

# **NANOFORCE**

## **Nanotechnology for Chemical Enterprises**

**– how to link scientific  
knowledge to the  
business in the Central  
Europe**



**Priority 1**

**1.1 Enhancing Framework Conditions for Innovation**

***"Nanotechnology is an area which has highly promising prospects for turning fundamental research into successful innovations.***

***Not only to boost the competitiveness of our industry but also to create new products that will make positive changes in the lives of our citizens, be it in medicine, environment, electronics or any other field."***

Janez Potočnik  
European Commissioner for Science & Research

**Nanotechnology is enabling new developments** in material science, **providing innovations for industries** ranging from construction, information and communication, healthcare, energy, transportation through to security

**Sustainable development of nanomaterials**, including an appropriate assessment of possible risks and their potential for environmental protection will **contribute to the sustainable economic growth**



To make the Europe becomes the leading knowledge-based economy, it is essential that the industry can bring nanotechnology based products and services to the market, so as to generate wealth, employment and sustainable growth

**Nanotechnology provides a golden opportunity for the creation of new knowledge-based enterprises** and has a **‘revolutionary’ potential** that can open up new production routes. It’s crucial that a favorable environment is created for nanotechnological innovation, in particular, for start-ups, spin-offs & SMEs

*“Towards a European Strategy for Nanotechnology” COM(2004) 338*

# Nanotechnology & Chemical industry

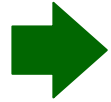
**Chemical industry** is one of the largest European manufacturing sectors and, as an enabling industry, it **has a pivotal role in providing innovative materials and technological solutions** which largely determine Europe's industrial competitiveness

**Chemical industry plays a key role for development of nanotechnology** since chemical products are the largest segment of the nanotechnology markets and nanotechnology increasingly uses chemical methods in all its areas of development



**Chemical industry**, in cooperation with governments, its sectoral actors and research centres, **should set up networks of excellence to promote key strategic innovation and to foster best practice and experience** at all levels and thus, **strengthen innovation clusters** and open innovation processes to facilitate cooperation across sectors and borders

## NANOFORCE specific objectives



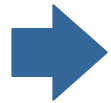
Outlining the **current situation of the nanotechnology in chemical industry** in the Central Europe space



According to EU **REACH Reg**, deepening research efforts & roadmaps for some key nanotechnology materials which are generally used in the industrial sector of the project regions to assess effects on human health, exposure & environmental impacts and finally demonstrate their proficiency, sustainability and market orientation



“**Nanodeals Generator**” → Innovative ICT nanotech platform to connect research with the chemical industry (*knowledge to business*), provide expertise tailored to individual needs & support for innovative SMEs in launching new joint initiatives to boost the Nano R&D and the effectiveness of innovation among chemical nanotech companies in the CE area



Development of the **Technology Rating Methodology** to provide support and expertise for chemical enterprises in elaborating new initiatives and benchmarking of identified nano-proposals

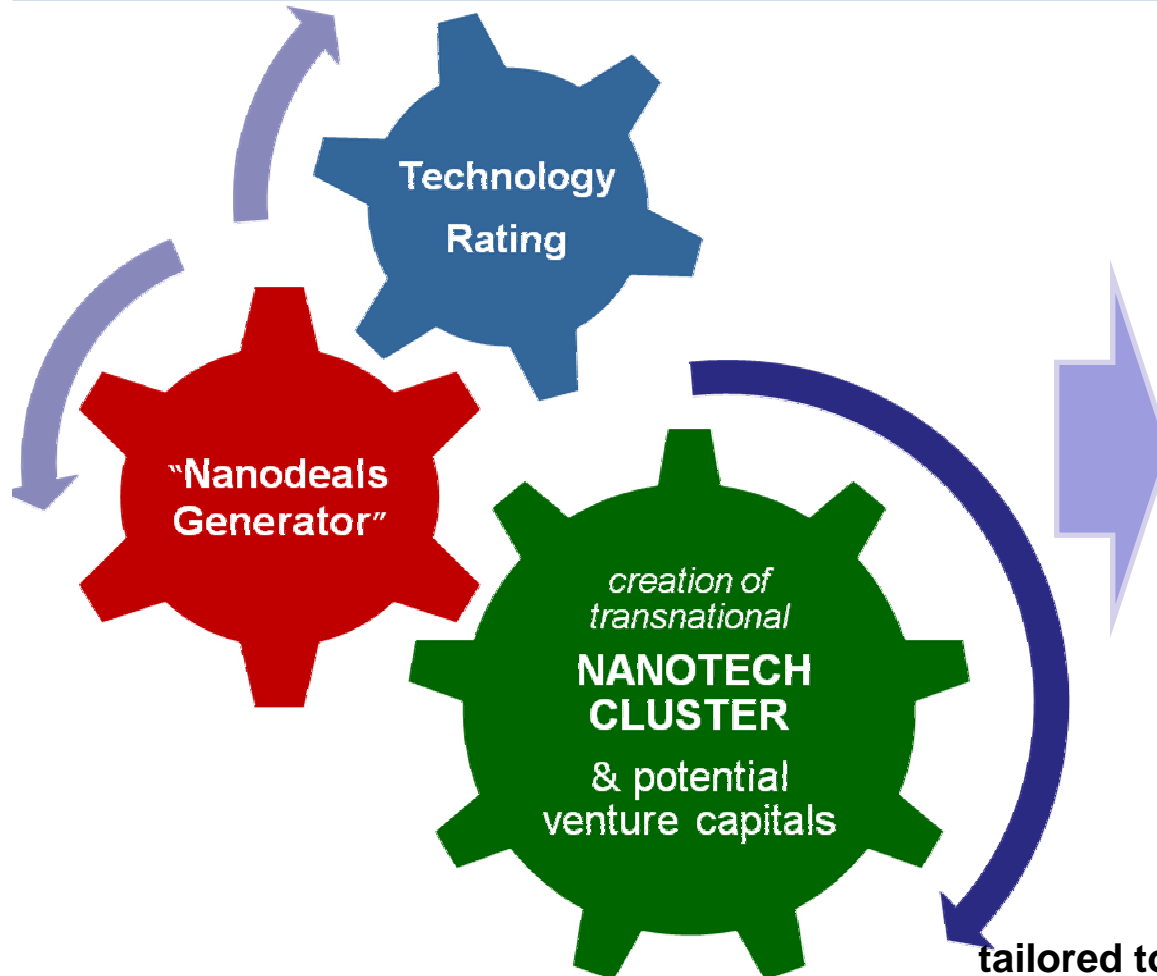


**Capacity building** of nanotech SMEs to prepare them to tackle a wider range of innovation challenges in the high-technology areas



Proposal for establishment of the “**Interregional Nanotech Venture Capital Fund**” to ensure the project follow-up and give a concrete solution of funding to the CE nanotech initiatives

# NANOFORCE innovative results



## SYNERGIC SET OF TECHNICAL & FINANCIAL TOOLS

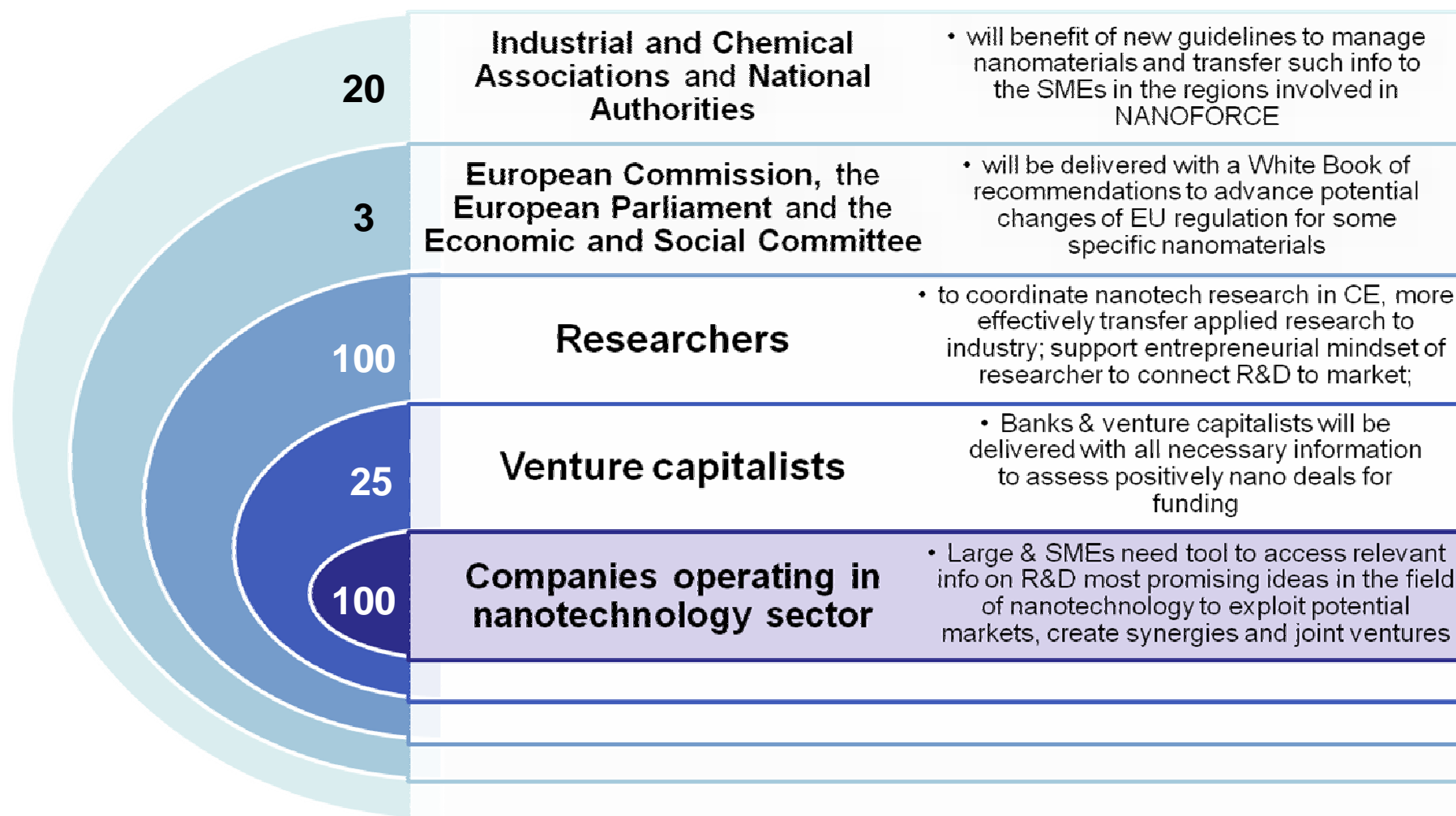
for chemical enterprises and R&D centers in a specific macro - regional area to:

- ✓ address **knowledge to business** in the nanotech sectors
- ✓ improve the industrial potential & competitiveness in the nanotech sector in the CE cooperation space

## CE Nanotechnology Roadmap

tailored to be applied to specific market segments that reached sufficient maturity to turn results of research into industrial processes

# NANOFORCE target groups



## NANOFORCE Work packages

**WP 1**

**WP 2**

**WP 3**

**WP 4**

**WP 5**

**WP 6**

**PROJECT  
MANAGEMENT  
&  
COORDINATION**

**COMMUNICATION  
KNOWLEDGE  
MANAGEMENT  
&  
DISSEMINATION**

**EXISTING  
NANOTECHNOLOGY  
INFRASTRUCTURES  
& STRATEGY  
TO REDUCE  
KNOWLEDGE  
GAPS  
IN  
CENTRAL EUROPE**

**RESPONSIBLE  
USE OF  
NANOTECH  
&  
ASSOCIATED  
RISKS  
MANAGEMENT**

**SUPPORTING  
NANO R&D  
COMMERCIALIZATION  
&  
INDUSTRIALIZATION**

**“INTERREGIONAL  
NANOTECH  
VENTURE  
CAPITAL FUND”  
&  
CAPACITY  
BUILDING**

**Responsible  
SC - Sviluppo  
Chimica  
LP**

**Responsible  
SCHP CZ  
PP3**

**Responsible  
Veneto  
Nanotech  
PP2**

**Responsible  
BioNanoNet  
Forschungs  
PP7**

**Responsible  
SC - Sviluppo  
Chimica  
LP**

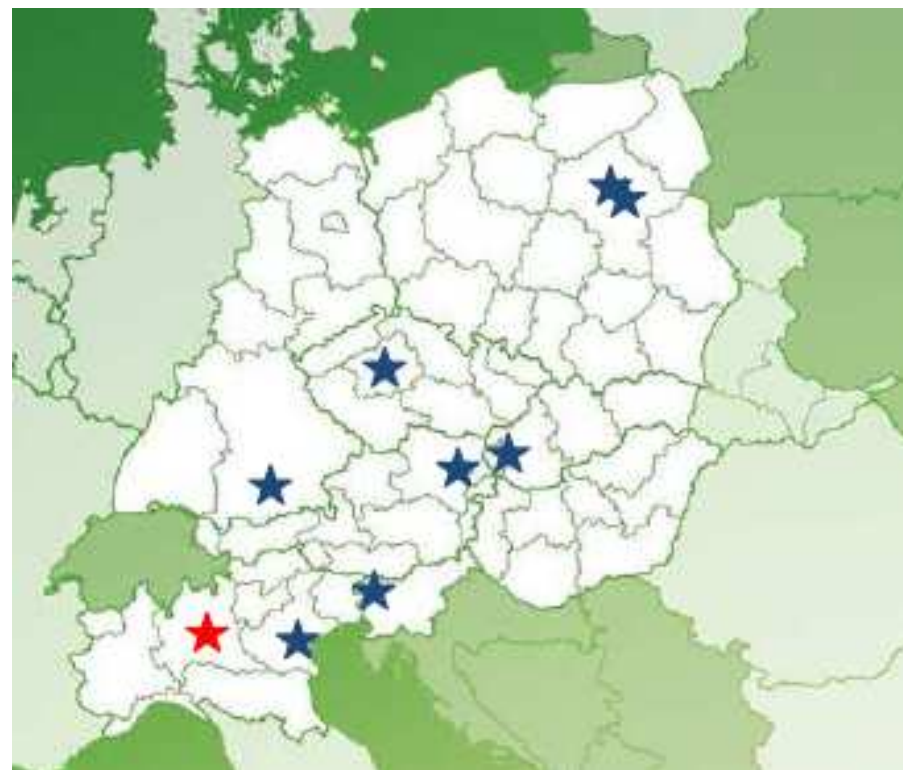
**Responsible  
PIPC PL  
PP5**

**Project duration: 30 months**

**NANOFORCE project presentation**



- LP** SC - Sviluppo Chimica spa (IT)
- PP2** Veneto Nanotech S.C.p.A. (IT)
- PP3** Association of Chemical Industry of the Czech Republic – SCHP (CZ)
- PP4** Chemistry Cluster Bavaria (DE)
- PP5** Polish Chamber Of Chemical Industry - PIPC (PL)
- PP6** University of Nova Gorica (SI)
- PP7** BioNanoNet Forschungs GmbH (AT)
- PP8** Association of Chemical & Pharmaceutical Industry of the Slovak Republic (SK)
- PP9** Institute of High Pressure Physics, Polish Academy of Sciences (PL)



Associated Institutions  
supporting the project

➤ CEFIC - European Chemical Industry Council



➤ ECRN - European Chemical Regions Network

