

Safe by design, Risk assessment and Risk governance in industry

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The idea behind safe by design (SbD) is to integrate knowledge of nanomaterials' potential adverse effects into the process of designing nanomaterials and nanoproducts—and to engineer these undesirable effects out of the respective materials or products. This entails that functionality and safety be considered in an integrated way right from the earliest phases of the research and innovation process. Several European Initiatives are dealing with this concept, its implementation in industry and ultimately its inclusion in a new versatile risk governance framework. In the NanoReg2 project, Risk Assessment tools and Life Cycle Assessment are being used to identify “hot spots” for SbD in the industry and gaps in knowledge as well as to demonstrate the effect of the SbD implementation. In the caLIBRAte project the aim is to establish a versatile risk governance framework for assessment and management of human and environmental risks of MN and MN-enabled products. This framework will include nanospecific models (control banding qualitative and other quantitative models) that will be calibrated and refined so that they will be useful for SbD and Risk Management Decision Support.