



**NanoCommons**

Nano-Knowledge Community

## **CALL FOR ACTION: ONTOLOGY TERM DEFINITIONS**

**The EU-NanoSafety Cluster WG F and NanoCommons  
with the support of the GRACIOUS project**



This project has received funding from the European Union Horizon 2020 Programme (H2020) under grant agreement no. 731032

# Tell us your needs!

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Go to [www.menti.com](http://www.menti.com) and use the code 11 75 43 9

In which area are you collecting ontology terms or are in need of new terms?

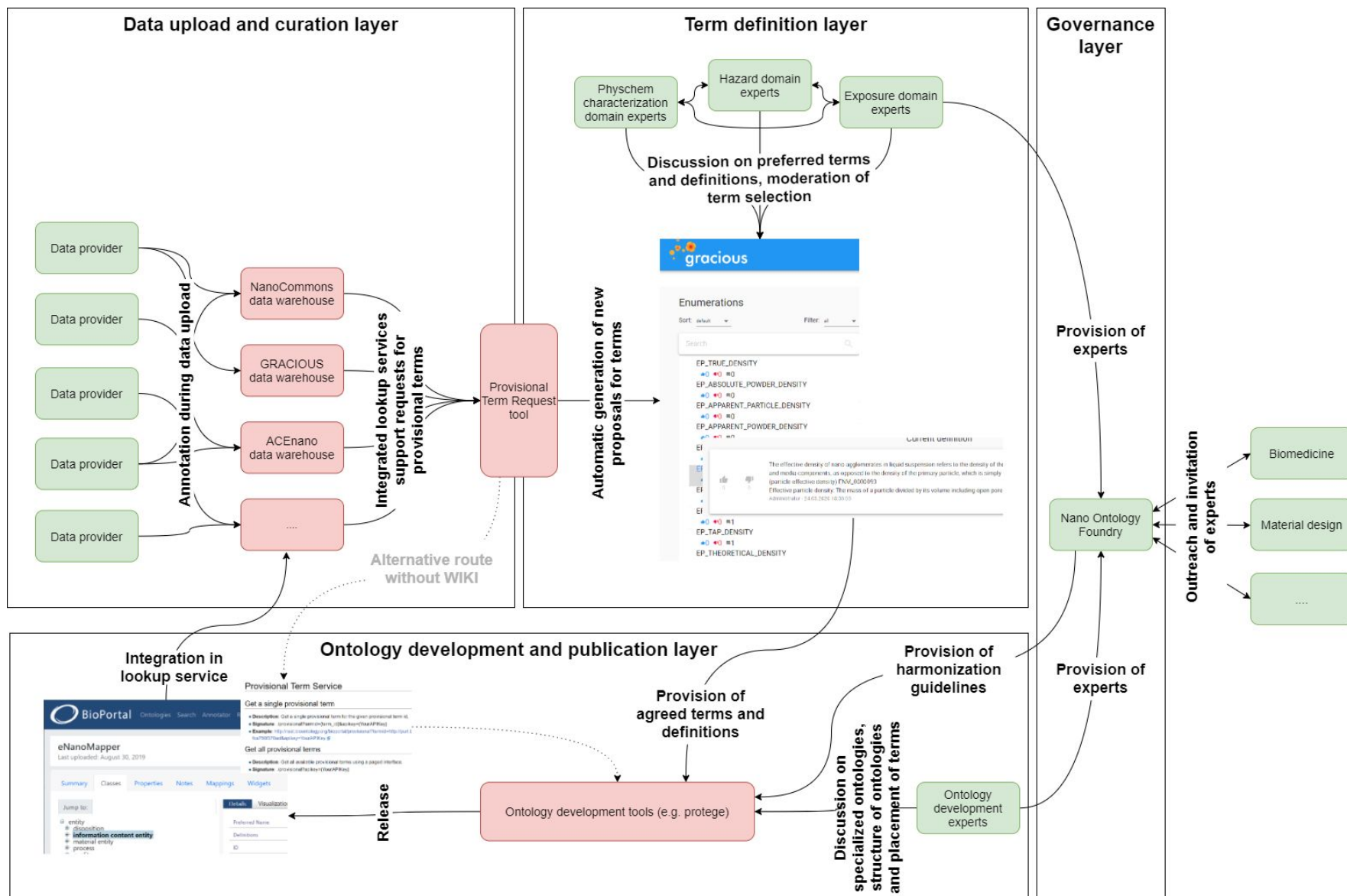
 Mentimeter

safe by design  
physchem characterisation  
nanoinformatics  
governance  
regulatory





# The ontology development universe



# The Ontology WIKI

(powered by GRACIOUS)

## Nano Safety Cluster Terminology

This Software is a system which aids agreement upon term definitions towards the creation of harmonized ontologies

Select a knowledge base to start



Nanoinformatics and simulations



Physicochemical characterization



Safe-by-design



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# The Ontology WIKI

(powered by GRACIOUS)



KB Selection > Physicochemical characterization > Endpoint

## Endpoint COPY ID

### Enumerations

Sort: default Filter: all

- Endpoint cand. w.m. 2 0 3
- Physchem property endpoint cand. w.m. 0 0 1
- Physchem characterization endpoint cand. w.m. 0 0 1
- Action candidate 0 1 2
- Action parameter cand. w.m. 0 0 0
- Physchem characterization technique cand. w.m. 0 0 0
- Brunauer–Emmett–Teller analysis cand. w.m. 0 0 4
- X-Ray photon spectroscopy cand. w.m. 0 0 0

### Current definition

2 0

The endpoint is a quantitative or qualitative interpretable standardized representation of a perturbation (a change from a defined reference state of a "closed" model system) that is measured by the bioassay. An endpoint consists of a series of data points, one for each perturbing agent (screened entity) tested the assay. definition [[http://www.bioassayontology.org/bao#BAO\\_0000179](http://www.bioassayontology.org/bao#BAO_0000179)]

Thomas Exner - 17.09.2020 11:09:19

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Add new comment

ACEnano needs a very general definition for the data warehouse to cover all measured endpoints of the developed techniques. However, the expert feedback shows that very different definitions are possible and we might think of introducing another layer in the data warehouse to be able to annotate the data according to these different definitions with ontology terms for more specific endpoints (e.g. physchem property endpoint) and then also specifically search for them.

Thomas Exner - 17.09.2020 11:09:12

Proposal for ACEnano: The conclusion of a chemical reaction or a defined target outcome of an experiment; 2. An endpoint is the final stage of a period or process, i.e. in terms of ecotox testing such as reproduction success, mortality, growth or growth inhibition.

Thomas Exner - 17.09.2020 11:09:21

More specific endpoints, like physchem property endpoint, are used in eNanoMapper. Should this be added as an additional layer between result and the specific endpoints

Thomas Exner - 17.09.2020 11:09:11

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<https://nsc-terminology.greendecision.eu/>

# Documenting ongoing activities

Section 1 of 6

## NSC Ontology Task Force

The task force was created to generate a complete picture of the ongoing activities with respect to ontology development and data annotation within the projects of the NSC and other international groups.

Currently there are increasing needs of high quality data to feed into the evolving nanoinformatics workflows and for use in a regulatory and policy context. To achieve this, datasets need to be findable online and machine readable and able to be combined to larger datasets to be reused for the identification of hidden patterns and relationships as demonstrated, among others, by Labouta et al. (2019) during the meta-analysis of 93 peer-reviewed papers. Thus, datasets need to be annotated using established ontologies, along with communication between the various nanosafety databases/repositories. Currently, there is a number of parallel ongoing activities within the NSC projects for the development of data dictionaries (collections of terms), taxonomies and ontologies, which are focussed in a field-specific context. This potentially results in duplication of work and lack of communication between the various efforts, leading to lack of harmonisation and communication and to huge effort and time being wasted.

Aims of activity:

- Generation of an ontology, terms, taxonomies
- Identification of the similarities and alignment potential to promote a harmonised response of the nanosafety community and promote data interoperability and reusability, as per the requirements of the Open data initiative of the European Commission.

<https://forms.gle/EEgz5Vb36zcT2HrZ7>

Even if the Task Force will end after the collection the above information, this should be followed up by the creation of expert groups. These groups will work on term collection in specific fields of nanosafety research

**Thank you for your attention and input!**

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