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# NANOFORCE

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

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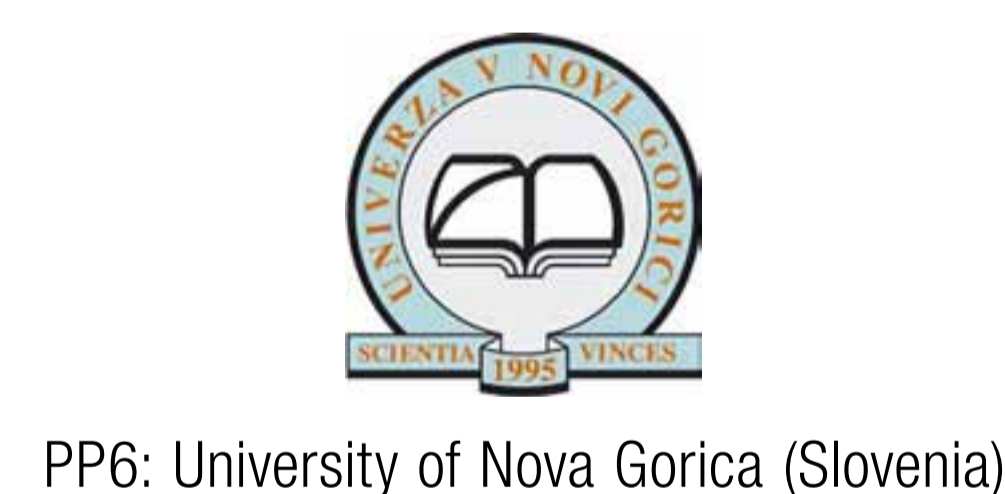
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### General Information

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



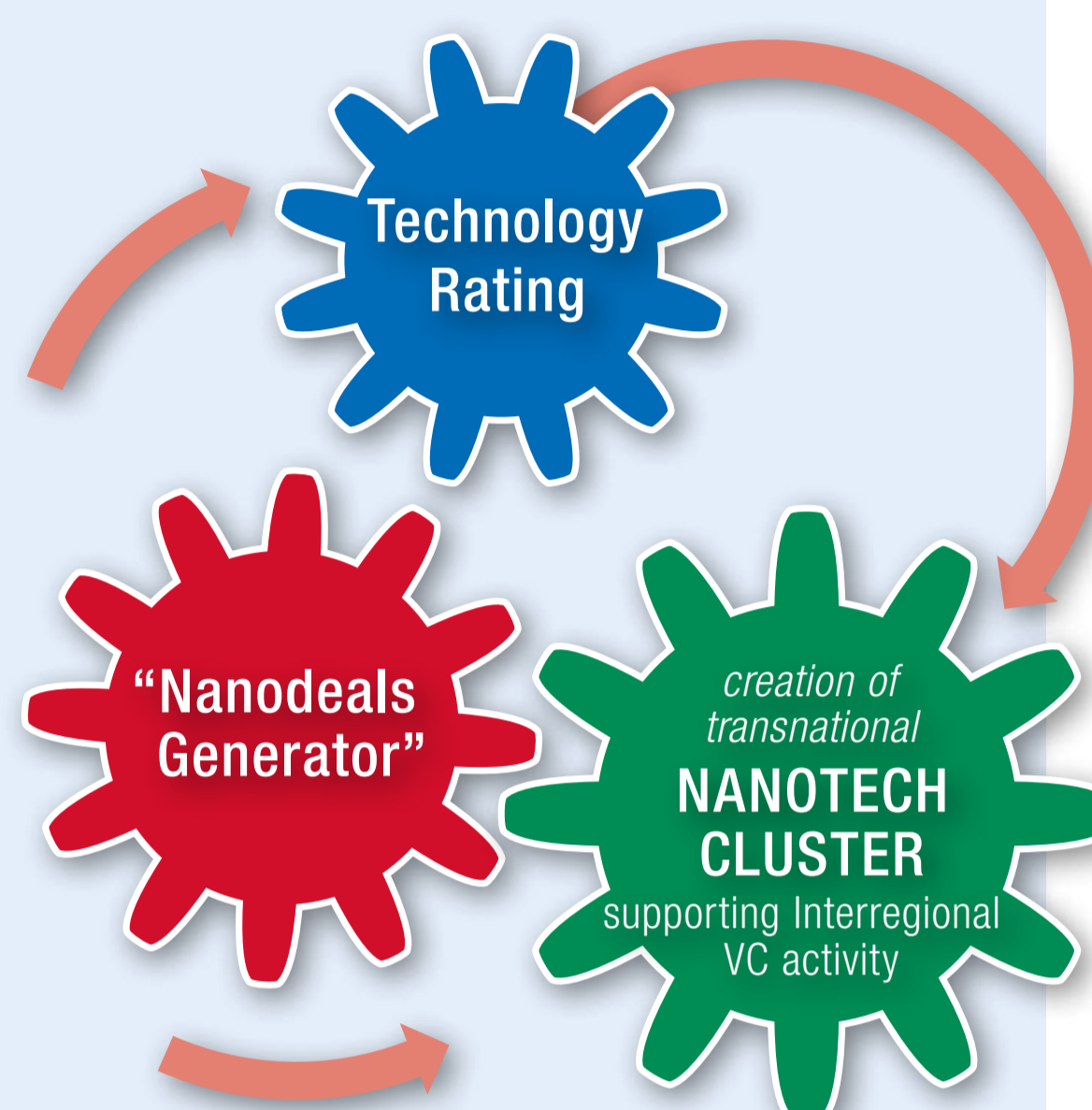
### Participating Organisations



### 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**.

The knowledge in the field of nanosciences and its industrial application has been gradually increasing over the last 10 to 20 years in Europe. Consequently there is the **necessity of a larger international cooperation and research coordination** to overcome disciplinary boundaries, to fill the gap between more and less experienced regions and to turn investments in R&D into industrial innovations.



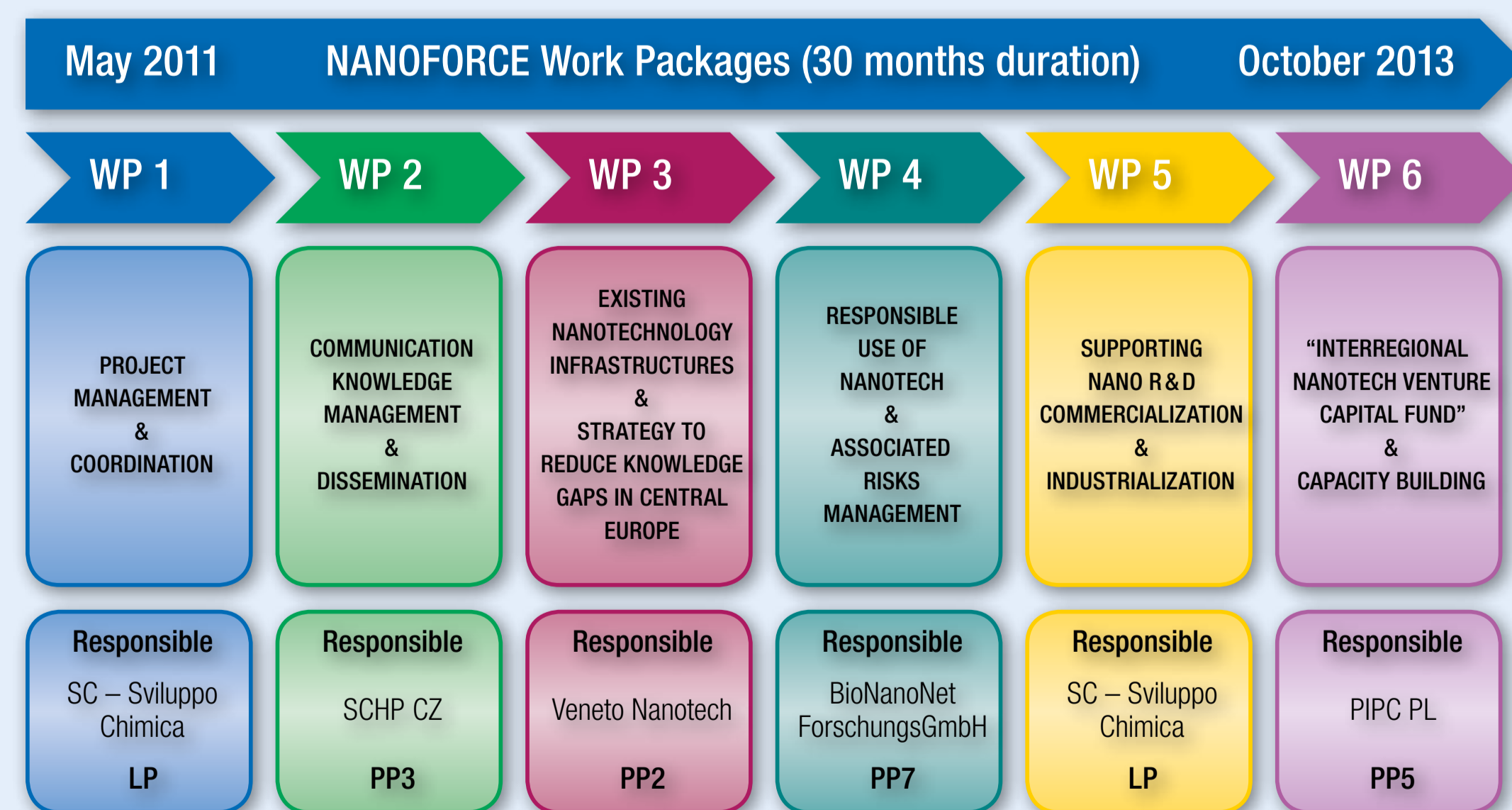
### Objectives

- 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**.

### Outputs/Goals

- Nanoscience, research & development continuously **improve the environmental, health and safety knowledge** and performance of our technologies, processes and products over their life cycles in order to avoid harm to people and the environment.
- NANOFORCE aims at **increasing the industrial participation** into the nanotechnology research projects and finding opportunities for their market implementation.
- NANOFORCE identifies new nanomaterials and thus creates a potential for **attractive investment opportunities**.
- NANOFORCE allows to discover new promising technologies and implements them.
- NANOFORCE provides a tool for assessing properties of products containing nanomaterials.

### Workpackages



### Methods

- **Framework analysis** to outline the current situation of the nanotechnology sector and gather information about the innovative level and gained experience in nanotechnology of chemical companies and governance authorities.
- Identification of potential needs and gaps in legislations and **risk assessment** and collection of data to establish baseline reports for specific target groups.
- **Lab analysis** and **exposure scenario** establishment on 3 major nanomaterials.
- State-of-the-art of regulations in the field of nanotechnology to **identify needs and gaps** and give possible **recommendations for the European Commission**.
- Information dissemination will take place during **project workshops** for target groups in the nanotechnology sector to outline the project objectives and results.
- A **nano-deal generator platform** will be established to create potential deals between R&D and industry and to **create transnational joint ventures** in the nanotechnology sector.

### Target Groups

- National Authorities (e.g. Health and Environmental dept. of Public Administration), including Industrial and Chemical Associations
- European Commission, along with the European Parliament and the Economic and Social Committee
- Researchers
- Venture Capitalists
- Companies operating in nanotechnology sector

### Results

- State of the Art Report on existing safety procedures and nanotechnology related legislation in the Central Europe region.

Are there special national nano-regulations (in comparison to EU guidelines)?

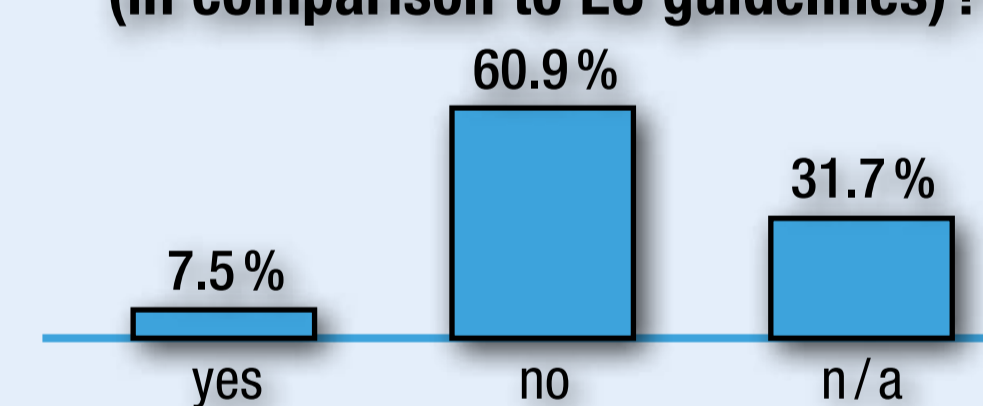


Fig. 1: Evaluation of specific national regulations concerning nanomaterials (in comparison to EU guidelines) in the CE region, Sample 161.

Do you think of nanomaterials as hazardous goods?

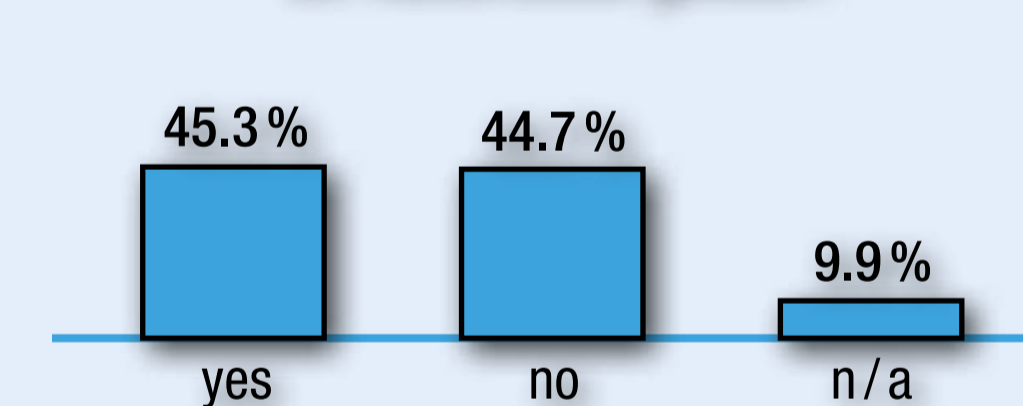


Fig. 2: Evaluation of hazardousness of nanomaterials in the CE region, Sample 161.

- Survey on the development and size of the nanotechnology sector in Central Europe with focus on security and financing.

Financial Situation – Central Europe

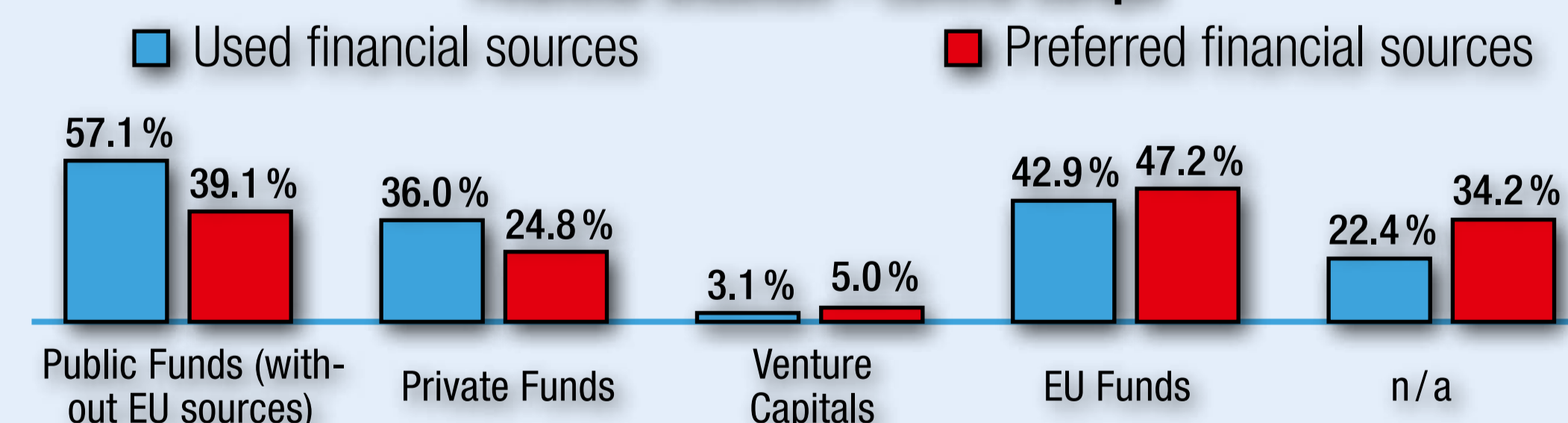


Fig. 3: Evaluation of used and preferred financial sources in the CE region, Sample 161.

### Next Steps

- **Start Up-Phase:** Characterization of three nanomaterials including toxicity, genotoxicity and ecotoxicity and identification of novel nanomaterials to create new potential for attractive investment opportunities.
- Guideline for the responsible use/production of nanomaterials for SMEs.

This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.



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