

WELCOME

Gov4Nano, NANORIGO and RiskGONE are three H2020 projects that have joined forces to address the same goal: to ultimately ensure a sustainable and equitable Nano Risk Governance Framework and Nano Risk Governance Council are developed in Europe and beyond. While each project has its own unique approach and objectives, all share common goals and visions which will be strengthened by constructive cooperation involving all stakeholders.

The partners involved have a long history of research to understand the impacts of nanomaterials on human health and the environment, and have participated in all major European and National projects dealing with these topics. This ensures a strong and comprehensive knowledge base and engagement with all key stakeholders. Over the projects' lifespans, the partners are working to develop and establish a robust public policy framework for the use of nanomaterials, based on scientific evidence supporting a clear understanding of risks, their assessment, and management within wider societal considerations.

The coordinated activities across the projects are organised in the following topics:

1. Nano Risk Governance Framework and Council
2. Portal, tools and instruments
3. Stakeholder involvement
4. Data management

These groups meet regularly and have agreed certain common milestones related to the joint expected outcomes:

- An operational, trans-disciplinary Nanotechnology Risk Governance Framework (NRGF) that integrates exposure, hazard and risk assessment tools with those assessing ethical, legal, social, and environmental aspects, and further supports responsible research and innovation (RRI).
- A sustainable European Nanotechnology Risk Governance Council (NRGC) that implements the NRGF and engages with all stakeholders in a proactive, participative and transparent manner – a 'trusted environment' – to address new issues as they may arise.
- A Nano Risk Governance Portal (NRGP) built on sound scientific data and informatics tools, that are validated, standardized, progressive and accessible to stakeholders.

This issue provides an update on the development of the NRGC, and the process of fine-tuning four different scenarios for the Council during the Council Workshops. This is followed by a report on the progress of the portal development. It concludes with a description of some of the public engagement events and activities conducted this year.

THE PROJECTS



Website: www.gov4nano.eu/
Coordinator: [Monique Groenewold](#)
Institution: National Institute for Public Health and the Environment ([RIVM](#)), NL



Website: www.nanorigo.eu
Coordinator: [Janeck James Scott-Fordsmann](#)
Institution: Aarhus Universitet ([AU](#)), DK



Website: <https://riskgone.eu/>
Coordinator: [Maria Dusinska](#)
Institution: Norwegian Institute for Air Research ([NILU](#)), NO

FAST FACTS

Financial resources

Budget: € 18.3 million

Duration

January 2019 – February 2023

Collaboration

82 partners
17 EU countries, Brazil, India, Iran, Switzerland, South Africa, Republic of Korea and USA



These projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 814425, 814401 and 814530

THE PROCESS TOWARDS ACHIEVING A NANO RISK GOVERNANCE COUNCIL (NRGC)

Across the three projects, a structured process has been developed which will lead to the design of the NRGC. This process is ongoing and comprises five stages (see Figure 1).

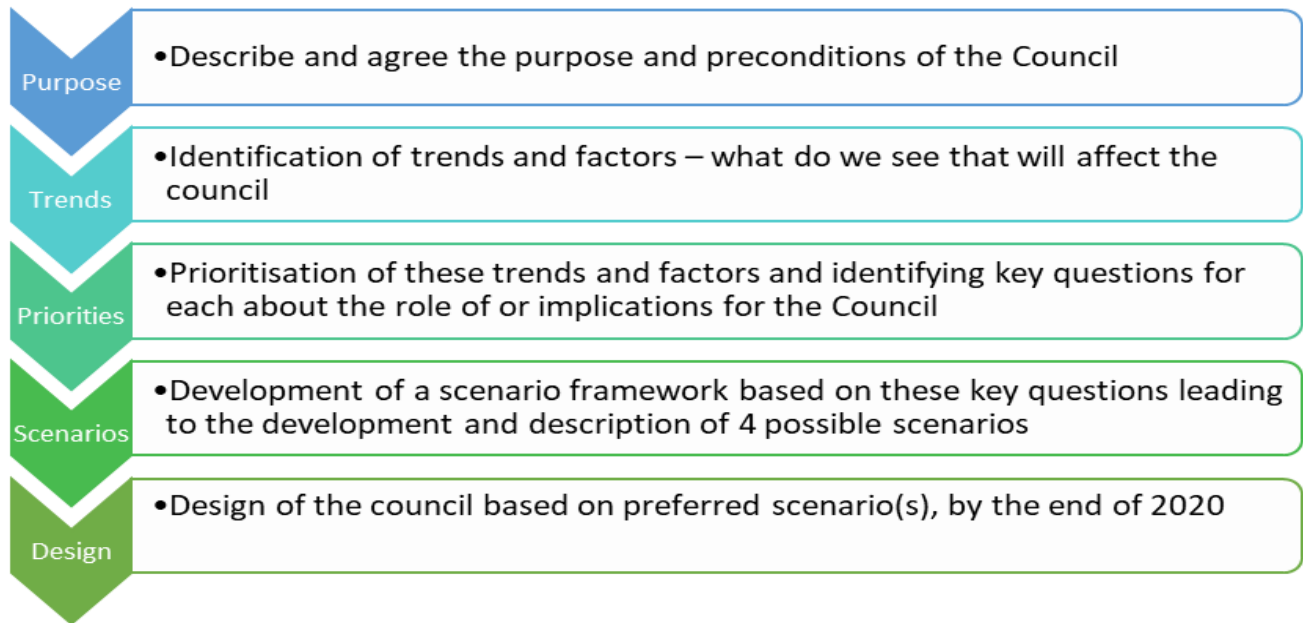


Figure 1: The five steps in the joint NMBP₁₃ structured design process

During the fourth stage, through a co-creation approach, a scenario framework has been developed based on considerations of the role and the positioning of the NRGC. This has been further elaborated to develop four concise coherent and realistic scenarios as to how the NRGC could work and what the organisational structure could be, as represented in a simplistic form in Figure 2, and as a summary map in Figure 3.

This work has been performed by a small task force set up by the three projects. The next step was to share progress towards the design of the council across the three project consortia and to use the feedback received to refine the scenarios. This was done at a workshop on 27th August 2020. Following that, the next critical step was to gain reactions from stakeholders and experts, to further refine the scenarios and ultimately choose a preferred option. That was achieved initially in a series of workshops, with the NMBP₁₃ stakeholder database group in September 2020 (see next page). The four scenarios have been refined, and the first of three webinars has just (03 Dec 2020) been held where the refinements developed in the intervening period were judged.

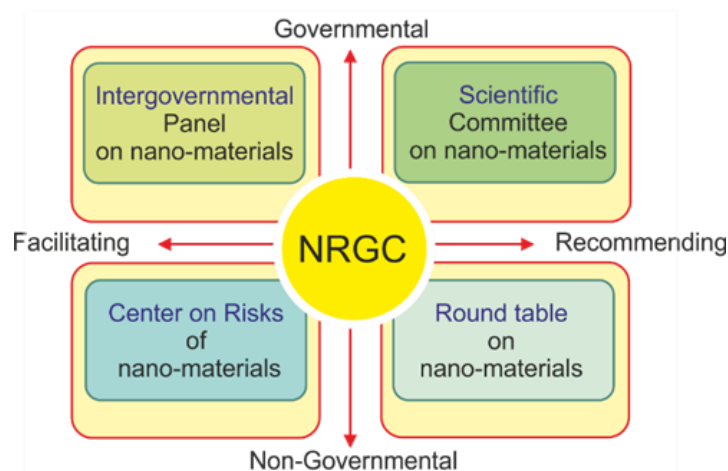


Figure 2: The four scenarios for a Nano Risk Governance Council.

Subsequent webinars in January and February 2021 will lead to the first blueprint of the Nano Risk Governance Council.

THE PROCESS TOWARDS ACHIEVING A NANO RISK GOVERNANCE COUNCIL (NRGC)

OUTCOMES FROM THE 2ND WORKSHOP

On 30th September 2020, a group of 32 stakeholders and experts from regulation, industry, NGOs and science participated in a virtual workshop to reflect on the purpose of the NRGC and its overall mission, vision and tasks.

Following the welcome and introductions, workshop participants discussed perceived needs and possible gaps in the current landscape of European institutions which the Council could serve to bridge without overlapping and competing with each other. The participants then reflected on and discussed the four possible scenarios (see Figure 3) for a new NRGC and different services of the future Council to facilitate collaboration and alignment between disciplines and between stakeholders (scientists, regulators and policy-makers, industry, NGOs and CSOs, and others).

The scenarios are:

1. The European Intergovernmental Panel on Nanomaterials
2. The European Scientific Advisory Committee on Nanomaterials
3. The European Centre on Risks of Nanomaterials
4. European Roundtable on Nanomaterials.

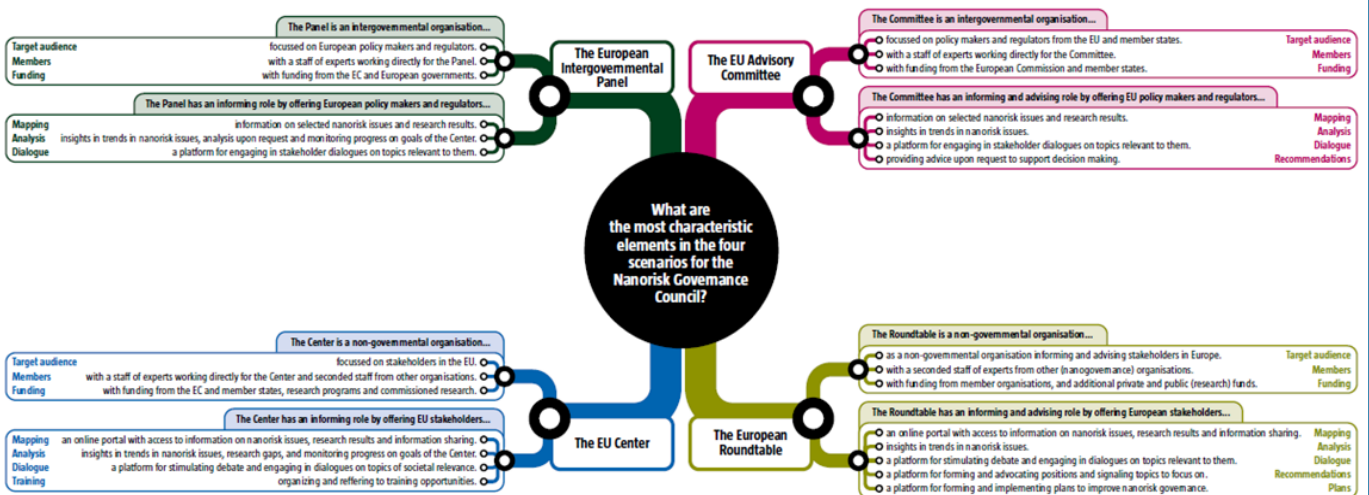


Figure 3: Summary Map of Four Possible Scenarios for the NRGC

Most participants in the workshop supported the idea of establishing the new initiative of NRGC and agreed that all four presented scenarios and respective services were valid suggestions. However, whether the Council were to act as an independent, neutral, bottom-up body or a top-down governmental body, it may need an official EU mandate to provide recommendations to the EC.

In sum, the participants recommended the following four conditions of success:

- **Conducting research:** The services of the Council should focus on interdisciplinary competence from health, environmental and social science because it has to work on interrelated social, cultural, technical, health and environmental issues. These services could include conducting research and identifying emerging issues.
- **Mapping:** The Council should provide stakeholders with a platform for information sharing on nano risks and benefits.
- **Dialogue:** It should engage a variety of types of stakeholders on nanomaterial issues, initiate dialogues with them to form joint plans. It should focus on a dialogue with decision-makers and regulators on the national or the international scene to convey what the Council proposes.
- **Monitoring:** The Council should take on a monitoring function as a kind of reflective governance.

The results and recommendations of the first and second workshop will be discussed and developed in the forthcoming report about the possible design of the NRGC; then among the members of the NANORIGO, RiskGONE and Gov4Nano consortia and in the two upcoming virtual workshops. Finally, initiatives are also ongoing in dialogues with various agencies to hear their views and concerns.

THE NANO RISK GOVERNANCE PORTAL (NRGP)

The NMBP-13 projects are joining forces and working towards the creation of a single common Nano Risk Governance Portal and Platform (NRGP) that serves the practical implementation of several NRC goals, such as sharing of knowledge and accessibility of information.

The future NRG will accommodate a number of solutions such as tools, models and websites, testing guidelines, SOPs, guidance documents and additional solutions related to these. Its practical realization is contingent on resolving a number of challenges that can be outlined along three different domains:



- *Organizational* – The creation of one common Portal and Platform needs to align with the current organizational structure of the three NMBP-13 projects and their respective work plans.
- *Architecture and content* – The architecture and content of a common Portal and Platform are to a great extent dependent on the common vision of the NMBP-13 collaboration on the following:
 - ◇ the Nano Risk Governance Council,
 - ◇ the Nano Risk Governance Framework, and
 - ◇ the specific User Groups envisioned to be using the portal and platform
- *Technical implementation* – Its technical implementation is reliant on design requirements as well as on the resources available for its development across the three projects.

Early on in 2021, a stakeholder workshop will be held to collect feedback from different potential User Groups and discuss different options and settings.

Stay tuned and join our discussion early next year!

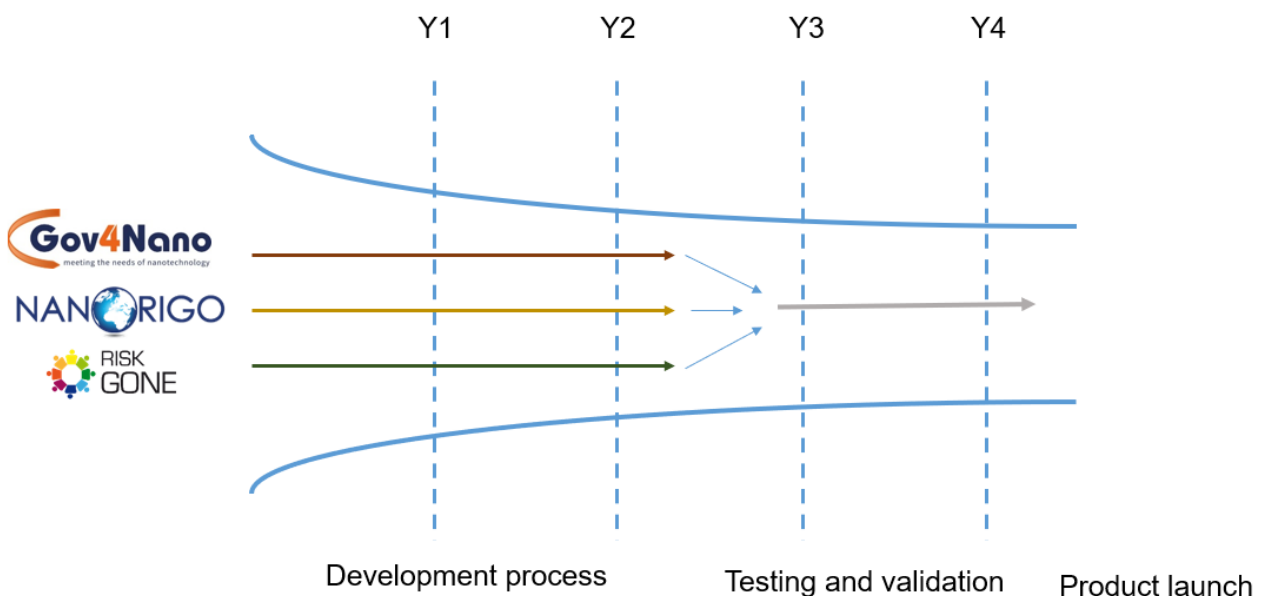


Figure 4: The portal development and deployment trajectories

STAKEHOLDER ENGAGEMENT ACTIVITIES

EUROPEAN RESEARCHERS' NIGHT

The three projects joined forces and shared resources to successfully participate in European Researchers' Night (ERN). Funded under the Marie Skłodowska-Curie actions, ERN is a Europe-wide public event that brings researchers closer to the public to showcase the diversity of science and its impact on citizens' daily lives. In 2019, it attracted 1.6 million visitors across more than 400 cities in Europe and beyond. The NMBP-13 projects took this opportunity and created a range of activities for different audiences to raise awareness of the exciting potential of nanomaterials alongside the need to develop appropriate tools and governance.

In Scotland, Optimat joined the 'Scottish Research Showcase' Twitter event, which highlighted a different project every 15 minutes throughout the day. It then took part in EXPLORATHON 20, organised by Scottish Universities, in which it delivered 'Making Nano Work for Us': a workshop presenting the activities of the three projects to a widespread audience. Following a short explanatory video, participants were invited to engage through Mentimeter to complete a quiz, polls and elicitation exercises to gauge opinion (see Figures 6 and 7). The video (available [here](#)) has been translated into German and will soon be available in Portuguese.

Over in Austria, PLUS hosted a virtual citizen science café addressing Nano Science and Health and examining questions such as: What makes SARS-CoV-2 successful? What is nano and where do we find it? Can nano fight COVID-19? How safe is nano and who cares? Meanwhile, BNN was joined by members of the public at the 'Life is Science' event through a virtual 'Coffee and Nano' gathering which focused on the question: 'Nanotechnology - How safe are the products and who decides?' In a lecture and discussion, participants were shown ways to navigate through the information jungle to think about how much potential risk is acceptable when it comes to new, innovative products.

In Germany, DECHEMA raised public awareness on how different kinds of nanomaterials are used in daily applications and how to manage the risks that some of them may pose to the environment and human health. This was achieved through a lecture, quiz and discussion. Finally, in Spain, the University of Zaragoza's 'Wanderlust' event allowed members of the public to examine products containing nanoparticles.

Making Nano Work for Us is available on YouTube [here](#)

All materials will be uploaded to the [NanoSafety Cluster nanoHUB](#)



Figure 5: Introduction to 'Making Nano Work for Us'

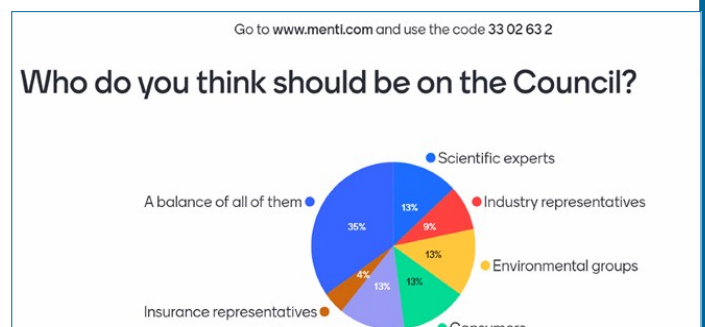


Figure 6: Audience poll responses: 'Who do you think should be on the Council?'

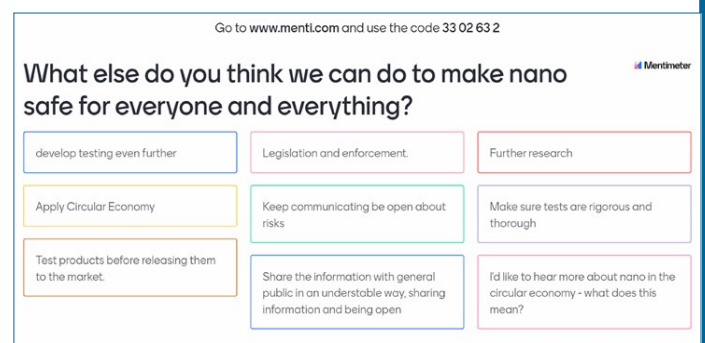


Figure 7: Audience elicitation responses: 'What else do you think we can do to make nano safe for everyone and everything?'

STAKEHOLDER ENGAGEMENT ACTIVITIES



The NMBP-13 projects featured quite predominantly during the 'Risk assessment, risk management and risk governance' sessions at the recent [nanoSAFE 20 virtual conference](#).

During the NanoSafety Cluster (NSC) Education Day, held as part of nanoSAFE on Monday 16th November, an intensive one-hour session focused on 'NanoRisk Governance & Safe-by-Design concepts - fit for translation to sustainable development? This slot featured the development and current concepts of the Nano Risk Government Framework and Council. Consortium members from each of the three projects delivered informative presentations to spotlight aspects of the current work being performed in the projects, as follows:

- "What do we need a NRG Council for, who are its stakeholders and what are their needs?" by Marie-Valentin Florin, NANORIGO
- What can we expect from a future NRG Council and what is the current view on its design" by Rob Aitken, Gov4Nano
- "Screening ethical issues for governance of nanorisk" by Ineke Malsh, RiskGONE (<http://enaloscloud.novamechanics.com/riskgone/thresholdanalysis/>)
- "Insight into the nanorisk governance process guided by the NANORIGO NRG framework" by Arto Säämänen
- "Requirements on NRG frameworks by insurances and other societal stakeholders" by Martin Mullins, NANORIGO

The following week, the NanoSafety Cluster Training Day incorporated a parallel session to introduce Nanotechnology Regulations and Risk Governance, with Monique Groenewold representing the NMBP-13 Projects (Figure 8).

This was a valuable interfacing opportunity in which various project representatives and coordinators could identify alignments and learn from current experiences.



Figure 8: Monique Groenewold (RIVM, Project Coordinator-Gov4Nano)

- All materials and videos will be made available soon via the [Nano Risk Governance Community on Zenodo](#) and the [Nanosafety Cluster Community on Zenodo](#).
- Posters of the event are available here: <https://www.cea.fr/cea-tech/pns/nanosafe/en/Pages/Nanosafe-Conference/Nanosafe-2020/Ressources/Posters-Topic-4.aspx>

And finally, we hope you have found this issue of interest.

Thank you to everyone from all three projects who contributed towards and reviewed this newsletter.