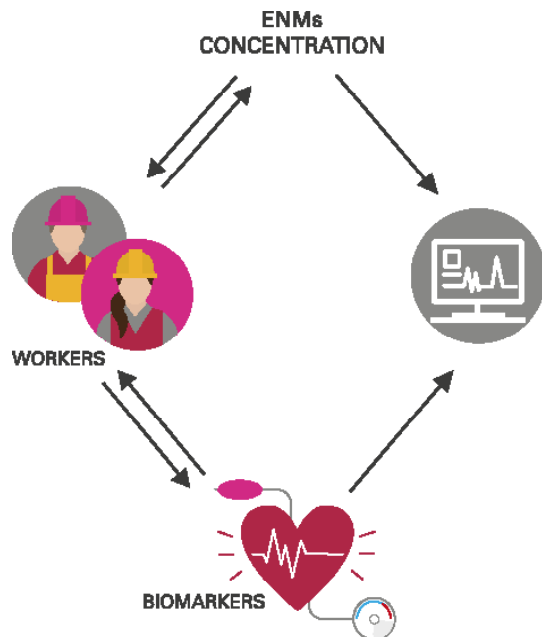


OBJECTIVES

Develop and demonstrate the feasibility of an integrated approach to monitor exposure and health effects derived from engineered nanomaterials, which consists of:

- A wireless sensor network that monitor the concentration of ENMs and relevant physical environmental conditions
- A web-based data management tool aimed at supporting health surveillance of data on the concentration of ENMs
- A panel of candidate biomarkers of nanomaterial exposure and effects via inhalation and a risk analysis of possible effects on human health



PROJECT

NanoExplore is a 4 years EU Life project that runs from September 2018 to September 2022. It has a budget of about 2.2 million.

PROJECT PARTNERS



CONTACT US

info@lifenanoexplore.eu
www.lifenanoexplore.eu



Integrated approach for exposure and health effects monitoring of engineered nanomaterials in workplaces and urban areas

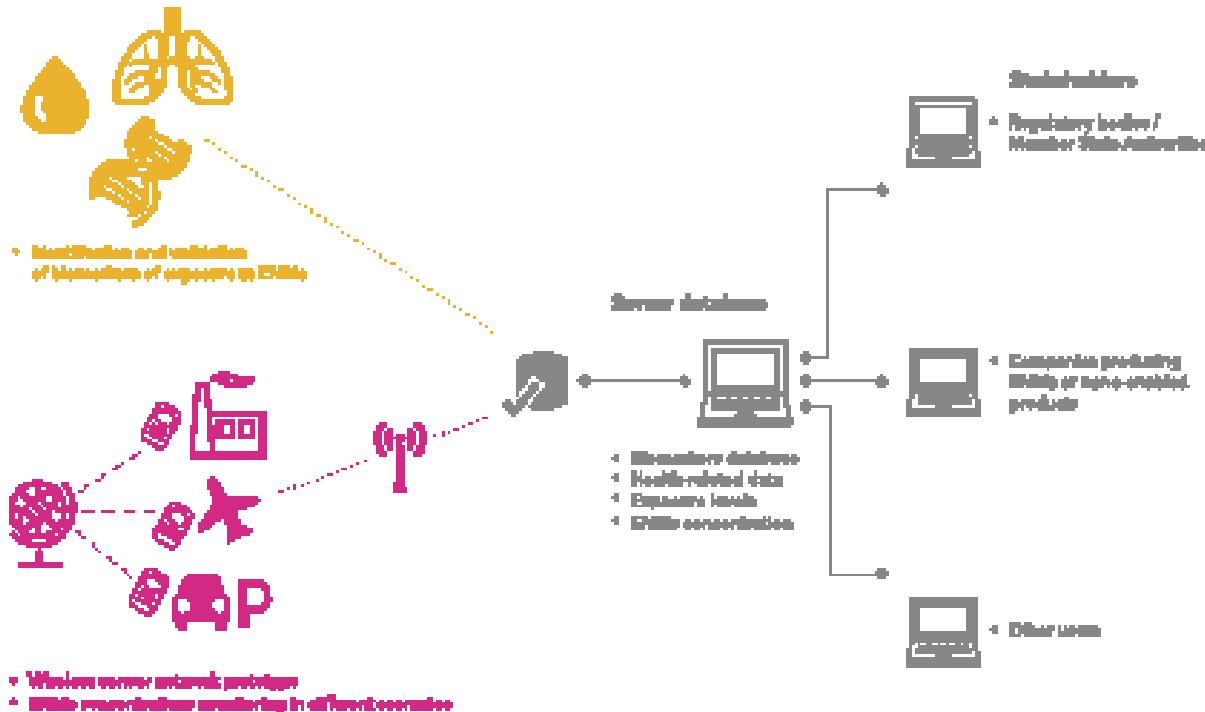
This project is part funded by the European Commission Life with grant agreement LIFE17 ENV/GR/000285



OVERVIEW

There is an urgent need to provide stakeholders, with an integrated approach to generate robust data on the levels of exposure and related health effects, supporting the risk assessment.

The Life NanoExplore project is working to develop and demonstrate the feasibility of an integrated approach to conduct biomonitoring studies, characterise exposure levels and elucidate possible health effects deriving from exposure to engineered nanomaterials (ENM) in indoor workplaces and urban areas.



APPROACH

- Development of protocols for practical use of biomarkers (UNITO)
- Design and development of the portable measurements devices (RAMEN/ITENE) based on biomonitoring data requirements
- Characterisation of the exposure in the workstations where exposed workers perform the task of concern.
- Sampling and measurement of selected biomarkers
- Data analysis

Preparatory Stage

Selection of a representative cohort of workers:

A well-designed cohort study will be designed for examining the applicability of candidate biomarkers.

Implementation Stage

Validation of biomarkers:

Proposed biomarkers will be analysed depending of the type of ENMs and exposure levels, being validated on the basis of the variability of the effects observed with respect to the control subjects.

Monitoring Stage

Demonstration in case studies:

Candidate biomarkers will be applied in subjects exposed to ENMs.