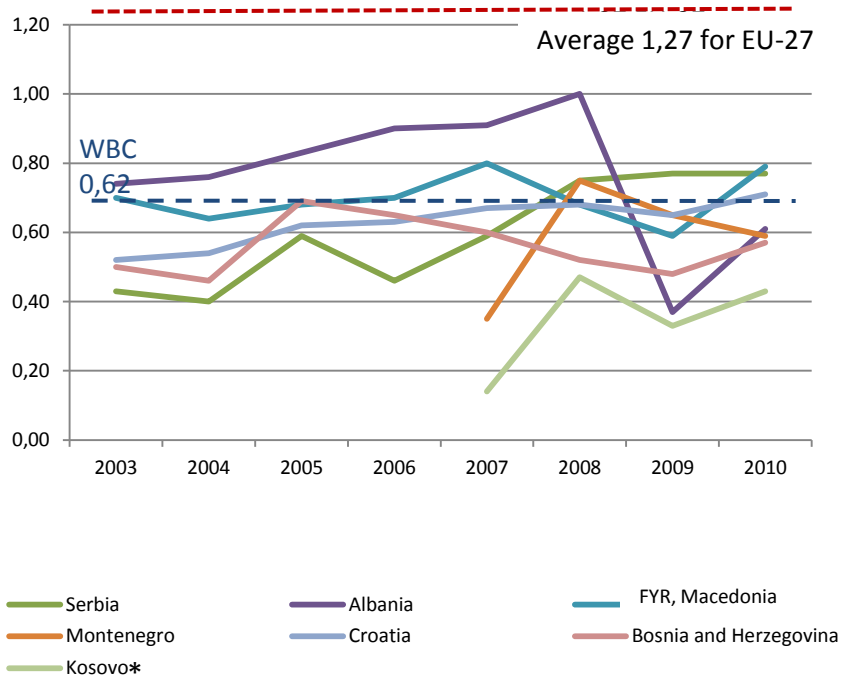


Source: OECD

STATE OF RESEARCH AND INNOVATION

A Snapshot (4)

Quality of research (citation impact)



(*) This designation is without prejudice to positions on status, and is in line with UNSC 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

GROWING POLICY AWARENESS…

During the last decade, WBCs have taken steps to improve RDI systems:

- **Scientific Diaspora Programs**: e.g. Albania's Action Plan on Mobility of Researchers (2011-2012); Croatia's 'Unity through Knowledge Fund' (UKF).
- In the face of deteriorating research infrastructure, countries in the region have tried to develop '**centers of excellence**' (Albania, Croatia, FYR Macedonia and Montenegro are currently investing in these initiatives).
- **Technology transfer programs** have been launched including policy reforms (higher education laws; e.g. Serbia), the creation of supportive infrastructure (Croatia and Serbia), and support to collaboration and business creation (Kosovo*).
- Schemes to promote **finance innovation** have also been introduced in recent years, but are still scarce: the Innovation Investment Fund in Serbia and BICRO's in Croatia. Kosovo* has been providing training courses to entrepreneurs and using voucher schemes.

(*) This designation is without prejudice to positions on status, and is in line with UNSC 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

…YET WITH OBSTACLES HINDERING POLICY EFFECTIVENESS

- **Resource limitations equals to small financial interventions**
- **Policy set-up conditions limit scope, scalability and effectiveness of national programs:**
  - Most reforms and policies have been essentially **partial**, in **small-scale** and **short-lived.**
  - **Policy fragmentation and limited coherence**
  - **Lack of a clear process for policy formulation and a results-oriented framework**
    - **These problems also effect donor's support to research and innovation in the region**
- **Complex agenda of reforms:**
  - **Technically** and **politically**,
    - E.g. Introducing performance based contracts in public research organizations

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WHY A REGIONAL STRATEGY FOR RESARCH AND INNOVATION ?
The rationale for regional co-operation

- **Shared interest and common concerns** to strengthen research and innovation, and move from a fragmented towards integrated 'knowledge' space:

  ➔ Economic geography, market size limitations

  ➔ A largely common vision about the reforms and policy challenges

- **Pooling regional research and innovation resources** to create a critical mass and synergies aiming to promote smart specialization of the Western Balkan economies.

- A **regional scientific specialization** consistent with smart specialization.

  ➔E.g. agriculture and biological sciences; medicine; and chemistry). shared by most economies, providing an opportunity to enhance research collaboration and maximize opportunities for innovation

REVEALED SCIENTIFIC ADVANTAGES IN SPECIFIC DOMAINS IN THE WESTERN BALKANS

Revealed scientific advantage, 2005-2009						
	Albania	BiH	Croatia	FYR Macedonia	Montenegro	Serbia
Agriculture & Biology	2.0	1.2	1.7	1.1	2.1	1.5
Earth & Planetary Sciences	3.3	0.9	1.4	0.9	1.1	0.5
Mathematics	0.8	1.1	1.2	1.4	1.0	2.0
Medicine	1.1	1.7	1.0	0.9	0.8	0.8
Physics & Astronomy	1.1	0.8	1.0	1.2	2.5	1.6
Veterinary	1.3	1.4	2.0	0.4	0	1.5

Revealed Scientific Advantage (RSA) is defined as the share of a country in documents in a given subject area , divided by the country's share of all documents published.

Source: Source: SJR — SCImago Journal & Country Ranks

THE GOAL AND OBJECTIVES

The overall objective of the Strategy is to strengthen the innovative capacity of the participating countries and increase the impact of research and innovation on economic growth and job creation.

To reach this goal, the Strategy will focus on achieving **three main intermediate outcomes:**

1) Stronger research-base (research excellence and productivity);

2) Effective research commercialization from public-funded research institutions and increased industry-science collaboration; and

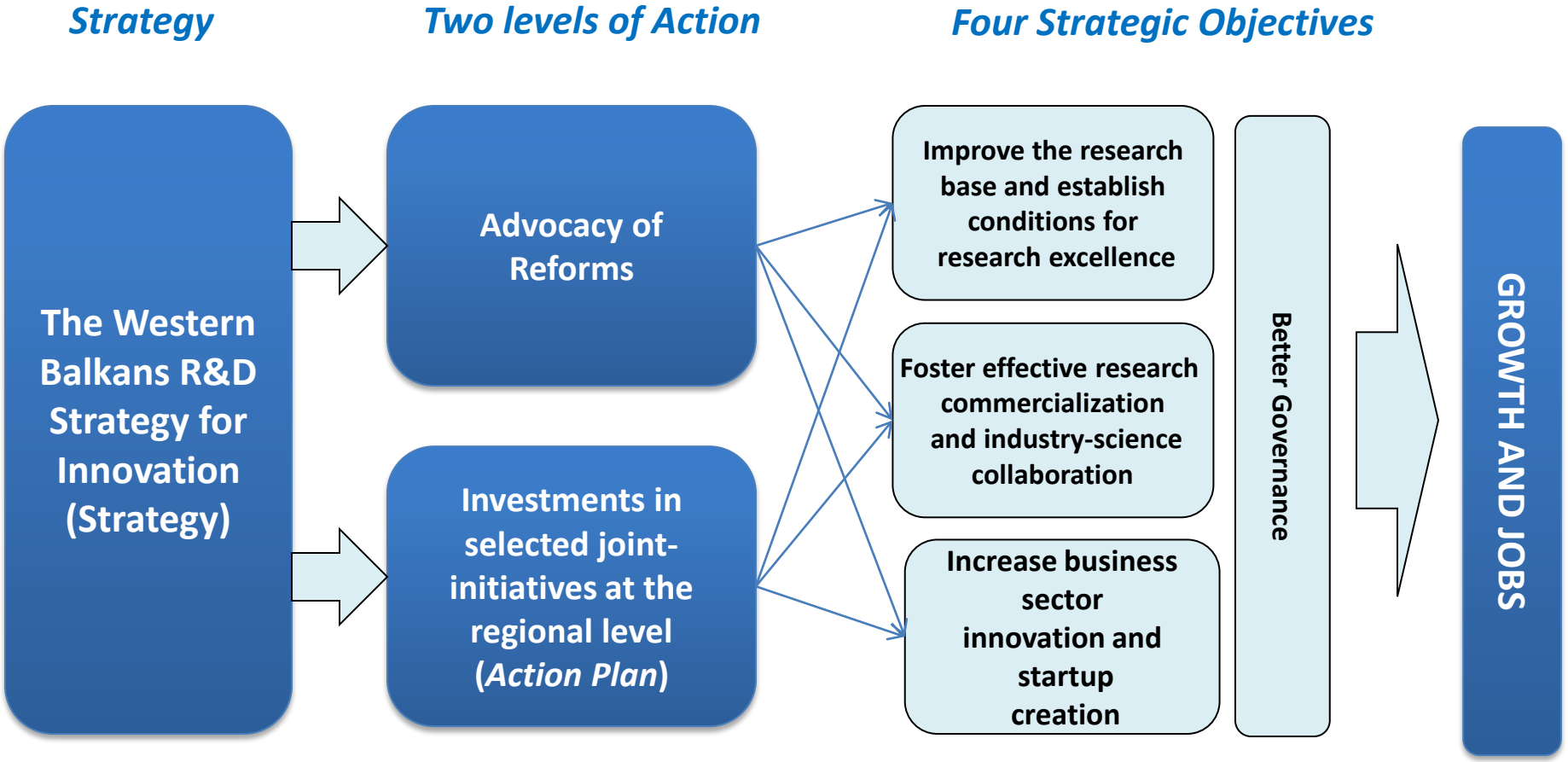
3) Innovation by the business sector and innovative firm creation

The Strategy emphasizes the need to improve the **overall governance of national innovation systems**, which include better management of public research organizations and better management of public policies (e.g. horizontal and vertical coherence).

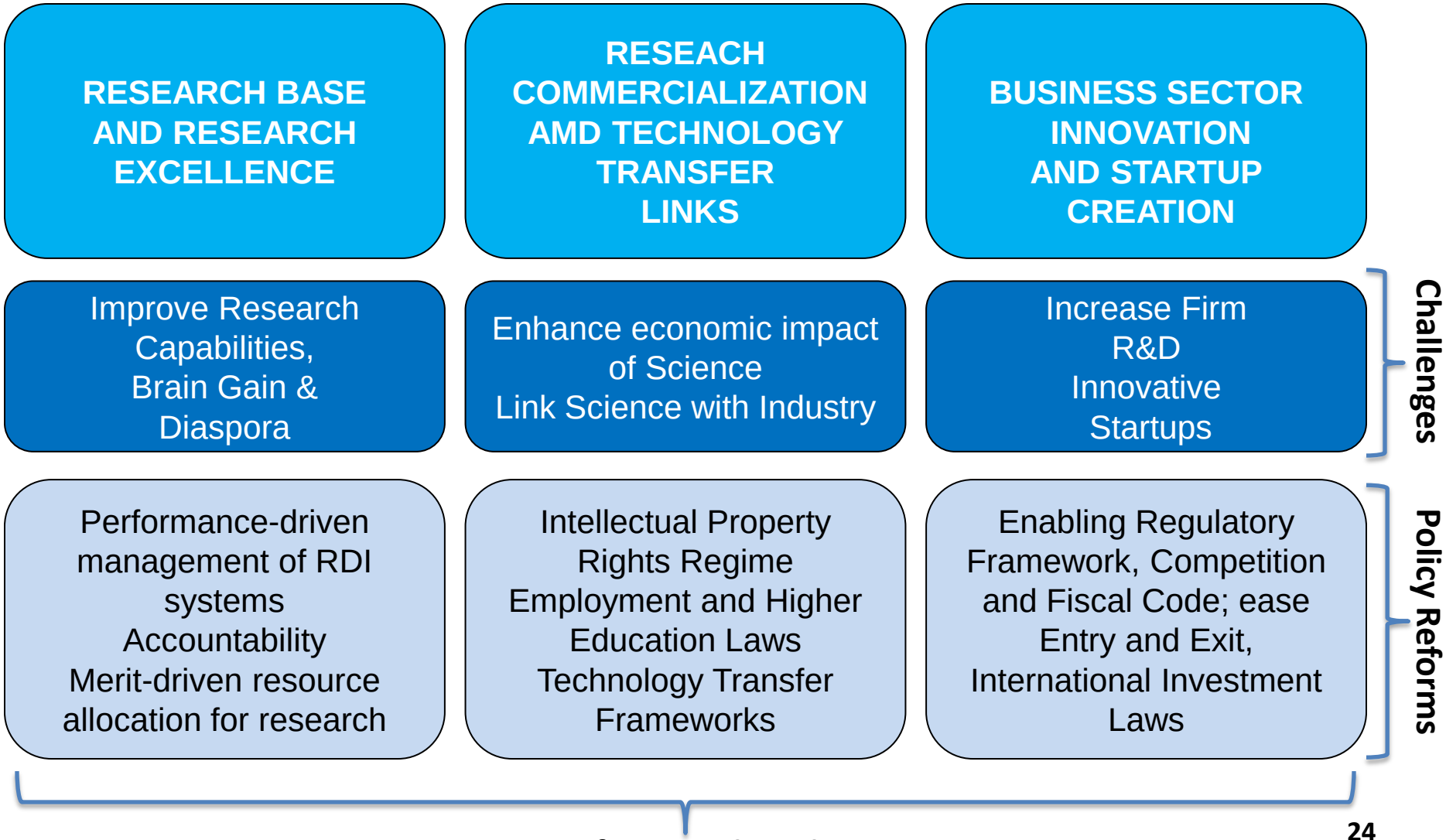
The Strategy will not replace – but **rather complement and encourage** – the strengthening of national innovation policies and reform of national innovation systems.

THE STRATEGY

A two pronged and results-driven approach to alleviate bottlenecks in research and innovation systems and reinforce policy governance in the WBCs



THE ADVOCACY OF REFORMS



JOINT INVESTMENTS

GOAL: TO CREATE AT REGIONAL LEVEL KEY CHARACTERISTICS OF SUCCESSFUL INNOVATION SYSTEMS

Stability of programs and policies (including predictability of funding);

Meritocracy (as the rule of the game for the research community);

Scale (avoiding duplication and reaching **appropriate critical mass in key sectors)**

Result orientation (including rigorous monitoring and evaluation for impact evaluation and learning).

THE PROPOSED REGIONAL INITIATIVES WILL CONTRIBUTE TO THE 5 STRATEGIC OBJECTIVES

A **research fund** to increase regional and international collaboration with the scientific **Diaspora** and expand opportunities for young researchers

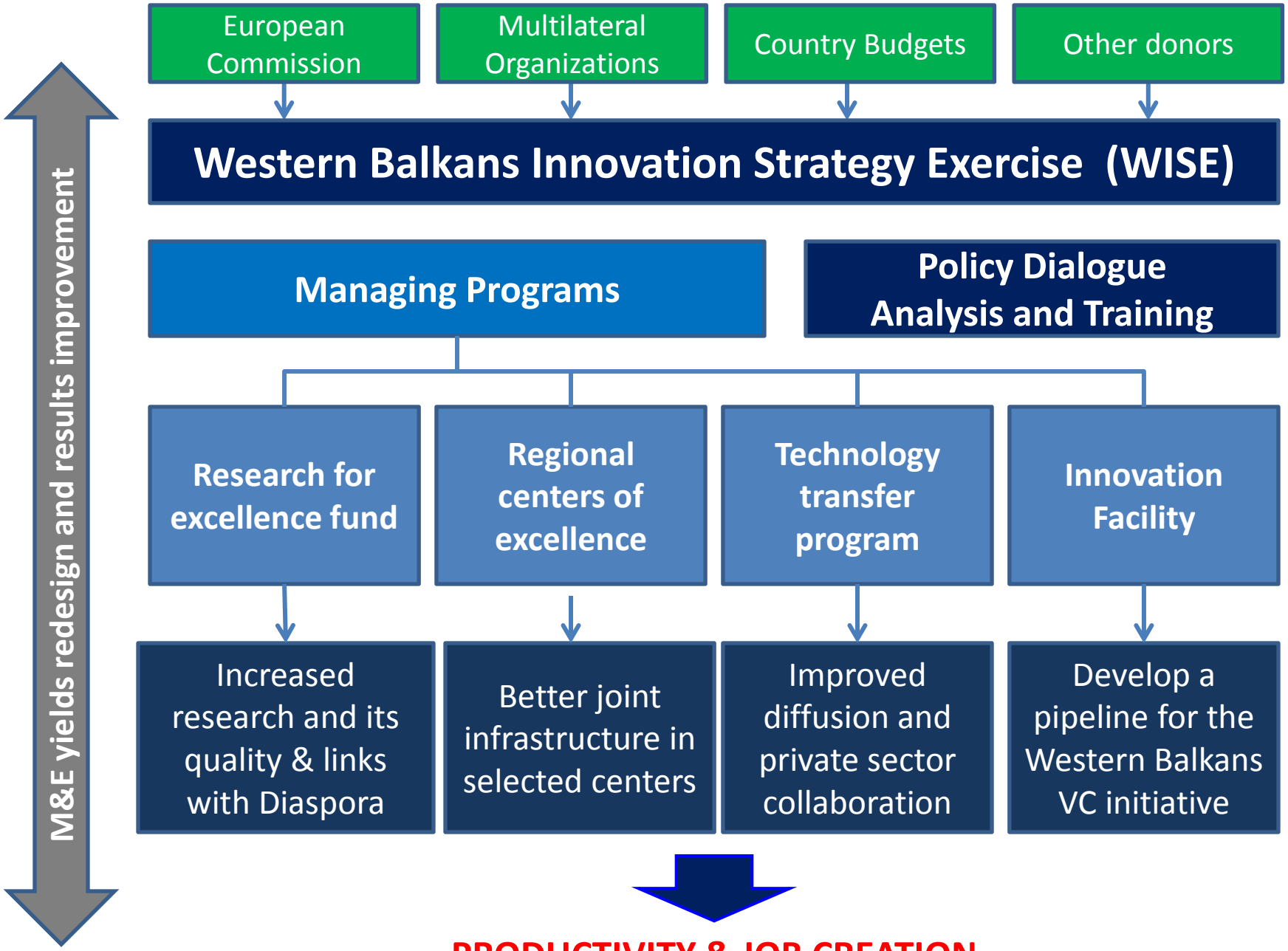
The creation of SELECTED **regional 'centers of excellence'** in selected fields – consistent with a strategy for smart specialization of the region,

A **technology transfer facility**,

An **early stage innovation facility**, complementing the support to be provided by the Western Balkan Enterprise Development and Innovation Facility (EDIF), and

A regional platform to supervise the implementation of these actions and promote policy reforms and systematic capacity building.

Estimated cost in a 4-year period: EUR 200 million.


European Commission
Multilateral Organizations
Country Budgets
Other donors
Western Balkans Innovation Strategy Exercise (WISE)
Managing Programs
Policy Dialogue Analysis and Training
Research for excellence fund
Regional centers of excellence
Technology transfer program
Innovation Facility
Increased research and its quality & links with Diaspora
Better joint infrastructure in selected centers
Improved diffusion and private sector collaboration
Develop a pipeline for the Western Balkans VC initiative
M&E yields redesign and results improvement
PRODUCTIVITY & JOB CREATION

EXPECTED OUTPUTS AND OUTCOMES

Planned outputs

- Report consolidating the findings in selected topics.
- An agenda of policy reforms with 'guidance notes' on the *'how to'.*
- Detailed description of 5 (?) regional initiatives (5 project-like, *'fiche type' documents)*

Expected outcomes (contribution)

- Reforms in the research and innovation sector advanced at national level
- Improved quality of public expenditures in research and innovation.
- Better integration to the European Research Area
- Strengthened research excellence and productivity
- Faster technology transfer and better science industry collaboration
- More young and innovative startups

SOME NEXT STEPS

NEXT STEPS

Main upcoming events:

- **March, 2013: 5th Advisory Body Consultation.**
- **Summer, 2013: Presentation of RDI Strategy and Action Plan.** A high-level event to present the Strategy and Action Plan and seek endorsement by the ministries of beneficiary countries .

Forthcoming reports & analysis:

- The State of Scientific Performance of the WBCs: An analysis based on bibliometrics by SCIMAGO.
- Deepen the country analysis (drafting consultants)
- Legal assessment of IPR framework for public research organizations (UN WIPO);
- Survey of research infrastructure and technology transfer (Techno-polis Turkey);
- Notes: (1) Smart Specialization in WBC; (ii) The Potential for clean-tech in WBC.