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THE PILOT EDITION OF THE MASTER IN DATA MANAGEMENT AND CURATION (MDMC)

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We propose a pilot edition of the Master in Data Management and Curation (MDMC), which is presented as a post-bachelor specialization course to address the critical need for skilled professionals in scientific FAIR (Findable, Accessible, Interoperable, Reusable) data management and curation.

The MDMC programme, in its pilot edition, is supported by two national infrastructure projects funded by the NPRR [1] (National Plan for Recovery and

[1]This Pilot training activity has been funded by the European Union - NextGenerationEU within the project PNRR "PRP@CERIC" IR0000028 and "NFFA-DI" IR0000015 - Missione 4, "Istruzione e Ricerca" -Componente 2, "Dalla ricerca all'impresa" - Linea di investimento 3.1, "Fondo per la realizzazione di un sistema integrato di infrastrutture di ricerca e innovazione" - Azione 3.1.1, "Creazione di nuove IR o potenziamento di quelle esistenti che concorrono agli obiettivi di Eccellenza Scientifica di Horizon Europe e costituzione di reti.

Resilience) with application in life science and materials science.

The materials science project NFFA-DI (Nano Foundries Fine Analysis - Digital Infrastructure) aims to create an environment linking fundamental nanoscience with advanced technologies and the life science project PRP@CERIC (Pathogen Readiness Platform for CERIC-ERIC upgrade) focuses on developing tools to combat pandemics. Both projects share the common goal to develop digital infrastructures to manage research data with a FAIR-by-design approach, using customized automatic workflows to capture, record, analyze, and share data and metadata produced by experimental facilities.

The training programme is the result of a synergic collaboration between three institutions in Trieste (Italy): Area Science Park, CNR-IOM (Consiglio Nazionale delle Ricerche - Istituto Officina dei Materiali), and SISSA (Scuola Internazionale Superiore di Studi Avanzati). By combining their scientific expertise and training experiences, they have crafted a training programme that addresses the actual pressing need for skilled and specialized professionals in the management and stewardship of research data in a FAIR-by-design manner. The pilot programme is structured with six weeks of intensive full-time lectures in Trieste (from September to November 2024) and seven months of internship in each project experimental facility to implement custom FAIR-by-design data workflow. This structure will allow participants progress through the course, achieve tangible results, be better equipped for their scientific careers and be prepared to tackle upcoming scientific challenges.

In today's digital and data-driven landscape, where research data production is growing exponentially, manage and curate data responsibly is essential to boost new research discoveries, to allow the reproducibility of research results and to share data Fully Ready for AI applications. MDMC programme fits perfectly into and supports the European Open Science Cloud (EOSC) initiative, highlighting the importance of EOSC-compliant research infrastructures and FAIR research data management.