

Nurturing Talent

Reinforcing the Interaction between
Research, Innovation and Education

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FFG, Austrian Research Promotion Agency

INNOVATING INNOVATION

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It is the ability of a country to nurture talent through education and skill development at all stages of the human life cycle that creates wealth!

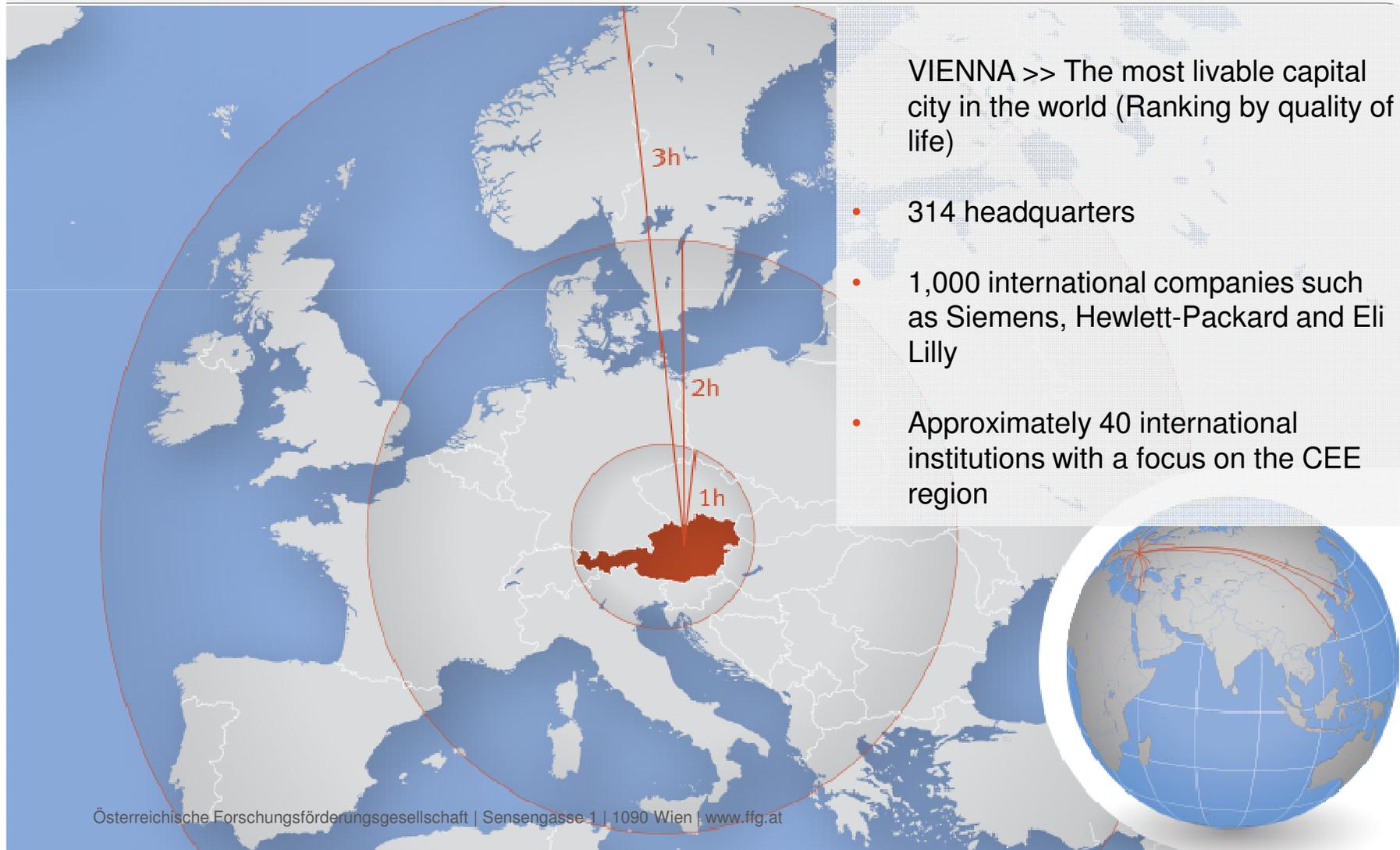
AUSTRIA

>> LOCATED IN THE HEART OF EUROPE ...

All of Europe with in reach in 3 hours



FFG

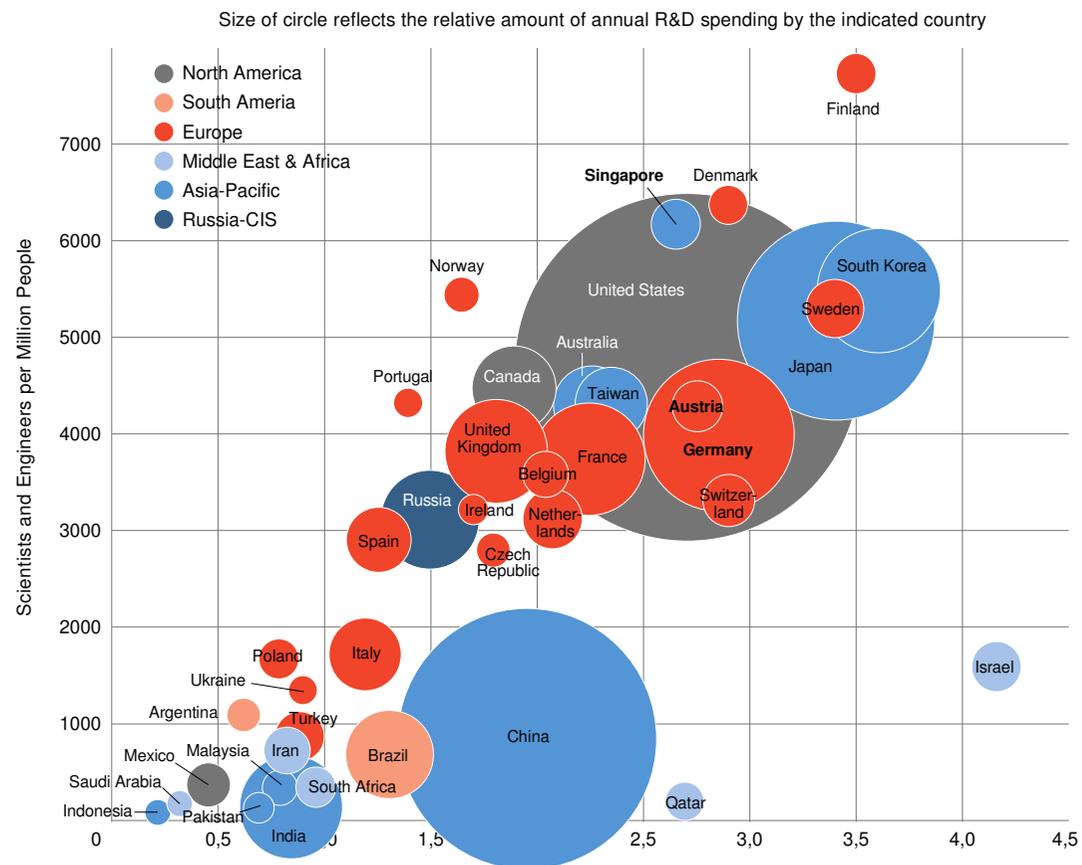


AUSTRIA: RESEARCH INTENSIVE COUNTRY



FFG

- Singapore
GERD: 2,2%
- Austria
GERD: 3,0%
- Germany
GERD: 3,0%



Source: Battelle, R&D Magazine, International Monetary Fund, World Bank, CIA Fact Book, OECD R&D as a percentage of Gross Domestic Product

AUSTRIA

>> EXCELLENT EDUCATION POSSIBILITIES



Qualified Staff & Low youth unemployment through:

- Dual education system
- 22 public universities, 11 private universities, 21 universities of applied sciences



The Human Capital Report 2015 (WEF):
shows:
Austria improved ranking by two ranks:
ranks 11 worldwide

FFG - AUSTRIAN RESEARCH PROMOTION AGENCY



The **Austrian Research Promotion Agency** (FFG) is the national funding agency for applied research and development in Austria

Stakeholder: Ministry for Infrastructure and Innovation and Ministry for Science, Research and Economy

Funding 2014: 617 million € (850 Mio. S\$)
Employees: 250 (227 FTE)
Projects 2014: 3.000 projects with
6.000 partners

>> Access to the entire Austrian R&D Community!

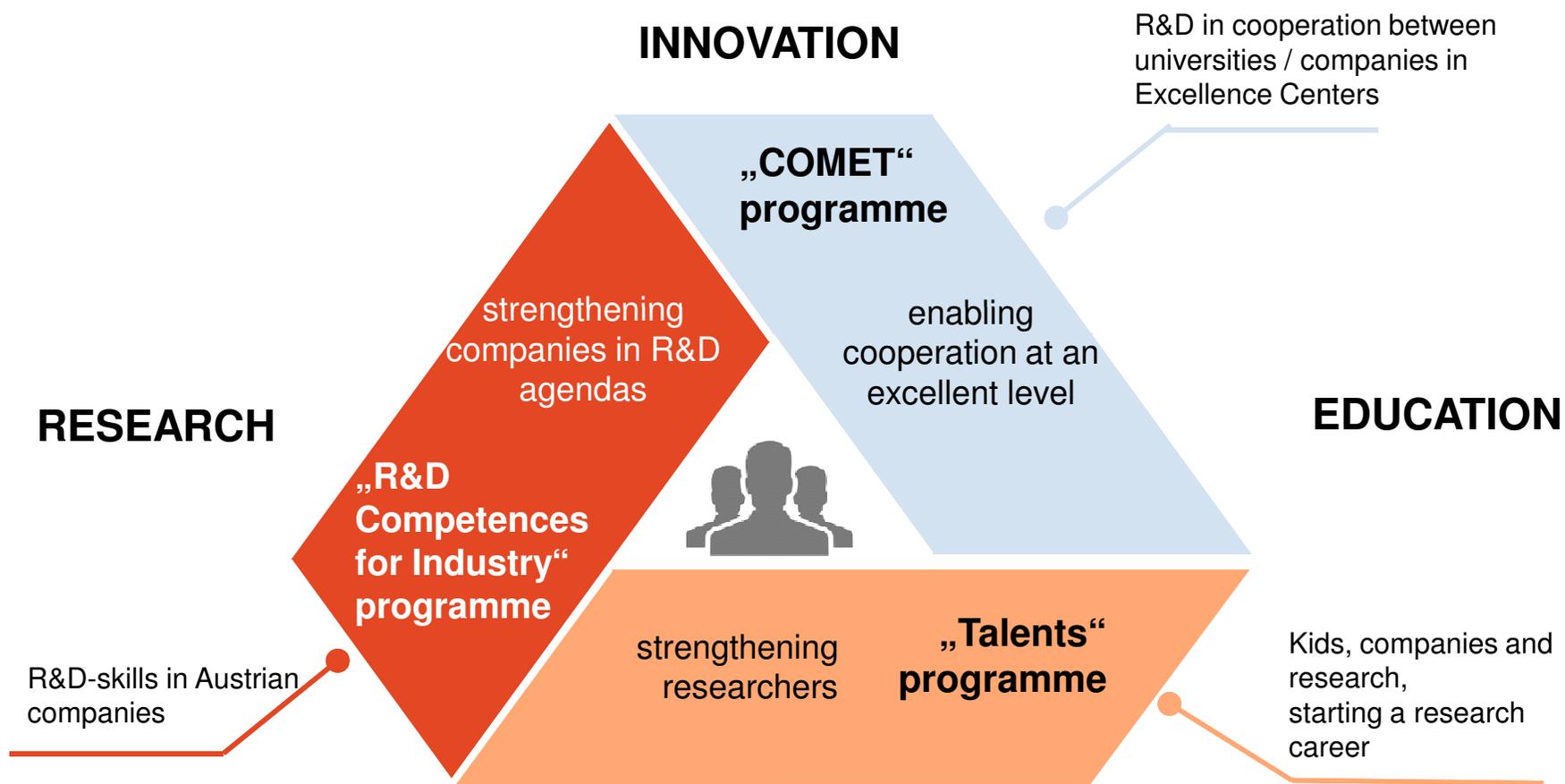


Question

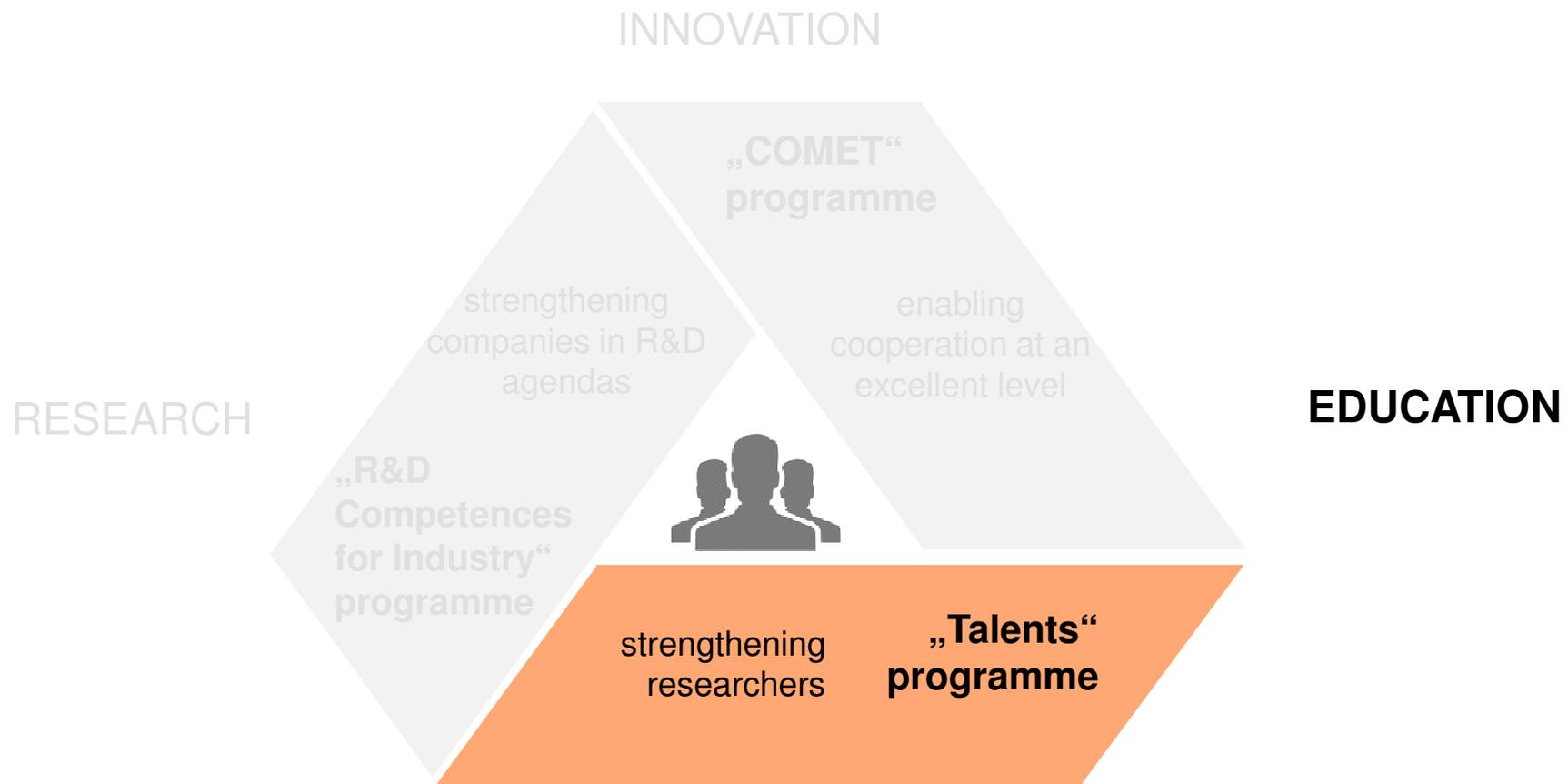


How can we unlock latent talent?

THE KNOWLEDGE TRIANGLE



TALENTS programme



TALENTS PROGRAMME

DISCOVER >> BENEFIT FROM >> FIND TALENTS



Programme goals:

- Encourage more **young people** for a career in R&D in Austria through eg **Internships for Pupils**
- Create **equal opportunities** for female talents, improve women's access to a career in R&D and enhance their career prospects
- Support **(inter)national researchers** in their career eg **Career Grants for Interviews, Relocation and Dual Careers in Applied Research**



SUCCESS STORY: TALENTS REGIONAL



The **Austrian Space Forum (OeWF)**, the **University of Innsbruck** and **135 pupils of four Tyrolean schools** developed a prototype of a Mars-space suit-simulator „**Aouda.X**“.

Aouda simulates the main restrictions which a space suit would show on Mars.

In addition to the technical and scientific findings the pupils gained experience in project management, media activities and interdisciplinary teamwork.



TALENTS PROGRAMME - OUTCOME AND IMPACT OF THE MID-TERM EVALUATION

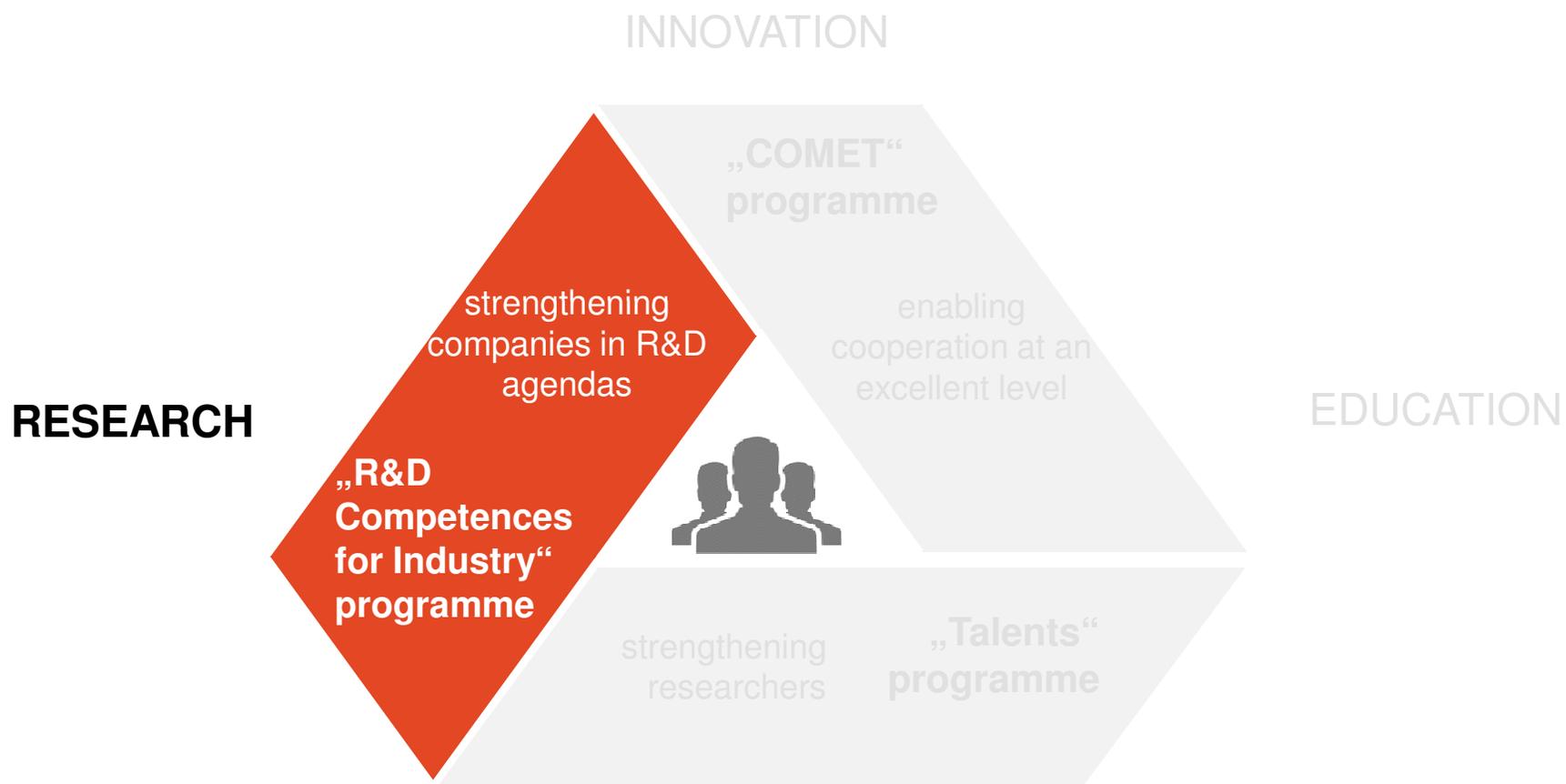


Synthesis (period under review: 2011 – 2013)

- **All career steps** are **covered** and the sub-programmes complement each other like a “**funding chain**”.
- Almost 1.200 organisations have benefited from the funding portfolio: 50% enterprises, 17% universities or universities of applied sciences and 8% non-university research institutions.
- 12% of the beneficiaries used two or more sub-programmes, 33% received several fundings within one sub-programme.
- The programme seems to be a “**starter programme**” with its partly rather **low-threshold offers** (especially the internships).



R&D COMPETENCES FOR INDUSTRY



R&D COMPETENCES FOR INDUSTRY

- The programme **supports the industry**, primarily **SMEs**, in raising the **qualification** of its innovation and R&D staff.....
- ...and so to **strengthen the innovation competence** in the company.
- All projects are applied and conducted by consortia based on **co-operations** between **companies and universities/ universities of applied science**.
- Together they design and perform the qualification measures that are **customized to the needs of** the participating **companies** and the selected employees.



OUTCOME AND IMPACTS 2011-2014

RTDI COMPETENCES FOR INDUSTRY



competitive advantage through.....

–new innovation competences and skills

- new technologies / internal processes
- new business areas
- new products / services
- new communication opportunities

–new networks

- ongoing exchange of knowledge
- flagship project
- joint products

–new knowledge for universities

- industry R&D „hot topics“
- implementation industry-based courses
- industry cooperation partners



A SUCCESS STORY

Qualification Network GREEN ACTIVE HOUSE



Goals:

- I. to set up a Curriculum with the three topics: greening of buildings, building physics and Energy & Technology
- II. to qualify participating companies in different branches working on the same project



Consortium:

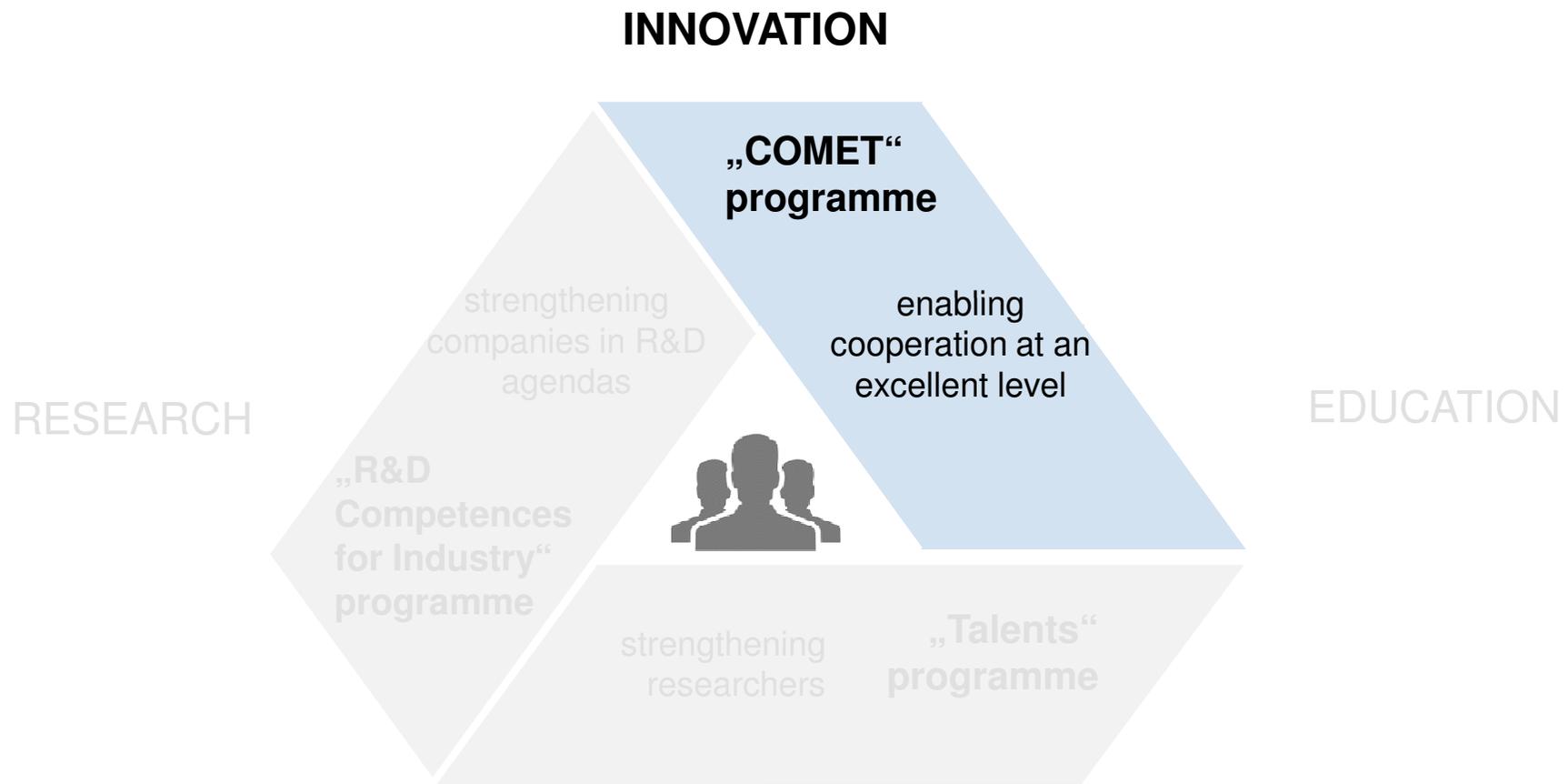
- University of natural resources and life sciences, Vienna
- Technical University Vienna, Institute of Building Construction and Technology and
- 14 Austrian SMEs (e.g. landscape designers, architects, construction industry, power engineering industry)

Outcome:

- flagship project „Sonnenplatz Großschönau“ in Lower Austria
- greening of walls and roofs based on new technologies
- providing consulting and trainings



© University of natural resources and life sciences



OBJECTIVES OF THE COMET PROGRAMME



FFG

- Strengthening the long-term research co-operation between science and industry in top-level research
- Establish and securing technological leadership of companies
- Initiating new scientific and technological developments
- Bundling of players by using thematic synergies
- Opening up to international participation
- Strengthening of human resources including gender aspects



A COMET SUCCESS STORY

Competence Center for Wood Composites and Wood Chemistry



Research Program

Wood-Composites & Technologies, Wood Materials Research, etc.

Key Data

Duration: 7 years

Total COMET Volume: 31,15 Mio. Euro

Funding Quota: 45 %

Total FTE: 91

Company Partners: 25

Scientific Partners: 4

Contact: www.wood-kplus.at

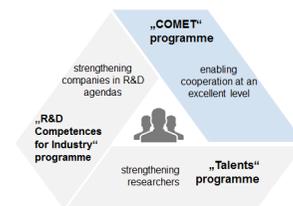


Some of the Goals

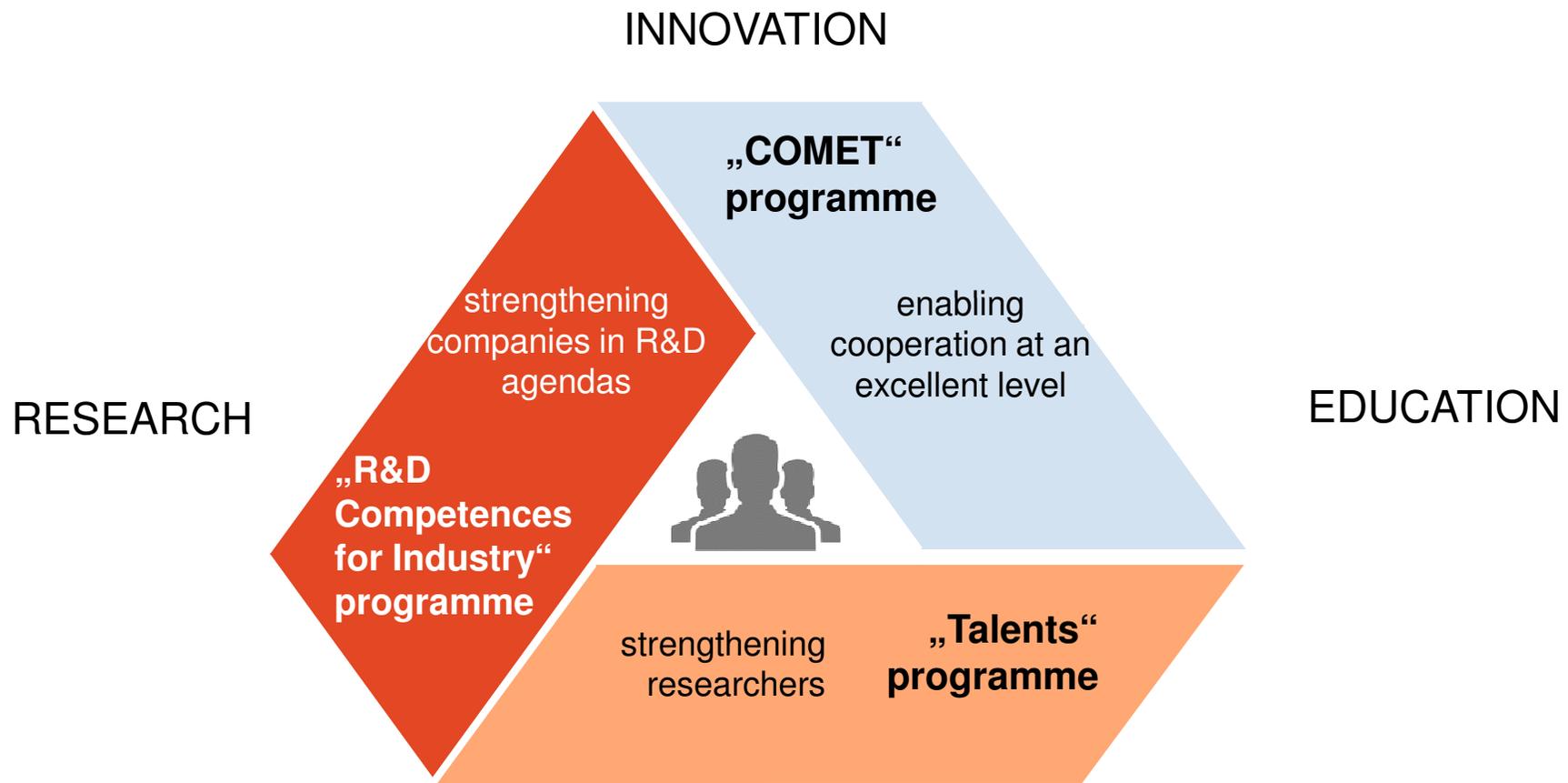
- Excellence in wood-based materials and processes R&D
- Transfer basic and applied research to the technology level
- Strengthen academic qualification programs and training by partner universities (i.e. **PhD's**).
- Achieving breakthroughs in R&D, bringing “green materials” and new bio-based products and technologies towards market.

Outcome

- Total number of publications in relevant journals: > 820
- Total finished PhD: 31
- Total Master Thesis: 70
- Number of internships: 130



THE KNOWLEDGE TRIANGLE



FOR NURTURING TALENT ...



... **A bundled variety of activities is necessary** to make the interaction between research, innovation and education **successful**

- The **cooperation** between the **scientific community and industry** is essential to enable innovation
- Medium-term to long-term research programmes **jointly defined** by science and industry create **future opportunities for scientific and technical personnel** and gain **outstanding scientific quality** and **high industrial relevance**
- There is **no excellent research without excellent researchers**



Talent, not capital is the key factor linking innovation, competitiveness and growth in the 21st century!

TALENTS - OUTCOME AND IMPACT OF THE MID-TERM EVALUATION 2/3



Possible fields for interventions

- Internships for Pupils: More attention should be given towards pupils having not considered studies of natural sciences or technology -> implemented in the call 2015
- Talents regional: Due to the specific challenges with view to the coordination of the many project partners, an increase of the budget is suggested. -> implemented in the call 2015
- FEMtech Career: There should be an easier offer for a first step to implement equal opportunities, to reduce the barriers for newcomer and SME. -> New designed call FEMtech Career-Check for SME 2015
- FEMtech Internships for Female Students: Factors that increase the motivation to stay in this field in this case the internship – seem to be crucial to counteract the phenomenon of the leaky pipeline (women leaving research during their career). Thus, an increase of the funds should be considered. -> Increase of 25% of the funds in the call 2015

