NanoDesk: Advanced web tools to promote the implementation of nanotechnologies and a safe use of nanomaterials in the plastic industry

NanoDesk observatory

Contents management, updates and expected improvements

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Outline

1. Current version of the observatory
2. Updates: interactive session & technological surveillance
3. Contents management
4. Summary conclusions

1. Current version of the observatory

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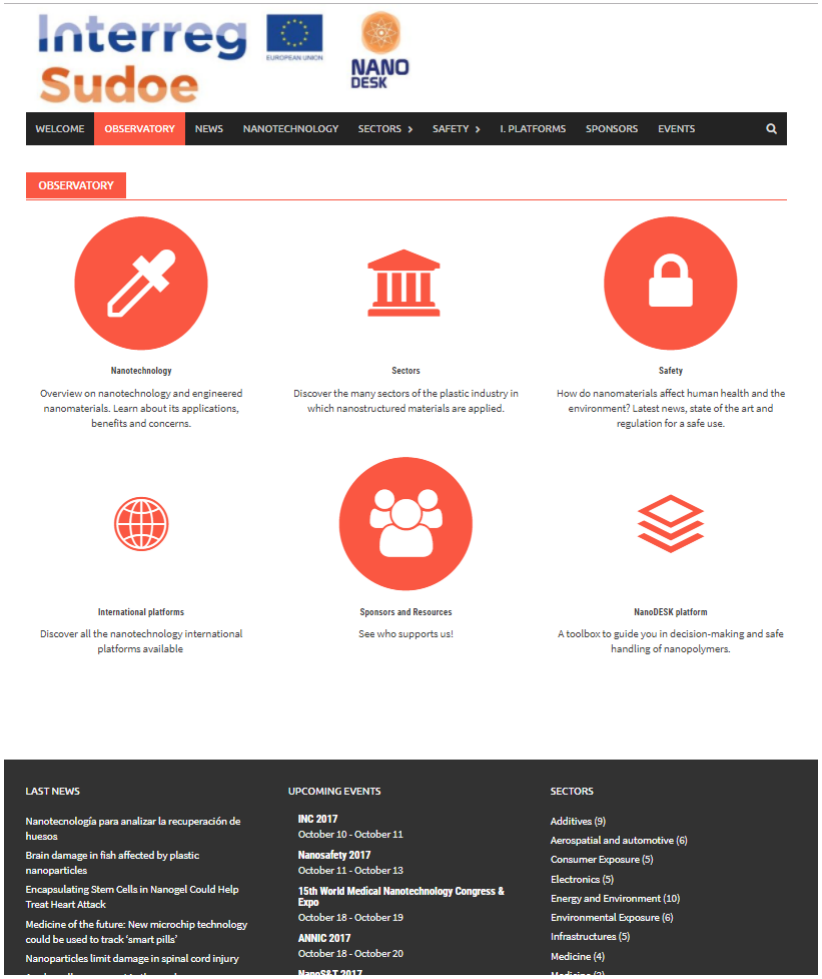
❑ The observatory at a glance

Main page (welcome)

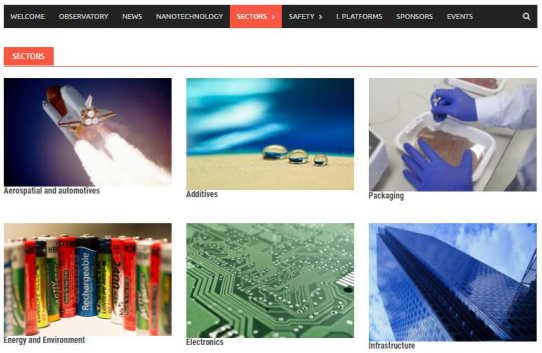


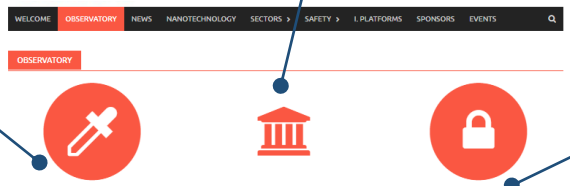
Main page (Access to the Observatory contents)

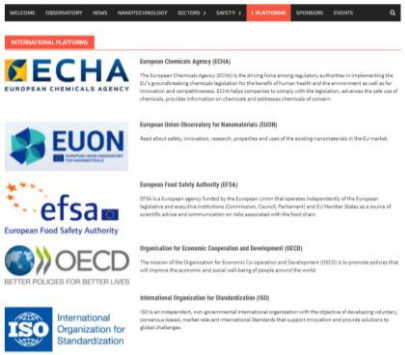
http://observatory.sudoenanodesk.europeanprojects.net/

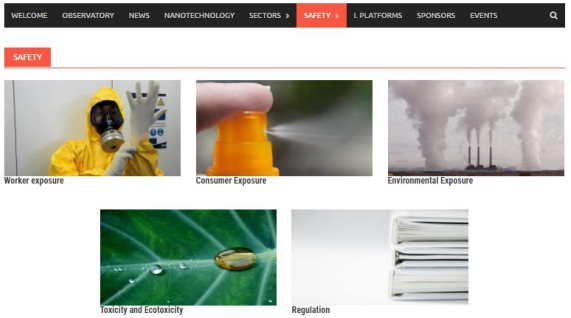
1. Current version of the observatory

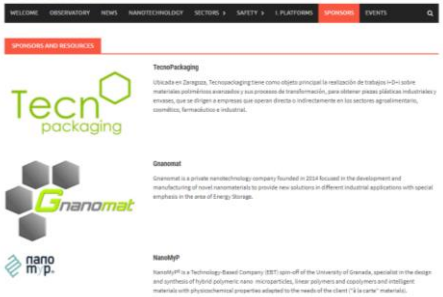
❑ The observatory at a glance

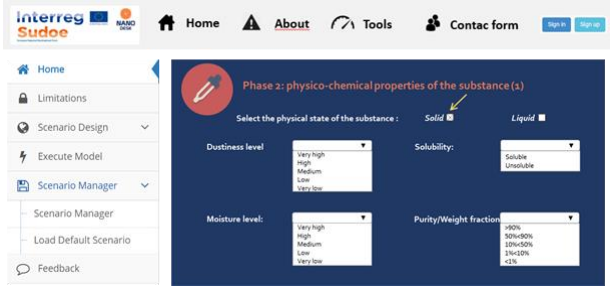












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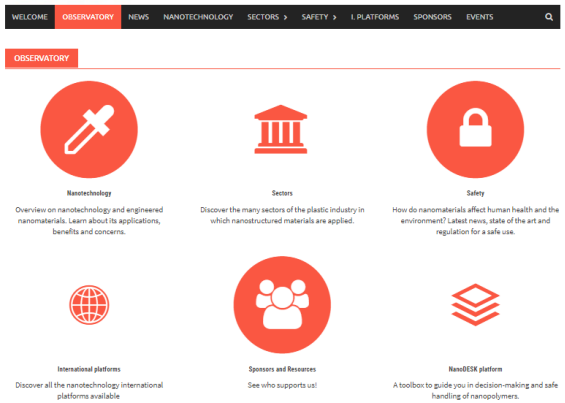
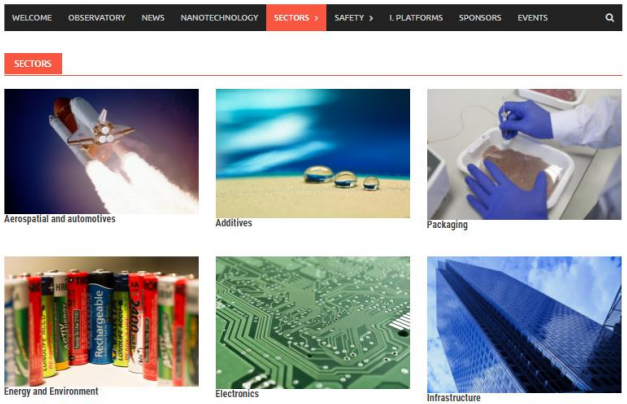
❑ The observatory at a glance





Market segment - sectors

News

The use of nanofillers opens an opportunity for developing innovative and high-performance packaging materials. Accurately, nanotechnology is having an impact on several aspects of food science, from how food is grown to how it is packaged. Companies are developing nanomaterials that will make a difference not only in the taste of food, but also in **food safety**, and the health benefits that food delivers. Applications include nano-filler **reinforced packaging** (e.g. enhanced barrier properties), **active packaging** (e.g. antimicrobial), **intelligent packaging** (e.g. freshness indicators), and **biodegradable packaging**. Clay nanocomposites are being used to provide an impermeable barrier to gasses such as oxygen or carbon dioxide in lightweight bottles, cartons and packaging films. Storage bins are being produced with silver nanoparticles embedded in the plastic. The silver nanoparticles kill bacteria from any material that was previously stored in the bins, minimizing health risks from harmful bacteria.

Other sectors

- Additives
- Aerospatial and automotive
- Consumer Exposure
- Electronics
- Energy and Environment
- Environmental Exposure
- Infrastructures
- Medicine
- Medicine
- Packaging
- Regulation
- Safety
- Sector
- Toxicity and Ecotoxicity
- Uncategorized
- Worker Exposure

Application	Product or article	Improved properties	Nanomaterials
Plastic/packaging	Antimicrobial food packaging Reinforced polymers	Higher thermal resistance Flame retardant Higher stability Higher electrical conductivity Higher efficiency Manufacturing processes Barrier properties (gas and moisture) Antimicrobial UV barrier Lower vapour permeability Mechanical properties Self-cleaning Higher tensile strength Stiffness Antibacterial Electrical properties	Titanium oxide Silver Silicon oxide Calcium carbonate Carbon black Nanoclays Zinc oxide

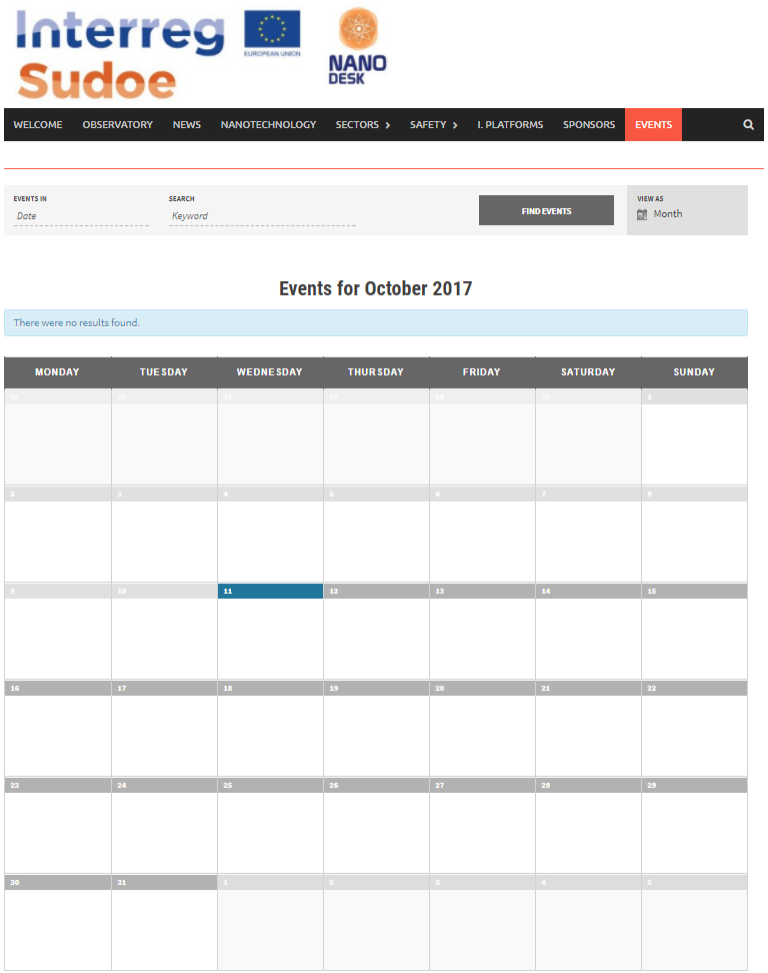
Articles

Relevant Nanomaterials

Potential properties using ENMs

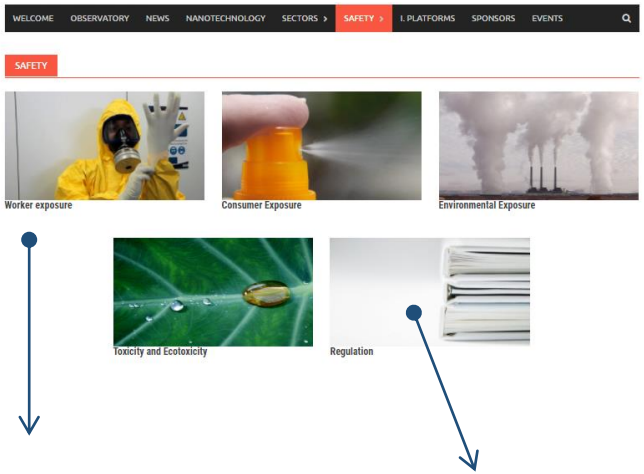
1. Current version of the observatory

The observatory at a glance



Nanosafety related events

Nanosafety related information



Regulatory activities

Overall view of safety issues in the workplace

2. Updates: interactive session & technological surveillance

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Expected updates

- New functionalities to support interaction with stakeholders
- Incorporation of customization options to support user experience and cover user needs: personalized visualization
- Definition of contents management procedures
- Automatization
- New visualization
- Timetable: new version scheduled in April 2018

Developed Steps

- Definition of functionalizes following proposal + IT experts recommendations (November 2017)
- Contact with 3 external providers following “best value of money principle”
- Design of the beta version to obtain a “best offer” (November 2017)
- Analysis with GT leaders and INVASSAT before contracting (December 2017)
- Start of the development: January – April 2018

2. Updates: interactive session & technological surveillance

Proposed Lay-Outs

Home

About

Sign in

Sign up

News highlights

Sectors

Subscriptions

- Nanosafety
- Packaging
- Aeronautics
- Medicine
- Automotive
- Building

Bulletins

Reports

Main screen

News highlights +

Share news

Bulletins +

Aerospatial and automotives

Additives

Packaging

Infrastructure

Reports +

September 17

October 17

November 17

NanoDESK support

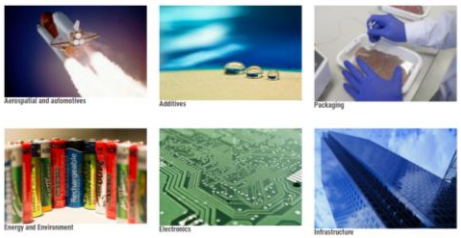
Recommend news

Propose new information sources

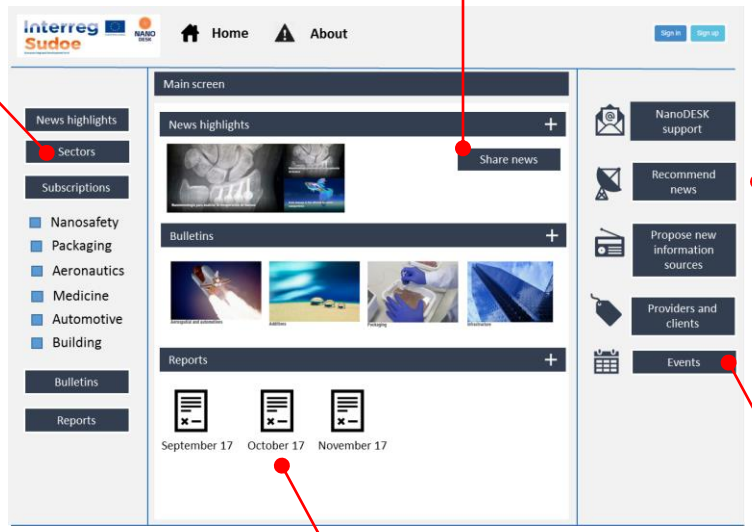
Providers and clients

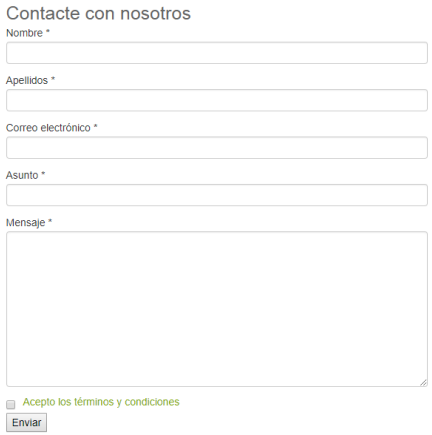
Events

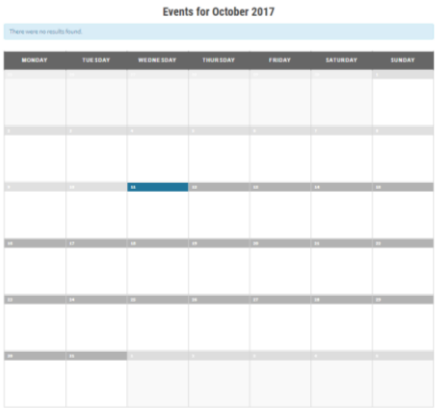
2. Updates: interactive session & technological surveillance



Information sharing







3. Contents management

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❑ Proposed activities

- Definition of roles and responsabalities
- Roles: “observer”, “analyst”, “editor”, “manager”

Roles	Actions	Who
Observer	Identification of relevant sources, screening of documents and news on a week basis	All
Analyst	Analysis of reccomeded news, papers, technical reports, as well as any other source recommeded by observers. Clustering and classifiaction of the information	One technician pointed by each entity. Weekly
Editor	Upload news and develop bulletins	One technician pointed by each entity. Monthy.
Manager	Publication and contents validations	INVASSAT / ITENE
Webmaster	Management of the software	ITENE

- Definition of roles and persons (31/10/2017)
- Start date: 01/12/2017

4. Summary conclusions

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To conclude….

- A close cooperation between the members of the consortium is mandatory to ensure sustainability and viability

- The selection of proper sources will be of prime importance to obtain a relevant amount of news and events across the sectors under the scope of the project.

- A proper management of the roles and responsibilities in the consortium will promoted “cost effectiveness”

- Identification of end users, feed back from stakeholders and a “SMART design” of the observatory will support the project to achieve our expected outcomes

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Thank you for your attention ¡

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Interreg Sudoe
European Regional Development Fund
EUROPEAN UNION
NANO DESK

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cnrs
CEMES
ProtoQSAR Chemoinformatics and modeling solutions to optimize your chemicals
INL INTERNATIONAL IBERIAN NANOTECHNOLOGY LABORATORY
UNIVERSITAT ROVIRA I VIRGILI
U.PORTO FACULDADE DE CIÊNCIAS UNIVERSIDADE DO PORTO
GENERALITAT VALENCIANA
INVASSAT Institut Valencià de Seguretat i Salut en el Treball