EU CONEXUS
Research for Society

This project has received funding from the European Union's Horizon 2020 research and innovation Programme under grant agreement No 101017436

EU-CONEXUS RESEARCH FO SOCIETY

D. 3.1
"EU-CONEXUS HR database with accurate information about all Alliances researches to promote knowledge and exchange"

2023

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Document Information:

Grant Agreement Number: 101017436
Project Acronym: EU CONEXUS RFS
Work Package: 3
Outcome Number: D3.1
Version: 4.0
Due Date: M36
Delivery Date: February 2024
Dissemination Level: Confidential
Task leader: AUA
Participating partners: all partners
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Internal Reviewers: Isabella Baer-Eiselt, Edita Lenkauskaitė, Research Council

Keywords: HR database, mapping, human resources, scientific interests, academic ranking, architecture

HISTORY OF CHANGES				
Version	**Publication date**	**Status**	**Partner university**	**Changes**
1.0	27/09/2023	Draft	AUA	Created
2.0	31/10/2023	Draft	LRUniv, AUA	Input from partners
3.0	08/11/2023	Draft	AUA	Updated after reviewing by all partners
4.0	07/02/2024	Final	AUA	Revised after quality check

QUALITY CHECK			
Version Reviewed	**Date**	**Reviewer (Partner)**	**Description**
1.0	20/10/2023	EU-CONEXUS director	Content check
2.0	20/10/2023	RFS project manager	Formality check
3.0	12/12/2023	Research Council	Validation

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1. INTRODUCTION

The EU-CONEXUS Alliance aims to foster collaboration and knowledge exchange among its researchers. To facilitate this, a human resources (HR) database was envisioned to provide up-to-date and accurate information about all human resources within the Alliance related to scientific activities. Thus, the EU-CONEXUS HR database was designed as a centralized repository to serve the critical purpose of consolidating accurate information about the alliance, its institutions, research facilities and services, and include all human resources - teachers-researchers, administrative staff related to scientific activities - specifying the research areas, outputs, competences, skills, and experience (especially transversal). As specified in the EU-CONEXUS-RFS project, the HR Database was implemented in the Research & Innovation Information System (RIIS): a public website listing research staff, units, infrastructures, equipment and services across EU-CONEXUS, aiming to facilitate communication between researchers of the Alliance and with our stakeholder community. The RIIS portal is available at the URL: https://riis.eu-conexus.eu/.

RFS WP3 Human Resources and WP4 Research Infrastructures and Resources were the core working groups participating to the RIIS development, in link with their respective deliverable and milestone (D3.3 HR Database and MS12 Mapping of research facilities, resources, services). They helped define the portal structure and the different fields displayed in order to reach a structure and vocabulary fitting each partner's internal research structuration. This report details how the HR database's structure and architecture were designed and implemented for the mapping of human resources within the RFS project.

Chapter 2 explains the way the organization of scientific areas was formulated, and the disciplinary-based structure with the consecutive levels of "Scientific Disciplines", "Scientific Fields", and "Research Areas". Chapter 3 describes the levels of academic ranking that were used to describe the researchers. Chapter 4 outlies the interface of the RIIS database that incorporated mapping of human resources, whereas Chapter 5 is describing the HR Database launch. Appendix 1 includes the full list of Scientific Disciplines, Scientific Fields, and Research Areas in an alphabetical order.

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2. SCIENTIFIC AREAS

To ensure for a standardized representation of each member in the Alliance and solidify the underlying connections of the HR database and facilitate the promotion of collaborations within parties, the mapping of the scientific interests of each member was designed as follows.

A Disciplinary-based Structure, also known as a discipline-based or subject-based structure, was decided as a common and traditional way of organizing academic programmes and research within a university. In this structure, scientific areas are primarily organized around specific academic disciplines or fields of study, and it allows for deep specialization within individual disciplines, presenting expertise and excellence in teaching and research.

The Scientific Areas were divided in 3 main categories, "Scientific Disciplines", "Scientific Fields", and "Research Areas" under the following structure (Figure 1).

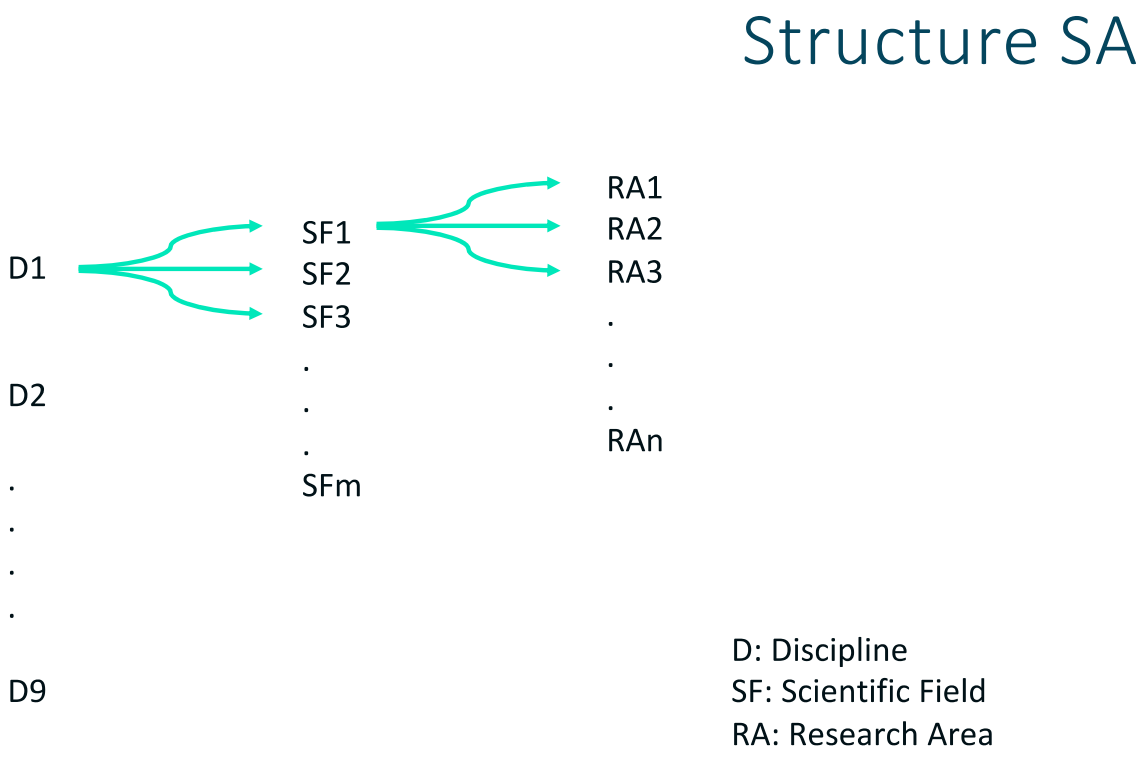

Figure 1. Structure of Scientific Areas

The highest level of the branch (D) includes the following 9 Scientific Disciplines:

- Agricultural Sciences – Food Science & Technology

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- Engineering Sciences & Technology
- Environment & Energy
- Humanities & Arts
- Life Sciences
- Management & Economics of Innovations
- Mathematics & Information Sciences
- Physical Sciences
- Social Sciences

2.1. Agricultural Sciences – Food Science & Technology

The discipline of Agricultural Sciences – Food Science & Technology is at the forefront of addressing global challenges related to food production, safety, and sustainability. This field combines the principles of agriculture with advanced scientific and technological knowledge to improve crop yields, develop innovative food products, and ensure the safety and quality of our food supply. In this academic area, students and researchers explore a wide range of topics, from plant breeding and soil science to food processing and nutritional science. They gain expertise in modern agricultural practices that enhance crop productivity while minimizing environmental impact. Additionally, they delve into food science, where they study the chemistry, microbiology, and engineering behind food production and preservation.

Graduates in Agricultural Sciences – Food Science & Technology have a significant impact on the agriculture and food industries. They play crucial roles in developing sustainable farming practices, creating new food products, ensuring food safety, and addressing global food security challenges.

2.2. Engineering Sciences & Technology

Engineering Sciences & Technology is a dynamic and diverse discipline that drives innovation and technological advancement across various industries. This academic field encompasses a wide range of engineering specialities, including mechanical, electrical, civil, aerospace, and computer engineering, among others. In this discipline, students and researchers engage in rigorous problem-solving and design processes. They learn to apply scientific principles to develop practical solutions for complex challenges. Engineering graduates are at the forefront of

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designing and improving everything from transportation systems and infrastructure to cutting-edge technology and communication networks. Engineering Sciences & Technology is characterized by its interdisciplinary nature, as engineers often collaborate with professionals from other fields to tackle multifaceted problems. This approach fosters innovation and creativity, making it a key driver of economic development and technological progress. Graduates in this discipline are well-equipped to pursue careers in various industries, including manufacturing, construction, healthcare, energy, and information technology. They are highly sought after for their analytical skills, problem-solving abilities, and capacity to drive progress in a rapidly evolving technological landscape.

2.3. Environment & Energy

The discipline of Environment & Energy addresses some of the most pressing global challenges of our time. It encompasses a broad spectrum of subjects related to environmental sustainability, conservation, renewable energy, and climate change mitigation. In this academic area, students and researchers explore the intricate connections between human activities, the environment, and energy resources. They investigate strategies for protecting ecosystems, conserving natural resources, and transitioning to cleaner and more sustainable energy sources. Graduates in Environment & Energy play critical roles in advancing environmental stewardship and energy efficiency. They work on developing innovative solutions to reduce carbon emissions, manage waste, protect biodiversity, and ensure a sustainable future for generations to come. By combining scientific knowledge with practical applications, this discipline equips individuals with the tools to address complex environmental and energy challenges in industries such as renewable energy, conservation, environmental policy, and sustainable urban planning.

2.4. Humanities & Arts

Humanities & Arts is a vibrant and diverse discipline that explores the complex tapestry of human culture, creativity, and expression. This academic field encompasses a wide range of subjects, including literature, philosophy, history, art, music, theatre, and languages. In this discipline, students and researchers delve into the richness of human experiences throughout history and across different societies. They examine the profound questions of existence, ethics, identity, and meaning that have shaped human civilization. Through critical analysis and creative expression,

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they explore the human condition in its myriad forms. Graduates in Humanities & Arts are equipped with critical thinking skills, cultural awareness, and the ability to communicate effectively, making them valuable contributors to various professions. They pursue careers in fields such as education, publishing, media, arts administration, cultural preservation, and more. Moreover, this discipline is essential for fostering empathy, understanding, and tolerance in society. It celebrates the diverse voices and narratives that make up our global community, promoting cultural exchange, and enriching our collective human experience.

2.5. Life Sciences

Life Sciences is a dynamic and ever-evolving discipline that explores the complexities of living organisms and the fundamental processes of life. This academic field encompasses a wide range of subjects, including biology, genetics, ecology, physiology, and microbiology. In this discipline, students and researchers uncover the mysteries of life at various scales, from the molecular and cellular level to entire ecosystems. They investigate topics such as genetics and heredity, evolution, ecology, and the interactions between organisms and their environments. Graduates in Life Sciences are at the forefront of advancements in medicine, biotechnology, conservation, and agriculture. They contribute to ground-breaking research that enhances our understanding of life itself and addresses critical challenges related to healthcare, biodiversity, and sustainability. Life Sciences is characterized by its interdisciplinary nature, as it often intersects with fields like agricultural sciences, chemistry, physics, and computer science. This multidisciplinary approach fosters innovation and drives discoveries in areas such as genomics, synthetic biology, and personalized medicine. The knowledge and skills acquired in Life Sciences empower individuals to pursue careers in diverse sectors, including healthcare, pharmaceuticals, biotechnology, environmental conservation, and scientific research. They play essential roles in improving human health, protecting ecosystems, and advancing our understanding of the natural world.

2.6. Management & Economics of Innovations

Management & Economics of Innovations is a forward-looking discipline that explores the dynamics of innovation, entrepreneurship, and economic development. It encompasses a range of subjects related to business management, economics, technology commercialization, and innovation policy. In this discipline, students and researchers examine how innovation drives

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economic growth and societal progress. They explore the strategies and practices that organizations, entrepreneurs, and policy-makers use to foster innovation, create value, and compete in the global marketplace. Graduates in Management & Economics of Innovations are well-equipped to lead in a rapidly changing business landscape. They have the skills to drive innovation within organizations, develop effective business strategies, and understand the economic forces that shape industries and markets. This discipline often integrates insights from economics, management, technology, and policy analysis. It addresses critical issues such as technological entrepreneurship, intellectual property, innovation ecosystems, and the role of government in fostering innovation. As innovation continues to play a central role in shaping our world, individuals trained in Management & Economics of Innovations are in high demand across various sectors, including technology start-ups, established corporations, government agencies, and research institutions. They drive economic development, create jobs, and contribute to the growth of innovative industries.

2.7. Mathematics & Information Sciences

Mathematics & Information Sciences are foundational disciplines that underpin many aspects of modern life. This academic field encompasses mathematics, computer science, information technology, and data science. In this discipline, students and researchers explore the language of nature—mathematics—and its applications in various domains. They investigate the principles of computation, algorithms, data analysis, and information systems, among other topics. Graduates in Mathematics & Information Sciences possess valuable analytical and problem-solving skills. They apply mathematical and computational methods to address complex challenges in fields such as finance, healthcare, cybersecurity, artificial intelligence, and scientific research. This discipline is marked by its interdisciplinary nature, as mathematics and information sciences are essential tools in a wide range of industries and research areas. It bridges the gap between theoretical knowledge and practical applications. Moreover, Mathematics & Information Sciences play a critical role in shaping the future of technology and data-driven decision-making. Individuals trained in this discipline are at the forefront of advancements in machine learning, cryptography, big data analytic, and software development. The demand for professionals with expertise in Mathematics & Information Sciences continues to grow, making graduates highly sought after in industries ranging from finance and healthcare to software development and

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research institutions. They drive innovation, optimize processes, and help solve complex problems in an increasingly data-driven world.

2.8. Physical Sciences

Physical Sciences is a fundamental discipline that explores the laws and principles governing the physical world. It encompasses a diverse array of subjects, including physics, chemistry, astronomy, geology, and materials science. In this discipline, students and researchers investigate the fundamental properties of matter and energy, the forces that shape the universe, and the processes that govern natural phenomena. They explore topics such as quantum mechanics, thermodynamics, the behaviour of materials, and the origins of the cosmos. Graduates in Physical Sciences possess a deep understanding of the physical world and the tools to analyse and solve complex problems. They contribute to scientific discoveries, technological advancements, and our understanding of the universe. Physical Sciences often involve cutting-edge research, experimentation, and observation. It's a discipline that pushes the boundaries of human knowledge, from exploring the fundamental particles of the universe to deciphering the geological history of our planet. Individuals trained in Physical Sciences are well-prepared for careers in research, academia, industry, and government. They work in fields as diverse as space exploration, energy production, materials development, environmental science, and fundamental physics research. As we continue to unlock the mysteries of the natural world, graduates in Physical Sciences play a pivotal role in advancing our understanding and addressing critical challenges, from renewable energy solutions to climate change mitigation.

2.9. Social Sciences

Social Sciences are a diverse and vital discipline that explores the complexities of human behaviour, societies, and cultures. This academic field encompasses a wide range of subjects, including psychology, sociology, anthropology, economics, political science, and geography. In this discipline, students and researchers delve into the intricacies of human interactions, societal structures, and the forces that shape our communities and global relationships. They explore topics such as human development, social justice, political systems, economic behaviour, and cultural diversity. Graduates in Social Sciences are equipped with valuable skills in critical thinking, research, and analysis. They gain insights into the dynamics of human societies,

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allowing them to address societal challenges, inform policy decisions, and promote positive change. Social Sciences often involve interdisciplinary approaches, as they examine complex issues that span multiple domains. This interdisciplinary perspective fosters a holistic understanding of social phenomena and informs evidence-based solutions. Individuals trained in Social Sciences pursue diverse careers in areas such as social work, education, public policy, international relations, market research, and community development. They contribute to creating inclusive societies, advocating for social justice, and addressing global issues. Moreover, Social Sciences are instrumental in understanding and addressing pressing contemporary challenges, including inequality, mental health, climate change, and global governance. Graduates in this discipline play an essential role in building a more equitable and sustainable world.

The next level describes the "Scientific Field" (SF) as an integral scientific sub-discipline that is further divided into "Research Areas" (RI-in the chart above…should this be changed to "RA"?) that outline the specificity and/or expertise of each researcher and member of the Alliance. An example of this representation is depicted in Figure 2 for the Scientific Field of Life Sciences.

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LEVEL 1 - DISCIPLINE	LEVEL 2 - SCIENTIFIC FIELD	LEVEL 3 - SCIENTIFIC AREA
Life Sciences	Applied Life Sciences, Biotechnology, and Molecular and Biosystems Engineering	Applied Bioengineering
		Applied biotechnology
		Applied plant and animal sciences
		Environmental and marine biotechnology
		Genetic engineering
		Synthetic and chemical biology
	Applied Medical Technologies, Diagnostics, Therapies and Public Health	Clinical medicine
		Diagnosis and treatment of disease
		Diagnostic tools
		Epidemiology and public health
		Medical ethics
		Pharmacology
		Regenerative medicine
	Cellular and Developmental Biology	Cell biology
		Cell physiology
		Developmental genetics
		Organogenesis
		Pattern formation in plants and animals
		Signal transduction
		Stem cell Biology
	Ecology, Evolution, Population and Environmental Biology	Animal behavior
		Biodiversity
		Biogeography
		Eco-toxicology
		Evolutionary biology
		Marine Biology
		Microbial ecology
		Population, community and ecosystem ecology
	Genetics, 'Omics', Bioinformatics and System Biology	Bioinformatics
		Biostatistics
		Computational Biology
		Epigenetics
		Genetic Epidemiology
		Genomics
		Glycomics
		Metabolomics
		Metagenomics
		Molecular and population genetics
		Proteomics
		Quantitative genetics

Figure 2. Example of branching of the Scientific Fields and Research Areas in the HR database.

In total, 383 Research Areas are recorded that ensure an accurate and holistic representation of scientific fields (Appendix 1). This structure offers clarity and specialization without requiring deliberate efforts to encourage interdisciplinary collaboration and adapt to evolving educational and research needs.

The most important aspect is that this structure supports academia's mission, vision, and objectives while facilitating academic excellence, research collaboration, and student success. The division of scientific fields into disciplines need to have a well-structured and logical approach aligning with specific academic and research areas, making it easier to organize faculty, resources, and programmes efficiently, and promote collaborations. This hierarchy offers benefits in the HR design such as ensuring clarity and facilitating interdisciplinary collaboration. While the

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categories are distinct, many research and academic innovations happen at the intersections of traditional disciplines, so promoting interdisciplinary collaboration can be beneficial.

The proposed structure aligns disciplines logically and should serve as a solid foundation for the Alliance to outline researcher's profiles and foster collaborations.

3. ACADEMIC RANKING

Additionally, the academic ranking implemented in the HR database was determined based on the multinational profiling of the Alliance, using the classification employed by the European Commission[1] and the research profiles descriptors.

Specifically, academic ranking is divided into the following categories:

1. First Stage Researcher (R1) (Up to the point of PhD)
2. Recognised Researcher (R2) (PhD holders or equivalent who are not yet fully independent)
3. R3 - Established Researcher (Researchers who have developed a level of independence)
4. R4 - Leading Researcher (Researchers leading their research area or field)

First Stage Researcher (R1) includes individuals doing research under supervision in industry, research institutes or universities, and doctoral candidates (up to the point of PhD). This profile is not to be included in the HR database. Recognised Researcher (R2) include doctoral degree (PhD) holders who have not yet established a significant level of independence, and researchers with an equivalent level of experience and competence PhD holders or equivalent. Established Researcher (R3) include researchers who have developed a level of independence, with an established contribution and reputation in their scientific field, conducting independent research and taking the lead in collaborative research. Finally Leading Researcher (R4) include researchers leading their research area or field, such as team leaders of a research group or head of an industry R&D laboratory, or leading researchers in their scientific field.

[1] https://euraxess.ec.europa.eu/europe/career-development/training-researchers/research-profiles-descriptors

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4. PROFILING HUMAN RESOURCES

The EU-CONEXUS HR database was designed to serve the critical purpose of consolidating accurate information about the Alliance, its institutions, facilities and services, and include all human resources related to scientific activities (teachers-researchers, administrative staff), specifying the research areas, outputs, competences, skills, and experience (especially transversal). To this end, the architecture of the database was designed based on the interconnected sections of the Research & Innovation Information System (accessible at https://riis.eu-conexus.eu): "Institutions", "Profiles", "Research Units", and "Facilities, Equipment & Services", with each section including comprehensive information to reach out to the scientific community, exchange knowledge and promote collaborations.

Mapping of human resources was implemented under the "Profiles" section of the database that was designed as a user-friendly interface that includes all members of the alliance presenting a short and comprehensive description of the member's scientific interests, appointments, contact details, etc.

Specifically, each member is presented under his/her name, Title or Position, Academic Ranking, affiliated University, and personal ORCID, including a photograph. The subsections of the member's profile include the "Profile" tab, and the "Facilities, Equipment & services" tab (Figure 3).

Under the member's profile the following fields are also included:

- Research Unit and Role of the researcher in the research unit
- Research Team and Role of the researcher in the research team
- Disciplines, scientific fields, research areas
- Keywords
- Bio
- Degrees
- News about me & my work
- Projects
- Thesis direction
- Trivia about me

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- Contact info

The structure of this section was designed to promote a quick but comprehensive overview of the members' expertise and scientific interests and identify researchers and experts by thematic, including also 'side-activities' effectuated.

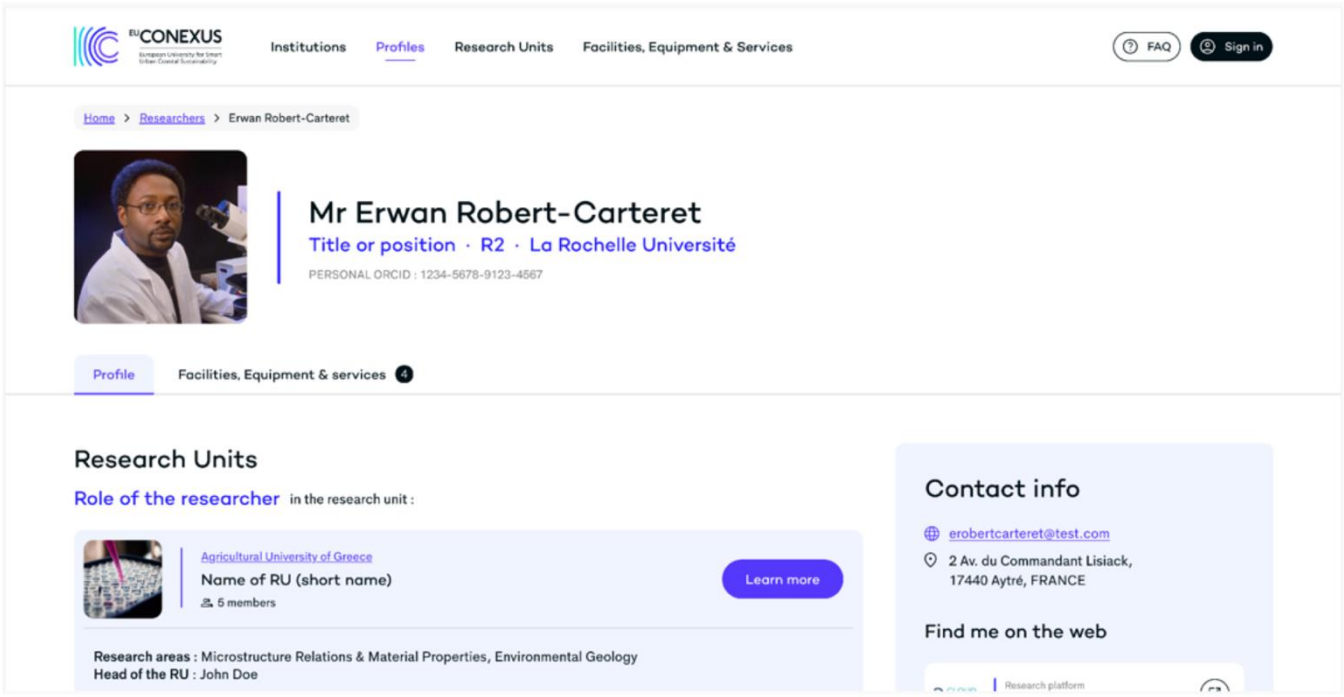

Figure 3. Overview of a factious member profile in the RIIS HR database

*The names in the example are factious (fake)

5. HR DATABASE LAUNCH

In each partner institution, local administrators were identified and given permissions allowing them to create profile accounts and modify data related to their institution on the RIIS. Local administrators act as local points of contact to answer requests related to the RIIS from their local community. They are also in charge of promoting the portal and training researchers in their institution if needed. Local RIIS administrators were trained on how to use and perform administrative tasks in the RIIS. A RIIS admin documentation was created and sent to them following the training.

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In parallel, partners were given the possibility to provide data in an Excel template by listing their researchers' name and email (in order to initialize their account) and other information featured in the RIIS (research units, facilities, equipment and services) in order to import them and have initial data available in the portal before its launch. Data in the RIIS, including Profiles, can be published and un-published (not publicly accessible); this option is reminded to users in the FAQ and during training sessions.

The RIIS including the HR database of researchers and research staff was launched on 13 October. Two introduction webinars were organized and continuous communication will be done by each partner to encourage their research community to complete their profile in the RIIS in order for their EU-CONEXUS peers to easily find them in the portal.

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6. CONCLUSION

The EU-CONEXUS Alliance's commitment to fostering collaboration and knowledge exchange among its researchers is exemplified through the development and implementation of the HR database. This centralized repository serves as a vital tool for consolidating accurate information about the Alliance's human resources, including teachers, researchers, and administrative staff. Through its well-structured architecture, encompassing sections such as "Institutions," "Profiles," "Research Units," and "Facilities, Equipment & Services," the database aims to facilitate outreach to the scientific community and promote collaborative endeavours. By providing detailed profiles based on a clear breakdown of the scientific areas and interests and facilitating quick access to researchers' expertise, this HR database stands as a cornerstone in advancing research collaboration and knowledge dissemination within the EU-CONEXUS Alliance.

Additionally, the structure of the database has incorporated a modern way of profiling researchers including all «side-activities» effectuated that can will facilitate the implementation of further assessment of researchers' careers, HR policies and actions. The database, including sections such as "Bio", "News about me & my work" and "Trivia about me" where the researcher can add, edit, and update their profile , as well as the interconnections between facilities and instiurions, can facilitate the implementation of further assessment of researchers' careers, HR policies and actions.

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APPENDIX 1

LEVEL 1 - DISCIPLINE	LEVEL 2 - SCIENTIFIC FIELD	LEVEL 3 - SCIENTIFIC AREA
Agricultural Sciences – Food Science & Technology	Agricultural biotechnology	Agricultural biotechnology
		Agricultural biotechnology and food biotechnology related ethics
		Biomass feedstock production technologies
		Food biotechnology
		Molecular and genomic plant breeding, market assisted selection
	Agriculture, forestry, and fisheries	Agriculture
		Agronomy
		Fishery
		Forestry
		Horticulture
		Plant breeding
		Soil science
		Viticulture
	AI and Data Science in Agriculture & Food Science	AI and Data Science in Agriculture & Food Science
	Animal and Veterinary science	Animal breeding
		Animal nutrition
		Animal physiology
		Other animal and veterinary sciences
	Applied Technologies, Diagnostics, Public Health	Rapid methods/Diagnostic tools
	Biodiversity	Biodiversity
	Computational biology, systems biology, Genetics, "omics" and Bionformatics	Computational biology, systems biology, Genetics, "omics" and Bionformatics
	Ecology – Synthetic Biology	Ecology – Synthetic Biology

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	Epidemiology public health	Epidemiology public health
	Food sciences and Technology	Dairy science and technology
		Food chemistry
		Food engineering
		Food microbiology
		Food packaging
		Food processing
		Food technology
		Molecular gastronomy
		New product development
		Quality control
	Other Agricultural Sciences and Food sciences and Technology	Other Agricultural Sciences and Food sciences and Technology
Engineering Sciences & Technology	Chemical and materials engineering	Catalysis
		Chemical process engineering
		Energy and fuels
		Energy production/processes (fuel cells, batteries, etc.)
		Materials engineering
		Mining and mineral processing
		Nanotechnology
		Petroleum engineering (fuels, oils)
		Other chemical engineering
		Other
	Civil, Surveying & Architectural engineering	Architecture engineering
		Civil engineering
		Construction engineering
		Municipal and structural engineering
		Structural Engineering
		Transport engineering
		Other

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Computer and telecommunications engineering	Computational methods in engineering
	Computer engineering
	Information and intelligent systems engineering
	Other
Electrical, electronic & communication engineering	Automation and control systems
	Communication engineering and systems
	Computer hardware and architecture
	Electrical and electronic engineering
	Optical and systems engineering
	Robotics and automatic control
	Telecommunications
	Other
Environmental engineering & biotechnology	Bio-derived novel materials
	Bioprocessing technologies, biocatalysis
	Bioproducts, biomaterials, biofuels etc.
	Bioremediation
	Environmental biotechnology
	Environmental engineering
	Ocean and coastal engineering
	Other environmental engineering
	Other
Mechanical engineering	Aerospace engineering (aeronautics & astronautical engineering)
	Applied mechanics
	Automotive engineering
	Fluid mechanics and turbomachinery
	Manufacturing engineering and machine design
	Naval engineering
	Nuclear related engineering
	Thermodynamics and thermal engineering
	Other

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	Medical engineering	Biomedical engineering
		Medical engineering
		Medical laboratory technology
		Other
	Other Engineering Sciences and Technology	Other Engineering Sciences and Technology
Environment & Energy	Circular economy	Bioeconomy
		Sustainable industry and manufacturing systems
		Waste and resource management
		Water in the circular economy
	Climate change	Adaptation and mitigation strategies
		Impact studies
		Modelling and projections
		Observations and remote sensing
	Earth and related environmental sciences	Atmospheric sciences
		Climatology
		Geochemistry and geophysics
		Geology
		Hydrology
		Marine sciences
		Mineralogy
		Paleontology
		Physical geography
		Water resources
	Ecology	Community ecology
		Human ecology
		Molecular ecology
		Organismal ecology
		Population ecology

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Energy and the built environment	Energy technologies for buildings
	Smart buildings in smart cities
	Smart innovative materials
	Sustainable building design
	Sustainable urban living
Energy resources	End use efficiency
	Energy grids
	Fossil and nuclear energy
	Policies and economics
Meteorology	Agricultural meteorology
	Environmental meteorology
	Experimental meteorology
	Hydrometeorology
	Weather forecasting
Oceanography	Chemical oceanography
	Coastal morphodynamics and marine geology
	Marine biology – Ichthyology
	Physical oceanography
Renewable energy resources and systems	Bioenergy
	Emerging technologies
	Energy storage
	Geothermal energy
	Hybrid systems
	Hydraulic energy
	Hydrogen and fuel cells
	Solar energy
	Wave and tidal energy
	Wind energy
Sustainable mobility and logistics	Freight transport and logistics

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		Sustainable urban mobility
Humanities & Arts	Arts (arts, history of arts, performing arts, music)	Architectural design
		Arts, Art history
		Cultural studies
		Performing arts studies (Musicology, Theater science, Dramaturgy)
		Studies on Film, Radio and Television
	History and archaeology	Ancient history
		Archaeometry
		Byzantine archaeology
		Classical archaeology
		Colonial and post-colonial history, global and transnational history, entangled histories, history of international relations
		Early modern history, modern and contemporary history
		Gender history, history of ideas, intellectual history and history of sciences and techniques, cultural history, history of collective identities and memories
		Historiography, theory and methods of history
		Institutional history, political history
		Medieval history
		Military history, war history
		Oral history, public history
		Prehistory and protohistory
		Social history, economic history
		Other
	Languages and literature	General Language Studies
		General literature studies
		Linguistics
		Literary theory
		Specific languages
		Specific literatures
	Philosophy, ethics and religion	Ethics (except ethics related to specific subfields)
		Philosophy of mind, epistemology and logic
		Philosophy, history and philosophy of science and technology

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		Religious studies
		Theology
	Other humanities	Other humanities
Life Sciences	Applied Life Sciences, Biotechnology, and Molecular and Biosystems Engineering	Applied Bioengineering
		Applied biotechnology
		Applied plant and animal sciences
		Environmental and marine biotechnology
		Genetic engineering
		Synthetic and chemical biology
	Applied Medical Technologies, Diagnostics, Therapies and Public Health	Clinical medicine
		Diagnosis and treatment of disease
		Diagnostic tools
		Epidemiology and public health
		Medical ethics
		Pharmacology
		Regenerative medicine
	Cellular and Developmental Biology	Cell biology
		Cell physiology
		Developmental genetics
		Organogenesis
		Pattern formation in plants and animals
		Signal transduction
		Stem cell Biology
	Ecology, Evolution, Population and Environmental Biology	Animal behavior
		Biodiversity
		Biogeography
		Eco-toxicology
		Evolutionary biology
		Marine Biology
		Microbial ecology
		Population, community and ecosystem ecology

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Genetics, 'Omics', Bioinformatics and System Biology	Bioinformatics
	Biostatistics
	Computational Biology
	Epigenetics
	Genetic Epidemiology
	Genomics
	Glycomics
	Metabolomics
	Metagenomics
	Molecular and population genetics
	Proteomics
	Quantitative genetics
	System Biology
	Transcriptomics
Immunity and Infection	Biological basis of prevention and treatment of infectious diseases
	Biology of infectious agents and infection
	The immune system and related disorders
Molecular and Structural Biology, Biochemistry and Molecular biophysics	Biochemistry
	Metabolism
	Molecular biophysics
	Molecular synthesis, modification, mechanisms and interaction
	Signalling pathways
	Structural biology
Neurosciences and Neural Disorders	Neural bases of cognitive and behavioral processes
	Neural cell function and signalling
	Neuroanatomy and neurophysiology
	Neurochemistry and neuropharmacology
	Neuroimaging
	Neurological and psychiatric disorders
	Systems neuroscience

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	Oncology and Cancer Research	Cancer biology
		Cancer diagnosis research
		Cancer treatment research
	Physiology, Pathophysiology and Endocrinology	Ageing
		Cardiovascular disease
		Endocrinology
		Metabolic syndrome
		Metabolism
		Organ physiology
		Pathophysiology
		Tumorigenesis
	Other Life Sciences	Other Life Sciences
Management & Economics of Innovations	Globalization of Innovation, global value chains, and catch-up processes	Globalization of Innovation, global value chains, and catch-up processes
	ICT enabled Innovation, Digitisation and Industrial Renewal	ICT enabled Innovation, Digitisation and Industrial Renewal
	Innovation and Entrepreneurship	Innovation and Entrepreneurship
	Innovation and Finance	Innovation and Finance
	Innovation Strategy, Organization and Management at the Business, Industry and Sectoral Level	Innovation Strategy, Organization and Management at the Business, Industry and Sectoral Level
	Innovation Systems, Innovation Policy, Innovation Governance and Metrics	Innovation Systems, Innovation Policy, Innovation Governance and Metrics
Mathematics & Information Sciences	Computer and information sciences	Algorithms, distributed, parallel and network algorithms, algorithmic game theory, computational geometry
		Artificial intelligence, intelligent systems, multi agent systems
		Bioinformatics, computational biology, systems biology, biocomputing and DNA and molecular computation
		Computer architecture, pervasive computing, ubiquitous computing
		Computer graphics, computer vision, multimedia, computer games
		Computer systems, parallel/distributed systems, sensor networks, embedded systems, cyber-physical systems

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		Cryptology, security, privacy, quantum crypto
		Human computer interaction and interface, visualization, robotics
		Machine learning and data processing
		Natural language processing and signal processing (e.g. speech, image, video)
		Scientific computing, computational methods, simulation and modelling tools
		Software engineering, operating systems, computer languages
		Theoretical computer science, formal methods, and quantum computing
		Web and information systems, database systems, information retrieval and digital libraries, data fusion
	Mathematics	Algebra and number theory
		Algebraic and complex geometry
		Analysis
		Application of mathematics in sciences, industry and society
		Control theory, optimization and mathematical finance
		Discrete mathematics and combinatorics
		Geometry and topology
		Lie groups, Lie algebras
		Logic and foundations
		Mathematical aspects of computer science
		Mathematical physics
		Numerical analysis
		ODE, PDE and dynamical systems
		Operator algebras and functional analysis
		Probability and statistics
		Scientific computing, computational science and symbolic computation
	Other computer and information sciences	Other computer and information sciences
	Other mathematics	Other mathematics
Physical Sciences	Chemical Sciences	Analytical chemistry
		Applied and industrial chemistry
		Chemical theory
		Colloid chemistry

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	Electrochemistry
	Inorganic and nuclear chemistry
	Molecular architecture
	Nanotechnology
	Organic chemistry
	Physical chemistry
Material sciences	2D Materials
	Composite materials
	Functional and Advanced materials
	Material synthesis
	Materials properties (e.g. thermal, electrical, mechanical)
	Polymer science
	Structure-Property relation
Physical Sciences	Acoustics
	Atomic Physics
	Condensed matter physics
	Fluids and plasma physics
	Laser Physics
	Molecular and chemical physics
	Nanosciences and nanotechnology
	Nanotechnology
	Nuclear physics
	Optics
	Particles and field Physics
	Quantum optics
Universe Sciences	Astro-physics/chemistry/biology
	Astronomy
	Cosmology
	Galactic and extragalactic astronomy
	Instrumentation
	Planetary systems

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		Solar system
		Space science
		Stellar
Social Sciences	Anthropology, Ethnology	Anthropology of gender
		Anthropology of religion
		Cultural anthropology
		Economic anthropology
		Medical anthropology
		Political anthropology
		Visual anthropology
	Economics and Business	(Applications of) quantitative methods to economics and business
		(Economy of) Sustainable growth/economic alternatives (circular economy, social and solidarity economy)
		Economics
		Finance
		Management/Marketing
	Educational Sciences	Life long learning
		New technologies in education
		Non formal education/museum education
		Politics of education/education policies
		Sociology of education/history of education
		Special education
		Teaching and learning art and humanities
		Teaching and learning natural sciences / mathematics
	Law, Organization Theory, Public Administration	Civil law
		Commercial law
		Comparative law
		Constitutional law
		Criminal law/Criminology
		International law
		Philosophy/History of law

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	Public administration law
Media and Communications	Computational media studies
	Cultural media studies
	Journalism
	Semiotics
	Visual communication
	Visual semiotics
Political Science	Comparative politics
	Contentious politics
	Greek politics
	International relations
	Political sociology
	Political theory
Psychology and Cognitive Sciences	Clinical/Counseling psychology
	Cognitive psychology/Neurosciences
	Critical psychology
	Cross-cultural psychology
	Developmental psychology
	Educational/School psychology
	Health psychology
	Organizational/Occupational psychology
	Political psychology
	Social psychology
Social and Economic Geography	Applied economic geography
	Critical geography
	Cultural geography
	Theoretical economic geography
	Urban geography
	Urban sociology

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Sociology	Applied sociology
	Community informatics/social network
	Critical sociology
	Cultural/leisure sociology
	Demography
	Educational sociology
	Ethnographic sociology
	Sociology of work
	Sociology of youth
	Visual/Cyber sociology