TERZO
GENERAL MEETING
MUSA

RACCOLTA DEGLI ABSTRACT

TERZO GENERAL MEETING DI MUSA

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Introduzione

Lo scorso 15 maggio 2024 si è svolto presso l'Aula Magna dell'Università Bocconi di Milano il Terzo General Meeting di MUSA, un evento che si ripete con cadenza semestrale e che in questa occasione ha riunito oltre quattrocento persone in rappresentanza della comunità scientifica e di tutti i partner del Progetto.
Nelle settimane precedenti il Meeting è stata promossa tra tutti i gruppi di ricerca di MUSA la raccolta degli abstract dei poster in via di predisposizione in vista della poster session. Durante la poster session della mattina sono stati quindi esposti nel foyer dell'Aula Magna e presentati 158 progetti di ricerca nati nell'ambito di MUSA e suddivisi nelle seguenti sei categorie:

1. **DIGITAL TRANSFORMATION**
2. **EDUCATION AND TRAINING**
3. **GREEN TRANSITION**
4. **HEALTHCARE SERVICES**
5. **GROWTH AND INNOVATION**
6. **SOCIAL INFRASTRUCTURE**

Ogni poster era presentato da una/un giovane ricercatrice/ricercatore appartenente al gruppo di ricerca autore del progetto.
Al termine della poster session, il Comitato Scientifico di MUSA, presieduto dalla dott.ssa Gianna Martinengo, ha valutato i poster presentati e ne ha individuato uno per ciascuna categoria che è stato premiato nel corso della sessione finale del Meeting.
Anche a seguito di numerose richieste in questo senso, e con l'obiettivo di garantire la massima diffusione dei lavori proposti in quella sede dalle ricercatrici e dai ricercatori di MUSA, abbiamo qui raccolto i titoli e gli abstract di tutti i poster, insieme ai riferimenti della/del presentatrice/presentatore.

Milano, giugno 2024

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Respi	Spoke 6	**DIGI**	**"Patto Educativo Digitale della città di Milano". A participatory process to take collective control over digital education**	There is a strong demand for an institutional voice on digital education, as parents, teachers and other childcare providers are confused and disoriented about how to lead younger people into the "online world". Our project sits in this scenario. We designed a participatory research to take a collective stance on digital education and safety of children and pre-adolescents of Milan, including families, schools, institutions and agencies/associations. The aim of the project is to identify and write shared city recommendations for the digital well-being and safety of children and pre-adolescents, preparing an official document with a list of practical indications on digital education. Our reserach follows four phases: exploratory, informative, consultative, disseminating. We concluded the first survey on parents and students and we are now carrying out the second survey on school principals and teachers. Preliminary results are presented and discussed.
G. Dirosario	Spoke 6	**DIGI**	**Mind the Gap: Exploring the Criticalities and Potential of Digital Technologies in Preschool Education**	This poster summarizes the preliminary findings of our MUSA6 project, focusing on the integration of digital technologies in early childhood education. It delineates a tripartite structure: a comprehensive literature review, focus group presentations with educators and parents of 0-10 year-olds, and a detailed analysis of four groups from Bambini Bicocca School, Milan (0-6 years). Grounded in the frameworks of Digicomp.edu and Digicomp 2.2, the study describes and analyses the use of digital technologies in preschool education, assessing their potential to enhance learning processes, with attention to digital safety and ethics, focusing also on the criticalities and limitations of such use. In the poster the initial results obtained will be described and analysed in order to then provide teachers and parents with practical devices and tools.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Mastrantoni	Spoke 6	**DIGI**	**E-Welfare and the city. Physical and digital spaces for social inclusion in the metropolitan area of Milan**	The poster illustrates the preliminary results of the ongoing research "E-Welfare and the City" conducted by an interdisciplinary group of sociologists, urban planners and designers of the Department of Architecture and Urban Studies (DAStU) and the Design Department of Politecnico di Milano. The research inserts in the field of studies focusing on the relationship between digital dimension and socio-spatial inequalities. Notably, we aim to explore through interdisciplinary points of view the role of physical spaces in fostering social inclusion in peripheral areas of the metropolitan city of Milan. It does so by focusing on youth, the elderly, and people with migrant backgrounds. The final aim is to experiment with and project hybrid spaces to improve digital competencies and access to the welfare of vulnerable categories in fragile territories, to pave the way for further studies and policy guidelines for service and welfare design.
C. Zola	Spoke 4	**DIGI**	**Technology access for poor households in six European countries after Covid-19 pandemic crisis**	The growing importance of technology and digitalization in the global economy has accelerated further after the Covid-19 pandemic. However, this diffusion varies according to socioeconomic context and different types of technology. This study analyzes the impact of the Covid-19 on the digitalization process of poor households, focusing on Internet access and computer ownership. To this end, we implement a Probit model with a difference-in-differences approach using EU-SILC data for six European countries. The analysis considers several socioeconomic factors and household characteristics, also examining heterogeneity across countries and equivalised income deciles. We find a significant positive association between lack of digitalization and poverty. Covid-19 is confirmed as a driver of digitalization. Its effect on the economically struggling population depends on the technology considered: it is accentuated for Internet connection, while it is almost zero for computer ownership.

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A. Delgreco	Spoke 5	**DIGI**	**Human Factors in Virtual Experiences: a Literature Overview**	Embracing a sustainability perspective within the metaverse is imperative, ensuring that its ecosystems foster psychological well-being, cultivate positive experiences, and mitigate potential negative impacts. An overview of reviews using Web of Science and ProQuest was carried out to identify the critical factors in the fruition of user-side immersive experiences. The overview reveals insights on emotions, presence, and cognitive aspects in virtual environments. Extended realities benefit clinical settings and diverse sectors but raise some concerns. Individual differences in usage remain unclear, with risks including addiction, dissociative events, unhealthy behaviours, and privacy issues, especially for adults. Limited research on children suggests potential impacts on physical and cognitive development, as well as potential risks of isolation from real-life interactions. Long-term psychosocial risks and mental health issues require further exploration.
S. Maghool	Spoke 6	**DIGI**	**Artificial Intelligence for Human Rights**	Artificial Intelligence(AI) is a crucial tool in identifying human rights violations, through biases, discriminations, and stereotypes. The EU human-centered AI warned about "new" rights that AI systems should comply with such as transparency, explainability, and liability. The EU's regulatory strategy ensures human involvement in AI's lifecycle. The HumanHall group on inclusive AI is working on assuring equality and non-discrimination through explanatory models and unbiased datasets. NOME, a project by the HumanHall, utilizes Machine Learning and Large Language Models (LLM) to promote equality and non-discrimination in organizational documents by merging law, linguistics, and computer science. The group adopts an interdisciplinary approach, creating datasets to tune LLMs compliance with human rights foe instances in hiring process by examines AI's role in promoting inclusive language in job ads. AI's potential extends to healthcare, analyzing vast data to improve medical access right.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
F. Berto	Spoke 2	**DIGI**	**Infrastructural Assurance in 5G-enabled edge cloud continuum**	Modern data-driven applications require a robust infrastructure. The 5G Edge Cloud has been a game-changer, providing advanced infrastructure that is crucial for ensuring operational integrity, security, and privacy of these services. This technology facilitates on-site data processing, while 5G Mobile Edge Computing manages processing demands and provides widespread network access. To ensure that QoS requirements are met, we propose a lightweight assurance framework that is specifically designed for the 5G continuum. This framework utilizes passive agents for monitoring, reducing operational impact and eliminating the need for active intervention. It verifies non-functional requirements by analyzing shared metrics, which aligns with the complex nature of 5G infrastructures. We demonstrate the viability and efficiency of our methodology through validation in a 5G simulator. This is a proof of concept, demonstrating the effective application of our framework in real-world scenarios.
L. Mauri	Spoke 2	**DIGI**	**Improving Machine Learning Model Robustness via Risk-Driven Ensemble Modeling**	The security of ML-based systems hinges on the robustness of the ML model employed. By interfering with any of the phases of the learning process, an adversary can manipulate data and prevent the model from learning the correct correlations or mislead it into taking potentially harmful actions. In this work, we investigate how to improve the resilience of ML models against training-time attacks under black-box knowledge assumption on both the attacker and the defender. Our main contribution is a novel defense mechanism which combines ensemble models and security risk analysis. We assign a risk index to points in relation to their proximity to the separation surfaces identified with a reference linear model and guide the partitioning of the training data via an unsupervised technique accounting for the risk indices. Then, we employ an ensemble of models, each trained on a different partition, and combine their output to obtain the final prediction.

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N. Bena	Spoke 2	**DIGI**	**Trustworthy Machine Learning-Based Applications: a Certification-Based Approach**	Modern applications consist of elastic server-side processes running in the cloud, implemented as micro- and nanoservices developed with cloud-native technologies and orchestrated at runtime. The availability of new orchestration platforms and programming frameworks is making it possible to execute these applications at line speed. In the fullness of time, an intelligent cloud continuum will support autonomous, self-configuring applications that will request the activation of its services wherever they are needed, including innovative Internet of Things devices. While this new paradigm promises many advantages its complexity is much higher than that of its predecessors. Machine learning (ML) is increasingly used to implement advanced applications with nondeterministic behavior, which operate on the cloud-edge continuum. We outline the key elements of a sound certification scheme for ML-based applications.
G. Cavicchioli	Spoke 3	**DIGI**	**Programmable Optical Processors: Making Calculations with Light**	In the last years, we are assisting to a consistent increase in the demand for computational resources, mainly led by machine learning algorithms; however, this growing demand will hardly be satisfied by conventional digital electronic circuits. Programmable photonic circuits provide a fast hardware implementation of algebraic sums thanks to light interference, so they can potentially satisfy these requests in particular in terms of latency, throughput, and power consumptions. In this context, we are developing a photonic circuit, based on an innovative recursive topology for performing linear algebra operations, in particular solving matrix inversion problems. This circuit could be used as a programmable optical processor (POP) and exploited as a hardware accelerator in those applications requiring low latency responses.

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L. Preti	Spoke 2	**DIGI**	**Implementation of machine learning applications in healthcare organizations: a systematic review of empirical studies**	Despite growing enthusiasm for machine learning (ML) in healthcare, its implementation remains sporadic. This work aimed to identify the characteristics of ML applications implemented in clinical practice and synthesize strategies for their successful adoption. A systematic review of empirical studies on the implementation of ML in clinical settings was conducted on 3 databases. The implementation processes were analyzed using a thematic analysis rooted in the Consolidated Framework for Implementation Research domains. Based on 34 selected studies , ML applications were mostly used for prognosis or diagnosis within hospitals. Key factors facilitating the integration of ML included inner setting elements, like access to knowledge and information, or aspects of the implementation process, like stakeholder engagement. Overall, non-ML-specific factors are deemed as the most relevant in determining successful implementation. ML-specific challenges, like trust, require further investigation.
G. Infante	Spoke 3	**DIGI**	**Exploring the digital readiness of tomorrow's doctors: an Italian study in the post-pandemic health system**	Telemedicine (TM) offers numerous benefits to health care. However, various barriers, such as healthcare professionals' insufficient technological skills, impede its effective implementation. This study aims to evaluate the preparedness of future physicians to TM post-Covid 19 identifying gaps in current medical education on the: (1) technical readiness, both general and health-related, and (2) behavioural readiness, including previous experiences and future intentions related to TM education and implementation. A cross-sectional study is conducted using a web-based questionnaire administered to medical students and residents at the University of Milan. Results: A lack of personal and academic experience on TM is detected. Only 16% of respondents used TM in the university setting. Participants express a desire for training (83%) and for experimenting with TM during their academic journey (81%). Interest in incorporating TM into their future clinical practice is expressed by 76%.

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M. Pisarra	Spoke 2	**DIGI**	**Unpacking value co-creation in the digital realm: evidence from a field experiment in the healthcare sector**	Digital technologies have changed public service delivery frameworks and created opportunities for establishing novel forms of relationships with service users. Literature has paid little attention to the potential of these technologies to improve value co-creation. The study empirically investigates this gap through a field experiment in a pediatric public healthcare organization by randomly assigning 99 patients (in this case children) to the digital telemedicine service and control groups and administering a survey to their caregivers to assess the individual-level value (value-in-use). The findings demonstrate an influence of digital co-delivery on the empowerment level of participants. Although no statistically significant direct effect of digital co-delivery is observed on users' trust level in healthcare services, the interaction between digital co-delivery and empowerment positively influences their trust, consequently leading to an enhancement in their satisfaction level.
L. Magnani	Spoke 2	**DIGI**	**Measuring the contribution of digitalization to SDGs: insights and challenges from the public healthcare sector**	The digitalization of the public sector offers opportunities for public entities in their efforts to meet SDGs. Drawing from the analysis of frameworks and documents on SDGs and digitalization, a field study in a public healthcare organization is conducted, adopting a data triangulation strategy. The research provides a process-based approach for the design of a contextualized SDG-related performance evaluation model. Then, the applicability of the model is assessed. The findings highlight the role of digital healthcare for achieving multiple SDGs. However, the paper shows evidence of gaps in the availability of the information sources required for SDG indicators. The paper calls for future accounting research avenues towards the exploitation of available information flows and data interoperability, the introduction of co-evaluation mechanisms with stakeholders, the leverage of artificial intelligence systems, and

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M. Carrara	Spoke 2	**DIGI**	**Validation of wearable devices for monitoring physiological parameters and daily activity**	Wearable technology is now very popular as a simple way to monitor individual well-being by assessing health-related parameters. Wristbands, smartwatches, and smart T-shirts ensure good acceptance in different situations, such as during physical activity and at work. Most of the devices on the market were designed for fitness applications, but are now targeting well-being in general, for example by providing the user with information related to estimated stress levels or sleep quality. Their use is also being explored for health monitoring in specific health applications (i.e., pregnancy, stress, sleep, sport). The data collected range from physiological parameters (i.e. heart rate (HR) variability) to measures of activity related to personal lifestyle. We present a quantitative evaluation of current wearable technologies for different applications to assess the accuracy of different devices in providing physiological data during an experimental protocol involving physical activity.
M. Detommaso	Spoke 2	**DIGI**	**Monitoring Stress with Consumer Wearables Through Cognitive Load and Risky Decisions**	Wearable devices have revolutionized self-monitoring, extending beyond physical activity to encompass health parameters and psychological states in real-world scenarios. This study assesses the reliability of consumer-grade wearables in tracking stress under cognitive load and risky decision-making scenarios. Participant data were collected using a Fitbit Sense, an Empatica EmbracePlus, and a ProComp Infinity polygraph (gold standard). Participants engaged in a standardized task to simulate stress, undertook the Mixed Gambling task to navigate high-risk decisions, and participated in a visual attention test to evaluate the salience of gain- and loss-associated stimuli. Physiological data, subjective reports, and cortisol levels were assessed. Results underscore the potential of wearables in stress monitoring, enhancing stress management practices. Furthermore, the study delves into the intricate relationship between stress conditions, attentional processes, and decision-making biases.

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G. Della Versana	Spoke 2, Spoke3	**DIGI**	**Work-related stress in academia: exploring work conditions and acceptability of wearable systems for stress assessment**	For the assessment of work-related stress wearables (WRS) have recently been utilized. These devices enable continuous physiological monitoring by collecting physiological data. They offer a wide range of opportunities to improve workers' awareness of their health and remote WRS assessments. At the same time, they entail some critical issues. Specifically, it appears crucial to consider the acceptance of end users before implementing any technology. To this end, a qualitative study was conducted through 4 focus groups involving 14 administrative staff members from the Politecnico of Milano, to explore the perception of the acceptability of wearables for stress assessment and of job demands and resources according to the JD-R model of WRS. Preliminary results have shown that acceptance is associated with the perceived utility of the collected data, understood as the reliability of the data and usability for improvement actions to address job demands in the workplace
M. Herold	Spoke 2	**DIGI**	**A Smartphone-app intervention for Stress Reduction and Well-being Enhancement**	Work-related stress is one of the biggest health hazards in the workplace. In the last years increasing attention has been paid to workplace safety and mental health issues, particularly on identifying new approaches to improve them with the help of m-health solutions. The following study aims to test the efficacy of a smartphone-based intervention, based on the principles of mindfulness and positive psychology, in reducing perceived stress and psychosomatic malaise and in increasing the resources of Psychological Capital, life satisfaction and mindfulness, in a sample of university students. Employing a controlled randomized trial, 98 students were randomly assigned to an intervention group (n=46), who used the app, and a control (n=52) group. Results showed that the smartphone-based intervention has significantly reduced perceived stress and psychosomatic malaise and increased the level of the Psychological Capital related to hope, resilience, and optimism.

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I. Ruina	Spoke 2	**DIGI**	**INDACO - INDAgine e CO-designing wellness solutions at work**	The project INDACO - INDAgine e CO-progettazione di soluzioni per il benessere al lavoro, is performed in collaboration between the research groups IEX-Interaction and Experience Design, Dipartimento del Design – Politecnico di Milano and the BECap Work and Organizational Psychology - Dipartimento di Psicologia, Università degli Studi di Milano – Bicocca. It aims to develop and validate new approaches for collecting objective data on lifestyles, well-being, and possible sources of stress in office work contexts. The collected data include physiological parameters (heartbeat and movement) through wearable devices (FitBit) to be correlated with information on workers' subjective experiences. The experimental research involves the technical-administrative offices of the Design Department as final users. It includes co-design activities and tests to assess the acceptability and suitability of the approach for long periods (two working weeks) of data collection.
M. Decorato	Spoke 4	**DIGI**	**A methodology for cybersecurity assessment of public administration: a case study on Lombardy municipalities**	Cybersecurity represents an abilitating factor for the digital transition of public administration (PA). A fundamental component of PA is municipalities. Therefore, our project focused on the cybersecurity level of the Lombardy municipalities. During our analysis, we performed (on a voluntary basis) the assessment of the IT infrastructures of the cities (e.g., phishing test, analysis of exposed resources and their vulnerabilities) as well as an evaluation of the cybersecurity skills of the people involved in these infrastructures. While the first point was assessed with a remote vulnerability test, the last was assessed with focus groups and an online survey involving more than 200 participants. Our analysis concluded that considering the resources available to the municipalities, the cybersecurity level of the municipalities is reasonable. However, further work is needed to defend PA against phishing attacks and education about the cloud transition.

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I. Trabskaia	Spoke 6	**EDU**	**Leveraging Computer-Based Simulations to Foster Curiosity, Knowledge Integration, and Self-Efficacy in Business Education**	Purpose – The paper is designed to explore how curiosity in computer-based simulations stimulates cognitive (knowledge integration) and motivational (self-efficacy) pathways in the context of business education. Design/methodology/approach – The paper utilizes survey research (N=391), questionnaires were completed after computer-based simulation game. Findings – The study reveals the effect of curiosity in computer-based simulations on effectiveness and creative thinking by triggering knowledge integration and self-efficacy. Originality/value – The study contributes to our knowledge about factors that stimulate curiosity, improve knowledge integration, encourage collaboration, and promote motivation.
G.Ghisleni	Spoke 1	**EDU**	**Engaging Students in Urban Renovation: A Participatory Science Model for Microbiome Sampling Fieldwork**	Urban microbiology has become an important part of urban renovation planning. Yet, it faces limitations: the punctiform nature of microbiome sampling necessitates countless samples for adequate data collection, while the common perception of microorganisms as inconspicuous and neglectable presents a significant challenge to impactful outcomes. To address these challenges, we've developed a participatory science model involving students in sampling campaigns, enabling large-scale collection and fostering awareness of this fundamental scientific field. During the Bicocca Sampling Days, participants were equipped with theoretical knowledge, protocols, and materials, and collected more than 2000 samples and related metadata from the Bicocca district, Milan. We assessed the model's impacts with standard and novel scales evaluating attitudes toward science and nature, understanding of the sampling process, skills related to science inquiry, and self-efficacy for learning and doing science.

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A. Mataresi	Spoke 6	**EDU**	**STEM4TEACHERS**	Establishment of an online training course for secondary school teachers. The course is divided into two modules: the first module offers a choice of STEM pathways (Physics and Nuclear Engineering, The Hidden Structure of the Internet, and Figures and Discoveries of Modern Physics), while the second addresses innovative teaching methodologies. Upon completion of the modules, participants are required to carry out a project work: an innovative educational activity focusing on the topics covered in the first module. The course is designed for teachers of all disciplines, aiming to disseminate socially relevant scientific themes through the lens of each subject during Civic Education class hours.
E. Grammatica	Spoke 6	**EDU**	**Promotion of gender equality in education: Analysis, Interventions and International Perspectives**	This working group is carrying out an in-depth analysis of gender stereotypes, which are already deeply ingrained in childhood and preadolescence.Through the analysis of the scores obtained in the INVALSI tests, gender differences in the learning of Mathematics and Italian among primary and secondary school students have been investigated over time.The aim is to highlight disciplinary segregation, where girls tend to excel in Italian but perform lower in mathematics compared to boys, thus potentially influencing their university career. In certain nursery schools and primary schools in Milan, we proposed initiatives aimed at inducing reflection on stereotypes and deconstructing these preconceptions through specific activities targeted at school pupils. Finally, to gain an international perspective, a study was conducted on the evolution of gender disparities over time in Italy and in other European countries.The study focused on specific indicators related to education, work and income

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H. Linjouom	Spoke 6	**EDU**	**Refresher course in 'Managing Intercultural Diversity in the World of Work'.- GEDIMOL**	The course addresses the global challenges of diversity, equity, and social inclusion, in line with ISO and UN's Agenda 2030. Organized by the interdisciplinary research group "HumanHall" (UNIMI), it aims to train professionals, HR specialists, and policymakers to manage diverse work environments. Italy, like Europe, shows interest in Diversity, Equity, and Inclusion (DEI), but targeted interventions are still needed to combat discrimination. The course equips professionals to create inclusive environments and tackle diversity management challenges. It covers various competencies through modules: communication, legal-regulatory, managerial, intercultural, and multicultural HR. It includes lectures, labs, and online activities, with skills certification and badges. It presents an opportunity to contribute to more inclusive and sustainable societies in contemporary workplaces.
M. Sottocorno	Spoke 6 , Spoke 1, Spoke 2, Spoke 3, Spoke 4, Spoke 5, Spoke 6	**EDU**	**Sustainability and the city - a podcast to disseminate a culture of sustainability**	The poster presents "Sustainability and the city", the podcast produced by the Open Air Lab multidisciplinary research group and dedicated to the dissemination of research and projects on urban sustainability developed within MUSA. To spread a culture of sustainability beyond institutional boundaries, from an open science perspective, interviews were conducted with MUSA project researchers from different disciplines (science, technology, engineering, mathematics, law, sociology, economics, geography, literature...), with the aim of bringing scientific research closer to the citizenry and promoting the production of a culture of sustainability accessible to all and therefore inclusive. Educating for ecological transition to counter inequalities, in fact, also means decreasing the distance to access culture and research, making knowledge accessible for the citizens.

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A. Pepe	Spoke 6	**EDU**	**Building a Quantitative Index of Youth Participation in the Public Sphere: A Multifaceted Approach**	The increasing scholarly attention towards promoting the participation of young individuals in the public domain has underscored the need for reliable quantitative measures. This research endeavors to validate a specifically designed index of participation for youth engagement in a sample of participants (N=800), comprising individuals aged between 16 and 24. Our approach seeks to capture the different psychological construct involved in young individuals contribute to and interact with the public sphere. The research was conceived within the MUSA ecosystem, funded by the European Union – NextGenerationEU, under the National Recovery and Resilience Plan (NRRP) Mission 4, Component 2, Investment Line 1.5. The initial findings indicated a theoretical framework in which the index traverses several aspects of youth engagement, encompassing civic participation, political action, and community involvement, among others.
S. Boccaletti	Spoke 6	**EDU**	**B-YOUth Forum: youth participation through research**	B-YOUth Forum Bicocca is a research laboratory open to young people between 16 and 25 years old which, with an interdisciplinary approach, uses scientific research to support young people in understanding the transitions taking place in societies. Following this perspective, youth public engagement in interdisciplinarity research constitutes a strategy to allow the new generation to participate competently and consciously in the construction of policies for the organization of social life in public space. B-YOUth Forum uses arts and visual informed methods and pays particular attention to child safeguarding policy, educational pacts and ethical issues, in order to enhance real participation in our research activities. B-YOUth Forum is part of a broader project, B-YOUth, which also includes other activities such as Festival GenerAzioni, B-YOUth Summer Camp and B-YOUth Summer School, that address the issue of youth participation through dissemination and training proposals.

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S. Ghisolfi	Spoke 6	**EDU**	**WIDEHO: Widening Horizons to improve opportunities**	When deciding high school tracks, students from more disadvantaged backgrounds have less information on future opportunities than their more fortunate counterparts, as well as less access to inspiring role models. This perpetuates inequalities and reduces school's impact as a social equalizer. Orientation activities toward high school choice is typically left to the individual initiative of schools, or classes, it thus perpetuates inequalities: it is more effective in school with more resources. To understand and tackle this phenomenon, we have designed a randomized experiment. The project : a) measures the disparity in aspirations among middle school children from different backgrounds b) organizes three meetings per classroom with career experts or role models to illustrate different high school tracks, c) assesses the impact of both interventions (career experts vs role models) on children's knowledge of their available school choices and their aspirations.
M. Fasola	Spoke 6	**EDU**	**Insights from the "Obiettivo Lavoro" Pilot Project for Vocational School Students in Italy**	In Italy, the "Obiettivo Lavoro" project addresses job market challenges for young people with low educational qualifications. It employs a randomized controlled trial (RCT) to ease the transition of vocational school students into employment. This involves offering job counselling and training to final-year students and their teachers. As a preliminary step, a pilot project was conducted in four vocational schools in Lombardy in 2023. It aimed to assess the overall project design and implementation protocol, finalizing and testing the contents of the planned interventions. The monitoring strategy also involved administering baseline and follow-up questionnaires to students, both tested during the pilot phase. The ongoing pilot phase has proven extremely valuable in identifying potential challenges and guiding refinements to the interventions for the main research project. These insights laid the groundwork for the large-scale intervention launched in the 2023-2024 school year.

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E. Lippo	Spoke 6	**EDU**	**Open the flood gates or skim the cream? Selective vs. open enrollment policies and the race for talent in Italy**	The predicted decline in the number of students attending higher education due to population ageing, as well as the resulting increased rivalry for a scarce resource, will put Italian universities under strain creating incentives to reduce selectivity. Yet, increasing enrollment might further reduce demand by lowering the average quality of students, diluting the degree signal, possibly to the detriment of high-achieving students due to negative peer-effects. Thus, universities face a trade-off in increasing the supply of college-educated workers in their region while competing with other universities on the quality margin. We ask how this inter-university competition plays out and what effects it might portend on the future supply of college-educated labor in Italy.
V. Disanto	Spoke 6	**EDU**	**The supply of PhD graduates in Italy and its correlates. A long-run glance**	We provide a full picture of the supply of PhD graduates in Italy over four decades (1986-2022). Our first aim is to ascertain the relationship between supply and policies. We describe the key policy changes and support our reconstruction by merging Istat and MIUR data, presenting a) the full time series, year by year, of the degrees awarded; b) a three-decades time series disaggregated by field (1998-2021); c) a two-decades time series (2010-2023) disaggregated by geographical area and separating metropolitan areas (where most of the PhDs are awarded) and the rest of the country. Our second aim is to check whether the patterns of the supply of PhDs are more closely related to the manpower needs of the economy. We then relate the supply of PhD titles (2010-2023) disaggregated at the provincial level to two indicators at the same level: on one side, the skill composition of the workforce, on the other side the intensity of the academic presence.

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P. Demarinis	Spoke 6	**EDU**	**Integrating Sustainability into Corporate Culture: A Comparative Analysis of Organizational Practices and Reporting Strategies in ten Italian enterprises.**	Integrated sustainability encompasses a complex idea centered on achieving economic, social, and environmental objectives under the frame of a strong sustainability concept. In this perspective, enterprise sustainability, is tightly linked to the evolution of enterprise culture, which in turns encompasses the collective values, norms, practices, and behaviors exhibited by the direction and employees. Building on the European sustainability competence scheme, our research analyses the skills sought by students aiming to become experts in sustainability change, as well as the skills most valued by companies, and explores how a set of 10 Italian enterprises seek to achieve sustainable business. The set of case studies is provided by the group of enterprises participating in an advanced course on cross-sectoral competencies for integrated sustainability reporting, held in 2024 at the University of Milan, under the frame of the Multilayered Urban Sustainability Action project.
C. Bernuzzi	Spoke 2	**EDU**	**Enhancing Telemedicine Integration: Unpacking Healthcare Professionals' Beliefs and Concerns**	Telemedicine is gradually emerging to offer sustainable practices for healthcare systems and patients, leading to new forms of collaboration and fostering value co-creation processes. However, the enhancement of telemedicine highlights new challenges and changes in the practice of healthcare professionals. Thus, two explorative studies were conducted to investigate healthcare professionals' beliefs concerning their experience with telemedicine. By analysing survey data (n=268), Study 1 showed healthcare professionals' apprehensions regarding the integration of telemedicine into their routine clinical practice. Through thematic analysis of semi-structured interviews with pediatricians (n=13), Study 2 revealed that, in addition to anticipated benefits in patients' experiences and healthcare structures, participants expressed concerns related to the risk of losing key clinical information, potential increases in workload and changes in their relationships with patients.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
L. Cerini	Spoke 5	**EDU**	**The Evolution of Sales associates' and Store Managers' Roles in the Fashion and Design Retail: Exploring the Impact of Sustainability Education on Attraction and Retention**	This paper examines the evolving role of sales associates and store managers in fashion and design retail, as well as the potential impact of sustainability education on attracting and retaining these positions. The authors utilized various sources between 2023 and 2024, including relevant literature, interviews with eight independent boutiques in Milan and four Italian luxury brands, and the analysis of 45 job descriptions for retail roles in Italian and international luxury brands and department stores obtained from LinkedIn and The Business of Fashion. The authors conclude that sales associates have transitioned into client advisors and storytellers, requiring them to possess an entrepreneurial mindset to cultivate client relationships. Sustainability training is identified as crucial in enhancing the value proposition to customers while promoting informed decision-making.
M. Crippa	Spoke 5	**EDU**	**The image of fashion in Italian Contemporary Literature**	My poster recapitulates the work carried out during my Research Grant which started in January 2023 and ended in January 2024. The aim of the research was to investigate the relationships between fashion and contemporary Italian literature. The texts examined were published since 1900 and today the bibliography includes 550 titles. Given the large number of texts and their variety, the bibliography is structured by genre categories: first the fiction texts, then the non-fiction ones. The poster will try to give evidence to the most important of each category, highlighting ideas for not only literary but also historical and social reflection. For examples, a strong presence of texts that are dedicated to ecological issues and sustainability emerged among non-fiction texts, and many others focus on the relationship between fashion and the female body. While among novels, the quantity of thrillers and children's books is interesting.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
I. Russo	Spoke 3	**EDU**	**Entrepreneurs' Gaps in Alternative Finance and the Design of the Matchmaking Platform**	This work delves into the development of a platform aimed at enhancing the financial skills of entrepreneurs, with a specific focus on alternative finance. Through semi-structured interviews with entrepreneurs on the demand side and incubators/accelerators on the supply side, the report uncovers significant gaps in financial knowledge. It explores potential strategies to address these through customized training activities. Key findings include a preference for practical, hands-on learning experiences over traditional theoretical seminars. Additionally, the report highlights the importance of collaborating with reputable content providers and implementing engaging course formats to maximize learning outcomes. Emphasizing the need for continuous support and guidance throughout training activities, this work sheds light on key considerations for designing an effective matchmaking portal, empowering entrepreneurs in navigating the complexities of alternative finance.
M. Bianchi	Spoke 3	**EDU**	**Best practices in entrepreneurship and technology transfer training and their impact on entrepreneurial initiative: a starting framework to design entrepreneurial training programs for researchers, startup entrepreneurs, academic staff and SMEs.**	This research was preparatory for the currently ongoing design of entrepreneurial and technology transfer (TT) training courses for researchers, startuppers, academic staff and SMEs in the Milan area. It explores the impact of entrepreneurial training on the propensity to start new entrepreneurial initiatives, through understanding the most effective learning tools and paths to promote entrepreneurship and TT. A comprehensive literature review was conducted to identify entrepreneurship education impact dimensions and indicators; based on the institutional framework impact indicators perspective, a benchmarking method aimed at comparing the best European and international entrepreneurship training institutions and centres and their learning models was adopted; an in-depth analysis was carried out on 6 selected initiatives through interviews. The results showed insights on the most suitable and impactful skills models, pedagogical approaches, and effective impact metrics.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
A. Sconti	Spoke 4	**EDU**	**Are investors willing to learn about sustainable finance? Experimental evidence from Italy**	We conduct a randomized survey experiment on a representative sample of Italian investors to investigate the impact of a short sustainable finance video (treatment) on sustainable finance literacy and the willingness to learn more about it compared to a control group. Controlling for several demographic characteristics, we examine in the control group the relationship between sustainable finance literacy and interest in learning. Then, we conduct the impact evaluation on the full sample and investigate heterogeneous treatment effects across gender, age, area of residence, education, climate change awareness and financial literacy. Finally, we discuss the cost-effectiveness of our intervention, and its implications for policy and future research.
V. Cucchiarini	Spoke 4, Spoke 3, Spoke 6	**EDU**	**New formats to improve citizens' financial literacy: MUSA4SWAP and EFFE Summer camp**	We present two new and unique formats to promote a higher level of financial literacy. 1. On 20th, 2023, we organized a unique event to spread financial education among citizens, called MUSA4SWAP. It was the first official swap party organized by the University of Milano-Bicocca with the following structure: a) a pre-questionnaire to test participants' basic knowledge about finance, and cognitive bias; b) specific training activities during the party and the distribution of the leaflet "Watch out the bias! Miopia bias"; c) a post-event questionnaire. A "sustainability manifesto" was produced after the event 2. "EFFE summer camp": it is the first financial and entrepreneurial summer camp totally free of charge open only to female teenager participants host by the University of Milano Bicocca (10-15 June 2024).

Presentatore	Spoke	Cat.	Title of the poster	Abstract
A. Negri	Spoke 1	**GRE**	**Monitoring mosquito biodiversity in the city of Milan**	The ambitious project of innovation and regeneration for a big city like Milan, should consider whether the planned interventions could favor invasion by animal and plant species, negatively and harmfully impacting on the people life quality. Indeed, different types of urban development have a strong and different impact on the spread of animals, that might act as reservoirs or vectors for a variety of infectious diseases (WHO). The effort to minimise the ingression risk of undesirable alien species is particularly true when it comes to mosquitoes. Our contribution to the MUSA plan, with a specific expertise in the medical entomology and vector-borne diseases areas, will consist in a subproject focused on mosquitoes, in target sites of the urban and peri-urban Milan areas. We will focus on monitoring mosquito vectors and related pathogens using high-throughput analyses, to deliver data on the spread of alien and native species and for the generation of predictive health risk maps.
E. Fesce	Spoke 1	**GRE**	**Tackling vector-borne diseases in a changing city**	West Nile virus (WNV) is a flavivirus, endemic in Lombardy region, that is maintained in an enzootic cycle between mosquitoes and birds. WNV is transmitted to humans via mosquito bite, with symptoms ranging from a flu-like syndrome to neurological disease. There are no treatments or vaccines available, so, in the context of urban regeneration, we must consider the effects that increased biodiversity may have on the spread of this infection. We therefore developed a set of mathematical models to investigate the role of different avian species and the efficacy of intervention strategies on the spread of WNV. We found that the most effective intervention strategy is to reduce mosquito breeding sites. In addition, we found that the duration of infection and demographic characteristics of the birds influence the dynamics of infection. We now aim to develop our models to include different mosquito species. In addition, all proposed theoretical models will be tested and fitted to field data.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Pioltelli	Spoke 1	**GRE**	**Investigating pollinators diet: a comparison of traditional and novel sampling techniques for pollen and nectar**	Pollinator insects, and particularly bees, rely on floral rewards for nutrition and diet plays a key role in the definition of their health status. Nevertheless, pollinators nutritional ecology has always been overlooked mainly due to the hindrance represented by the sampling of flower rewards. Here, we compared a novel sampling tool based on a portable vacuum cleaner with some common methods for pollen and several nectar sampling techniques. The macronutritional profile and the secondary metabolites composition of pollen and nectar were assessed using UV-vis assays and HRMS analyses. Our results demonstrated that different collection methods introduce biases in the nutritional profiling of floral rewards with variations in their qualitative and quantitative composition.
I. Arnoldi	Spoke 1	**GRE**	**Aedes koreicus mosquitoes as sentinels of heavy metal pollution in peri-urban areas of Northern Italy**	Heavy metals can accumulate in living organisms due to contact to contaminated environmental substrates. Contamination mainly occurs because of massive and/or mismanaged anthropogenic activities. Air-dispersed metals can enter water bodies by dry and wet deposition. Heavy metal contamination (HMC) can increase near to the source of pollution, close to the urban environment, but can be found also in sewage and water treatment sludges used as agriculture fertiliser. Mosquito larvae are capillary spread in urban and peri-urban areas, localised into artificial containers and natural pools. We are investigating if Ae. koreicus can be used as sentinels for HMC in industrialised peri-urban areas and farmlands in Lombardy, where this species is diffused. We are carrying out biochemical, morphological and molecular assays in laboratory to define the biological response of these organisms to water HMC with the goal to select potential markers to be used in future monitoring.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
S. Sherpa	Spoke 1	**GRE**	**Amphibian allies: impacts of varying amphibian species assemblages on tiger mosquito survival and development**	Biotic interactions of synanthropic species provide key information for biodiversity management in urban landscapes. We assessed direct and indirect effects of predation and trophic competition with varying assemblages of amphibian species on survival and development of the Asian tiger mosquito (Aedes albopictus), an invasive and widespread disease vector. Mosquito larvae were reared in caged exposure or direct contact with amphibian predators (newt larvae), benthic grazers (brown frog tadpoles), water-column foragers (tree frog tadpoles). Direct predation from newts lowered mosquito larva survival by 98.5% within 24 hours, while contact with tadpoles lowered both survival and activity, impacting time to and condition at metamorphosis. Non-direct exposure to amphibian larvae impacted aquatic life-stages resulting in accelerated development. Promoting amphibian biodiversity in urban landscapes can contribute mitigating the spread of mosquitoes with relevant implications on human health.
M.Finazzi	Spoke 1	**GRE**	**Reviving Urban Spaces: Microbial Approaches for Sustainable Regeneration**	Recent decades transformed cities into growing urban jungles that house more than half of the global population. We have to face the ecological shifts caused by urbanization that affect all living organisms, including us and the microbiota. Its biodiversity has been radically reduced, and its beneficial immunomodulation role towards humans has failed. In the MUSA context, our UniBiome project aims to build microbiome-oriented data to guide an effective urban renovation of Milan. We characterized the microbiome signature of the University of Milano-Bicocca and the Politecnico di Milano. We designed a two-season sampling campaign during each of which we collected more than 500 environmental samples and more than 160 students participated by donating their skin and gut microbiomes. Our DNA-based approach entails amplicon-based sequencing and bioinformatics analysis allowing us to chart the interplay between human and environmental microbiomes, and the related health repercussions.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
A. Bruno	Spoke 1	**GRE**	**The One Health Approach in Urban Regeneration: An Evidence-Based Framework for Designing Sustainable Cities**	Rapid urbanization has led to negative, and sometimes unintended, consequences on biodiversity and human health. While cities offer numerous advantages in meeting the basic needs of a growing population, they also pose less apparent and longer-term health costs. To address the multifaceted impacts of urbanization, an Evidence-Based Design framework for establishing mitigation and regeneration actions is essential. Via a One Health approach, we provide recommendations and strategies for the urban regeneration of future cities, placing biodiversity and ecosystem services at the core of designing healthy and sustainable urban spaces. The development of solid scientific knowledge for achieving sustainable living relies on the implementation of shared decision-making strategies, coupled with an understanding of local conditions and priorities. Indeed, by blending insights from various disciplines and harnessing their monitoring tools, we forge a robust scientific foundation for our future.
F. Pittino	Spoke 1	**GRE**	**Bacterial communities of the phyllosphere of urban plants: a focus on hydrocarbon degradation**	Urban vegetation aids in reducing levels of atmospheric hydrocarbons (HC), likely mediated by plant-associated bacteria that colonize the phyllosphere. Magnolia, ivy and linden tree leaf samples were collected in Piazza della Scienza (Milan) prior to depaving to understand the degradation potential of the vegetation already present. Bacterial communities were characterized and genes involved in HC degradation were quantified. Stomatal densities, amount of epidermal wax, lamina length, width and total area were measured. Bacterial community composition varied among the plant species and interestingly, Rhodococcus, a HC-degrading genus, had a high coverage in magnolia samples. Leaf morphology data showed differences in the lamina length of linden trees probably due to the different environmental conditions of the four sampling areas. While no particular variations were found among the different magnolia specimens, stomatal densities and amount of epidermal wax were highest in magnolia.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Palm	Spoke 1	**GRE**	**The role of vegetation to improve air quality and soil hydrology in urban spaces**	Impermeable surfaces do little to attenuate high temperatures, standing water, and particulate matter in the air. The leaf surface, or phyllosphere, can directly capture particulate matter and in some cases, host microbes that will degrade the pollutants. Plant cover and root systems can regulate soil hydrology and evapotranspiration. The Piazza della Scienza of the UNIMIB campus will host experimental plots with plants adapted to the Mediterranean climate. Deciduous and evergreen tree and shrub species have been selected to evaluate plant leaf functional traits involved in intercepting particulate matter in the air in combination with measurements of air quality from sensors above and below the canopies. The water-use efficiency of differing vegetation cover (herbaceous versus shrubs) will be investigated by isolating the soil of individual plots by physical barriers and monitoring both irrigation and precipitation inputs and measuring gas-exchange and water relations of the plants.
J. Frigerio	Spoke 1	**GRE**	**Development of an early-warning molecular tool for invasive plant detection in the urban area**	Invasive plants can compromise the ecological balance and threaten local biodiversity by invading green areas and public spaces. Prevention is crucial to avoid the introduction and spread of new invasive plants. With the aim of developing a new early-warning tool for invasive plants detection, eight invasive plants listed in the EU blacklist have been selected, and species-specific primer pairs have been designed. Subsequently, mixes with typical urban plants and invasive species were created in laboratory. Tests have demonstrated the primer pairs' ability to uniquely identify the invasive species presence in the mix, making it possible to detect their presence within 24 hours. This rapid detection capability will enable environmental operators to intervene promptly to contain the spread of invasive plants before they can cause significant damage to the local ecosystem. This tool could have a significant impact on the protection of local biodiversity and the integrity of urban habitats

Presentatore	Spoke	Cat.	Title of the poster	Abstract
S. Mecca	Spoke 1	**GRE**	**Unlocking the Potential of Urban Fruit and Vegetable Waste: A Multifaceted Approach to Sustainable Bio-Waste Treatments**	The European Union generates 118 to 138 million tonnes of bio-waste annually. Current management methods like incineration fail to fully utilize its potential and lead to environmental issues. My project aims to enhance the upcycling of urban fruit and vegetable waste by developing efficient waste treatment techniques. We focus on preserving natural bio-polymers aiming to transfer their structural properties into valuable materials. We expplot the dried and milled waste as fillers incorporated in non-polyurethane foams for insulating purposes and compound in biobased polymers through extrusion technique for 3D printing. We also investigate low-impact treatments like mild acid hydrolysis for environmentally friendly production of bioplastic films. Ultimately, from all these subprojects, we aim to compile a comprehensive data library (analysis, treatments, supply chain considerations, and validated applications) to connect our MUSA open lab and expertise with companies.
S. Digiovanni	Spoke 1	**GRE**	**Integrated biorefinery to generate novel bio-based materials and biotechnological products from agrifood waste**	The valorisation of agrifood waste through biorefining is essential to decrease the problems connected to disposal, while generating an array of products of value. In this work, we investigate the possibility to valorise the waste stream of a previously established production of novel leather-like material obtained from fruit peels. The first part of the study proved that by replacing the acidic pre-treatment of the fruit peels with different enzymatic cocktails in the hydrolytic step it is possible to modify the physical properties of the treated biomass and tune the mechanical properties of the final bio-based materials. In the second part of the study, preliminary results showed that the liquid waste from the different hydrolytic treatments can be used as growth media for yeast cell factories, with the acidic one having a more limited application.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
R. Milanesi	Spoke 1	**GRE**	**Understanding of Zygosaccharomyces parabailii glucose metabolism and its regulation for improving fermentation performances**	The understanding of microbial physiology paved the way to the current development of industrial biotechnological processes. These achievements were obtained working on a small number of model microorganisms that are now the preferred chassis for synthetic biology and biomanufacturing applications. Nevertheless, unconventional yeasts might have peculiar features making them interesting for the development of bio-based circular economy models. Zygosaccharomyces parabailii is an interspecies hybrid yeast characterized by resistance to low pH and stress induced by weak organic acids. Glucose metabolism in this yeast is characterized by a mild Crabtree effect and reduced ethanol production, when compared with the model yeast Saccharomyces cerevisiae, therefore being potentially superior in terms of fermentation performances. In this work, we describe sugars metabolism in Z. parabailii focusing on its reduced Crabtree phenotype, and ability to grow on alternative carbon sources.
A. Doldi	Spoke 1	**GRE**	**Air quality monitoring during urban regeneration activities: the case of MUSA Open-air laboratory at University of Milano-Bicocca**	As part of the MUSA ecosystem, the regeneration of Piazza della Scienza involves close monitoring of indoor and outdoor air quality. Particulate matter (PM) and nanoparticles concentrations were monitored during both the pre-work (May – June 2023) and the construction phase (July 2023 – now) by establishing 11 sampling spots on the university campus. Sampling was carried out deploying both research-grade instruments (Dust Monitor 1.107, Grimm and Nanoscan SMPS, TSI) and low-cost sensors (OPC-N3, Alphasense and Partector-2, Naneos). Results showed a significant increase in concentrations during the construction for PM and nanoparticles in both the indoor and outdoor environments monitored on the campus. This work will be carried out throughout every step of the regeneration of Piazza della Scienza, highlighting the impact of the construction site and the effect of the urban planning actions promoted by MUSA on air quality.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
L. Celona	Spoke 1	**GRE**	**Air quality monitoring and deep learning based forecasting**	Ensuring predefined air quality standards is crucial for health. Air quality index is estimated using monitoring systems at coarse spatial resolution. To achieve finer resolution monitoring, we propose an IoT-based air quality station inspired by a European Space Agency project that can be installed in different areas of the Bicocca district as well as in the laboratories and classrooms of the University. Equipped with four sensors, the station collects data that, combined with information on traffic and local events, enables the automatic prediction of pollution trends, facilitating the implementation of policies to improve air quality. To this end, we have also designed deep-learning techniques to predict different pollutants over one day. Due to insufficient data from our station, experiments were conducted using data from stations in Seoul (North Korea), Madrid (Spain), and Aarhus (Denmark). The achieved results offer insights for future endeavors.
S. Prudenza	Spoke 3	**GRE**	**Assessment of the odor impact associated to a paper mill: an example of IOMS environmental monitoring at receptor a paper mill: an example of IOMS environmental monitoring at receptor**	Odour pollution represents a limiting factor to the operation of industrial activities because of citizens' complaints. Many regional and national laws prescribe the execution of periodical monitoring campaigns at plant emissions and receptors located in their proximity. Instrumental Odor Monitoring Systems (IOMS) are commonly involved for monitoring odors directly where their presence is complained. They analyze in real-time the ambient air to detect odour presence and determine their provenance. This paper describes the monitoring of paper mill odour emissions by two IOMS located at two receptors, where residents frequently report the occurrence of odour events. It describes the protocol involved for plant odour sources characterization, IOMS training and validation. The monitoring, lasting 4 months, allowed assessing the odour impact at receptors, expressed as the detection frequency of plant odors, and identifying critical emissions deserving maintenance interventions or upgrading.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Ratti	Spoke 3	**GRE**	**Implementation of an electronic nose for real -time identification of odour emission peaks at a wastewater treatment plant**	This paper proposes a novel approach for real-time monitoring by Instrumental Odour Monitoring System (IOMS) of odour emissions from a WasteWater Treatment Plant (WWTP), characterized by unpredictable odour peaks at its arrival tank (AT), generating nuisance nearby the plant, most likely due to the conferment of non-identified and malodorous wastewaters. The EN was trained to identify deviations (odour peaks) from a Normal Operating Region (NOR), defined as to include concentrations levels unlikely to cause nuisance out of the plant, and simultaneously activate the targeted withdrawal of gas samples to be further analysed to investigate the causes of such peaks. Results prove that IOMS can detect real-time alterations of odours from the AT with an accuracy of about 90%. The chemical and olfactometric characterization of samples collected in correspondence of the odour peaks enabled to investigate their origin and take proper counteractions to mitigate the WWTP odour impact.
V. Zaffaronicaorsi	Spoke 1	**GRE**	**Influence of personal factors on soundscape perception in Piazza della Scienza, Bicocca**	Noise pollution is a growing concern in large cities, impacting human health and well-being. Soundscape approaches are an important tool to evaluate human perception of sound environment, including the physical phenomena and socio-demographic and psychological factors. This study aimed to assess the influence of psychological well-being and demographic factors on the soundscape of Piazza della Scienza, campus University of Bicocca, Milano. The square is cemented and arranged on two levels, surrounded by buildings. Soundscape monitoring was performed using four recording devices and a survey that involved 398 participants. According to the sample, the most bothersome sound source are the technical installations, followed by vehicular traffic and people. Moreover, individuals with high sensitivity to noise expressed negative emotions describing the soundscape as boring, annoying, or chaotic.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
A. Massironi	Spoke 1	**GRE**	**Proactive Control for Distractor Expectation: A Simulation Experiment on Attention and Driving Performance**	On the road, drivers are deemed to pay attention to driving-relevant objects (i.e., other cars, traffic lights) while at the same time avoiding being distracted from interfering ones (i.e., billboards). In this context, proactive attentional control for distractor expectation, based on anticipation of events, may be recruited to optimize performance. Here, we aimed to study how these processes impact braking responsiveness and lane-keeping within a virtual driving simulator. The drivers' taskwas to quickly brake to road-sign-like stimuli presented in a scenario where they were made used to expect distractors to appear or in a scenario without distractors. Our results indicate that when distractors are expected but do not appear, drivers brake slower to the driving-relevant object but have a more accurate lane keeping, as compared to when they are not expected, suggesting – therefore – that distractors on the road may entail both costs and benefits impacting driving performance.
S. Dellasantina	Spoke 1	**GRE**	**The MUSA walkability map: a tool for enhancing active mobility in the Bicocca district**	Our paper intends to study the walkability of the Bicocca university district (Milan), following a socio-ecological approach. First, based on a review of the literature, we built three indexes on accessibility to urban opportunities, street security and comfort. The indexes - which summarise twenty standardised indicators on the urban design, morphology and functional characteristics of the district pedestrian routes – constitute the overall walkability index. An open access web map of the Bicocca walkability was then published to represent the distribution of the indexes values in the district. Second, we organised focus groups to investigate the factors that the students value the most in their daily walking experience. Then, by applying the q-methodology analytical tools, we grouped the subjects based on their answers. The results were integrated in the walkability map by weighing the indexes according to the social groups' preferences.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
I. Burkov	Spoke 1	**GRE**	**The evolution of sustainable mobility business models: a systematic literature review**	This systematic literature review examines the nexus of sharing mobility, sustainable mobility, and business models through a rigorous methodology involving data from research articles published in English between 2014 and 2023 in management and transportation. It elucidates the pivotal role of business model innovation (BMI) in attaining sustainability objectives, particularly within sustainable mobility solutions. By consolidating existing research, identifying trends, and proposing future research avenues, this paper offers valuable insights for academics and industry practitioners, potentially shaping forthcoming business strategies and policy formulations in sustainable transportation.
D. Zotti	Spoke 3	**GRE**	**TROMBIA Project – Autonomous sweeper for urban cleaning services**	The urban cleaning and waste collection sectors are recognized for their considerable physical requirements and reliance on work vehicles predominantly fueled by methane. Nevertheless, the operations in these domains frequently lack precision and efficiency, resulting in time and resource wastage. The primary goal of the project is to enhance the existing scenario, providing a more efficient and environmentally sustainable service. Extensive research was undertaken to explore innovative solutions, culminating with the choice to test the "Trombia Free" electric and autonomous sweeper. The machine experimentation will take place at MIND, a private public-use area in Milan with restricted vehicle circulation. With a duration of at least 10 months, the experiment will span various climatic conditions. During this period, numerous analyses will be conducted to measure the overall performance of the machine, its safety, and as well as its economic benefits.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Giustra	Spoke 1	**GRE**	**Untargeted metabolomic analysis using liquid chromatography quadrupole time-of-flight mass spectrometry to unravel the impact of heavy metal stresses on secondary metabolite production in leaf of Populus nigra**	The exposition of plants to abiotic stress such as contamination of soil and water with toxic heavy metals (HMs) negatively affects plant growth and poses a serious threat to the surrounding environment due to their diffusion and persistence. Though most plants are highly sensitive to toxic metals, tolerant species are being increasing selected and used for phytoremediation, a plant-based technique for reducing contaminants in soil. Excess HMs often induce oxidative stress, but tolerant species may combat it through a series of metabolic mechanisms that generate secondary metabolites, such as phenolic compounds and flavonoids, which are known to have antioxidant properties. Here a metabolomic approach was used to evaluate the secondary metabolite profiles of Populus nigra trees growing on noncontaminated and contaminated sites in an urban setting (Milan, Italy).
L. Gouby	Spoke 1	**GRE**	**Many Little Piggy! - Biosensors for soil quality monitoring**	Our aim: development of a prototype biosensor based on terrestrial isopods. A technology for monitoring the ecological quality of soils and how it changes with environmental restoration activities.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
A. Previati	Spoke 1	**GRE**	**Best practices for the sustainable management of shallow geothermal energy resources in urban areas: insights from the case study of the City of Milan**	Recent EU directives and national regulations have encouraged the development of geothermal energy as a renewable low-emission source. In the Milan metropolitan area, the number of shallow geothermal wells has increased significantly in the last 5 years, covering from 40 to 400 GWht/a. This rapid growth and the resulting criticalities motivated the need for better management strategies of the groundwater/energy underground resources: 1) Define the requirements for a common database of geothermal installations; 2) Analyze the cumulative impact of existing geothermal systems, delineating thermal capture and thermal disturbance zones using large-scale analytical and numerical models; 3) Evaluate the subsurface hydrogeological/thermal budgets on a regular grid basis to highlight the most critical areas in terms of hydrogeological and thermal stress. Finally, the implementation of future demand scenarios will improve the sustainability and reduce the risks of existing and planned systems.
L. Gallia	Spoke 1	**GRE**	**Multiscale characterization of the Urban Heat Island (UHI) of the city of Milan (Italy)**	The Urban Heat Island (UHI) is a phenomenon whereby urban areas are generally warmer than surrounding suburban and rural areas. Taking into account its spatial and temporal variability, its layered structure, and the possibility of studying it at different scales, we aim to characterize the UHI of Milan from macro to microscale. To achieve this, we employ various approaches and temperature measurement techniques for both surface and air. Landsat 8 images are employed to measure surface tamperatures at both macro and mesocale. Through these images, it is possible to identify hotspots in the city such as the Bicocca neighborhood, which is characterized by a mixture of different surfaces. At the microscale, we are focusing on our University campus, undergoing urban regeneration. Here, we are utilizing IRT images from thermal cameras for measuring surface temperatures, along with ground-based or drone-implemented environmental sensors for measuring air temperature, within the square.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
D. Duva	Spoke 1	**GRE**	**Digital twin methodology for thermal comfort measurement**	This research aims to develop a methodology for assessing retrofitting and urban regeneration strategies for a specific category of buildings in Milan. It uses the Digital Twin methodology to analyse a sample building and replicate its behaviour in a digital model. The workflow involves using Arduino's digital ecosystem, which includes a microprocessor and motherboards for simplified rapid prototyping. The Arduino Cloud allows for real-time data transmission and digital model updates. The workflow includes surveying, modelling, planning infrastructure, and coding phases to achieve the desired results. The goal is to apply this retrofitting methodology to a wide range of buildings, ensuring accurate environmental data collection and verification on a large scale. The aim is to determine a workflow that allows for real-time reading of environmental parameters and automating their correction during the building's daily life to achieve thermal comfort conditions.
A. Sangalli	Spoke 1	**GRE**	**Retrofitting according to new Comfort Standards**	The objective is to develop a methodology and test it, which aims at the application of innovative techniques and controls to: - achieve and assess comfort based on the recent significant changes in the Comfort and Energy standards, e.g. in ASHRAE 55:2020 - at the same time reducing "energy needs for heating and cooling" (EN-ISO 52000). - test the performance and contribution to comfort of the new generation of super-efficient ceiling fans.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
V. Trifiletti	Spoke 1	**GRE**	**Innovative solar cells for low-cost building or product-integrated photovoltaic**	Integrated photovoltaic (PV) refers to the incorporation of photovoltaics into various structures or devices to harness solar energy and convert it into electricity ready to use. Perovskite solar cells (PSCs) and earth-abundant chalcogenides such as Cu2ZnSn(SxSe1-x)4 (CZTSSe) have gained attention in recent years due to their potential for high efficiency, low-cost fabrication, and versatility. PSCs and CZTSSe adapt perfectly to the integrated PV demands. Here we present our preliminary results on the realization of semi-transparent PSCs, produced in air, for window application and flexible CZTSSe solar cells for vehicle integration. Both processes have been designed to be easily scalable from lab to production. Both PSCs and CZTSSe solar cells have been designed to be employed in 4-terminal tandem architecture to increase efficiency.
L. Vergani	Spoke 3	**GRE**	**Electrified Catalytic Reactor for Hydrogen Release from LOHC**	The research project studies hydrogen-based systems as an energy storage device to stabilize the electric grid. The project concerns the design of electrified reactors for H2 release from hydrogen carriers. It focuses on the hydrogen carrier identification, the development of a reactor model, and the reactor integration into a process layout. The dehydrogenation of the LOHC pair methyl-cyclo-hexane/toluene was considered. The energy needed by the endothermic reaction is provided by Joule effect, via the electrification of a resistive internal reactor material (SiSiC foam) which is packed with Pt-based catalytic particles. The model showed the capability of releasing 95.5% of the hydrogen contained in the MCH, which corresponds to 1400 Nm3/h of hydrogen with a total reactor volume of 1.49 m3 and a specific energy consumption of 14.3 kWh/kg_H2. The reactor works with a specific MCH flow rate of 600 Nl/h/kg_cat, a pressure of 2 bar, and a temperature range between 250 and 380 °C.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
M. Bellomo	Spoke 3	**GRE**	**Electric storage systems: an overview of charge estimation methods for battery management systems and potential future developments**	Electric storage systems play a fundamental role in the energy transition, in particular in the electrification of transport and in the stabilization of power lines, which in future years will face increasing elements of instability due to greater penetration of renewables in energy production. Electric storage systems require battery management systems (BMS), electronic systems that allow batteries to operate safely, while optimizing performance and useful life. An efficient BMS is based on a precise method for state of charge (SoC) estimation. In this poster we present a synthetic overview of state-of-the-art methods for SoC, comparing the characteristics of model-based approaches, such as equivalent circuit models or electrochemical models, and data-driven approaches, based on statistics, machine learning and deep learning. We also highlight possible future developments and innovative methods at the intersection between these two categories, such as physics-informed models.
B. Barzaghi	Spoke 1	**GRE**	**Human impact on Milan freshwaters' biodiversity and functionality**	Freshwaters are biodiversity hotspots and yet have suffered a dreadful decline, especially in urban landscapes. We're investigating the human impact in Milan's metropolitan area, by assessing freshwaters' biodiversity and their functionality along an urbanization gradient. The sampling sites are natural and artificial lentic waterbodies (pools, ponds, small lakes), as well as slow-flowing channels, backwaters and fountains. Biodiversity is profiled through environmental DNA amplification, targeting bacteria, insects, amphibians and teleost fishes. Abiotic measures of each water body (length/width, substrate, water T, pH, conductivity..) and C/N/P cycling assessment in the lab will ensure the characterization of multiple ecosystem functions. Each site is sampled twice (April, June) to assess changes in the functional traits of the whole community. Evaluation of eDNA accuracy will be performed on amphibians, by comparing water filtering results with visual encounter surveys (Feb-June).

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Batzella	Spoke 3	**GRE**	**Pressure sensor placement for ruptures localization in water distribution networks**	Water saving in distribution networks (WDS) has been gaining increasing significance in recent years due to the raise in water scarcity and population growth. To this aim beside the localization and repair of already occurred leakages it is crucial the ability of localizing new ruptures in WDS. Continuous real-time monitoring of flow variables can help in new ruptures detection, but positioning of sensors for an efficient detection is challenging. Working on the benchmark network (Jowitt & Xu 1990) we populated a node pressure database, without and with single ruptures of various entities and positions. The database has been used for testing a new ruptures localization method, based on correlation analysis and real sensor sensitivity. The database creates a reference framework available for researchers to validate their own methods for this kind of analysis. A validation step will be supplied using the E-NET network, a currently underway model in Hydraulics lab of Politecnico di Milano
S. Benzi	Spoke 3	**GRE**	**E-NET: Experimental water distribution network for the evolution of the Digital Twin**	Water distribution networks (WDN) are critical infrastructures on which the well-being of communities and citizens depend. Digital Twin in water sector is an innovative technology which relies on the integration of virtual network model, optimization algorithms, real time data collection to improve operability and safe management of water resources. The project "E-NET" consists in the creation of an experimental WDN and of its digital twin in the Hydraulic Laboratory of Politecnico di Milano. The layout of the experimental plant is based on a benchmark network model widely studied (Jowitt & Xu,1990) and used in more than 50 scientific publications. The objective is to create a tool for researchers and practitioners to experimentally verify and validate digital twin solutions through tests, workshops, and specialization courses, helping the technology transfer.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
M. Rancan	Spoke 4	**GRE**	**Firm-level characteristics and ESG scores: the European landscape with a focus on Italy**	This research project investigates the state of ESG reporting of European companies. By analyzing data provided by Refinitiv we consider a sample of 910 European listed companies over the period 2010-2022. Our analysis illustrates differences in ESG scores between industries and countries as well as the corporate characteristics related to different levels of ESG scores. We also provide a focus on 111 Italian listed companies.
C. Carrara	Spoke 5	**GRO**	**An easy to access database for sustainable and circular textile & fashion ingredients**	Responsible innovation is not an easy topic. Specifically, investigating, and sourcing, trustable sustainable textile ingredients is defenitely complex both for citizens and professionals. This database aims to be a free & easy to access tool to disseminate the knowledge, and promote the adoption, of the above mentioned materials. Products and processes are analyzed both at sustainability and market availability level. This tool is completed by a "Certifications' glossary" that aims to clarify what each certification means in terms of values for the whole supply chain, starting from producers down to the final users.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
F. Khatami	Spoke 5	**GRO**	**Country-level analysis of the sustainability and circularity in the textile-clothing-leather-footwear (TCLF) industry**	Current study aims to investigate the relationships between the textile-clothing-leather-footwear (TCLF) industry and sustainability for four countries, i.e., France, Germany, Italy, and Spain. Using the linear regression model for data from 2010 to 2020, our findings show significant positive relationships between trade balance values of agricultural raw materials (TB of ARM), footwear (TB of FOOT), and textiles and clothing (TB of TEXT), which were recognized as the key variables of TCLF industries with the overall sustainability and circular economy in the study areas. Particularly, among the four countries, the strongest correlations between TCLF industries and sustainability belonged to Italy. The novelty of this research lies in identifying the relevant variables from WITS and Eurostat databases to evaluate relationships between the TCLF industry and sustainability at the country level.
G. Rossi	Spoke 5	**GRO**	**TRAC3S. Rethinking the luxury supply chain through Web 3.0 technologies**	Recent years have seen significant growth in academic research focused on the luxury industry. While much literature focuses on consumer perceptions, there's a need to shift focus to the interaction between companies and consumers. Urgent issues such as supply chain sustainability and authenticity demand attention. Our research identifies key areas for reform, including traceability, sustainability, anti-counterfeiting, and communication. To ensure these conceptual assumptions, WP 7 focuses on creating the technological solution TRAC3S, capable of ensuring, through web 3.0 technologies (artificial intelligence, virtual reality, augmented reality, NFTs, and blockchain), a more smart supply chain in the luxury sector. This includes proposing a new intelligent production chain that goes through the stages of 1. prototyping, 2. minting, 3. distribution, 4. experiential pre-sale, 5. release of the physical twin.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
N. Ruggiu	Spoke 5	**GRO**	**Urban Circularity Framework**	The Urban Circularity Framework (UCF) collects a set of key performace indicators designed to assess the circular initiatives of fashion and design organisations at both operational, named as practice level, and urban level. Developed through collaboration with the Municipality of Milan, it addresses the common necessity of evaluating the effects of circular practices within the city. Impact evaluation is conducted across three dimensions: economic, environmental, and social. The UCF is the result of research employing a hybrid approach, incorporating literature review, benchmarking analysis, stakeholder consultations, and use case studies. The novelty of the framework lies in its structure being able to measure the urban impact by collecting the data at a practice level from the organisations located in the city area.
S. Gadola	Spoke 5	**GRO**	**Unconventional Platforms: how MUSA spoke 5 supports local cooperation to foster sustainable innovation**	Platforms like Airbnb and Uber have revolutionized traditional value creation dynamics by connecting diverse customer groups subjected to network effects. While digital technologies have characterized platforms by fostering global diffusion, other cases overlooked in the literature operate locally and physically, seemingly sharing platform characteristics. Cases like living labs and coworking share structural similarities with digital platforms but operate differently, offering unique value creation dynamics thus defined as "Unconventional Platforms" (UP). This research compares UP to conventional platforms, highlighting their distinctive features through empirical investigation. We find that UP capitalize on proximity and human dimension. Proximity fosters serendipitous matchmaking and local ecosystem collaboration. Human highlights individual and organizational capabilities in sensing matchmaking's potential value exploring individual knowledge in unknown fields.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
F. Novello	Spoke 5	**GRO**	**Ethical consumer, sustainability, and fashion: circulation of the benefit corporation model**	Execution of extensive literature review aimed at creating libraries, databases, and subsequent study related to fashion sustainability with a focus on benefit corporations and b corp. We have collected the following appropriate keywords: B Corp, Circular Economy, Circular Fashion, Circularity, Codici Etici, Consumer Behaviour, Ethical Fashion, Fashion Industry, Fashion Law, Fashion Sustainability, Fast Fashion, Green Economy, Greenwashing, Luxury Brands, Moda Sostenibile, Società Benefit, Supply Chain, Sustainability, Sustainable Development, Sustainable Fashion, Textile Industry, Textile Manufacturing. Data selection: The list resulting from the search strings has been further screened by reading the paper, to retain only what is meaningful for our purpose. The work aims to provide a comparative perspective (USA, Italy and France) in the legal debate on sustainability in the fashion and luxury industry.
F. Malerba	Spoke 3	**GRO**	**Does entrepreneurs' financial literacy affect the financing mix of start-ups? Evidence from Italy**	Startups frequently face challenges when seeking financing beyond the traditional 3F (Family, Friends, and Fools) and they are often unaware of the available funding sources besides the banking system. One reason may be the lack of financial literacy that is limited among entrepreneurs leading to a situation in which there is a potential missed diversification of the financial pool. This research aims to explore the potential impact of financial literacy on entrepreneurs' decisions regarding their firms' funding mechanisms. Leveraging a 2021 Bank of Italy survey, the study has a sample of 607 startups, and employs an ordered probit regression model to discern the influence of financial literacy on the familiarity and use of alternative finance instruments. Findings should contribute to a deeper understanding of internal determinants of startup financing choices and inform the development of financial education programs aimed at enhancing entrepreneurs' financial literacy.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
J. Andohr	Spoke 3	**GRO**	**Mapping the Entrepreneurial Ecosystem of Milan & Lombardy**	This research used a descriptive analysis method to analyse the different factors that impacted the growth and development of Milan's entrepreneurial ecosystem between 2010 and 2020, measured by the number of startups launched per year. The single factors chosen followed the study of Leendertse, Schrijvers, and Stam (2022). By examining these external factors, we can understand the state of Milan & Lombardy's entrepreneurial ecosystem and how different forces have shaped it, leading to the start of new ventures. A regression analysis has also helped to reveal which factors have impacted the growth of entrepreneurship in Milan and Lombardy the most. We have lastly used economic, employment and patent indicators to infer the impact of the ecosystem on the region of Lombardy as a whole.
K. Ghasemzadeh	Spoke 3	**GRO**	**Unveiling the Living Lab model: A systematic Literature Review**	Despite Living labs' (Ls) rapid growth and wide-ranging topics, few comprehensive systematic reviews exist, limiting a holistic understanding of the field. This paper aims to conduct an up-to-date, systematic literature review, analyzing 74 papers from ABS journals. Building on current literature and identified gaps, we formulated three main research questions exploring LLs' organizational and managerial mechanisms, motivational and interaction aspects, as well as their performance and impacts and simply "how they work". Additionally, we present a comprehensive framework for establishing LLs, outlining essential steps and best practices. This rigorous review and framework development contribute to a deeper comprehension of LLs, highlighting research gaps and suggesting effective directions for the future.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
S. Zarebidaki	Spoke 3	**GRO**	**Navigating Startup Success: A Systematic Review of Business Accelerators and Incubators through the Lens of Resource Dependence Theory**	This systematic literature review critically examines the evolving landscape of business accelerators and incubators, utilizing a robust research design that involves a comprehensive analysis of 46 selected documents. This systematic literature review delves into the intricate interplay between accelerator/incubator programs and startup success, with a specific emphasis on resource dependency, organizational strategy, and institutional environment dynamics. Grounded in the framework of Resource Dependence Theory (RDT), this review systematically synthesizes extant research to elucidate how startups strategically navigate dependencies on accelerator and incubator resources and how they control uncertainties and power dynamics. The paper concludes with practical implications for entrepreneurs and highlights theoretical contributions, providing a comprehensive guide for practitioners and researchers navigating the complex realm of venture-building programs.
A. Romano	Spoke 4	**GRO**	**Determining the contribution of an acceleration pathway for a successful start-up**	

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Madiai	Spoke 6	**GRO**	**Does the urban space influence entrepreneurial ecosystems? A gender perspective**	This study investigates the relationship between the urban space and entrepreneurial ecosystems (EEs) with a gender perspective. We question whether the physical structure of the urban space where the EEs place affects the funding of innovative ventures and whether this effect is different between female-led and male-led ventures. We have created a unique dataset – spanning more than 10 years between 2012 and 2023 – that combines (i) longitudinal data on urban space attributes and (ii) data on ventures fundings across Italy, with information on the ventures' and founders' characteristics. By using econometric estimations, we uncover whether and how the urban space has a gendered effect on ventures.
Y. Cheng	Spoke 3	**GRO**	**Securing Venture Capital for Sustainability-Driven Ventures: An Analysis of Funding Delay**	This study explores the funding delays faced by Sustainability-Driven (SD) ventures when seeking investment from Venture Capitalists (VCs). SD ventures have a dual mission, targeting both economic returns and non-economic, sustainability-oriented goals. We argue that this dual mission complicates VCs' evaluation of these ventures' potential and sets the stage for possible agency conflicts. VCs might postpone investment in SD ventures to reduce uncertainty and mitigate these conflicts. Conversely, SD ventures may be hesitant to agree to restrictive terms that VCs might propose to alleviate their concerns related to uncertainty. Utilizing the global Pitchbook dataset for empirical analysis, we find evidence supporting our hypothesis that SD ventures experience delays in obtaining VC funding. Nevertheless, our research identifies specific investor- and market-level factors that can lessen these delays.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Botta	Spoke 3	**GRO**	**The Role of Initial Performance in Venture Capital Performance Persistence: Skills or Luck?**	Venture capital (VC) firms are known for their sustained performance, influenced by both the skills of General Partners (GPs) and initial luck. Our study explores how these factors interact to shape performance persistence. We find that higher initial performance, driven by either luck or GP skills, leads to greater persistence, especially when both are high. Additionally, we examine how factors like fund size and Limited Partners contribute to this persistence.
Q. Xiong	Spoke 3	**GRO**	**Greening the Portfolio: Limited Partners' Preferences for Social Impact and Sustainability Orientation of Venture Capital Funds**	This study explores the extent to which institutional investors influence the sustainability orientation of venture capital (VC) funds. Using a sample of 4,419 VC funds established between 1995 and 2016, we find that funds predominantly backed by limited partners (LPs) with a higher willingness to pay for social impact include a greater number of sustainability-driven ventures in their portfolios. We propose that the influence from LPs depends on their incentives and capacity to apply pressure. First, LPs are more incentivized to advocate for sustainability-related investments when there exists misalignment of objectives between LPs and VC funds. Second, the capacity of LPs to exert influence is contingent upon the power dynamics between LPs and VC firms. Our empirical evidence broadly supports these theoretical conjectures. Overall, this study underscores the crucial role of institutional investors in shaping the sustainability orientation of VC funds.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
V. Lomele	Spoke 4	**GRO**	**Entrepreneurial Sustainability and Access to Finance**	In this project we investigate how the sustainability orientation of entrepreneurial ventures influences their access to two sources of external finance: loans and venture capital (VC). Absent secondary data on these issues, the project is based on primary data collected through a survey. The survey encompasses subjective and objectives measures of sustainability orientation, including the adoption sustainable managerial practices. With respect to financing aspects, the survey enquires on companies' demand for loans and VC, and the access to these sources of finance. We distinguish between traditional, impact-oriented, and governmental VC, and between traditional loans and sustainable-linked loans. The survey was sent February-March 2024 to more than 100,000 young European ventures established since 2015. Companies were contacted using their general email addresses, to comply the GDPR requirements on the use of personal data. This resulted in a relatively low response rate, around 2%.
R. Articolo	Spoke 2	**GRO**	**The economics of big data in life sciences**	This paper serves as a review of assessment methods for evaluating the benefits of Open Science (OS) initiatives, which often manifest as open platforms capable of hosting and disseminating research findings, data in multiple formats, methodologies, codes, or tools. OS initiatives come with specific benefits and costs, making Cost-Benefit Analysis a suitable tool for evaluating these initiatives. The benefits fall into two categories: efficiency and enablement. Efficiency benefits enable users to achieve comparable outcomes with fewer resources, while enablement benefits facilitate the development of new outputs such as collaborations, spin-offs, or patents. The most frequently used methodologies to estimate these benefits are the avoided cost, contingent valuation, long-run marginal cost, Delphi, and qualitative analysis approaches. Finally, the paper presents an impact assessment example of the EMBL's data resources, conducted via an online survey that garnered 4,920 responses.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
F. Soave	Spoke 3	**GRO**	**Intralayer bond for 3D Printing Reinforced Concrete**	The three-dimensional printing of concrete is revolutionizing the construction industry by creating optimized structures and faster processes. However, there are challenges in maximizing its potential, especially in ensuring strong bonds between the layers. Factors such as moisture and temperature affect bond strength, thereby impacting structural integrity. Despite the existence of established methods like the use of wire mesh and steel reinforcements, this research introduces the use of stainless steel-reinforced nails to enhance layer connections, offering modular solutions and automation possibilities. The aim of the research is to enhance bond strength in additive manufacturing, using tailored test (shear box test) configurations to evaluate bond quality and strength. This study provides valuable insights into layer bonding, demonstrating how specific reinforcements can significantly improve this parameter over time.
G. Rizzieri	Spoke 3	**GRO**	**A numerical model for the simulation of 3D Concrete Printing**	3D Concrete Printing (3DCP) is rapidly gaining momentum in the construction industry and could be the key to achieving a more automatized and sustainable construction process. However, before a large-scale adoption takes place, it is necessary to develop reliable analytical and numerical tools to provide designers with a better understanding of the printing process. This contribution presents a fluid numerical model to simulate the extrusion and layer deposition phases of 3DCP. The model assumes that fresh concrete can be treated as a homogenous fluid and has been validated by reproducing the printing of single and multi-layer filaments. Additionally, a wide range of phenomena typical of 3DCP can also be reproduced with high accuracy, making the model a promising tool to assess in advance the performances of the printing process and predict the final "quality" of the printed object.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
I. Eremeev	Spoke 1, Spoke 2, Spoke 3	**GRO**	**Transimpedance amplifier for LGAD noise measurements: design and characterization**	A wideband low-noise transimpedance amplifier (TIA) has been designed to measure the current noise power spectral density (NPSD) of low-gain avalanche diodes (LGAD). The design focuses on maximization of operating bandwidth and minimization of system background noise. The TIA is based on the OPA818 operational amplifier due to its high gain-bandwidth product (GBWP) (2.7 GHz), low input capacitance (2.4 pF) and low input voltage noise density (2.2 nV/√Hz). A detachable daughter board DC coupled to the TIA's input is used for testing various devices. TIA was calibrated by measuring the noise of resistors at different temperatures. The measurements of TIA's input noise revealed an additional OPA's current noise component with respect to the one declared on datasheet. The NPSD's of an LGADs have been measured from 10-28 A2/Hz to 10-24 A2/Hz in the range of frequencies from 10 Hz to 3 MHz, showing a dominant white component, strongly dependent on the device bias condition and temperature.
A. Lagala	Spoke 1	**GRO**	**20 MeV·cm2/mg Linear Energy Transfer Radiation Tolerant six-transistor Static-Random-Access-Memory Cell in 28 nm CMOS technology**	This poster presents the design and simulations of a 28 nm CMOS bulk volatile memory cell resistant to Single Event Upsets at 20 MeV·cm2/mg of Linear Energy Transfer. Using a classic six-transistor structure, the cell features storage latches with feedback impedance to minimize current in the pull-down/pull-up network, preventing unintended bit alterations. To validate its resilience, a current pulse signal from incident particles passing through the silicon substrate was modeled using MATLAB and simulated in SPICE. With an incident charge pulse of 15.5 fC lasting about 400 ps, the resulting current pulse peaks at 60 µA, causing a -250 mV voltage shift from the '1' logic value (0.9 V supply) with recovery time below 1% of 0.9 V of 600 ps. Simulations considered operation in a 32-bit SRAM bank, accounting for bit-line routing capacitance. The cell functions at 10 ns per operation with energy/bit values of 108 fJ, 64 fJ, and 126 fJ for WRITE, HOLD, and READ operations, respectively.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
M. Chiariello	Spoke 1	**GRO**	**A 900-MHz Hardening-by-Design Voltage Controlled Oscillator in 28nm CMOS**	In this poster the design and electrical simulations of a Hardening-by-Design current starved Voltage Controlled Oscillator (VCO) is presented. This VCO is designed to be a core component of a rad-hard Phase Locked Loop (PLL) functioning as a clock generator with a target output frequency of 900 MHz. The VCO is realized as a 4-stage fully differential ring oscillator in 28 nm CMOS HPC+. Through extensive electrical simulations its performances have been evaluated in terms of power consumption (666.4 µW), phase noise (-86.09 dBc/Hz @ 1 MHz) and jitter (268.9 fsRMS). The impact of a 1 GRAD Total Ionizing Dose (TID) on the threshold voltage of NMOS and PMOS transistors was replicated by working on transistor models and simulated electrically. A comparison between Process, Voltage, Temperature (PVT) simulations and this supplementary corner analysis show the robustness of the VCO in response to threshold voltage shifts induced by 1 GRAD TID.
M. Malanchini	Spoke 1	**GRO**	**Design and Implementation of a RISC-V Microprocessor for Aerospace Applications**	This poster presents the development and implementation of a single-core Reduced Instruction Set Computer V (RISC-V) microprocessor for aerospace applications. Implemented in 28 nm bulk CMOS technology, the microprocessor adheres to the RV32I definition of the RISC-V architecture, operating at 100 MHz with a supply voltage of 0.9 V. Pre- and post-layout simulations, alongside FPGA implementation, validate the design's functionality and efficiency. With a footprint of 0.05 mm², corresponding to 52.36 kGE. The microprocessor exhibits a power consumption of 1.488 mW, primarily due to dynamic power (1.479 mW), while having an average static power consumption of 9 µW. This work underscores the feasibility of deploying energy-efficient RISC-V processors in aerospace systems.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
L. Anzi	Spoke 3	**GRO**	**Fabrication of Graphene FETs on Benzocyclobutene Substrate for High-Frequency Applications**	This poster presents the fabrication of graphene field-effect transistors (GFETs) on a benzocyclobutene (BCB) substrate tailored for high-frequency applications. BCB emerges as an ideal polymer substrate, offering low-loss suitable for advanced semiconductor integration. Leveraging BCB, it is possible to achieve heterogeneous integration, enabling seamless incorporation of CMOS technology with graphene-based devices. Using large-area graphene grown by chemical vapor deposition (CVD) as the channel material, we successfully fabricated and tested GFETs on BCB substrates. Our experimental results demonstrate a maximum frequency of oscillation (fmax) of 40 GHz in GFETs with a 200 nm channel length at a drain-source voltage (VDS) of 0.4 V, suggesting the potential for even higher fmax at larger VDS. This work highlights the potential benefits of using BCB-based substrates in enabling the realization of high-performance GFETs for next-generation high-frequency electronic applications.
R. Sant	Spoke 3	**GRO**	**LabXAS: a new table-top instrument for in-lab XANES/EXAFS measurements**	X-ray Absorption Spectroscopy (XAS) is a powerful technique used to characterize the chemistry and the structure of materials. However, the need of an intense and tuneable-in-energy x-ray beam has limited the use of this technique to synchrotron facilities, thus precluding its wide-spreading. We have designed a new table-top XAS spectrometer, called LabXAS, based on the use of a conventional but micro-focused x-ray source with suitable brilliance. Besides the source, the spectrometer also comprises a Johansson-type Ge(nn0) crystal analyser and a silicon drift detector, all arranged on a Rowland circle. The instrument works in low-vacuum, between 3 and 15 keV energy. LabXAS is intended to minimize the costs, the size and the mechanical complexity of existing spectrometers, while reaching state-of-art performances. Moreover, it aims to provide a fast access to XAS characterization of novel, advanced and sustainable materials to local communities of scientists.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
M. Tambaro	Spoke 1	**GRO**	**An integrated front-end for accelerometry in gravimetry experiments**	This work presents the design of an analog front-end for an advanced three-axis accelerometer to enhances the precision of planetary orbit and rotation measurements. The accelerometer provides critical support to the spacecraft tracking data by accurately measuring non-gravitational perturbations on a Planetary Orbiter contributing to the broader knowledge of planetary science and relativistic physics. It must improve the actual boarding equipment mounted on satellites, by reducing the instrument's footprint and power consumption by replacing the components of the accelerometer front-end with an Application Specific Integrated Circuit (ASIC). The device exceeds the typical acceleration measurement requirements of 10-8 m/s2 with an intrinsic noise level of 10-9 m/s2/√Hz over the frequency range of 0.1 to 100 mHz. This work also shows the various challenges that must be faced while studying a system that covers such broad requirements.
R. Maryam	Spoke 1	**GRO**	**Enhancing polyethylene terephthalate (PET) surface wettability properties through Oxygen Plasma Treatment and Graphene Coating**	Inspired by nature's ingenuity, tunable wettability has attracted much attention across academic and industrial fields. Various techniques of tailoring the polymer surfaces have been explored to control the changes in wetting properties. Plasma treatment is widely used to modify the surface of polymers since it offers numerous advantages over other surface modification techniques. Polyethylene terephthalate (PET) is important due to its wide range of applications. To broaden its application is enhanced by coating and plasma treatment. This work shows how wettability and properties were improved by using oxygen plasma and coating. The plasma treatment and coating of GO on PET enhance the properties of the treated samples. Several characterization techniques were used to analyze both untreated and treated PET. GO was confirmed by XRD, Raman, and FTIR analysis.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Bruschi	Spoke 3	**GRO**	**New generation devices for the seismic protection of hospitals**	Hospitals are considered strategic structures for Civil Protection purposes due to their fundamental role in managing emergencies after disasters. They must remain fully operational in the aftermath of earthquakes, and therefore it is necessary to protect not only the structure, but also the medical equipment from even minor damages. Current anti-seismic devices are effective in protecting structures from ground motions, but they can be damaged during extreme events, leaving the structure and its content unprotected in case of possible aftershocks. Moreover, they are conceived to prevent structural collapse, but not necessarily to protect the content as well. The project aims at investigating new generation devices, designed to increase the seismic performance of hospitals. The innovative systems are characterized by (1) higher damping, and hence higher protection capability, compared to devices on the market, and (2) the ability to endure multiple earthquakes without damage.
Y. Alzoubi	Spoke 3	**GRO**	**Enhancing Structural Performance through Stress-Constrained Topology Optimization**	Stress-constrained topology optimization plays a critical role in engineering designs by enabling the design of robust yet lightweight structures. This work demonstrates how stress constraints influence the optimization process and contribute to the development of efficient structural designs. The poster begins by outlining the fundamental principles of optimization, computational methods, and tools commonly employed. Case studies demonstrate how stress constraints are integrated into the optimization process to achieve optimal structural performance. For instance, in bridge design, it can lead to the development of innovative truss configurations that minimize material usage while maintaining adequate strength and stiffness. Visual representations accompanying each case study provide insights into the iterative refinement of designs. This work aims to inspire further research, addressing designers' evolving challenges in designing safe, sustainable, and cost-effective structures.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Talebbeydokhti	Spoke 3	**GRO**	**Strategies for Strengthening Academic Core Facilities: Fostering Collaboration and Sustainability**	This paper explores the landscape of research infrastructures and the valorization models present within academic settings. Through a combination of scoping review methodology and mapping exercises, we investigate academic core facilities in both European and Italian contexts. Through our review, we examine the business models and management practices of these facilities, aiming to identify strategies that enhance their value within university frameworks. The mapping exercises are instrumental in uncovering best practices, analyzing funding mechanisms, and promoting collaboration among institutions. By shedding light on the management and collaborative practices of academic core facilities, this exploration provides valuable insights essential for advancing research and innovation within academic institutions and beyond.
P. Boscolo	Spoke 3, Spoke2	**GRO**	**The Italian life science venture capital ecosystem**	We explore the Italian VC landscape looking in particular at the incubation and acceleration services currently available. By classifying VC investors according to funding sources, business models and other relevant parameters, we aim to map the characteristics of the ecosystem and the various programs available to start-ups. In parallel, we review public policies of the last 5 years aimed at promoting entrepreneurship for health/wellbeing. The second part of the study is dedicated to the data analysis of 39 investors and 857 startups operating in Italy in the health sector. We combine the quant analysis with interviews to a subset of orgs in order to assess how the existing VC framework supports new ventures. The primary objective of this research is therefore to examine the Italian life science VC ecosystem to suggest whether any adjustments could to be made to the regulatory framework to better facilitate VC activities in this specific field.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
T. Vasiljev	Spoke 5	**HEA**	**Statistical Approaches for Assessing Safety and Efficacy of Skincare Products: A Comprehensive Review]{Statistical Approaches for Assessing Safety and Efficacy of Skincare Products: A Comprehensive Review**	In recent years, the cosmetic industry has witnessed a significant increase in developing and marketing eco-friendly products focused on improving skin health and appearance while promoting environmental well-being. The implementation of animal testing bans across European countries has led to a shift towards alternative methodologies. New Approach Methodologies (NAMs) have emerged as viable substitutes, leveraging innovative in Vitro and in Silico tools to predict toxicity and evaluate critical safety endpoints. These approaches offer a cost-effective and ethical means of chemical safety assessment. By using the PRISMA 2020 methodology, renowned for its robust approach to paper selection, this review aims to explore emerging trends and provide up-to-date guidelines for developing effective and sustainable skincare formulations within stringent safety parameters.
A. Obaid	Spoke 2	**HEA**	**A Comparative Analysis of the ocular refraction assessment**	This prospective semi-randomized crossover study assessed the agreement and reliability in the assessment of ocular refraction across four procedures. A standard subjective procedure was compared to objective assessments performed by three devices: the open and closed-field aberrometers Osiris (CSO, Italy), and the open field autorefractor WAM-5500 (Grand Seiko, Japan). A total of sixty-two participants, 33 presbyopes (54.7±8.2 years) and 29 young students (24.3±4.0 years) were enrolled. Objective measurements were taken at 5-minute intervals and randomly ordered. Subsequent subjective refraction concluded the examination. The ocular refraction resulted significantly different among the procedures. There was no agreement among the several procedures. The open field devices, which offer measurement of refraction in a more ecological scenario that assures normal binocular vision conditions in the real space (eliminating the vergence-accommodation conflict) showed good reliability.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
F. Zeri	Spoke 2	**HEA**	**Is there a publication bias in the evidence supporting the use of different strategies to control myopia progression?**	Randomized controlled trials (RCTs) are crucial for assessing intervention efficacy, and their synthesis in systematic reviews (SRs) and meta-analyses (MAs) offers a comprehensive overview of available evidence. Publication bias can skew results by favouring the publication of studies with positive outcomes, resulting in over-estimation of treatment efficacy. In this study, we aimed to evaluate publication bias in myopia control treatment research. Egger's test was used to reveal publication bias among RCTs selected from SRs and MAs evaluating spectacles, contact lens, and pharmacological myopia control treatments. Results did not find any publication bias in the available literature in the field of myopia control treatments. These results support the conclusion that the effects of the different strategies to control myopia progression are not overestimated.
G. Rizzo	Spoke 2	**HEA**	**Assessment of accommodative response: comparison between objective measurement methods**	This study aimed to evaluate and compare objective accommodative responses in emmetropised subjects. Measurements were conducted on the right eye, using an open-field aberrometer (OFA-Osiris,CSO,Italy), an open-field autorefractometer (WAM-5500,Grand-Seiko,Japan), and a closed-field aberrometer (Osiris,CSO,Italy). 17 volunteers (22.29±1.05 years), 10 males, completed the study . Each subject underwent preliminary optometric analysis to verify inclusion criteria and identify the prescription for emmetropisation by contact lenses (MyDay,CooperVision,US). After lens application and stabilisation, measurements were taken, assessing accommodative ability using the three instruments in a randomised order. Statistical analysis revealed no significant differences between the two open-field devices. However, significant differences were observed in measurements performed with the Osiris. The likely cause can be attributed to the virtual nature of the target, as it is a closed-field instrument.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
R. Adorni	Spoke 2	**HEA**	**Analysis of pupillary response to action phrases with negative and neutral hedonic valence and their relationship with memory processes.**	This study explored how valence and arousal affect pupillary responses while encoding action sentences with different emotional connotations. The initial phase aimed to evaluate the accuracy of pupillary measurements. Subsequently, pupillary responses were recorded from a group of 33 subjects, their memory for action sentences was evaluated, and correlations were analyzed. Findings revealed when participants encoded negative stimuli, there was a tendency toward pupil constriction, whereas neutral stimuli led to pupil dilation. Moreover, increased pupil dilation during the encoding phase correlated with improved accuracy in the subsequent recognition phase. However, despite valuable insights, it's crucial to acknowledge study limitations. Factors such as small sample size, instrumental constraints, and difficulty isolating cognitive-related pupillary changes from physiological fluctuations should be considered. Further investigations are necessary to confirm these preliminary findings.
D. Coluzzi	Spoke 2	**HEA**	**Identification of Reentrant Areas in Complex Atrial Flutter via Centrality Measures from Directed Network Mapping**	Atrial Flutter (AFL) significantly affects cardiac rhythms and quality of life. Directed Network Mapping (DNM) is a useful tool for understanding atrial electrical propagation and aiding in ablation procedures. In this work, the impact of AFL on centrality measures from DNM using data from 10 patients characterized by five different mechanisms of AFL was analyzed. Centrality measures like betweenness (B), harmonic centrality, and those derived from PageRank and HITS algorithms were evaluated. Centrality maps were represented and correlated with the cycle count at each node. Centrality's effectiveness in detecting reentrant areas was evaluated using ROC analysis. Moderate to strong correlations (>0.5) were found, with B being the most correlated and effective measure in identifying reentrant areas across patients (AUC: 0.84 ± 0.05) and mechanisms (AUC: 0.81 ± 0.06). Incorporating centrality measures into DNM may enhance our understanding of AFL mechanisms and atrial electrophysiology.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
I. Antonazzo	Spoke 2	**HEA**	**Urban Population as a living lab: exploring cardiovascular risk factors and risk profiles in the Bicocca District of Milan.**	Introduction: Cardiovascular diseases (CVDs) are an important cause of death worldwide. Despite some known risk factors, many remain poorly investigated particularly in urban populations. Aim: 1) To determine the prevalence of both well established and novel CVD risk factors; 2) To investigate the relationship between such risk factors and the CVDs risk profile. Methods: An observational study will be conducted in the district of the University of Milano-Bicocca. Residents aged ≥25 will be invited to participate and will undergo a series of evaluations including: lifestyle, cognitive functions, psychological dispositions, sleep patterns, perceived health, occupational stress, and socioeconomic status. Clinical assessments will include medical history, ongoing treatments, vital signs, ECG, and 24h blood pressure measurement. Bloods, urine and stool samples will be collected for analysis and stored in a biorepository to allow future analyses.
S. Mongardi	Spoke 2	**HEA**	**Exploring sleep role in European cardiovascular health: Insights from the UK Biobank**	Sleep and sleep-derived metrics are yet to be included in cardiovascular disease (CVD) risk models, despite the growing evidence that highlights their impact on cardiovascular health (CVH). The Life's Simple 7 (LS7) score is a measure of CVH for CVD risk prediction based on 7 known CVD risk factors, defined by the American Heart Association (AHA). In this study, we build upon the findings of recent research that focused on the development of an improved score of CVH that incorporates healthy sleep, based on information extracted from wrist-worn wearable devices, as an additional eight metric in AHA's LS7 score. Our aim is to replicate and validate results from previous work, based on the American population, on a European cohort from the UK BioBank, a large-scale biomedical database including data from over 500,000 participants recruited across the UK, to investigate the role of sleep-derived metrics in enhancing the predictive power of CVD risk prediction models.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
V. Ruozzi	Spoke 2	**HEA**	**Enhancing epicardial puncture planning and guidance: A Mixed-Reality approach.**	The subxiphoid puncture is crucial in transcatheter pericardiocentesis or cardiac arrhythmia ablation: a needle is pushed through the chest to the pericardium under fluoroscopy or ultrasound guidance. High precision is required to avoid damaging the myocardium or other tissues over the needle path, leading to a significant incidence of complications. This research aims to advance the procedure through computational tools devoted to pre-procedural planning and intra-procedural guidance. A desktop planning application allows for visualizing pre-operative CT images and the corresponding 3D reconstruction of the relevant organs, computing risk-free trajectories, and storing results. A Mixed-Reality (XR) application allows for visualizing and registering on the patient the 3D organ reconstructions and the planned trajectory. The effect of the XR application on the accuracy and precision of the puncture is investigated in vitro by means of a dedicated phantom.
G. Vingiani	Spoke 2	**HEA**	**A novel pipeline to profile leucocytes by Single-Cell RNA-seq in the liver**	CD45+ cells were isolated from the liver of Opa1 flox/flox – Clec4f Cre- and Clec4f Cre+ mice (n=4/genotype) which undergone a chow diet for 28 weeks. For the scRNA-seq, 24.000 cells were used, STAR-2.7.0 was used to aligned the raw data with mouse reference genome (GRhm39) and converted in gene expression. CD45+ cells were further normalized and clustered based on the gene features and statistics elaborated in Seurat package (Rstudio). Significant genes (p-value < 0.05) were imported in EnrichR for the function analysis. Non-linear dimensionality reduction of the data, based on the neighborhood and resolution, showed n=5 clusters (Kupffer Cells, Natural Killer, Neutrophils, B and T cells). Markers to detect specific populations and highlights possible changes due to the gene mutation were identified: Clec4f expression allow us to distinguish 3 KC subpopulations, mainly involved in lipid metabolism (p-value=1*10^-3) and immune system processes (p-value=2*10^-7).

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Montanari	Spoke 2	**HEA**	**A pediatric telecardiology system that facilitates integration between hospital-based services and community-based primary care**	This pilot study introduces an innovative pediatric telecardiology system, comprising a telecardiology system seamlessly integrated with a hospital telemedicine platform. A smooth flow of ECG execution, transmission, and reporting between Primary Care Pediatrician clinics and the hospital was tested as the primary objective. User experience surveys were also considered. We integrated a digital electrocardiographic signal acquisition unit and online information transmission-capable tablets, that were provided to the pediatricians, with a telemedicine platform that facilitated the transmission of the patient's ECG data to the Hospital Cardiologist. 158 children underwent ECG recording, with 100% transmission success rate. Normal findings on the ECG were demonstrated in 94.9 % of children. 90% of respondents to the user experience survey were satisfied with the service, 2.8% reported connection problems and 3.7% concerns about the service's reliability compared to standard care.
M. Colussi	Spoke 2	**HEA**	**PRACTICE: an intelligent healthcare platform supporting research in hemophilia**	We present PRACTICE (Pilot on remote automatic ultrasound scan analysis for hemophilic patients), a distributed healthcare technological platform that supports the tasks of acquisition, annotation, organization, and processing of medical data to make it accessible for the training of machine learning systems. PRACTICE includes three main components: GAJA, a mobile application that guides patients in self-acquiring ultrasound images at home, enabling personalized remote monitoring of joint health; CADET, a computer-aided diagnosis web application that supports the practitioners through a set of machine learning models; and ATOM, a system for the orchestration of annotation tasks. Although PRACTICE was designed in the specific context of supporting the detection of joint recess blood effusions in hemophilic patients, we report the main design and implementation challenges and solutions to make it an advanced telemedicine application in the context of MUSA Spoke 2.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
M. Piccardo	Spoke 2	**HEA**	**Exploring patient's role in telemedicine: a comparative bibliometric analysis across psychology and medicine**	The role of telemedicine in healthcare management is expanding, emphasizing various forms of patient participation. Despite extensive scientific literature, consensus on the definition of active patient participation is lacking. This study explores the evolution of this concept and field-specific differences, comparing psychology with medicine. Using Bibliometrix software, a bibliometric analysis of 591 papers from WoS (320 in psychology, 271 in internal medicine) published from 1990 to 2023 examined terms related to patient participation in telemedicine (e.g., adherence, compliance, empowerment, activation, engagement). Terms related to patient participation are currently heterogeneous in both areas. A co-occurrence network reveals distinct conceptual structures; engagement and adherence are focal points in psychology and medicine, respectively. Patient-centered terms are increasing in both fields.
M. Fiori	Spoke 2	**HEA**	**The SERENADE pilot: Sensor-based explainable detection of cognitive decline**	Our poster will show the technical infrastructure and the preliminary results of SERENADE, an innovative application for the MUSA telemedicine platform targeting Mild Cognitive Impairment (MCI) patients. MCI patients exhibit cognitive dysfunction in one or more domains while still maintaining daily functions. Changes in daily activities could indicate the conversion to dementia. However, sporadic visits with clinicians can not accurately assess cognitive decline, often consisting of subtle changes. The SERENADE project aims to continuously monitor MCI patients in their homes and identify digital biomarkers that can serve as early indicators of cognitive decline. Specifically, unobtrusive sensing devices are installed in the patient's home to monitor their behavioral habits in the long term. AI models are in charge of detecting behavioral changes from sensor data in a transparent way, so that behavioral changes are also associated with human-readable explanations.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
F. Medici	Spoke 2	**HEA**	**Using electronic waste as Catalyst for continuous flow synthesis of pharmaceutical products**	Indole scaffolds are found in many drugs and bioactive components (e.g., serotonin, melatonin), and the development of new synthetic pathways is always a hot topic. Our study focused on using flow chemistry as a green and scalable alternative for synthesising functionalised indole scaffolds, minimising the chemical waste of the process and exploiting a recyclable catalytic system, In addition, as the catalyst, a packed bed reactor charged with Y(III), a rare earth element derived from the recycling of E-waste, was used continuously for up to 5 days, without any significant decreasing of efficiency, thus highlighting the importance of the project in the context of a circular economy process.
A. Pisati	Spoke 2	**HEA**	**DELTA: Database of Enhanced Ligands and TArgets for drug discovery and activity prediction**	Inverse screening consists in the identification of targets for a specific ligand among numerous receptors, it finds various applications in the drug discovery process as it allows the identification of secondary targets for investigated drugs or natural compounds, enabling the prediction of possible side effects and toxicity but also suggesting new potential therapeutic uses. We developed a dataset of therapeutically relevant targets, consisting in 485 proteins associated with specific diseases and for which either an approved drug or a drug under clinical trial is available. We also collected a dataset of ligands with experimentally determined activity on the aforementioned targets, including an equal number of active and inactive compounds depending on a defined activity threshold, reasonably covering the involved chemical space. Both targets and ligands structures have been refined and optimized.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Ponzini	Spoke 2	**HEA**	**Impact of Computer Vision Syndrome: A Study on University of Milano-Bicocca Video Terminal Workers**	This study aimed to evaluate the impact of regular exposure to digital screens on the vision and well-being of University of Milano-Bicocca video terminal (VDT) workers during their routine occupational health check-ups. The assessment included anamnesis, a questionnaire for Computer Vision Syndrome (CVSS17), and visual screening procedures (Visiotest,Essilor,France). Out of the 113 participants who underwent the examination, the analysis focused on 88 patients, 21 males, (50.45±10.48 years) who meet the inclusion criteria. The results, in line with the literature, showed: a mean CVSS17 score of 31.4±5.0, an increased eye fatigue towards the end of the workday, and an average increase in the near point of convergence. Visual assessment with Visiotest revealed limitations of this type of screener. Despite a significant correlation between the presence and intensity of symptoms, no significant correlation was found between symptoms and an increase in the number of years/hours on the VDT.
G. Steyde	Spoke 2	**HEA**	**Monitoring maternal and fetal coupling for the assessment of well-being in pregnancy**	The maternal and fetal cardiovascular systems are closely linked, since the latter relies on maternal circulation for nutrients, particularly oxygen. Impairments in nutrient transmission often lead to hypoxia, the most common cause of fetal distress. Maternal fetal cardiac coupling (MFCC), i.e., the coordination in the maternal and fetal cardiac regulation, is expected due to system integration. To model this phenomenon, non-invasive abdominal electrocardiographic (ECG) recordings of approximately one hour were obtained from 40 pregnant women of different gestational ages. A robust pipeline was developed to extract maternal heart rate variability (HRV), fetal HRV, and maternal respiration from the ECG. The interactions of the three signals were analyzed in time and frequency domains using extended autoregressive modeling. Future developments may include more complex non-linear models. This project is a collaboration between the University of Eindhoven and Polimi.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
M. Nardon	Spoke 2	**HEA**	**Alterations in single-leg drop jump kinematics and ground reaction forces after a subject-adapted fatiguing protocol**	Anterior cruciate ligament (ACL) tear is one of the most frequent non-contact injuries in several sports. Neuromuscular fatigue (NMF) reduces muscle performance and alters motor strategies during dynamic movements. To date, the potential role of NMF as a risk factor for ACL injury is still debated. Here we evaluated how kinetic and kinematics variables during single-leg drop jump (SLDJ) movements were affected by NMF. 23 healthy young participants performed SLDJ movements before- and after an individualized cycling protocol to induce NMF. Following NMF we observed a reduction in jump height performance. Interestingly, hip and knee joints flexion angles during landing were reduced, and we also observed an increased knee abduction angle during the absorption phase, all of which constitute increased risk factors for ACL injury. Conversely, we observed a reduction in vertical ground reaction forces, which reduces the risk of injury by decreasing the load at the knee joint during landing.
S.Coelli	Spoke 2	**HEA**	**Quantification of mental workload and stress through multiparametric physiological responses**	The present study compares EDA (ElectoDermal Activity) and HRV (Heart Rate Variability) features during different stressing stimulations, and proposes a reliable approach to estimate the sympathovagal balance during realistic daily activities. An ARX model was developed to isolate the respiratory component in HRV, enabling a more robust separation of vagal and sympathetic contributions, while different parameters were extracted from the EDA signal related to both tonic and phasic components. 34 healthy subjects were involved in the study. The ARX model provides a more accurate quantification of the sympathovagal influences on the heart. Phasic EDA is strongly affected by the cognitive stimuli, while it is less affected by the postural one. Different mechanisms are involved in the two analyzed systems

Presentatore	Spoke	Cat.	Title of the poster	Abstract
V. Pengo	Spoke 3	**HEA**	**Implementing formulation strategies and quality controls to open up a new era in the food supplement industry**	Consumers are becoming increasingly demanding regarding quality and performance of food supplements and companies are competing to meet such requests using novel formulations and improving production quality. However, to this target, final product testing needs to be implemented. Thus, our research aimed at: i) evaluating gastro-resistant food supplements obtained via film-coating starting from commercially available formulations and ii) developing a new effective and vegetarian coating formulation. The work was supported by leading companies in the Italian nutraceutical market, being our country recognized as a worldwide excellence in the field and one of the main exporters. For the first goal, ≥100 batches were prepared and tested according to pharmaceutical standards. Only a few coating formulations marketed as gastro-resistant turned out compliant. However, the experience acquired allowed us to adopt a data-driven approach in the development of a novel enteric-soluble coating.
C. Lena	Spoke 3	**HEA**	**RealSynCol: A High-Fidelity Synthetic Colon Dataset for 3D Reconstruction Applications**	Deep learning has the potential to improve diagnosis in colonoscopy through the development of 3D reconstruction algorithms. However, large datasets are required, and the acquisition of ground truth data is time-consuming and often unfeasible. We propose RealSynCol, a highly realistic synthetic dataset aimed at faithfully replicating the endoscopic environment. Abdominal CT images from 10 patients were annotated to extract the colon shape and its centerline. These structures were imported in a virtual environment closely mimicking the intraoperative setting, and a texture depicting a vascular pattern was applied. The obtained dataset includes 10 colon shapes, with 2 trajectories each, for a total of 40720 frames, each paired with a ground truth depth map and optical flow. For each trajectory also intrinsic and extrinsic camera parameters are given.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
E. Bianchi	Spoke 3	**HEA**	**Microfluidic technology for high-throughput drugs testing**	Patient-derived organoids (PDOs) are revolutionizing biomedical sciences because they preserve cellular heterogeneity and closely recapitulate the histopathological features and genomic profiles of the tumor of origin. Unlike 2D cell cultures, a tight correlation between patients' and derived 3D organoid cultures' responses to drugs has been established in several tumor types, supporting PDOs as patient avatars that could predict response to therapy. However, organoids culturing with extracellular matrix (ECM) to support 3D architecture has been challenging for high-throughput screens (HTS) drug assays due to the technical issues in handling biological matrices. The system we have been developing is a platform to allow seeding, growth, and testing, in static/flow conditions, of hundreds of 3D culture units of organoids, simultaneously. At this stage of development, tests involve drug sensitivity on cell/organoid lines or patient-derived but it will be extended to other applications.
G. Cretti	Spoke 3	**HEA**	**MOoC for the development of immunotherapies against colorectal cancer (CRC) metastases**	Colorectal cancer (CRC) involves neoplastic growths in the colon and rectum, with a high metastasis propensity. No definitive cure exists for advanced stages, largely due to the lack of accurate models. Organ-on-chip technology offers a promising tool for CRC research. Our microfluidic system, aiming to mimic the CRC microenvironment and its metastatic interactions, features dual compartments for tumoral spheroid and lung tissue model, connected by vascular channels for endothelial cells, promoting spheroid vascularization and linking colorectal and lung compartments. The initial phase focuses on developing a reliable alveolar epithelial model and CRC spheroid generation, followed by endothelial cell-mediated vascularization. Next steps include co-culturing cancer spheroids with endothelial cells to create a vascularized tumour model and validating the platform by observing cancer cell migration from colorectal to lung tissue, advancing CRC research and potential treatments.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
A. Porazzi	Spoke 2	**HEA**	**Green Radiotherapy: a focus on hypofractionation. Is radiotherapy as green as we would?**	Aim: This project aims to develop a carbon footprint score to evaluate carbon dioxide (CO2) emissions produced due to radiation therapy (RT). Methods: Patients treated with RT between 2012 and 2022 at the European Institute of Oncology (IEO) were included in the study. Inclusion criteria were: 1)age > 18 years; 2)any cancer histology; 3)written informed consent for research purposes. Data will be extracted from patients' medical records and linear accelerator (LINAC) specifics and used to estimate a carbon footprint score to model CO2 emissions generated per patient at the end of RT. Results: 24'617 patients met the inclusion criteria. A predictive algorithm will be developed to assess carbon footprint and to create a score. CO2 emissions will be modeled by: 1)average distance to the hospital; 2)pre-treatment imaging; 3)LINAC beam-on power; 4)beam-on time; 5)number of fractions. The carbon footprint score will be externally validated to detect critical issues related to CO2 emissions.
T. Elli	Spoke 5	**SOC**	**A platform-based inquiry about the Milanese panorama of circularity and sustainability**	The presented work aims to inquire about Milanese actors active on the topics of circularity and sustainability in the areas of fashion, design, and lifestyle. The research presents a method that exploits social media affordances and recommendations to identify territorial actors of different dimension, reach, and nature. The starting point of this research is the Instagram page of a Milanese hub that promotes urban initiatives related to urban manufacturing, social inclusion, and the rehabilitation of former industrial areas. The page appears to be well managed, with posts that mention the urban actors with whom it collaborates. It provides access to information about Milanese stakeholders (i.e., associations, institutions, professionals, traders, producers, disseminators, etc.) and, at the same time, is used to source suggestions around the topics of sustainable fashion, design and lifestyle.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
P. Ribolla	Spoke 6	**SOC**	**Collecting urban sustainability stories**	The poster presents some of the actions carried out by the multidisciplinary research group Open-Air Lab aimed at citizens, with the aim of promoting and disseminating a culture of sustainability accessible to all. The ideal territory, but not the only one, is the public space of the Bicocca area, conceived as a place of participation and a context of continuous learning on the themes of sustainability in its various declinations. In particular, through a series of a number of actions - participatory calls for the collection of sustainability stories, workshops aimed at citizens and seminars open to public actors and organisations - the poster aims to return to the emerging meanings of sustainability, which outline a complex construct, only partially studied, that needs to be elaborated, shared and co-constructed in order to fully realise a culture of sustainability.
M. Carminati	Spoke 3	**SOC**	**It takes a village: sustainable value co-creation in Public Service Ecosystem.**	Sustainable Public Service Organizations (PSOs) require the innovation of business model that is user-oriented and enacted within an ecosystem. The Public Service Logic represents one of the emerging theories for better understanding the value co-creation processes in public service provision. In this perspective, the service users are at the core of dynamic value co-creation processes that occur within Public Service Ecosystem (PSE) involving multiple actors, organizations, resources, and institutions. In the field of human services, value is represented by the satisfaction of multiple users' (and family's) needs and the development of capabilities for their future. Through a longitudinal multiple case study, seven PSEs were assessed in the field of developmental services to explore how complex value co-creation work. Results suggest that PSO should act as meta-organization that supports sustainable value co-creation across different levels of PSE.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
G. Dantonio	Spoke 1	**SOC**	**Social impact assessment of urban regeneration operations; for a methodological and operational approach aimed at planning and implementing interventions**	Exp-EIA is a method and a participatory tool combining geographical information and psychological constructs into an automatic cartographic representation of the subjective experience of places. It's part of a wider research aiming to understand how urban regeneration projects can be assessed to prevent exclusion and gentrification, ensuring the creation of a just city. The case study focuses on a neighbourhood in Milan, a dynamic city that is facing a significant crisis with a relevant impact on the lives of its inhabitants. The focal point is combining Social Impact Assessment with a spatial justice perspective, to explore if such an approach can guarantee more just projects and processes and if it can transcend its role as an evaluation tool and become a proactive planning instrument. The research follows three phases: 1) mapping communities to involve 2) exploring the area to assess people's experiences; 3) identifying indicators for evaluating the urban regeneration project.
E. Gregori	Spoke 1	**SOC**	**Legal engineering for urban regeneration**	Urban regeneration demands innovative legal instruments to network the actors involved, foster cooperation, and help overcome the antagonism between public and private interests. In town planning, the conventional practice uses multilateral agreements in the initial phase, which are then divided into single, bilateral contracts during the operational stage. However, this approach lacks coordination, cooperation, and assessment mechanisms. The research carried out by the University of Milan is developing a new contractual tool, designed with public administrations and developers' participation in mind, to revolutionize urban processes and magnify land development's positive externalities. This new tool will ignite sustainable urban regeneration, promising benefits for all stakeholders. The model's features include measurement criteria of the project's success, intended to guide public and private actors on their performance toward shared socio-economic and environmental targets.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Quaresmini	Spoke 6	**SOC**	**Qualification and quantification of fairness for inclusive and sustainable mobility**	We introduce conceptual tools from philosophy in an opinion dynamics model, developing a framework to promote social justice while fostering the diffusion of sustainable mobility. We first embed the classical fairness criteria of equality and equity in the control problem, to achieve a fair distribution of the resources allocated to spread the adoption. We then introduce a credibility parameter, being aware that in real world scenarios agents weigh their choices based on their peers' credibility. In such situations, unfairness may arise when someome attributes a credibility deficit to others due to their social features. This leads to a particular kind of discrimination which is usually not considered, i.e. epistemic injustice. We define the concept of epistemic fairness, as the condition where no agent is affected by the credibility deficit, assessing the impact of social discriminations comparing the diffusion of the innovative solution within epistemically fair and unfair scenarios.
M. Degoli	Spoke 6	**SOC**	**The Glossary of Inclusion (work) - prototype**	The prototype «Glossario dell'inclusione (lavoro)» is a website where citizens, workers and professionals can have easily access to (i) definitions, (ii) laws and (iii) a brief description of both protections and examples on employment relationships and diversity and inclusion topics. The prototype is composed of more than 30 words. For each of them a graphic card – i.e. a visual mind map – has been developed to guide the user among the definition of the legal term, the relevant legislation, and the concrete example of either the discriminatory situation in both employment relationship and workplace. To implement the accessibility of this tool the research team is approaching three different steps: (i) the language used to create the graphic cards is simple, clear, and complete; (ii) the graphic cards will be available in both Italian and English; (iii) the website will be enriched of inclusive aids selected among different options (e.g. screen reader, screen magnification and others).

Presentatore	Spoke	Cat.	Title of the poster	Abstract
C. Fredella	Spoke 6	**SOC**	**Active citizenship: policy models for social cohesion**	The research-intervention, within the framework of the MUSA Spoke 6 project Innovation for Sustainable and Inclusive Societies, is embedded in an ecological paradigm and in a democratic and inclusive citizenship education perspective. The research question investigates the dimension of the synergy between school and extra-school to construct a model of integration between formal and non formal education to contrast school drop-out. New actions will be co-designing in multi-professional teams and implemented in the Milan San Siro district, a multicultural and multi-problematic neighborhood. The first exploratory phase of the action 3.1.3 Contrasting and preventing school drop-out in disadvantaged urban neighborhoods, through focus group and participatory observations, survey the context's needs and acknowledge the interventions already in place to counter educational poverty. The next phase will involve teachers and students in Teacher Professional Development Research paths.
A. Palvarini	Spoke 6	**SOC**	**Welfare Platforms: a global comparative analysis**	Nowadays, the "Platform Economy" is a reality that involves most of the major economic sectors. Our research examines the phenomenon of Local Welfare Platforms, namely physical and/or digital entities addressed to various targets of the population, especially vulnerable people. These platforms have several purposes, such as providing social services, informing about a topic, advocating for a group of citizens and building communities. The methodology adopted in this research is threefold: a) literature review of peer-reviewed papers concerning service platforms; b) creation of a framework to interpret cases through comparative analysis; c) data collection, analysis and discussion. In order to classify these platforms and describe their emerging logics, we build a database of more than 400 units from a global landscape. By identifying the dominant platform models, we thus strive to understand their added value to local welfare ecosystems and capture the role of PA in this new game.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
B. Aiello	Spoke 6	**SOC**	**Human Rights and Corporate Sustainability**	The research aims to analyze human rights integration in sustainability strategies of Italian companies. It reviews managerial practices, compares existing standards, and incorporates institutional context analysis at Italian and international levels. The primary outcome is a maturity index for human rights management. To validate the framework, relevant experts where interviewed. Sample selection includes listed Italian companies in the FTSE Italian All Share, covering approximately 90% of the market capitalization. A hybrid analysis methodology integrating Generative AI into the comprehensive analysis of sustainability reports and human rights policies is under development.
C. Serra	Spoke 6	**SOC**	**Impact of child disability on mothers' and fathers' employment trajectories in Italy**	This project represents the first causal study of the effects of child disability on mothers' and fathers' labour market outcomes in the Italian context using a population approach and rich administrative data. We carry out our analyses using several INPS archives, i.e. matched employer-employee administrative records for the universe of workers in the Italian non-agricultural private sector. The study unveils the significant challenges faced by parents, particularly mothers, and finds that mothers of disabled children experience greater disadvantages in terms of employment likelihood, earnings, and career advancement compared to mothers of healthy children. Fathers' employment outcomes, however, remain largely unaffected. These findings highlight the need for policies addressing the specific needs of families with disabled children to mitigate inequalities in the labor market.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
S. Ronchi	Spoke 4	**SOC**	**A mapping of corporate welfare in co-operatives in Lombardy**	In response to the emergence of new social needs and following recent reforms, the scope of company-based welfare (CBW) has greatly expanded in recent years. Even the cooperative world has begun to carve out a space in the provision of CBW. While existing literature analyzes the role of (social) cooperatives in the provision of (company-based) welfare services (Maino, Barazzetta, and Santoni 2019), little is known about CBW within the cooperatives, despite the significant role they play in the Italian economy (7% of GDP and 7.5% of employment). To begin to fill this gap, the poster presents the preliminary results of a survey – conducted within the framework of MEIEC, in collaboration with 'Secondo Welfare' Lab and CoopForm – which aims to map the demand and supply of CBW in a sample of cooperatives active in Lombardy.
cri.dellicarri99@gmail.com	Spoke 6	**SOC**	**Social inclusion of women and young people of migrant backgrounds**	After two years of field observation and confrontation with local social organisations, we decided to intervene in the San Siro district with three lines of action: 1 - Support for after-school activities for children from primary to high school with the collaboration of students from the faculty of linguistic mediation (in this school year, about 30 university students involved) 2 - Strengthening the training of the district's Italian schools' teachers for foreigners, offering free courses and the possibility for students to take the examinations for official Italian language certifications from A2 to C1 at our university at a very affordable price 3 - Opening of a school, university and work orientation desk for young people under 29 years of age, to help them make aware choices for their future and build up a support network This new hub will also act as research centre, where to collect data and information to evaluate the efficiency of the proposed actions to foster inclusion.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
D. Belliti	Spoke 6	**SOC**	**Including Migrant Women**	The aims of our action are: 1) a survey on prevention strategies of gender-based violence and inclusion of different cultures for an active citizenship of migrant women in Milan; 2) collection of needs from institutional and social actors; 3) training meetings and in-depth seminars about empowerment and development of an inclusive and gender citizenship. What we have done: 1) interaction with institutional and social actors (Municipalities 3, 7 and 9, Equal Opportunity Office of Milan, women associations involved in combating gender discrimination and domestic violence); 2) valorisation and exchange of good practices realized by institutions and associations; 3) co-planning of training activities aimed to social operators and migrant women. What we are going to do: 1) a pivotal training project in San Siro; 2) meetings in Milano-Donna municipal centres to identify needs and foster inclusion processes; 3) definition of proposals to implement the active citizenship of migrant women
D. Mandrioli	Spoke 6	**SOC**	**The Practical Significance of Identification Starting From Six Exemplary Family Reunification Cases**	The tragedies associated to migration persistently violates the law. Absence of adequate identification of corpses may impede the enjoyment of human rights and the course of justice. It also presents administrative obstacles, as death certificates are indispensable in legitimizing orphanhood and widowhood. To elucidate the issue, we analyzed 6 representative cases from the tragic 03/10/2013 shipwreck near Sicily, where 366 people were retrieved dead from the sea. These cases underscore the challenges involved, highlighting the need for continued efforts to ensure that this problem transcends from being an ethical discourse. Although considerable progress, these cases reveal that work still lies ahead. There is the need of improved mechanisms to certify kinship ties, which are often a limiting factor in many reunifications and hinder the granting of custody to children. The severity of this problem necessitates attention, especially considering the fatalities caused by migration.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
L. Franceschetti	Spoke 6	**SOC**	**Right to Identity: Comparison between Medico-Legal Practices and Legislation on Missing Persons and Unidentified Bodies in Milan and Paris.**	The methodologies associated with reporting missing persons and identifying unknown corpses vary worldwide. This comparative study delves into the medico-legal practices and legislative frameworks in Italy and France. A survey conducted by experts in the field of identification highlighted the issues in the processes of both countries. This work reveals that, while national and regional systems are in place for managing these cases, there are significant limitations in terms of interconnectivity, resource allocation, and data management. The paper also provides an analysis of the medico-legal procedures in the identification process, emphasizing the multi-faceted nature of this work. The importance of collaborative strategies and shared practices to address the complex challenges in identifying missing persons and unknown bodies is underlined. The findings from Milan and Paris serve as a microcosm to understand patterns, offering insights that could inform global practices.
G. Rapella	Spoke 6	**SOC**	**Enhancing access to rights in vulnerable contexts: the experience of Bocconi University's Legal Clinics at San Vittore prison**	The Bocconi University project for MUSA enhances Legal Clinics as a mean to provide support on legal issues to vulnerable individuals. Thanks to PNRR resources, since September 2023 Bocconi Legal Clinics have opened a legal desk at San Vittore prison. The project's objective is twofold: to have an impact on inmates, by offering legal expertise free of charge; to train students to face real cases through an innovative "law in action" approach. The desk currently involves five students. They meet inmates twice a week and help them to fully understand their legal status. On such occasions, students explain in simple words the complexities related to the pending criminal case and have the chance to conduct research, to draft professional emails, and, with the inmate lawyer's consent, to prepare formal requests. To prevent PTSD, they took part in a course on anxiety and stress management. To date, the desk has assisted around 125 individuals.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
L. Oliva	Spoke 6	**SOC**	**Enhancing access to rights in vulnerable contexts: the experience of Bocconi University's Legal Clinics at San Siro Legal Clinic**	The Bocconi University's MUSA project enhances Legal Clinics as a mean to offer free legal support to vulnerable individuals, promoting social inclusion and broader recognition of rights. Established in November 2019, the San Siro legal clinic operates every Thursday at Via Giacinto Gigante. Students, along with professors and external experts, conduct interviews and provide legal assistance to those seeking guidance on rights and interactions with public entities. They draft legal documents and conduct research on complex cases, often with support from experienced lawyers. Periodic training meetings on immigration law are periodically held as well as two meetings held by the EMDR Association Italy aimed to support practitioners and students working with vulnerable populations. From January 2023 to March 2024, 33 students participated, with approximately 250 individuals seeking assistance at the legal clinic.
G. Fassina	Spoke 6	**SOC**	**Social Assistive Robots for the Assessment and Rehabilitation of Autistic Children**	Autism Spectrum Disorder (ASD) is a neurodevelopmental condition marked by social and behavioral deficits, affecting approximately 1 out of 36 children globally. Within this domain, Robot-Enhanced Therapies (RET) hold promise, but their efficacy remains uncertain, also because of the lack of assessment metrics. This study proposes a Randomized Controlled Trial (RCT) deploying a Robot-Enhanced Imitation Therapy and a novel quantitative metric. The therapy entails triadic interactions between a robot, a therapist, and the child, focusing on gesture production and imitation. Custom action recognition algorithms, leveraging on Artificial Intelligence, enable the robot to interpret gestures. Additionally, a new quantitative metric is proposed focusing on Joint Attention (JA), i.e. the ability to share attention with a partner. The Early Social Communication Scale is administered, and gaze direction is automatically extracted from video-recordings, enabling JA quantification.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
L. Veronelli	Spoke 6	**SOC**	**Images from another (digital) world**	Spoke 6, Action 1.5.3 aims to develop new tools using advanced technologies like Augmented Reality (AR), Virtual Reality (VR), 3D interfaces, and interactive web platforms to support vulnerable populations and promote social inclusion. Our project is developing a VR tool to assess cognitive function in people with subjective memory complaints and early-stage dementia. The final version of the tool is expected by the end of the second year of MUSA. Cognitive training and stimulation have proven valuable in preventing age-related cognitive decline. Therefore, we are also developing an intervention program that uses cognitive-motor training to improve functionality and well-being and prevent cognitive decline in senior citizens. The intervention toolkits are expected to be delivered within the next few months. Similar to the VR tool, we will be showcasing the development stages of this intervention program. We anticipate having data on the program's effectiveness by the end of the year.
M. Gianotti	Spoke 6	**SOC**	**Multisensory Training Intervention for Hearing Impaired Children: Preliminary Results of a Pilot Study**	This paper examines the influence of the Interactive Multisensory Environment (iMSE) on the training of deaf children in comparison to traditional methods. Over a 7-week duration, two groups of deaf children were evaluated and trained, one utilizing the iMSE (Experimental Group) and the other employing a traditional PCbased method (Control Group). The training encompassed four different thematic categories, each with nine associated sounds. The iMSE offered an immersive and dynamic learning experience, while the PC-based method presented stimuli through a desktop computer. Results indicate that the iMSE yielded positive effects on the training outcomes of deaf children, as evidenced by improved performance and engagement. This research sheds light on the potential benefits of innovative multisensory technology in educational settings for children with hearing impairments, offering insights for future educational interventions.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
V. Bauer	Spoke 6	**SOC**	**MusicTraces: A collaborative music and paint activity for autistic people**	Painting and music therapy approaches can help to foster social interaction for autistic people. However, the tools sometimes lack of flexibility and fail to keep people's attention. Unknowns also remain about the effect of combining these approaches. Though, very few studies have investigated how Multisensory Environments (MSEs) could help to address these issues. This paper presents the design of a full-body music and painting activity called "MusicTraces" which aims to foster collaboration between people with moderate to severe learning disabilities and complex needs, and in particular autism, within an MSE. The co-design process with caregivers and people with neurodevelopmental conditions is detailed, including a workshop, the initial design, remote iterations, and a design critique.
S. Masier	Spoke 6	**SOC**	**Italian validation of an innovative tool for monitoring social inclusion in people with mental disorders.**	The research on social inclusion on people with mental disorders has been hindered by difficulties in defining, measuring, and understanding its components. While several tools have been proposed, their psychometric validation has been limited. The Filia Social Inclusion Measure is an effective self-administered tool to measure social inclusion in both clinical and research contexts (Filia et al., 2022). The scale has been translated and presented to 113 people treated at the Dipartimento di Salute Mentale e Dipendenze of the ASST Santi Paolo e Carlo; finally, it has been validated using the same metrics described by Filia (2022). Results are promising, suggesting a possible large-scale use to evaluate the effectiveness of treatments and to elaborate personalised therapies. We also foresee enlarging the sample size and the creation of a map to link social inclusion and living area.

Presentatore	Spoke	Cat.	Title of the poster	Abstract
A. Donati	Spoke 2	**SOC**	**Improve the management of specific learning disorders in children at school**	Early screening is essential to improve specific learning disorder (SLD) diagnosis since targeted training can help distinguish them from simple delays. The IndiPote(dn)S project streamlined the screening by proposing structured observations and training to a mean of 15352 children per year (over 4 years) from kindergarten. Obtaining 75.8% of true positives in reports to clinicians, the concept is promising, yet improvable. Indeed, observation is left to teachers, who introduce subjectivity. Technology can enhance the screening by standardizing the process and detecting unseen signs. The work aims to create technology-based data collection to support SLD screening. In this regard, a web-app was devised and will be enriched with smart objects and serious games. Artificial intelligence will be exploited to understand the main risk factors of SLDs and to predict the risk of having a SLD considering the initially detected weaknesses. An abstract on the topic was submitted to EDULEARN24.
	Spoke 5	**SOC**	**MUSA NEXT App For MUSA Spoke 5**	The purposes of the APP are to integrate the product authentication control system; to give space to the different WPs of MUSA SPOKE 5 (the APP will be a showcase for all the results of the WPs); to provide extra contents that can make the APP a useful tool for the general public. The extra contents concern: how to make your own piece of clothing (there will be a downloadable model paper combined with a solution generator depending on the fabric available); an interactive map of the vintage places in Milan, related to design and fashion (this tool can be implemented by the fan base); a list of tips for better storage; a space of gaming to see sustainability strategies applied and to make the player the protagonist of these choices and their consequences. The application will be characterized by the possibility of being usable by as many people as possible, including settings advanced that also allow individuals with disabilities to access the contents and interactions of this project.