![EC for SafeNano logo]

European Centre for Risk Management and Safe Innovation in Nanomaterials & Nanotechnologies (EC4SafeNano)

Results of the survey on current needs of member states, European Commission & EU agencies, private stakeholders and NGOs and on resources at the level of competences, equipment and services.

In 2017 a survey was organized to identify the needs of different stakeholder groups (EU member states, European Commission & EU agencies, private stakeholders and non-governmental organisations), next to the inventory of competences and infrastructure of service suppliers. Information about each person and their organization, their needs for access to expertise, knowledge and services regarding nanosafety was collected. For the service suppliers, information was obtained about their ability to provide technical services for testing and measuring, or/and their ability to perform consultancy and desk top studies. The information collected has been analyzed and will contribute towards the activities planned under work package 3 –"Building the services the various private and public market actors require to manage nanotechnology safely". A summary of the survey outcomes and future steps is presented in this leaflet.

EC4SafeNano

This is a EU-funded project for the development of a distributed Centre of European organizations offering services for Risk Management and Safe Innovation for Nanomaterials & Nanotechnologies (EC4SafeNano). The center will be structured as a hub-based network and will work with established platforms and centers of excellence for nanosafety across Europe and internationally.

The EC4SafeNano network members can:

o access resources to start a new or develop an existing nanosafety platform.
o exchange/interact with experts on one platform.
o consult on needs, resources and services.
o harmonize nanosafety related practices on EU-wide scale.
o have EU-wide acceptance of the study results in recognition with EC4SafeNano.
o access various workshops or activities organized by other network members.
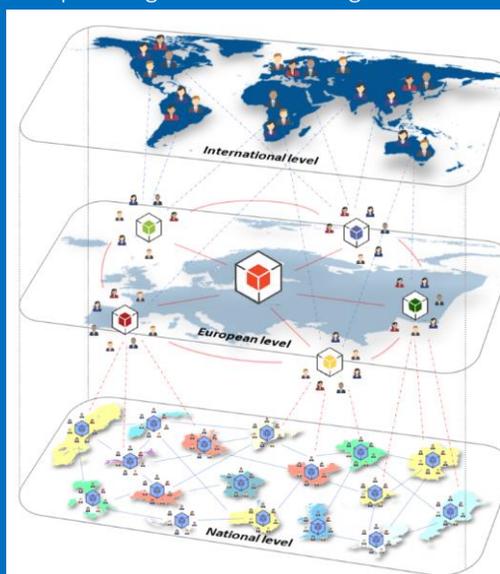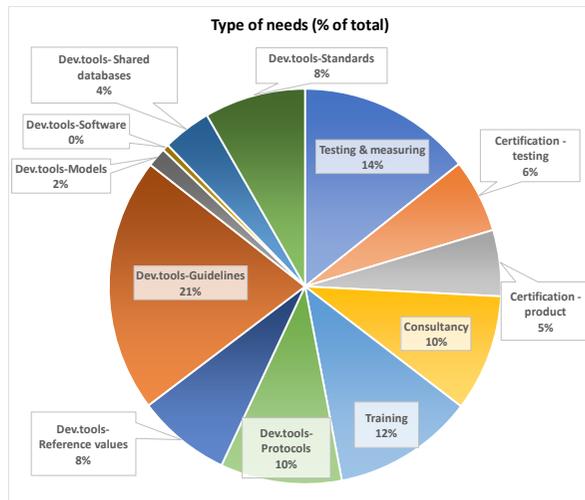

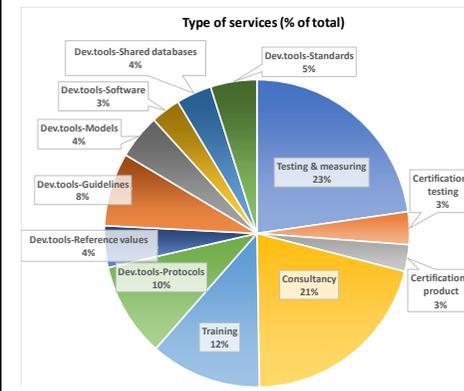## For more information, please contact

Task leaders:
Birgit van Duuren), TNO (Netherlands)
birgit.vanduuren@tno.nl, Tel +31(0) 888 66 50 90
Hilda Witters , VITO (Belgium)
hilda.witters@vito.be, Tel +32(0) 14 33 52 13

Results of a survey on current needs of member states, European Commission & EU agencies, private stakeholders and on resources at the level of competences, equipment and services.

The Demands - Identification what knowledge, tools and services stakeholders (private, public) require to safely manage nanotechnology.

Type of needs (% of total)

- Dev.tools-Standards 8%
- Dev.tools-Shared databases 4%
- Dev.tools-Software 0%
- Dev.tools-Models 2%
- Testing & measuring 14%
- Certification - testing 6%
- Certification - product 5%
- Consultancy 10%
- Dev.tools-Guidelines 21%
- Training 12%
- Dev.tools-Reference values 8%
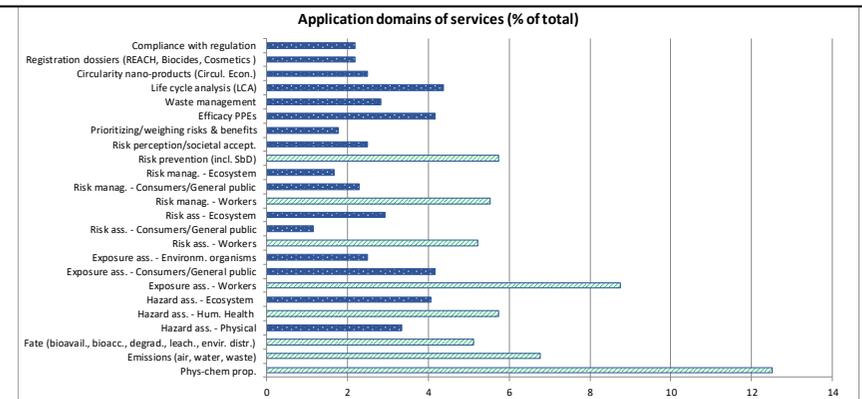- Dev.tools-Protocols 10%

The survey resulted in a total of 30 responses from Member states, 2 from EU and EU agencies, 90 from the industry and 28 responses from the general public. The response came from 26 countries, including 6 non-European countries. Responders were asked for their main concerns regarding nanosafety/nanotechnology and the needs they have at the moment. Also, the need for services related to information management were inventoried. The highest concerns were found for human health for all stakeholder groups. With respect to health effects in humans there is a need for clear, validated and standardised methods and guidelines to characterise hazardous nanomaterials and to appraise their critical properties. To assess human exposure (occupational or consumer) there was a need for improved methods for sampling nanomaterials and monitoring emissions from different processes. This included the development of safe limits for occupational/consumer/ environmental exposure. Civil society is mostly interested in understanding risks and prevention of possible risks. The chart above indicates the needs regarding the type of service for all responders. Regarding the services related to information management, the responders indicated a need for help desk, website, newsletters, workshops and public engagement activities.

The Resources - Mapping the available resources addressing risk management and safe innovation.

Type of services (% of total)

- Dev.tools-Shared databases 4%
- Dev.tools-Standards 5%
- Dev.tools-Software 3%
- Dev.tools-Models 4%
- Dev.tools-Guidelines 8%
- Testing & measuring 23%
- Certification - testing 3%
- Certification - product 3%
- Dev.tools-Reference values 4%
- Dev.tools-Protocols 10%
- Consultancy 21%
- Training 12%

The survey results are based on 82 responses from service suppliers on safe nanotechnology from 22 countries, including 2 non-European countries. Research organizations were the most represented group of service providers (58%). Next to technical details on competences, equipment and methods in use, the service providers were asked to give an overview of their current offer for types of nanosafety services (see pie chart). Within each type of service, e.g. testing and measuring, consultancy…., the main applicability domains were scored, e.g. physic-chemical characterization, exposure assessment, hazard assessment, waste management, life cycle assessment, regulatory compliance….(see bar chart). Testing & measuring and consultancy studies represented the majority of services (each > 20% of total), followed by training (12%) among all 82 service providers.

In the application domains, physic-chemical characterization (13 %), emission studies (7 %), fate (5 %), hazard studies human health (6 %), exposure assessment workers (9 %), risk assessment workers (5 %), risk management workers (6 %) and risk prevention (6 %) were most important across different types of services. The bar chart also demonstrates that service activities in the domains of hazard, exposure, risk assessment and management are dedicated to the field of human health, especially workers, rather than ecosystem or public health concerns. The market of nanotechnology innovation and safety is still evolving and therefore plans for future implementation of services were registered in the survey. New services for testing and measuring got less attention (8%), while consultancy and training remain above 10%. Development of tools, more specific for protocols and guidelines, were seen more important than the current offer (above 10%).

Application domains of services (% of total)

- Compliance with regulation
- Registration dossiers (REACH, Biocides, Cosmetics)
- Circularity nano-products (Circul. Econ.)
- Life cycle analysis (LCA)
- Waste management
- Efficacy PPEs
- Prioritizing/weighing risks & benefits
- Risk perception/societal accept.
- Risk prevention (incl. SbD)
- Risk manag. - Ecosystem
- Risk manag. - Consumers/General public
- Risk manag. - Workers
- Risk ass - Ecosystem
- Risk ass. - Consumers/General public
- Risk ass. - Workers
- Exposure ass. - Environm. organisms
- Exposure ass. - Consumers/General public
- Exposure ass. - Workers
- Hazard ass. - Ecosystem
- Hazard ass. - Hum. Health
- Hazard ass. - Physical
- Fate (bioavail., bioacc., degrad., leach., envir. distr.)
- Emissions (air, water, waste)
- Phys-chem prop.

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Survey results: input to "Building the services the various market actors require"

The results of the current inventory of needs and resources is the input to work package 3 „Building the services". A software tool for fit-and gap-analysis has been developed by Tecnalia. The tool does allow to match the needs and services at regional level or European level, and identify gaps for certain types of services, or specific stakeholder groups.

Furthermore, the inventory of services with technical details on infrastructure, measurement tools, software models, competences and procedures will provide input for the establishment of a didactic catalogue of services. This will group the different categories of services, and provide a question-based interface and guidance to help users to identify suitable methods, tools, guidance that meet their needs.

Future needs and services

As both needs and services may evolve over time, the continuous use of the online survey is discussed as a possible mechanism to update the inventory later on in the project. The latter will be further elaborated and considered in the task on validation of services after evaluation of the case studies (WP4) and in the task on innovation management (WP5). A second version of the current survey results will be prepared by the end of the project to present the updated inventories of needs and resources.

Interested in EC4SafeNano?

More information regarding EC4SafeNano can be found on www.ec4safenano.eu. At the moment, more than 50 Associated partners are registered. Are you interested to join as Associated Partners, to engage in the Focus Network activities and to help shape the future Centre? Please contact G. Balachandran, gbalachandran@eu-vri.eu or register via www.ec4safenano2.eu-vri.eu/Login.aspx.

For more project information, please contact

Project coordinator:
Dr. Emeric Frejafon, INERIS (France)
emeric.frejafon@ineris.fr, Tel: +33 (0) 3 44 55 63 13