Computing infrastructure for the definition, performance testing and implementation of safe-by-design approaches in nanotechnology supply chains

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A major challenge for the global nanotechnology sector is the development of safe and functional engineered nanomaterials (ENMs) and nano-enabled products (NEPs). In order to minimize the risks to human and environmental health during the engineering of NEPs the goal of the Safe-by-Design for Nano (SbD4Nano[1]) project is to create a novel e-infrastructure for the definition, performance testing and implementation of Safe-by-Design (SbD) approaches in the nanotechnology supply chains.

SbD4Nano will overcome all the barriers to promote the implementation of SbD approaches in the nanotechnology industry, providing SMEs with a set of web-based applications and tools.

The tool integrates a number of models to predict the toxicity of ENMs, being designed to be used by SMEs and non expert users. New approaches to predict the functionality of advanced materials have been implemented to support the design of safer products without compromising the performance. Key messages learned from the project are:

1. FAIR data is essential to overcome current barriers to develop predictive models
2. New models shall consider the functionality to support industrial uptake
3. A new knowledge infrastructure compiling models and tools have been developed

Feel free to add an image plus description.

References are mandatory:
[1]   https://www.sbd4nano.eu/ - G.A. **862195**