GRINS FOUNDATION

UNIVERSITÀ DI TORINO

Spoke 5
Innovation: Ecosystems for the Circular Economy

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Finanziato dall'Unione europea NextGenerationEU

Ministero dell'Università e della Ricerca

Italiadomani
PIANO NAZIONALE DI RIPRESA E RESILIENZA

Partenariato Esteso Finanziato dal PNRR - Missione 4, Componente 2, Investimento 1.3

PE9 GRINS

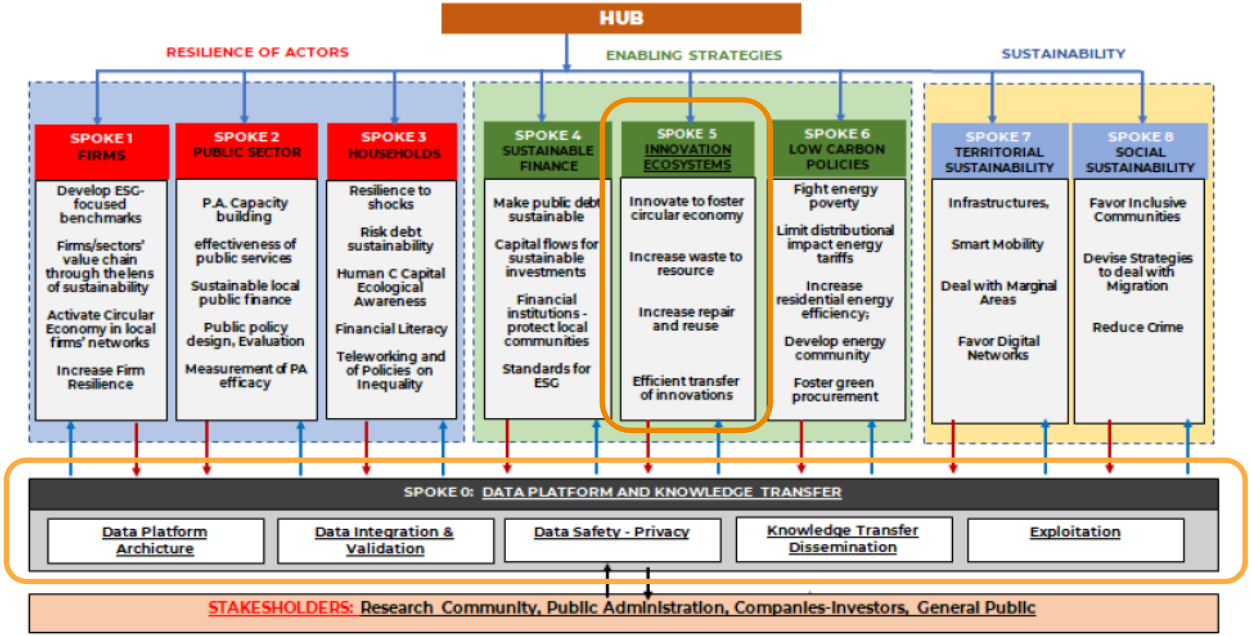
Obiettivi Generali

Developing an **integrated set of geo-referenced heterogeneous databases** for the study of the evolution of the economic and social conditions of the Italian local areas and of the economic system as a whole.

The aim of the project is to make available to public and private actors an accessible open data platform – **AMELIA** dAta platforM for the transfEr of knowLedge and statistIcal Analysis – usable in real time, building integrated repositories and data analysis platforms from heterogeneous sources.

GRINS in un grafico

Figure 4 The Spoke structure of GRINS EP



PE9 GRINS – Spoke 5

Innovation Ecosystems for the Circular Economy

Obiettivi generali

Elaborating indicators and develop models for the analysis of determinants and effects of innovation dynamics designed to enable and boost the transition to the Circular Economy (CE) paradigm.

Focus on local systemic interactions among firms, universities and institutions; global dynamics; employment, skills reconfiguration and wage differentials; regional policies for CE innovation and smart specialization.

Final output: observatory on innovation system dynamics for the circular economy transition (**Circular Innovation Monitor**)

WP 1 - Circular innovation ecosystems

Obiettivi generali

This WP analyses innovations and technologies conceived to enable the transition to the CE paradigm.

The activity will exploit machine learning and technology landscaping methodologies to develop indicators to assess CE-related innovations and map their geographical, sectoral and technological topologies and spillovers.

Specific attention will be given to interactions among firms, universities, financial institutions, research centres, innovative start-ups, incubators and accelerators.

WP 2 - Innovation, labour market dynamics and inequalities

Obiettivi generali

Develop indicators and models to analyse the socio-economic impact of the innovation-based CE transition, focusing on labour market dynamics.

The activity will aim to ascertain how CE innovations may induce skills mismatch in firms and territories, as well as to map the set of skills that better contribute to the CE transition in different sectors and technological domains.

Further analysis will focus on the impact of CE innovation on wage differentials across occupations, sectors and territories.

WP 3 – Structural change and global dynamics

Obiettivi generali

Data collection and developing indicators and models to investigate how leveraging innovation for the CE transition in firms and territories is affected by international exposure.

Focus on import-export dynamics, foreign direct investments, migration flows and related policies.

Further focus will be on the change in the structure of intersectoral flows of goods and services across territories, and the consequent reconfiguration of global value chains (GVCs) engendered by the diffusion of CE practices.

WP 4 - Policies for innovation-driven CE transition and smart specialization strategies

Obiettivi generali

Define a map of risks and opportunities at the regional level for strategies for the promotion of a circular economy.

Define a dashboard of indicators for stakeholders and policymakers for making informed decisions for their smart specialization strategies toward the circular transition.

Provide practical and problem-solving lessons, based on best practices of equal innovation-driven CE-transitions, for stakeholders and policymakers.

Spoke 5 - Bandi a cascata

Obiettivo generale

Integrare le competenze già esistenti nel partenariato con approcci e specializzazioni complementari

Elaborazione di dati ed indicatori che consentano di descrivere nel modo più esaustivo possibile le molteplici sfaccettature delle dinamiche di innovazione a supporto della transizione circolare

Final data should be provided in Excel format or other formats compatible with statistical software such as STATA, R Studio or Python.

Aggiornabilità del dato

Spoke 5 - Bandi a cascata

Linea tematica 1 - Start-up innovative per l'economia circolare: dati, indicatori e effetti di policy

Investigate the potential **contribution of innovative startups**, and of the connected **policy incentives**, to the CE transition.

Proposals are expected to provide data pertaining to the creation of innovative startups related to the CE domain in Italian regions.

Detailed micro-level information is required, **accounting for the entry and exit** of startups from the innovative startup register.

The data should be elaborated to assign startups to the CE domain reliably, and to develop taxonomies within this domain.

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Linea tematica 2 - Flussi migratori e dinamiche di innovazione circolare: dati e indicatori per il cambiamento strutturale

investigate the spatial dynamics of migration flows in Italy, with a specific focus on migration and innovation in the CE technological domains.

Proposals are expected to provide data pertaining to migration flows in Italian provinces at least over the period 2012-2019.

Detailed micro-level information is required, accounting for individuals' country of origin, gender, employment status, sector, educational attainment and possibly for the contribution of inventors to patenting.

Spoke 5 - Bandi a cascata

Linea tematica 3 - Infrastrutture digitali e transizione circolare

Investigate the spatial diffusion of digital infrastructure, with a specific focus to those technologies that are more likely to boost the CE transition.

Proposals are expected to provide data pertaining to the diffusion of digital infrastructure in Italian regions.

Data on the diffusion of advanced digital infrastructure (e.g. high-speed broadband networks) should be at municipality-level and then aggregated at province level at least over 2012-2019.

For each municipality, data will have to cover at least the % of households with access to UBB connections, as well as the % of households with access to traditional ADSL connections. Data should cover all networks deployed in Italy.

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Linea tematica 4 - Transizione circolare, disuguaglianze territoriali e malcontento

Investigate the spatial dimension of discontent in Italy and its association with the spread of the green transition and local vulnerability.

Proposals are expected to provide data on the diffusion of discontent, voting behaviour, and vulnerability to the CE transition in Italy at the province level, at least over the period 2012-2019.

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Linea tematica 5 - Digital transformation, economia circolare e dinamiche territoriali di innovazione

Proposals are expected to provide data on the co-evolution of CE and digital technological trajectories in Italian provinces, at least over the period 2012-2019.

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Linea tematica 6 - Green trademarks e transizione circolare: dati di impresa e indicatori territoriali

Investigate the spatial dimension of the green trademarks in Italy, with a particular focus on CE-related trademarks.

Proposals are expected to provide micro-level data on Italian trademarks at least over the period 2012-2019. Data should be geolocalised and classified as green and CE-related

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Linea tematica 7 - Incentivi fiscali alla Ricerca e Sviluppo in Italia: dati e indicatori per una valutazione di impatto

Investigate Italian firms' access to policy incentives for innovation (tax credits, patent box, etc.), to evaluate their impact on the innovation-based CE transition.

Proposals are expected to provide data on firms' access to diverse policy incentives for innovation.

Detailed micro-level information is required, accounting for the conditions to access the incentives, the incentive amount, the innovative outcome (R&D investments, patents, etc.), and the key economic and financial variables.

The data should be elaborated to connect the innovation activity to the CE domain reliably and to develop taxonomies within this domain.

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Linea tematica 8 - Transizione circolare, misure di policy e strategie

Analysis of government intervention and individuals' commitment to the environment by using regional data to characterise social, economic and territorial differences.

Analysis of municipal transition to the circular economy using municipal data to characterize the economic sectors, sustainable practices and biodiversity conservation policies also considering the digital transition and the role of online platforms in reducing waste.

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Linea tematica 9 - Ecosistemi innovativi per la transizione circolare: dati, metodi e indicatori innovativi per una mappatura regionale

developing and applying innovative statistical methodologies, data analysis techniques, and indicators relevant to mapping regional ecosystems within the circular transition paradigm.

also outline clear and measurable indicators to assess the effectiveness and impact of the proposed methodologies in promoting circular economy practices at the regional level.

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Linea tematica 10 - Transizione ecologica nelle catene del valore: indicatori ed evidenza dai settori e regioni italiane

Developing data and indicators on the interplay between GVC dynamics and the CE transition in Italy.

Proposals are expected to collect data and develop indicators and models to study how the international context influences innovation processes for the CE transition in firms and territories with particular reference to the dynamics of internationalisation.

The activity must adopt a multilevel approach, highlighting the differentials at the company, industry, and territorial level and temporal dynamics

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Linea tematica 11 - Transizione circolare e rischio ambientale nei territori

Geo-localized data on changes in climatic conditions, ecological characteristics, physical features, and environmental stress (e.g., hydrological or fire risks) will have to be collected for Italian territories at the most detailed geographical level possible.

Data will be organised in a dedicated dashboard and will contribute to develop a monitoring tool to support the governance and management of climate risk, warning systems, and recovery strategies.

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Linea tematica 12 - Adozione di innovazioni per la transizione circolare: dati di impresa e indicatori territoriali

Investigate firms' adoption dynamics of CE-related innovation based on the implementation of a survey approach.

Proposals are expected to provide survey data pertaining to the adoption of CE innovation by Italian firms. The questionnaire has to capture essential dimensions concerning the definition of innovation (process/product; radical/incremental; etc.).

The sampling approach has to ensure representativeness at least at the NUTS 2 level. The sample has to be stratified also according to size and sector of activity.

Grazie per l’attenzione