

At a glance

€ 900k budget

42 month-long duration

4 working objectives

3 French partners

A shared understanding

The issue of **identification** of antiquities is at the core of the fight against the illicit trafficking of cultural goods.

Nanotechnologies can bring an **operational and user-friendly solution** to this problem.

Any suggested solution must take into account the **constraints** which cultural heritage professionals and law enforcement agencies are facing.

Contact us

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NOSE
UTT - CNRS - CRENSP

Novel Security ink for
archaeological artefacts
marking



NOSE's genesis

NOSE is a continuation of the projects **POLAR** (Police forces and Archaeologists against the trafficking of antiquities, CNRS-funded), **NETCHER** and **PREVISION** (funded via the European Horizon 2020 programme).

Building on those past experiences, NOSE can rely on the complementarity of the actors involved in the protection of cultural heritage and contribute to the fight against the illicit trade of cultural goods.

Challenges of the project

For security

To fight theft, concealment and counterfeiting which finance organised crime and terrorism

For antiquities

To make the most of progress in nanotechnology to improve marking, inventoring and traceability (origin, provenance) of antiquities

For end-users

To gain access to healthy and user-friendly solutions, directly enforceable



Objectives

Create an encompassing list of **specifications** relevant to archaeologists and the police forces.



To carry out the **technical development** of the ink using nanotechnologies and following a specifications.



To explore the various **physical properties** of the inks and the **reaction of objects** based on their materials.



Onsite testing of the ink produced (excavation sites, museums, police checks).

Work organisation

The definition of constraints

The ENSP Research Centre coordinates the realisation of a state-of-the-art assessment of existing tools as well as the definition of specifications for the final product. It involves specialists and end-users in these tasks, such as the French Central Office for the Fight against Trafficking in Cultural Goods (OCBC).



The technical realisation

The laboratory L2n (Light, Nanomaterials and Nanotechnologies) based at the University of Technology in Troyes develops the inks in accordance with the specifications. The added-value of nanotechnology and the creation of a direct link between marking and referencing in a database are key elements of its work.



Onsite testing

The laboratory HiSoMA from the House of Orient and the Mediterranean uses onsite the suggested solutions. Their testing on excavation sites in Kition, Amathous and Salamis in Cyprus will assess their efficiency and acceptability in field conditions.

