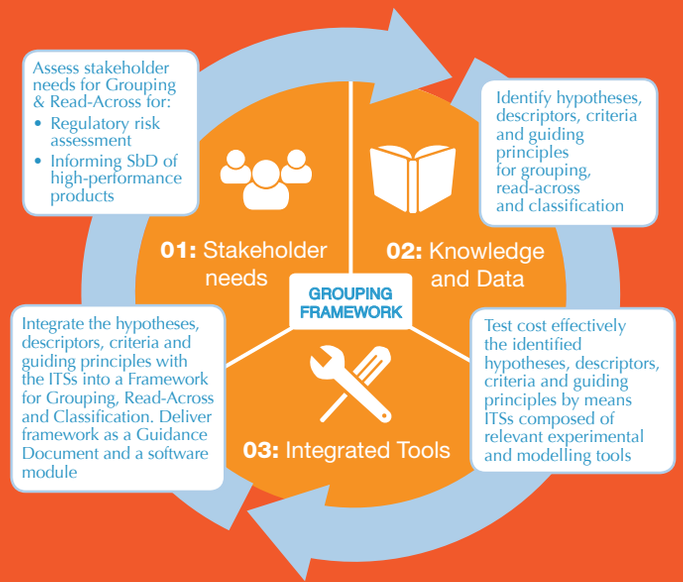
OBJECTIVES

- Integrate key stakeholder needs with state-of-the-art thinking on grouping and read-across of nanomaterials/nanoforms in order to design, develop and refine a sustainable Framework.
- Develop knowledge and generate data as the basis to derive hypotheses, criteria and guiding principles for grouping, leading to classification and read-across, as building blocks for the GRACIOUS Framework.
- Refine and integrate tools to build the GRACIOUS Framework, Guidance Document and software module.



PROJECT

GRACIOUS is a three and a half year EU project that runs from 2018 to 2021. It has a budget of about 7.1 million.

CONSORTIUM

GRACIOUS brings together 23 partners spanning Europe and the USA, including representatives from academia, industry, policy makers and regulators.

HERIOT WATT UNIVERSITY · BASF · IOM · yordas · BfR · universität wien · iit · ETH zürich · LEITAT · AkzoNobel · IOM consult · Unilever · ThinkWorks · ASU · Duke · ATHENA · Empa

gracious

Grouping , Read-Across, Characterisation and ClassificatiOn framework for regUlatory risk assessment of manufactured nanomaterials and Safer design of nano-enabled products

www.h2020gracious.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 760840

PROJECT OVERVIEW

The GRACIOUS project will develop a highly innovative science-based framework that supports the assessment of risk posed by the ever increasing array of nanomaterials on the market and under development. The framework will streamline the process for assessing their risk by logically grouping nanomaterials thereby allowing extrapolation between (read-across) nanomaterials and reducing the need to assess exposure to and toxicity on a case by case basis.

CONCEPT & STRUCTURE

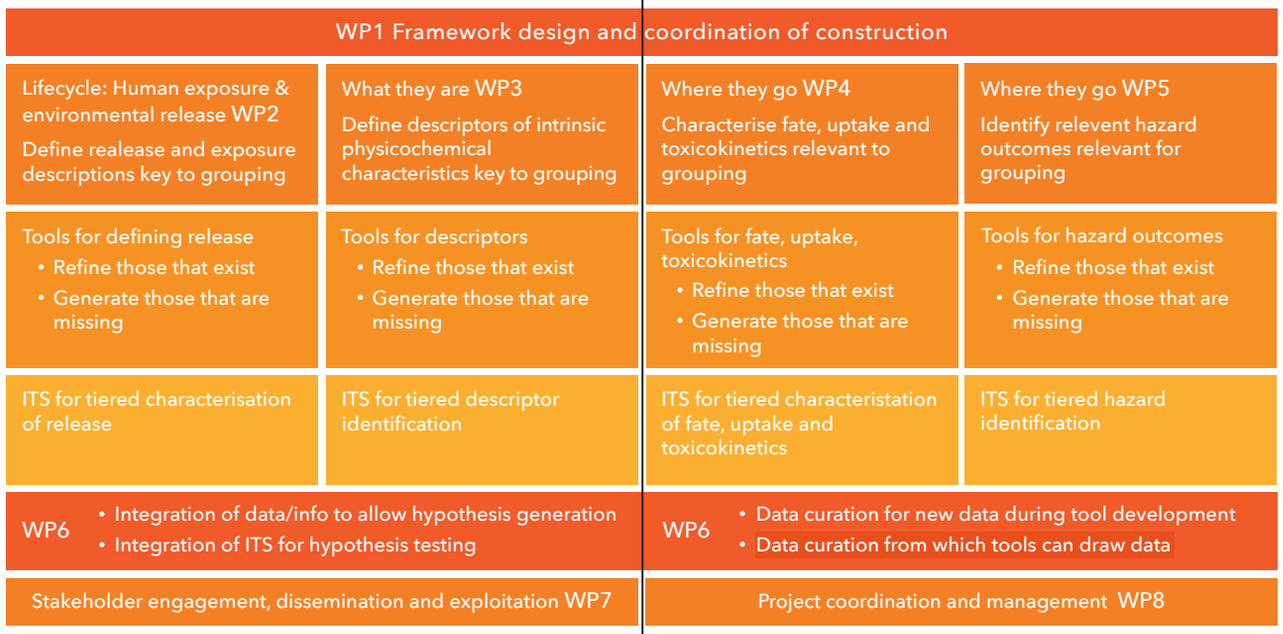
WP1 will design and coordinate construction of the Framework, which will then be built by defining the descriptors and endpoints relevant to hypotheses generation for grouping and read-across (WP2-5).

To generate the knowledge and data needed to identify and test these hypotheses Intelligent Testing Strategies (ITSs) will be developed to cover all domains of relevance for risk assessment:

1. Lifecycle environmental release and human exposure
2. What they are: physicochemical identity
3. Where they go: environmental fate, uptake and toxicokinetics
4. What they do: human and environmental toxicity

These descriptors and endpoints will define the tools needed to accept, reject or refine the hypotheses, which will then be built into a series of ITS s before integration into a Framework (WP6).

The ITSs will reduce, refine and replace (where possible) the need for animal testing by promoting the use of modelling (e.g. in silico, fate, exposure), *in vitro* and cell-free tests.



EXPECTED RESULTS

The Framework and its Intelligent Testing Strategies will be delivered as:

- E-tool fit-for-purpose for various key stakeholders (regulatory and industrial)
- Guidance Document

Both the E-tool and the Guidance Document will be designed for practical application to:

- Help industries and regulators assess environmental and human health risks of existing NMs/NFs cost-effectively
- Facilitate business decisions concerned with developing new NEPs
- To inform Safety-by-Design practices