ALLEGATO 1

Scheda progetto

Posti	N. 1
Progetto	DARE – DIGITAL LIFELONG PREVENTION
CUP	B53C22006460001
S.C.	09/H1 – Sistemi di elaborazione delle informazioni
S.S.D.	ING-INF/05 – Sistemi di elaborazione delle informazioni
Sede di svolgimento dell'attività di ricerca:	Dipartimento di Biomedicina, Neuroscienze e Diagnostica avanzata (B.I.N.D.)
Struttura di svolgimento dell'attività didattica:	Dipartimento di Biomedicina, Neuroscienze e Diagnostica avanzata (B.I.N.D.) / Scuola di Medicina e Chirurgia
Impegno scientifico	Attività di ricerca coerenti con il settore scientifico disciplinare ING-INF/05 per lo svolgimento delle seguenti attività previste nel Progetto DARE: **Spoke 1 – ENABLING FACTORS AND TECHNOLOGIES FOR DIGITAL PREVENTION:** Lowering and breaking down barriers for adopting innovative, sustainable, high quality, and effective digitally enabled solutions for prevention. The overall objective is to co-create with stakeholders a personalized prevention roadmap for future healthcare that incorporates digital solutions along the entire prevention path. *WP4 – Technology and Analytics:* WP aim is to identify, develop, adapt, and personalize the enabling technologies *Task 4.3 – Data Mining, AI, ML, Deep Learning, big data analytics.* This task will identify/adapt/develop data-driven tools and methods, including descriptive and predictive analytics. To overcome the issue of the black-box nature of ML models, both generic and modelling-specific explainable methods will be used whenever relevant. AI-based (semantic) indexing of entities and relations in the data will be developed for the extraction of patterns and correlations, including aid in the searching, browsing, retrieval, and explanation of information to demonstrate tangible value and improved usability of health data for end-users. **Spoke 2 - COMMUNITY-BASED DIGITAL PRIMARY PREVENTION:** To develop an advanced interoperable surveillance system powered by an innovative digital infrastructure integrating administrative, clinical, health, and environmental data sources at both the individual and the population level; to provide tools for risk assessment or targeted interventions based on lifestyles, health determinants, environmental and genomic profiling, both in daily life and occupational settings; to implement innovative community-based digital primary preventive interventions, across the lifespan. *WP1 – Building Ecosystem and Infrastructures:* To develop an interinstitutional multidisciplinary framework supported by an advanced digital infrastructure for innovative community-based surveillance and digital primary prevention. **Task 1.2 - Deployment of a Digital IT Infrastructure.** This task will coordinate the deployment of a local advanced second-level IT infrastructure for High-Performance Computing compliant with advanced standards and interoperability profiles. This infrastructure will integrate health, occupational, environmental, and climate data extracted from primary sources and databases. In terms of hardware resources, the infrastructure will integrate a data stream management system for various wearable/IoT/IoMT devices and mobile apps. **Task 1.3 - Deployment of Digital Services.** A set of services will be developed and delivered for data access and processing: Database services

	(storage, computation, relational and non-relational DBs), Application Programming Interface for web and mobile application connection, and AI/ML-based services to develop centralized and federated models to highlight any possible or unexpected correlation or association.
Impegno didattico	Disciplinare e Attività formative da svolgere nell'ambito del progetto DARE
Numero di pubblicazioni:	12
Lingua straniera:	Inglese