

# Regional Innovation Impact Assessment Framework for universities

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# JRC facts and figures



**€ 386** million Budget annually,  
plus **€ 62** million earned  
income



**6** locations in 5 Member  
States: Belgium,  
Germany, Italy, the  
Netherlands, Spain

**42** large scale research  
facilities, more than 110  
online databases



**83%** of core  
research staff  
PhD's

**30%** of activities in policy  
preparation,  
**70%** in implementation

**+400** instances of support  
to the EU policy-maker annually



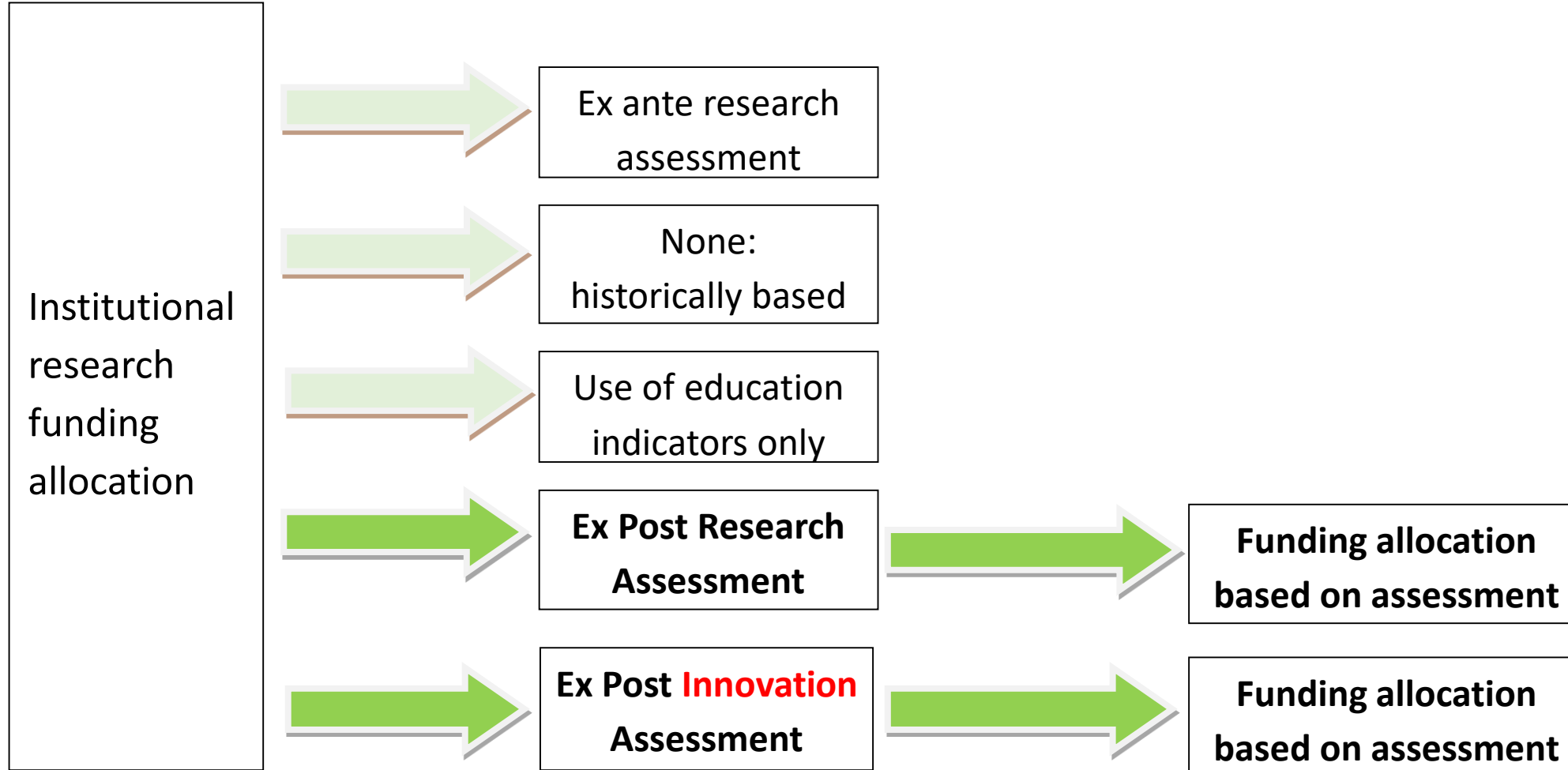
**Over 1,400**  
scientific  
publications p.a.

# Lamy Report: European university label

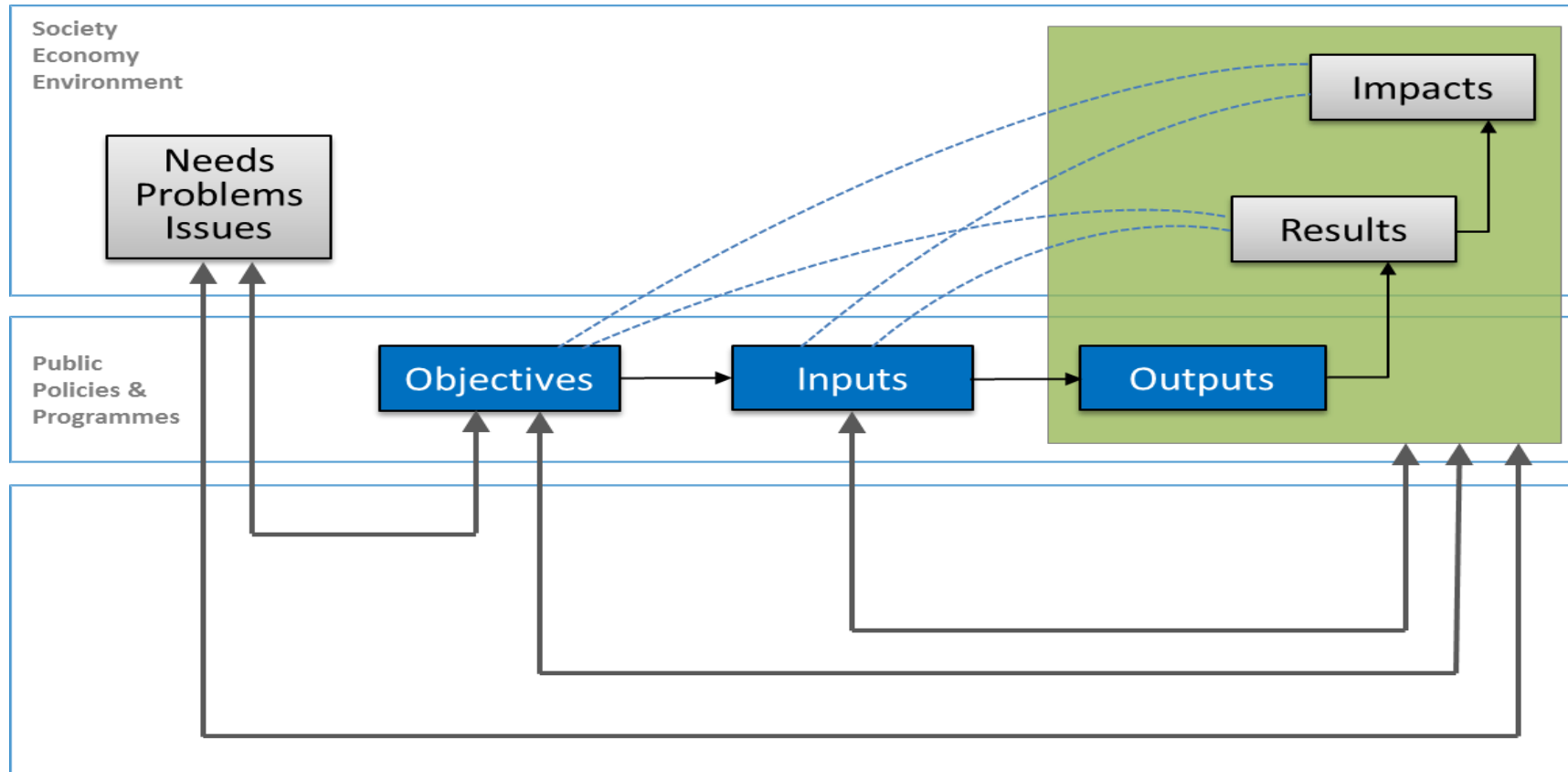


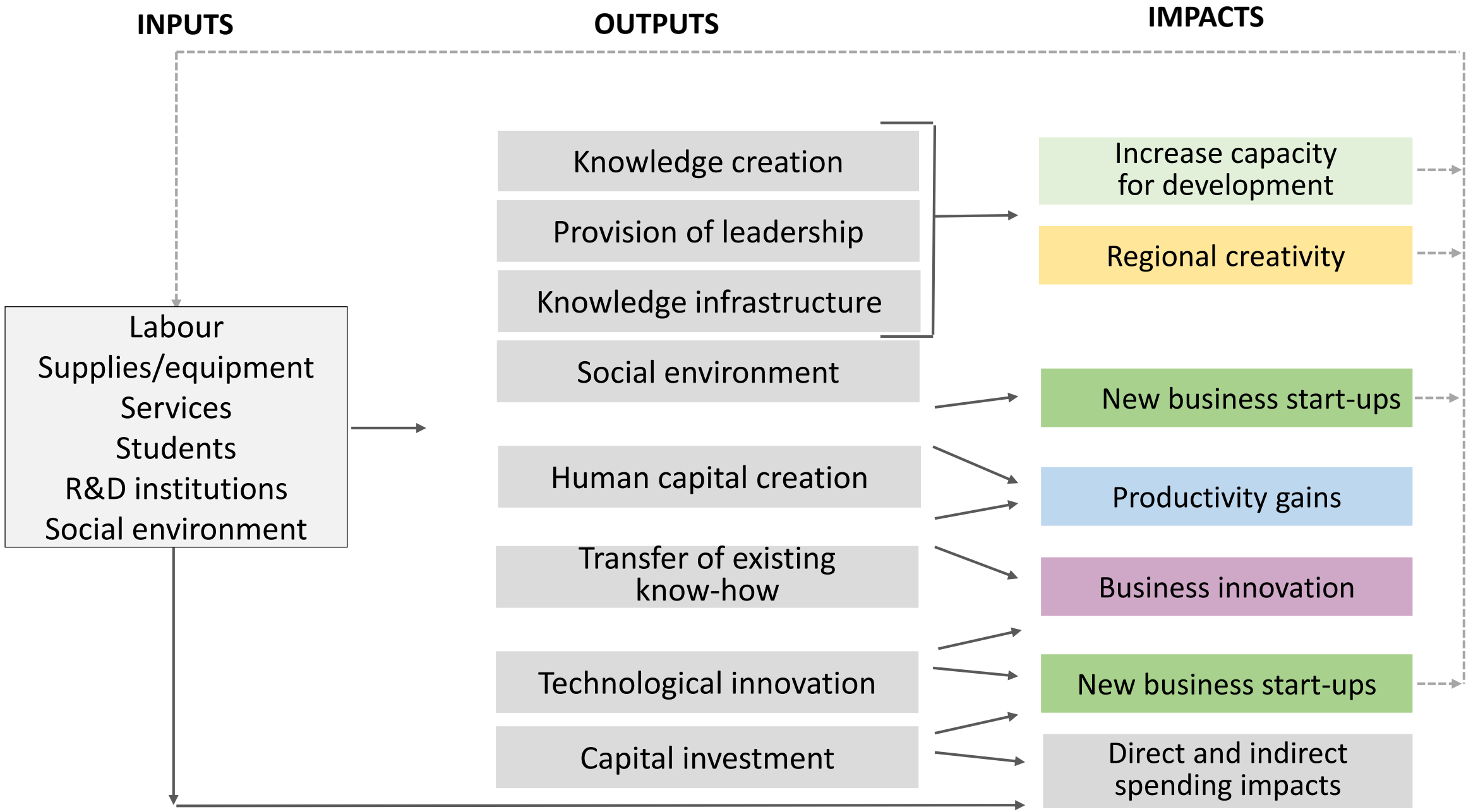
*The EU could offer top-up institutional funding tied to modernization and innovation performance (Lamy et al, 2017)*

# Performance based funding of universities



# Innovation Impact of Universities

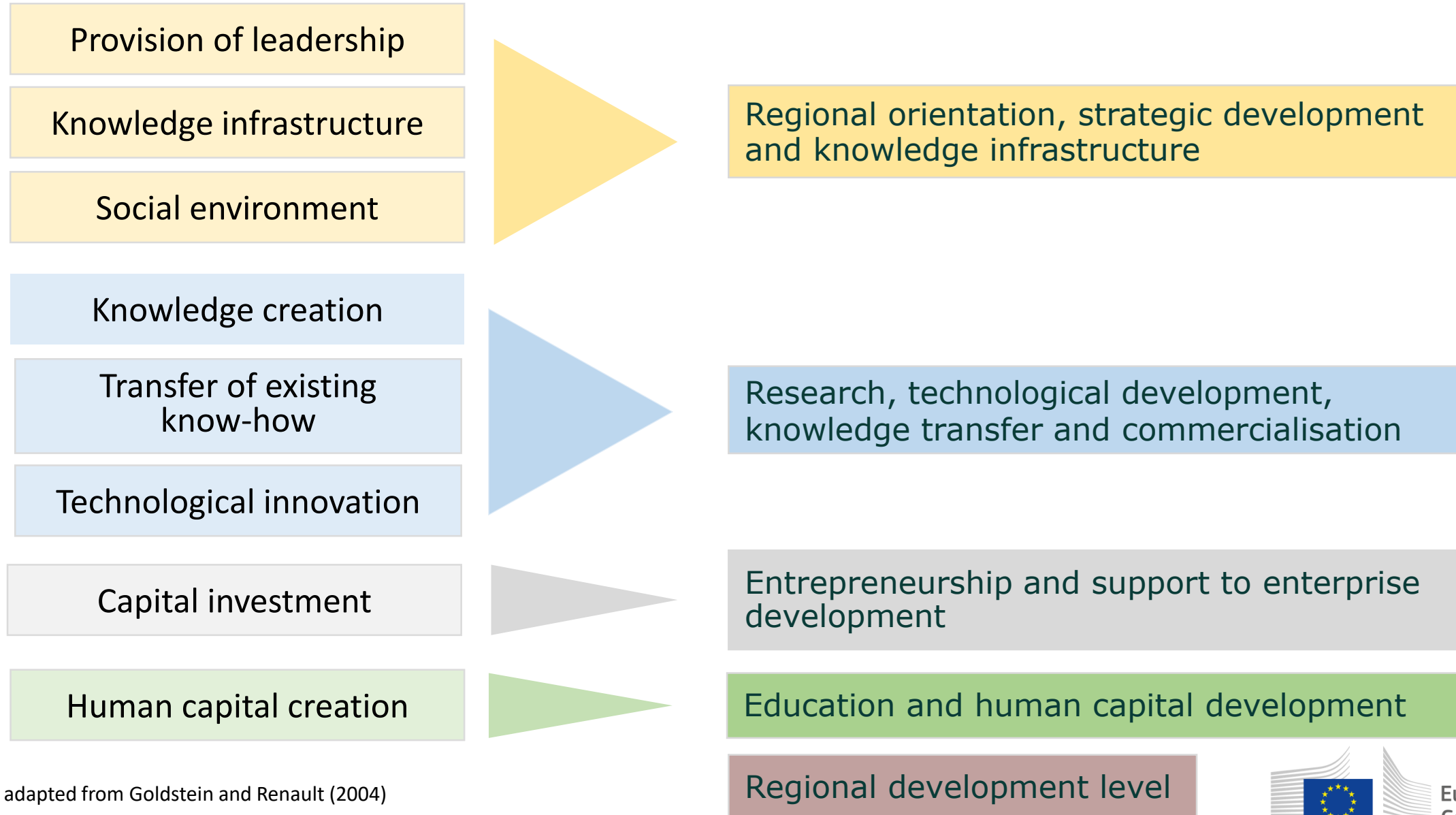




Source: adapted from Goldstein and Renault (2004)

# Outputs/Impacts

# Indicator portfolio



Source: adapted from Goldstein and Renault (2004)

## OUTPUTS/IMPACTS

## Indicator portfolio

Provision of leadership

Knowledge infrastructure

Social environment

Regional orientation, strategic development and knowledge infrastructure

Tailor made RIA profile could feed into a university level case study: a "narrative with numbers"

Capital investment

Human capital creation

Entrepreneurship and support to enterprise development

Education and human capital development

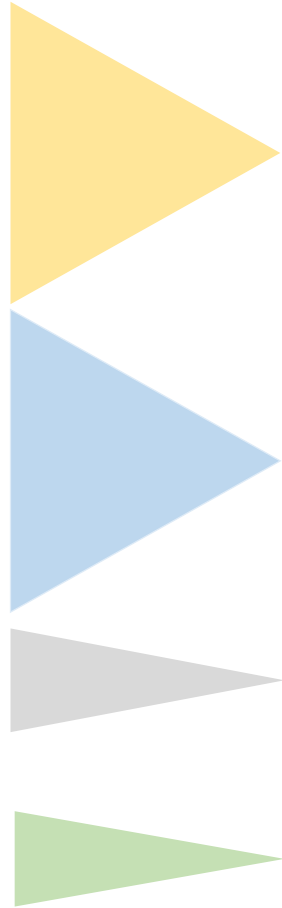
Regional development level

Source: adapted from Goldstein and Renault (2004)



# Indicator boxes

University performance



Regional orientation, strategic development and knowledge infrastructure

examples

Profiling related to regional needs and specialisation

Research, technological development, knowledge transfer and commercialisation

R&D related income from private sector

Entrepreneurship and support to enterprise development

Student start ups / spin offs

Education and human capital development

% of students enrolled in entrepreneurship courses

context

Regional development level

e.g. Regional Innovation Scoreboard

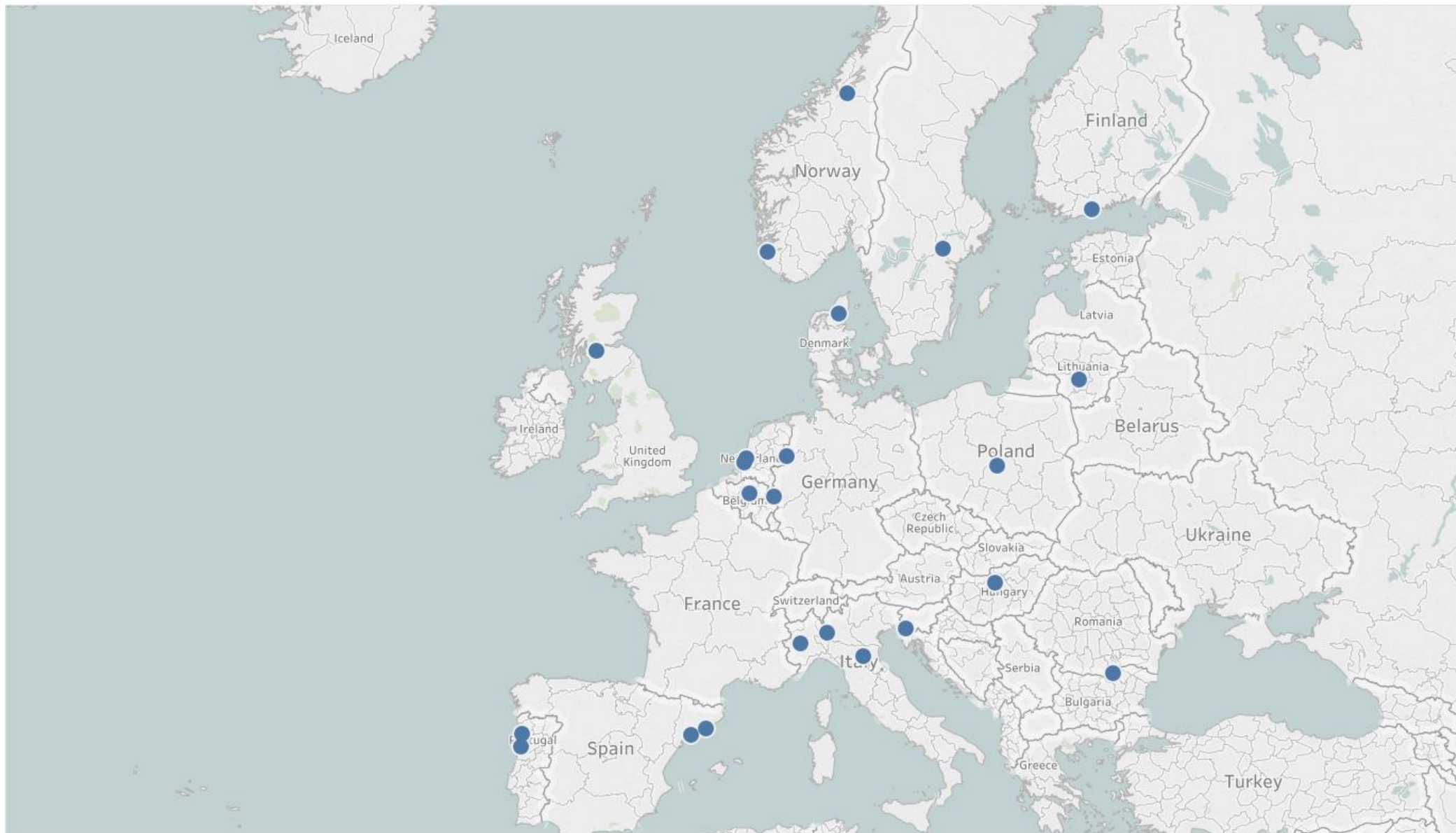
# Innovation Impact of Universities

## General considerations

- Performance systems may:
  - Assess absolute innovation performance
  - Performance relative to regional performance
  - Improvement of performance (progress)
  - Performance with respect to pre-determined objectives (contracts)
- Final design dependent on the framework through which it is implemented (e.g. national frameworks, FP9 or ESIF)

# Case studies being developed using JRC framework

## JRC case studies



# Case Studies next steps

- 1<sup>st</sup> workshop October
- 2<sup>nd</sup> workshop November
- High Quality case studies published on JRC RIO website
- Book project



# Thank you

Questions and inputs/feedback?

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# Examples use of U-Multi Rank in RIA

Knowledge transfer indicators	Regional engagement indicators
<ul style="list-style-type: none"><li>• Income from private sources</li><li>• Co-publications with industrial partners</li><li>• Patents awarded</li><li>• Co-patents with industry</li><li>• Publications cited in patents</li><li>• Income from private sources</li><li>• Co-publications with industrial partners</li><li>• Patents awarded (size-normalised)</li><li>• Industry co-patents</li><li>• Spin-offs</li><li>• Income from continuous professional development</li></ul>	<ul style="list-style-type: none"><li>• Student internships in the region</li><li>• BA theses with regional organisations</li><li>• MA theses with regional organisations</li><li>• Regional joint publications</li><li>• Income from regional sources</li><li>• BA graduates working in region</li><li>• Student internships in region</li><li>• Regional joint publications</li><li>• Income from regional sources</li><li>• MA graduates working in region</li><li>• Graduates employment in the region</li><li>• Strategic research partnerships in the region</li></ul>

*In red the KT indicators that appear in both RIA and UMR*

# Indicator Box A: Education and human capital development

Inputs	'Results' indicators and 'Impact' indicators
<ul style="list-style-type: none"> <li>• Grants and scholarships for students from local/regional private sector</li> <li>• Credit bearing courses established through a direct request or with the involvement from non-academic local/regional organisations;</li> <li>• Tailor-made academic programs in partnership with businesses</li> <li>• Participation non-academic agents in curricula design</li> <li>• Joint PhD Programmes and industry sponsorship of post graduate education</li> <li>• Entrepreneurship teaching and learning; skills development</li> <li>• Inter-sectorial mobility of teaching staff</li> <li>• Labour outcomes and student satisfaction post-graduation</li> <li>• Regional student retention</li> <li>• Life-long learning and non-academic education</li> <li>• Graduate tracking of salaried employment</li> </ul>	<ul style="list-style-type: none"> <li>• Entrepreneurship education: number of students enrolled in entrepreneurship courses as % of total students</li> <li>• the number of students attending internship</li> <li>• Number of faculty members taking a temporary position in a non-academic organisations;</li> <li>• Number of employees from non-academic organisations taking temporary teaching and/or research positions at university</li> <li>• Labour outcomes and postgraduate labour surveys that measure satisfaction with knowledge gained at university</li> <li>• Student internships in the local region: out of the students who did an internship, the percentage where the internship was with a company or organisation located in the region</li> <li>• BA theses with local/regional organisations: degree theses of bachelor graduates done in cooperation with organisations (industry, public, non-profit organisations) in the region</li> <li>• MA theses with local/regional organisations: degree theses of master graduates done in cooperation with organisations (industry, public, non-profit organisations) in the region</li> <li>• % academics teaching in courses required by local/regional firms; or income received from non-credit bearing teaching and associated activities for local/regional clients</li> <li>• Graduate employment: percentage of graduates working in the region after graduation</li> <li>• Wages of university graduates (3-5 years after graduation)</li> </ul>

# Box B: Research, technological development, knowledge transfer and commercialisation (with involvement of local or regional partners)

Inputs	'Results' indicators and 'Impact' indicators
<ul style="list-style-type: none"> <li>• Research activities</li> <li>• Knowledge and technology transfer</li> <li>• Consultancy and contract research</li> <li>• Collaboration with regional private partners</li> <li>• Inter-sectorial mobility of research/teaching staff</li> <li>• Industry funded research positions</li> <li>• Shared R&amp;D facilities</li> <li>• International staff</li> </ul>	<ul style="list-style-type: none"> <li>• R&amp;D related income from local/regional private sector</li> <li>• Resources generated from contract research and consultancy work local/regional industry</li> <li>• Strategic research partnerships in the region</li> <li>• Regional partnerships of the Tech Transfer Office</li> <li>• Patent (applied/granted), licensing income from local/regional industry</li> <li>• Regional joint research publications within local/regional industry</li> <li>• Shared R&amp;D facilities with local/regional industry</li> <li>• Mobility of university staff to or from local business enterprises</li> <li>• Research staff with a dual affiliation at local/regional business enterprise</li> <li>• Industrial PhDs that involve local/regional industry; % of PhDs undertaken jointly with private actors or the number of postgraduate students directly sponsored by local/regional industry R&amp;D prizes and innovation prizes awarded by local/regional industry</li> <li>• Professorships or other university positions (partially) funded by local/regional industry</li> <li>• Public private co-publications</li> </ul>



# Indicator Box C: Entrepreneurship and support to enterprise development (within the local region or with involvement of local or regional partners)

Inputs	'Results' indicators and 'Impact' indicators
<ul style="list-style-type: none"><li>• <b>Industry liaison offices, knowledge and technology transfer offices;</b></li><li>• <b>Business incubators, and accelerators</b></li><li>• <b>Access to seed funding and venture capital</b></li><li>• <b>Science park, technology park or innovation hub</b></li><li>• <b>Other business-related infrastructure, facilities and services</b></li></ul>	<ul style="list-style-type: none"><li>• University spin-off and start-up companies (number of, employment generated, turnover)</li><li>• Student start-ups (number of, employment generated, turnover, private funding raised, nature of university support)</li><li>• Investments of industry or public sector partners</li></ul>

# Indicator Box D: Regional orientation, strategic development and knowledge infrastructure (with involvement of local, regional, national or foreign partners)

Inputs	'Results' indicators and 'Impact' indicators
<ul style="list-style-type: none"><li>• Profiling to reflect regional specialisation and objectives</li><li>• Involvement in regional innovation strategy setting</li><li>• Regional knowledge infrastructure;</li><li>• Capacity for regional socioeconomic development</li></ul>	<ul style="list-style-type: none"><li>• Income from regional sources: proportion of external research revenues – apart from government or local authority core/recurrent grants – that comes from local/regional sources (i.e. industry, private organisations, charities).</li><li>• Joint agenda setting with regional partners</li><li>• Profiling strategies (PR and marketing) related to regional needs and specialisations</li><li>• HRM and staff performance assessment related to regional needs and specialisations</li><li>• Formation of social ties and networks with local/regional stakeholders and partners</li><li>• Contributions to the creation of a local/regional entrepreneurial ecosystem</li><li>• Contribution to embedding the regional innovation system in international R&amp;D networks (international co-publications; participation in international research projects; attraction of foreign staff)</li><li>• Contribution to the investment climate (attraction of private investments in the region e.g. by foreign or national firms)</li></ul>

# Regional context indicators

Inputs	'Results' indicators and 'Impact' indicators
<ul style="list-style-type: none"><li>• <b>Framework conditions (human resources, attractive research systems, innovation friendly environment)</b></li><li>• <b>Investments (finance and support; firm investments)</b></li><li>• <b>Innovation activities (innovators, linkages and intellectual assets)</b></li><li>• <b>Employment and sales impacts</b></li></ul>	<ul style="list-style-type: none"><li>• Percentage population aged 30-34 having completed tertiary education</li><li>• Percentage population aged 25-64 participating in lifelong learning</li><li>• International scientific co-publications per million population</li><li>• Scientific publications among the top-10% most cited publications worldwide as percentage of total scientific publications of the country</li><li>• R&amp;D expenditure in the public sector as percentage of GDP</li><li>• R&amp;D expenditure in the business sector as percentage of GDP</li><li>• Non-R&amp;D SME innovation expenditures as percentage of total turnover</li><li>• SMEs introducing product or process innovations as percentage of SMEs</li><li>• SMEs introducing marketing or organisational innovations as percentage of SMEs</li><li>• etc</li></ul>