



## NanoSafety Cluster (NSC) Education Day @ NanoSAFE, 16 Nov 2020

### Preliminary program

#### Intention:

This day shall act as guidance for the entire NanoSafety community, including young researchers, to highlight how individual research projects fit as a puzzle piece into the wider picture. It shall be an orientation-giving and educational event depicting the overall strategy behind NanoSafe(ity).

#### Means to achieve this:

- to offer a **WG-overarching education/communication/discussion** event involving the audience *via* interactive sessions;
- to layout ways to **go beyond** with anything the nanosafety community have learned/developed to serve the emerging topics of Horizon Europe (emerging contaminants incl. microplastics, nanomedicine, safety assessment of novel/innovative/advanced materials for future along their entire life cycle);
- to foster participation in creating better sustainable materials (than e.g. nanosilver in socks), technologies, medical approaches, *etc.*
- to exhibit the perspectives of the NSC Working Groups and the different currently ongoing projects;
- to be **as interactive as possible** using **hands-on** activities, e.g., by showing **how-to** operate e-tools, upload/retrieve data to/from repositories & perform models;
- to facilitate vivid contribution to discussions using survey tools such as Mentimeter, WooClap, VoxVote, *etc.*
- to offer different perspectives in **pro/contra discussions**, *e.g.*, by defining **challenger - defender roles taken by experts on specific topics** or evtl. by dividing attendees into zoom breakout rooms
- to show application of emerging NRG frameworks or SbD tools;
- to **request feedback** to user interfaces and enable stakeholder involvement

## Preliminary program in CET

9:00-9:05 h Welcome of the day by Martin Himly, PLUS (Chair of NSC WG-A)

### ➤ **Block 1 - Emerging approaches in nanorisk assessment**

- Session 1: New developments in human hazard assessment - focus on AOP, QSAR, IATA
  - 9:05-9:15 h (i) Session intro on “The Why and What and How of AOPs and various emerging approaches – QSAR, NAMs, IATA” by Session Chair Peter Hoet, KathUni Leuven
  - 9:15-9:30 h (ii) “Beyond chemocentric models: from toxicogenomics to integrated approaches for IATA development” by Dario Greco, Uni Tampere
  - 9:30-9:45 h (iii) AOPs and data integration within Nanosafety” by Penny Nymark, Karolinska Institutet
  - 9:45-10 h (iv) “Showcasing the AOP-Wiki Resource Description Framework – why nano-AOPs do not exist” by Marvin Martens, Uni Maastricht

Short break 10:00-10:05 h

- Session 2: Exposure & life cycle assessment - determination & modeling
  - 10:05 h Introduction of Session Chair Wouter Fransman, TNO
  - 10:05-10:15 h (i) “Extrapolation (i.e. re-use) of exposure measurement data for similar exposure scenarios and/or similar materials - from regular chemicals to NMs” by Remy Franken, TNO
  - 10:15-10:30 h (ii) “Sharing of release and exposure measurement data” by Camilla Delpivo, Leitat
  - 10:30-10:45 h (iii) “Efficiency testing and implementation of risk management measures to mitigate exposure to NMs” by Henk Goede, TNO
  - 10:45-11:00 h (iv) “Life cycle thinking in nanoform release assessment” by Nathan Bossa, Leitat

## Virtual coffee, tea & sweets break 11:00 - 11:05 h

### ➤ **Block 2 – Data workshop & e-tools for nano & beyond**

- Session 3: Data FAIRness, metadata completeness, scientific quality assurance
  - 11:05-11:10 h (i) Session intro “Experiences from NanoFASE going FAIR” by Session Chair Claus Svendsen, UKCEH
  - 11:10-11:35 h (ii) “When is a metadata set complete?” showcasing (a) specific example(s) with discussion moderated by Thomas Exner, Edelweiss Connect
  - 11:35-12 h (iii) “How to implement (scientific) FAIR principles in my work?” showcasing support in data FAIRness for projects by Ammar Ammar, Uni Maastricht

Short break 12:00-12:05 h

- Session 4: Spectrum of e-tools along data life cycle
  - 12:05-12:15 h (i) Session intro “Data life cycle - generation processing, evaluation, prediction, curation” by Session Chair Iseult Lynch, UoB
  - 12:15-12:25 h (ii) “Showcasing the NanoCommons exposure/risk assessment tool <http://enaloscloud.novamechanics.com/nanocommons/exposure/>” by Periklis Tsiros/Harry Sarimveis, NTUA
  - 12:25-12:35 (iii) “Showcasing read-across of NM properties (*i.e.* zeta potential) to cytotoxicity using <https://cellviability.cloud.nanosolveit.eu/>” by Tassos Papadiamantis, UoB
  - 12:35-12:45 (iv) “Showcasing human exposure assessment using <https://aerosol.cloud.nanosolveit.eu/1/>” by Nikolaos Cheimarios/Andreas Tsoumanis/Georgia Melagraki/Antreas Afantitis, NovaMechanics
  - 12:45-12:55 h (v) “Idea, methodology, current state of the NanoInformaTIX platform” by Gianpetro Basei, Greendecision
  - 12:55-13:00 h (vi) “Call for action on the Gracious Ontology-Wiki” by Thomas Exner, Edelweiss Connect

#### **Working lunch and NSC General Assembly 13:00 – 14:30 h**

#### **Virtual coffee, tea & sweets break 14:30 – 14:45 h**

- **Block 3 - NanoRisk Governance & Safe-by-Design concepts - fit for translation to sustainable development?**
  - Session 5: Features of nanoRGFs in development & current NRG concepts
    - 14:45-14:55 h (i) “What do we need a NRG Council for, who are its stakeholders and what are their needs?” by Marie-Valentin Florin, NanoRigo
    - 14:55-15:05 h (ii) “What can we expect from a future NRG Council and what is the current view on its design” by Rob Aitken, Gov4Nano
    - 15:05-15:25 h (iii) “Screening ethical issues for governance of nanorisk” by Ineke Malsh, RiskGone
    - (<http://enaloscloud.novamechanics.com/riskgone/thresholdanalysis/>)
    - 15:25-15:45 h (iv) “Insight into the nanorisk governance process guided by the NanoRigo NRG framework” by Arto Säämänen, and “Requirements on NRG frameworks by insurances and other societal stakeholders” by Martin Mullins, NanoRigo

#### **Short break 15:45-15:50 h**

- Session 6: Elements of SbD for sustainable development & innovation
  - 15:50-15:55 h (i) Session intro “SbD - from philosophy to application” by Session Chair Andrew Nelson (SABYDOMA)
  - 15:55-16:10 h (ii) “Elevator pitches by other 3 NMBP-15 projects” by Soco Vazquez (SABYNA), Carlos Fito (SbD4Nano), Anna Costa/Felice Simeone (ASINA)

- 16:10-16:30 h (iii) “Presenting two case studies (CS) to apply different SbD concepts in break-outs”: (a) CS1 on SbD for Covid-19, *e.g.*, antiviral coating, strategies for pharma by Susanne Resch, and Anna Costa; (b) CS2 on SbD in plastics/3D printing/additive manufacturing by Soco Vazquez (confirmed) and Andrew Nelson
- 16:30-16:45 h (iv) Feedback/views/feelings from break-outs by Susanne Resch, BNN for CS1 and Soco Vazquez for CS2
- 16:45-16:50 h (v) Session summary & outlook to green innovation jointly by Andrew Nelson and Martin Himly

**Virtual refreshments, coffee, tea & sweets break 16:50 - 17:00 h**

The focus of the sessions will be on **gains to the entire process**, explaining how the tools **fit into the wider strategy** and what **remains after the projects** have finished, where to find further info to get things **applied in users’ own hands**.

**NSC Plenary Session: 17 - 18 h**

# NSC Training Day @ NANOSAFE Digital Conference

23 November 2020

Agenda in CET

2 Parallel Sessions

<b>Hands-on Training on Nanosafety Tools and Models</b>	<b>NanoSafety Stakeholder engagement, Diplomacy, Regulation and Risk Governance</b>
<p>9:00-9:05 Welcome of the day - Martin Himly (Chair of NSC WG-A)</p> <p>09:05-10:00 <i>In silico</i> tools for Nanosafety Research, Lang Tran (PATROLS)</p> <p>10:00-12:00 Interactive training on “NanoXtract Image Analysis Tool – NanoCommons Knowledge Base”, Antreas Afantitis, Georgia Melagraki, Dieter Maier, Andreas Tsoumanis, Anastasios Papadiamantis, Iseult Lynch (NanoCommons)</p> <p><b>12:00-13:30 Lunch break</b></p> <p>13:30-14:30 NanoSolveIT tools for assessment of human and environmental exposure to nanomaterials Antreas Afantitis, Georgia Melagraki, Nikolaos Cheimarios, Andreas Tsoumanis, Samuel Harisson, Pantelis Karatzas, Philip Doganis, Harry Sarimveis, Iseult Lynch (NanoSolveIT)</p> <p><b>Short break 14:30-14:40</b></p> <p>14:40-16:40 Advanced <i>in vitro</i> models of the human lung, GI tract &amp; liver for hazard characterisation, Kirsty Meldrum, Barbara Drasler, Rui-Wen He, Angela Kämpfer, Samantha Victoria Llewellyn, Marije Niemeijer (PATROLS)</p> <p><b>Short break 16:40-16:50</b></p> <p>16:50 - 17:20 Enhanced darkfield microscopy for localization of particles <i>in vivo/in vitro</i>, Trine Berthing (PATROLS)</p>	<p>10:00-10:05 Welcome of the day - Stella Stoycheva (Co-Chair of NSC WG-A)</p> <p>10:05-12:00 Stakeholder workshop on analytical tools, Eva Valsami-Jones (ACEnano)</p> <p><b>12:00-13:30 Lunch break</b></p> <p>13:30-15:00 Introduction to Nanotechnology Regulations &amp; Risk Governance (NSC Working Group G), Steffi Friedrichs (<a href="#">AcumenIST</a>), Keld Alstrup Jensen (<a href="#">caLIBRAte</a>), Monique Groenewold (<a href="#">Gov4Nano</a>), Thomas Kuhlbusch (<a href="#">NanoHarmony</a>) Maria Dusinska (<a href="#">RiskGONE</a>), Janeck Scott-Fordsmand (<a href="#">NanoRIGO</a>) (<a href="#">NANOMET</a>), Miguel Banares (<a href="#">NanoInformaTIX</a>), Antreas Afantitis (<a href="#">NanoSolveIT</a>), Iseult Lynch (NanoCommons)</p> <p><b>Short break 15:00-15:10</b></p> <p>15:10-17:00 h Science Diplomacy: A New Way to Think About Your Role in a Community of Research, Claire Mays (<a href="#">SabyNA</a>, <a href="#">InsSciDE</a>), Guillermo Ort-Gils, Institute for Bioengineering of Catalonia (IBEC)</p>