Delivering Nanotechnologies, advanced Materials and Production to REGional manufacturing

Interreg Europe
European Union | European Regional Development Fund

NMP-REG
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Sharing solutions for better regional policies

Interreg Europe and Clusters for Recovery

Online workshop 1st March 2022

Cross-cluster collaboration for a quick recovery from pandemic

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NMP-REG in a nutshell

Priority Axis 1 - **Strengthening research, technological development and innovation**

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CLUSTER concept
represents for NMP-REG an effective
paradigm of innovation delivery

☐ **Design and develop (Phase1) / begin and monitor implementation (Phase2) of** <u>Action Plans</u> **for policy** improvement

☐ **Foster EU networking** on NMP innovation delivery, <u>sharing</u> AP guidelines through PLP and other communication tools.

Partnership – **7 partners coming from 5 EU Regions**
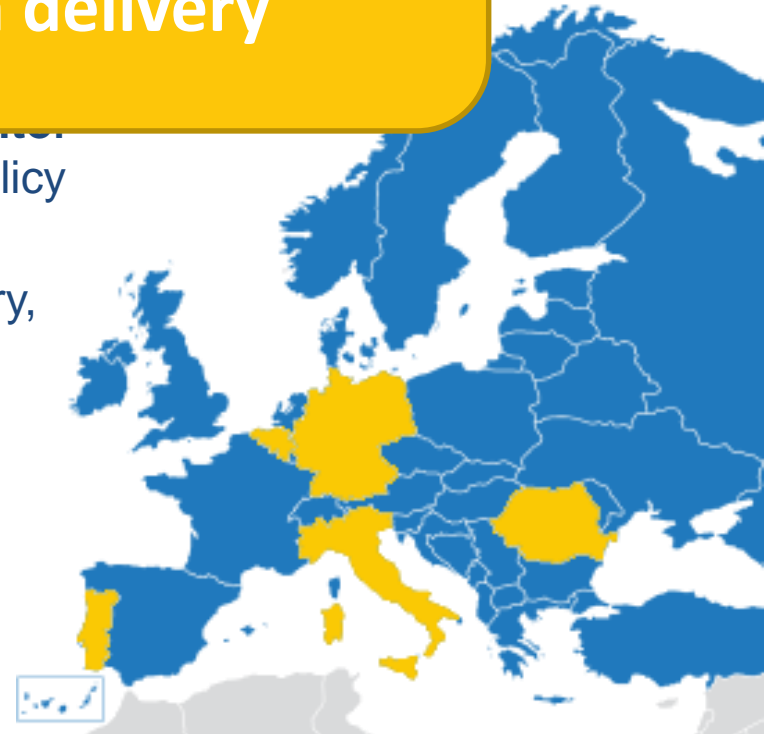
Technology Districts in Tuscany

In 2014-2020, Tuscany launched a policy to **reorganise the technology transfer system** based on the implementation of **11** regional **Technology Districts.**
Technology Districts are **immaterial infrastructures/organized networks for TT** of industries, SMEs, laboratories and public-private research centres <u>**DEALING WITH or AIMING TO invest**</u> in innovative solutions focused on **specific sectors** of the regional **economy** or **enabling technologies.**
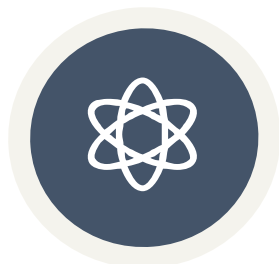
ADVANCED MATERIALS

PAPER **ENERGY** **FASHION** **LIFESCIENCES** **STONE**

ICT **RAILWAY** **NAUTICAL** **INTERIORS & DESIGN** **SMART CITY**

A **Technology District aims to**:
- Promote technology **dissemination and knowledge** of innovative solutions
- Support **innovation delivery** and technology transfer
- Facilitate the **sharing/optimization of** physical **facilities** (laboratories, equipment)
- Promote technological exchange, **networking**, the development of industrial research and **innovation projects**, the signing of **B2B and R2B agreements**

Technology Districts in Tuscany

The system of regional **Technology Districts**, therefore, **represents the link between regional policies** for innovation and technology transfer **and the business-research system**, particularly referring to **SMEs**.

As such, **TDs provide services both** for **SMEs**, **Research Organizations** and the regional **Managing Authority itself:**

- Technology **dissemination** (workshops)
- **B2B / R2B / F2B** matchmaking events
- Support for business innovation **projects**
- Support for participation in regional and EU **calls**
- **Technical services** (feasibility analysis, proof of concept, testing)
- **Training** and **patenting** services
- Orientation to research laboratories and **skills**
- Visits of **researchers** to companies
- **Analysis** of sectoral innovation needs
- Identification of technological **priorities**
- Support to **Smart Specialisation Strategy** (S3)

Technology Districts in Tuscany

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S (Strengths)
- Clear **technology** commitment
- **Public-private** steering committees
- **B2B/R2B** exchanges between **actually** motivated actors
- Growth of innovation **projects** for **quality** and quantity

W (Weaknesses)
- **Too low** level of start-up **funds**
- **Lack of coordination** among TDs and between TDs/MA
- **Lack of a cross-sectoral** approach to innovation needs

O (Opportunities)
- **Effectiveness** of innovation policies and TT
- Building **multidisciplinary approaches** to problems
- TDs as **key drivers** for territorial competitiveness and **S3 strategies**
- TDs as key nodes for approaching to **EU opportunities** by SMEs
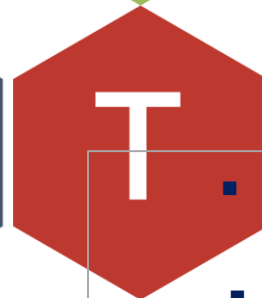
T (Threats)
- **Overlapping** and uncoordinated **parallel initiatives**
- Limited **extent** of TDs' initiatives if **not** led in **sinergy**
- **Scattering** and loss **of** economic and professional **resources**

From TDs to CLOCK (by NMP-REG)

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Weaknesses of the TDs system have been addressed through a dedicated "Action" of the **NMP-REG Action Plan**:

> The **bottom–up approach** adopted by LP/TD Materials
>
> **+** the **working relationship** built up with MA and some TDs
>
> ➤ led to a smooth, bur relevant, **change of paradigma**
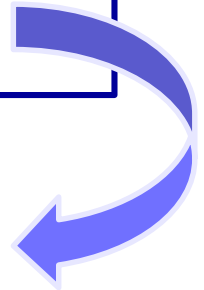
> **7 Technological Districts** (by their management entities including NMP) **AND** the **Tuscany Region** (by its Directorate for Economic Development) **signed a Protocol of Understanding** in order to setup an **Interdisciplinary platform for Innovation delivery in Tuscany**, named:

CLOCK
Cluster Of Clusters for Knowledge

CLuster Of Clusters for Knowledge

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Objectives

- ❑ **Sharing knowledge,** skills, equipment and tools, with a view to **economic intelligence;**
- ❑ **Integration** between **research-training-innovation-business;**
- ❑ Capitalization of research, technological development and innovation programmes;
- ❑ Technological **dissemination** and **matchmaking B2B/R2B**;
- ❑ Identification of **interdisciplinary solutions** to supply chain or sectorial problems;
- ❑ Regional **coordination** to maximize the effectiveness of the programmes, projects and actions for technology transfer

ADVANCED MATERIALS

CHEMISTRY

PAPER

CLOCK
CLuster Of Clusters for Knowledge

NAUTICAL

INTERIORS & DESIGN

ENERGY

LIFESCIENCES

- ➢ **Regional government resolution n° 1256/2019 (MoU)**
- ➢ **CLOCK legal Association** (only TD managing entities), constituted in late 2020

... meanwhile, the COVID emergency

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Change in the policy measures
Regional Authority quickly reacted to the COVID health emergency, in order to support the resilience and restart of SMEs.
Launch of several **calls for recovery and digitization** (**>250M€**)

Change in the innovation delivery activities
TDs have to progressively revise and update:
- **methods** for contacting entrepreneurs and researchers (from physical to virtual exchange)
- **services** for SMEs (+ focus on new recovery funding opportunities)
- technological **trends** for the "post" health emergency
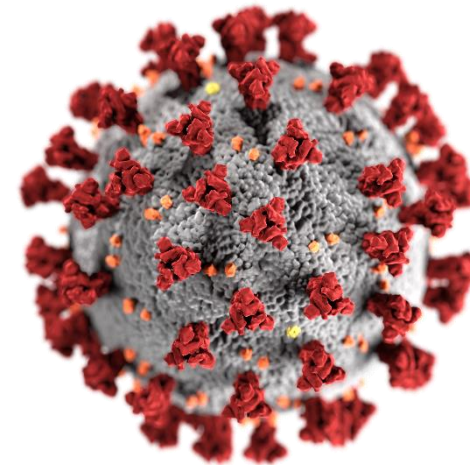
Change in the CLOCK process deployement
Faster establishment of the **Association**, delay in the **public launch** of the platform (also due to the new Regional organization and programming period), increased focus on multidisciplinary **strategic projects**.

Change in the regional strategies (new RIS3)
In spring 2021 Regional Authority decide to duly revise own **Smart Specialisation Strategy** for the programming period 2021-2027 accordingly with the new framework emerging after the pandemic. Both TDs (in parallel) and CLOCK (as a whole) participated to the review.

New technology trends

The health emergency has suddenly **changed the investment priorities** of regional resources and the development prospects of the same **technologies**

CLOCK
CLuster Of Clusters for Knowledge

System actions on cross-cutting strategic themes

- **The Tuscan hydrogen supply chain**: production, storage and use for decarbonisation of industrial systems
- **The Tuscan chain of sustainable and smart packaging:** from design to the end of waste
- **Industrial symbiosis**: circular economy and new bio-based materials

Advanced Materials in the post COVID society
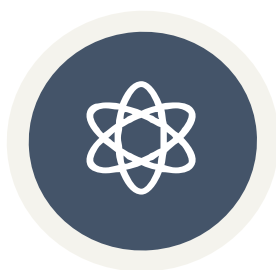
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- **Advanced surfaces and materials,** e.g. antiviral surfaces, polymeric textiles to prevent the spread of disease (clothing, protective equipment), safe materials for public tools (seats, handles), filters, cheap rapid tests.
- **Modelling, data integration and ICT,** e.g. materials modelling, materials for increase data storage capacity (electric vehicles) and for reduce power demand in cloud computing, safety by design materials.
- **Circular economy and resilience,** e.g. recovery of raw materials (new ones for replace), improved materials for durability and capacity, advanced + addictive manufacturing applications inspired by the COVID emergengy

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