

Info Session on the Horizon Results Booster

Nanorestart – Nanomaterials for the Restoration of Works of Art

25th May, 2022

Patrizia Zitelli zitelli@csgi.unifi.it





CSGI – Center for Colloid and Surface Science



- 18 Units
- 7 associated laboratories
- about 300 scientists:
 Full Professors,
 Associate Professors,
 and Researchers

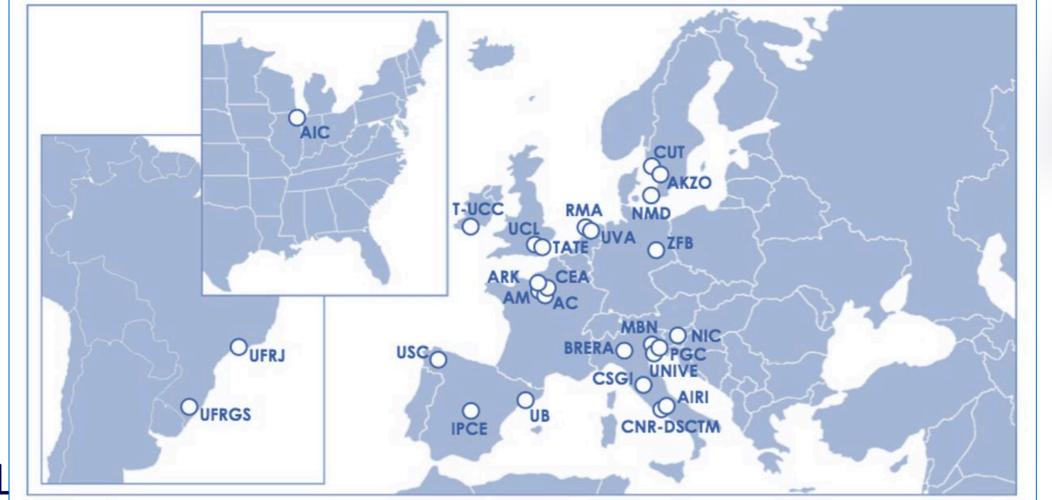
www.csgi.unifi.it



Nano*Rest* RT

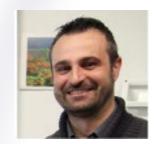
Nanomaterials for the Restoration of Works of Art

- 26 partners from 14 countries over the world
- Coordinated by Prof. Baglioni CSGI & University of Florence
- 42 months (June 2015 November 2018)
- cca. € 8.6 million





Prof. Piero Baglioni



Prof. Rodorico Giorgi



Dr. David Chelazzi



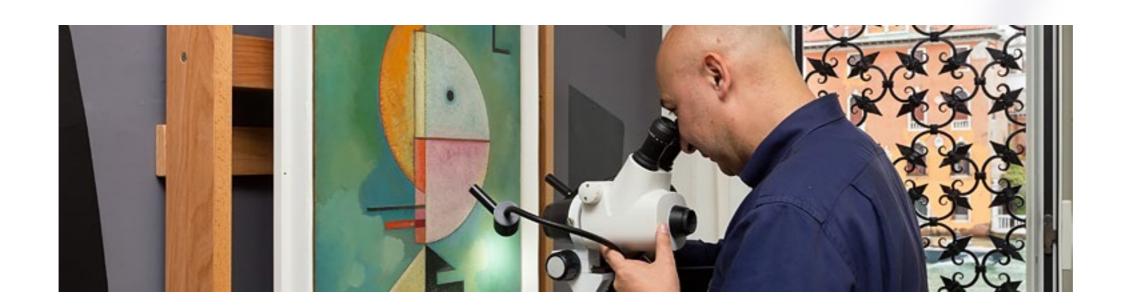
Patrizia Zitelli





Nanomaterials for the Restoration of Works of Art

The NANORESTART project focused on the synthesis of novel nanomaterials and on the development of innovative restoration techniques to address the conservation of modern and contemporary works of art





Nano*Rest* RT

Nanomaterials for the Restoration of Works of Art



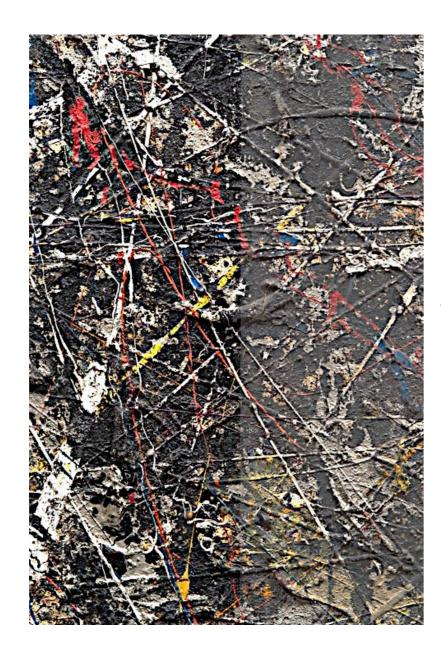






Nano*Rest* RT

Nanomaterials for the Restoration of Works of Art



Alchemie Jason Pollock



Beato Angelico Wall paintings, Florence





Piero della Francesca Wall paintings, Arezzo



NANORESTORE Formulations



Several formulations are on the market and available to conservators with the commercial name of **NANORESTORE**

20 formulations currently produced by CSGI and distributed by CSGI and Deffner & Johann GmbH



NANORESTORE OLEANING APOLAR COATING





Nanorestore Plus Nanorestore Cleaning

Nanorestore Gel

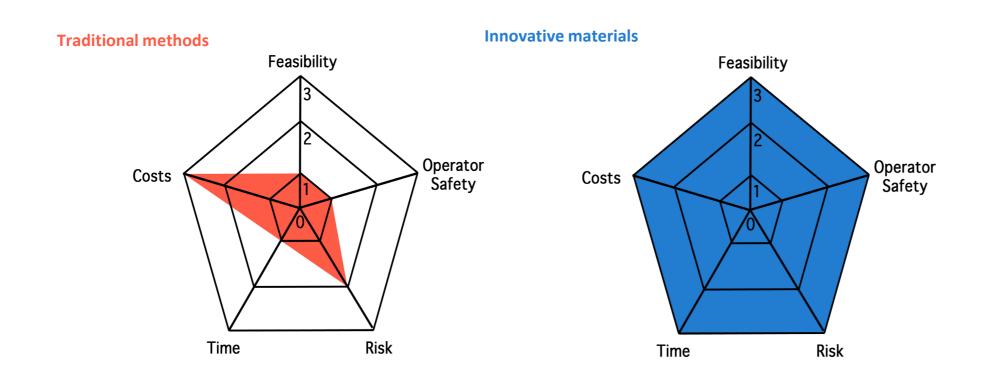
Nanorestore Paper



NANORESTORE Formulations



These innovative formulations have a high business potentiality!!



- ✓ High durability
- ✓ Non-invasiveness
- ✓ Long term protection
- ✓ Minimization of risks
 - ✓ Feasibility
 - Low costs



HRB – Services G2M and BPD

- 1. Develop a business plan
- 2. Optimization of production process
- 3. Identify solutions in terms of start-up operations





G2M - Business - Co-designing a plan for commercial development

G2M - Examining exploitation/business implementation options

BPD - Business Plan Development



HRB – Lean Canvas for the hydrogels family products

PRODUCT

•

Context: cleaning of works of art

PROBLEM

- After the application, residues of the cleaning system may be left on treated surfaces
- Difficulty in removing the target material without damaging the original materials and substrates of the work of art in a selective, and controlled way

EXISTING ALTERNATIVES

- Polysaccharide-based rigid hydrogels
- Water-based thickened systems
- Solvent gels
- Organosilicone gels
- Natural and synthetic sponges, organic and inorganic poultices

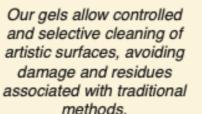
SOLUTION



Two classes of highly retentive hydrogels (Peggy gels and Dry gels) whose main features are:

- they do not leave gel residues on the cleaned surfaces
- they allow for a controlled release of the cleaning fluids which grants a selective and damage-free action

PROPOSITION *



MARKET



Background knowledge on physico-chemical properties of these materials.

Acquired know-how on the formulation and synthesis of these hydrogels.

CHANNELS (



- Congresses, seminars, workshops and word of mouth.
- Dedicated website and social networks (Facebook, YouTube and Instagram)

CUSTOMER SEGMENTS



- Private conservators (users and customers)
- Conservators (users) public and private institutions (customers)
- Conservation schools (customers)
 teacher and students (users)
- Geographic location: worldwide

EARLY ADOPTERS



Private conservators and conservators working in public and private institutions involved in the NANORESTART project

KEY METRICS



- # units sold;
- # customers and countries reached
- Control over customer loyalty
- Customer satisfaction
- Reduction of production costs
- # institutional agreements
- # trainings, workshops and seminars

COST STRUCTURE 1



		Year	
	2018	2019	2020
Personnel (1 part time)	10.000,00€	10.000,00 €	10.000,00€
Consumables	1.500,00 €	1.750,00 €	2.000,00 €
Packaging	400,00€	600,00€	600,00 €
Shipment	1.900,00€	2.350,00 €	2.500,00 €
Administration	1.000,00€	1.000,00 €	1.000,00€
Total	14.800,00€	15.700,00 €	16.100,00€

REVENUE STREAMS





Prices

- Peggy gels:
 sheet: 18 €
 - gum:6€
- pen: 12 €
 Dry gels:
- sheet: 18 €
 Test kit*: 36 €
- * including 4 half sheets and two half gums

The organization of trainings, seminars and workshops on the use and application of Nanorestore[®] products is planned for the forthcoming months



HRB – Services G2M and BPD

Results achieved in the short term

- Better definition of the roles and internal procedures (internal protocol)
- Improved NANORESTORE website and create social media channels
- Trainings for conservators
- Costumers segmentation
- First quantification of costs and revenues streams, also in terms of sustainability



HRB - Services G2M and BPD

Next steps

- □ Implementation of production system (scale-up phase)
- □ To contact potential investors
- Create a Spin-off



HRB - Services G2M and BPD





Piero Baglioni



Rodorico Giorgi



Giovanna Poggi



Michele Baglioni



Patrizia Zitelli



Filippo Baldereschi



Daniela Vullo



Teresa Guaragnone



David Chelazzi





zitelli@csgi.unifi.it products@csgi.unifi.it

ww. horizonresultsbooster.eu





