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nano FORCE

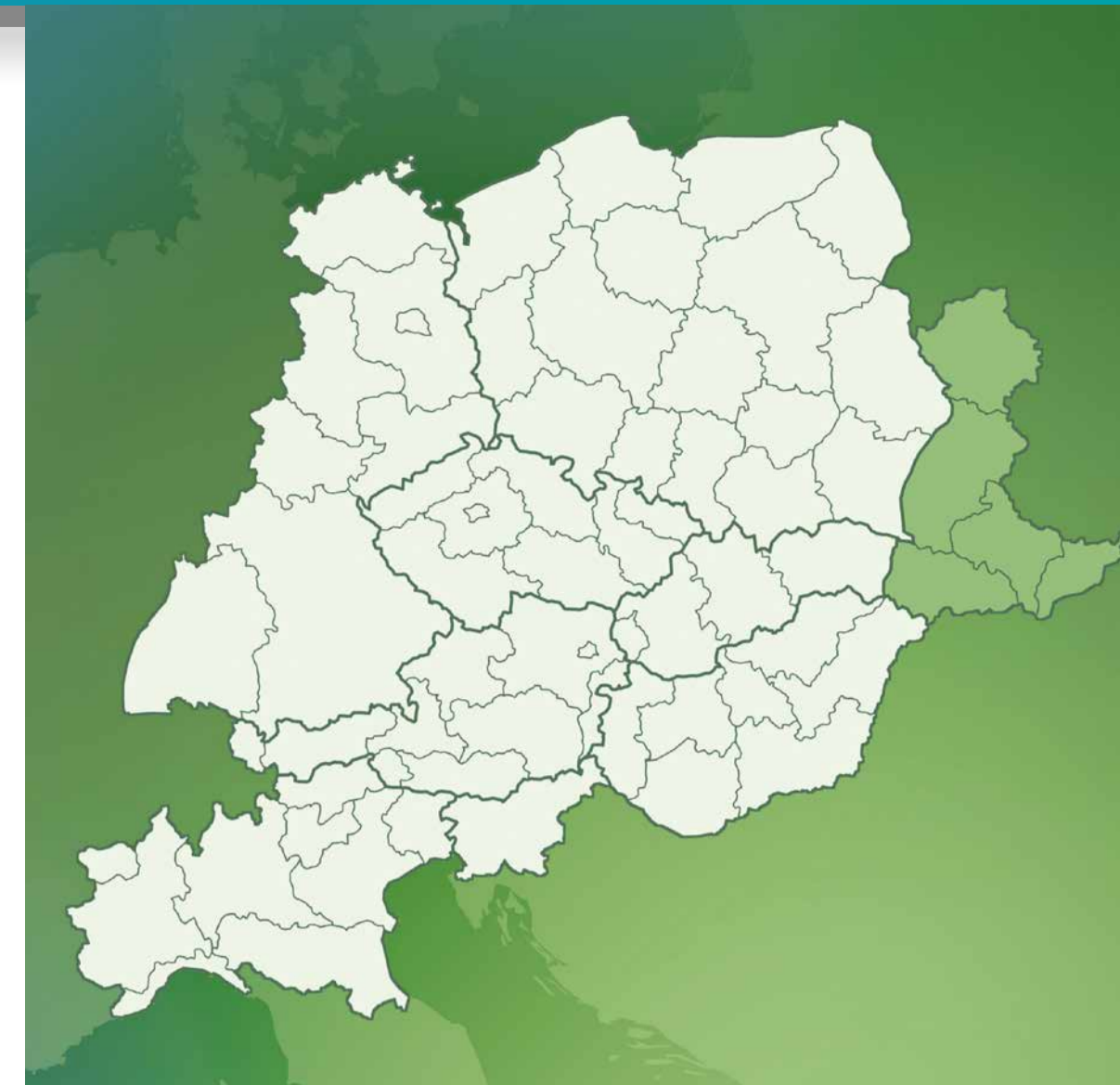
Nanotechnology for Chemical enterprises – how to link scientific knowledge to the business in the Central Europe

Safety Implementation of Nanotechnology for Chemical Enterprises within a Bottom-Up Approach Towards Communication

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Participating Organisations



PP5: Polish Chamber of Chemical Industry (Poland)



PP6: University of Nova Gorica (Slovenia)



PP7: BioNanoNet Forschungs GmbH (Austria)



PP8: Association of Chemical and Pharmaceutical Industry of the Slovak Republic (Slovak Republic)



PP9: Institute of High Pressure Physics, Polish Academy of Sciences (Poland)

Background

Nanosciences and nanotechnologies are new approaches to research and development that concern the study of phenomena and manipulation of materials at atomic, molecular and macromolecular scales. Nanotechnology currently underpins many practical applications (medical, ICT, energy production, food-water, security, broad range of materials etc.) and has the potential to enhance quality of life and environmental protection, and boost industrial competitiveness.

NANOFORCE

Participating countries: **AT, CZ, DE, IT, PL, SI, SK**; Total Budget: **2.368.900,00 €**; Duration: **30 months**; Kick-off: **1st May, 2011**

- Foster the innovative nanotechnology-sector networks across Central Europe regions.
- Bring together public and private organizations (enterprises, research centers, venture capitalists and public institutions).
- Collaborative & interdisciplinary researches on nanomaterials (in the frame of REACH Regulation).
- Turn the most promising laboratory results into innovative industrial applications.

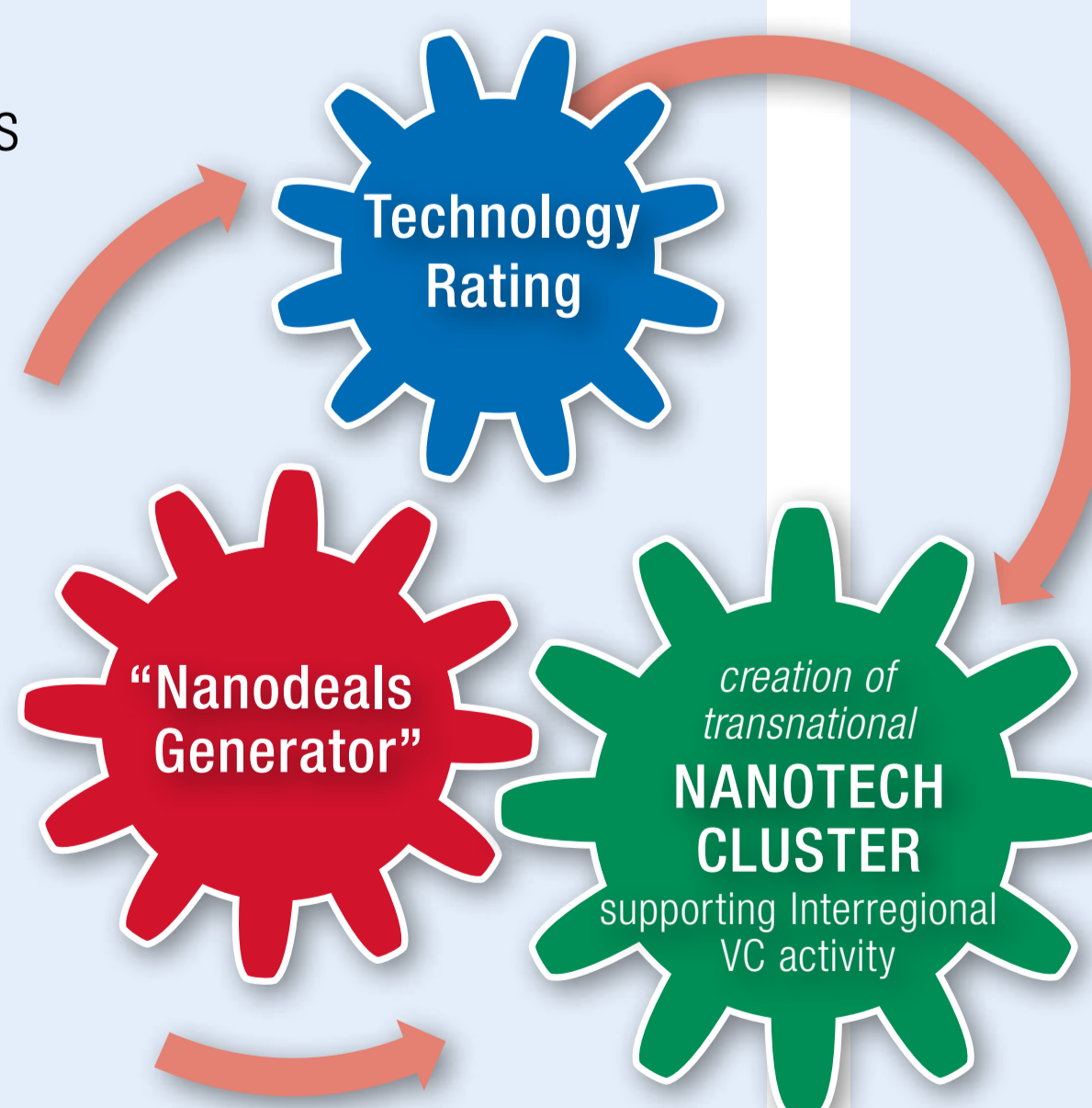
Target Groups



Fig. 1. NANOFORCE target groups

Outputs

- **Framework analysis** to outline the current situation of the nanotechnology sector and the gained experience in nanotechnology of chemical companies and governance authorities.
- State-of-the-art of regulations in the field of nanotechnology to **identify needs and gaps** and give possible **recommendations for the European Commission**.
- **Transnational Guideline** for the responsible use / production of nanomaterials in Central Europe
 - Information on **safe implementation** of nanotechnology – from product start to sale
 - **Market barrier** analysis
 - Risk and safety assessment – **safety data sheets and exposure scenarios** for three nanomaterials identified
 - Communication and consumer information
- **NanoDeals Generator**
 - provide expertise tailored to individual needs
 - support for innovative SMEs in launching new **joint nanotechnology initiatives**
 - “research to business”
- **Technology Rating Methodology**
 - assessment, validation and evaluation of NanoDeals
- **Interregional Nanotech Venture Capital Fund (INVCF)**
 - international, national and regional initiative **to fund start-up companies** in nanotech
 - easing Venture Capitalist assessment
- **Training Course**: “How a young Scientist could become an Entrepreneur”



Results

Excerpt from the 2nd Regulatory Review on Nanomaterials:

- 2011 Commission “**Recommendation on the definition of nanomaterials**”
 - to be used by Member States, European Union agencies and companies
- Nanotechnology as **Key Enabling Technology (KET)**
 - innovation and new processes
 - three pillar strategy towards growth and job development

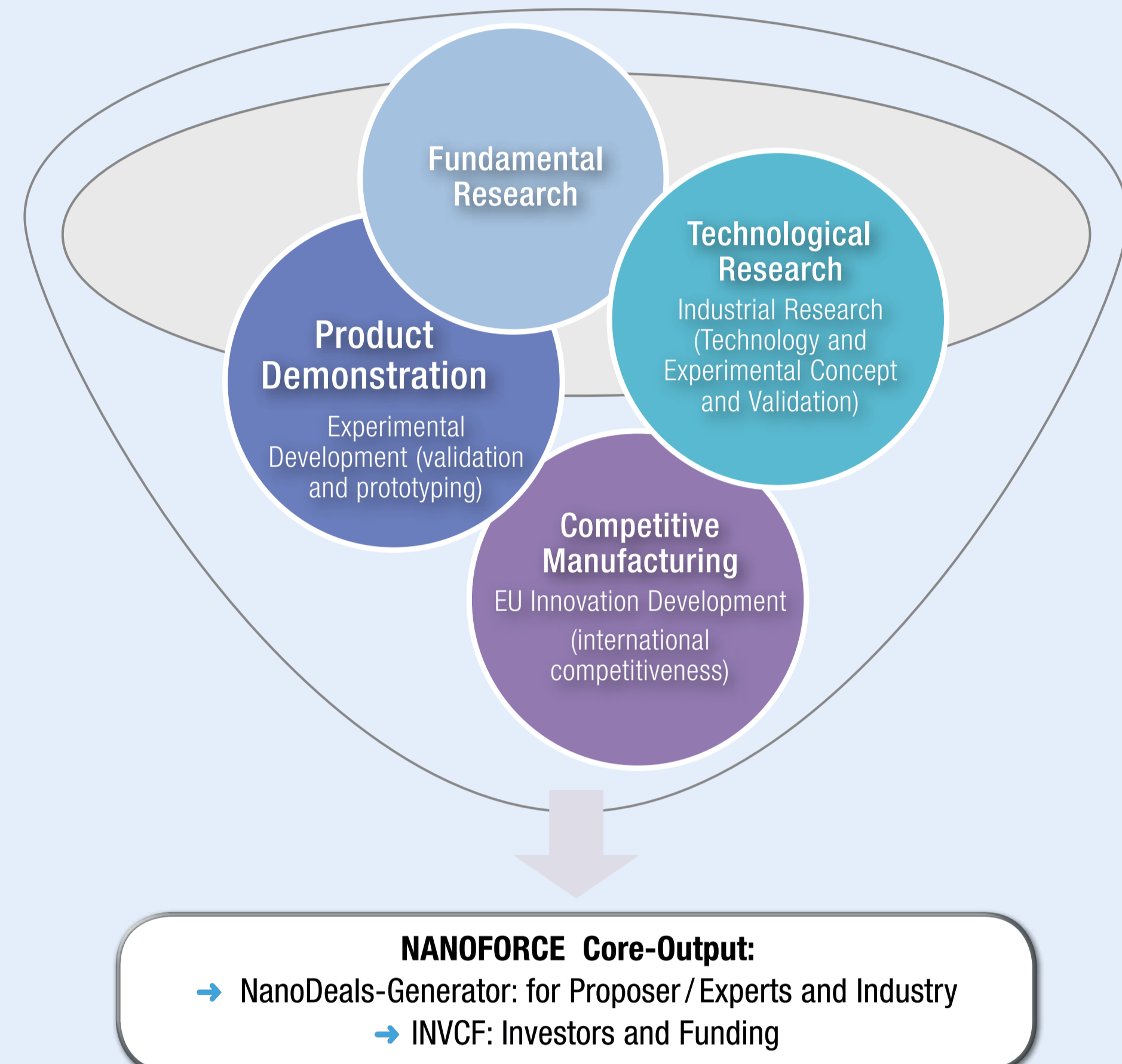


Fig. 2. Strategic definitions and criteria applied for R&D&I funding under EU policies and law. NANOFORCE supports this action by launching a “NanoDeals Generator” to promote the “knowledge to business” approach; by establishing an Interregional Nanotech Venture Capital Fund (INVCF) to fund start-up companies in nanotech

- **Risk / Benefit assessment** and product authorization (e.g. UV filters, food and feed ingredients)
- Harmonization and **standardization** through OECD
- **REACH** as registration tool and **legislative framework** for handling of nanomaterials

Excerpt from currently available nanotech related legislations found within NANOFORCE framework analysis:

- **Cosmetics** (Regulation (EC) No. 1223/2009) in force on 11th July 2013:
 - cosmetic products containing nanomaterials → notification to the Commission 6 months prior to market placement; in force since 11th January 2013
 - “a catalogue of all nanomaterials used in cosmetic products placed on the market, including colorants, preservatives and UV filters” labelling obligations → “list the relevant materials with the word ‘nano’ in brackets”

Proposed Amendments to Regulations

- **Uniform definition**
- Registration for imported and manufactured nanomaterials < 1 tonne / year
- **Reporting** requirements for all nanomaterials on the market
- Harmonized **labeling** of nanomaterials
- “**Case by Case**” approach for nanomaterials
- **Standardized methods** and reference material (particles in relevant media)
- Safety reports with **exposure assessment** for registered nanomaterials
- Adaption of the **precautionary principle** at all levels of the production cycle

Literature

Communication from the Commission to the European Parliament, Council and the European Economic and Social Committee – Second Regulatory Review on Nanomaterials, (SWD(2012) 288 final) COM(2012) 572 final
 High-Level Expert Group on Key Enabling Technologies – A European “three pillar bridge” to pass across the “valley of death” – Final Report (2011)
 Regulation (EC) No. 1223/2009 of the European Parliament and of the Council on cosmetic products

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