

Position Description

1. General Information

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| Name of the position | Data as a service – As an overarching theme |
| Foreseen enrolment date | September 2025 |
| Position is funded by | <ul style="list-style-type: none"> • COFUND, Marie Skłodowska-Curie Actions (MSCA), Horizon Europe, European Union • University of Vaasa • RMIT University |
| Research Host | University of Vaasa |
| PhD awarding institutions | University of Vaasa & RMIT University |
| Locations | Primary: Vaasa, Finland Secondary: Melbourne, Australia |
| Salary | 30,605.12 EUR annual gross salary (2,448.41 EUR monthly gross salary) |
| Supervisors | <ul style="list-style-type: none"> • Rodrigo Rabetino Sabugo, Professor, University of Vaasa • Rummy Narayan, Postdoctoral Researcher, University of Vaasa • Joonas Keranen, Associate Professor, RMIT University • Babak Abbasi, Professor, RMIT University |
| Group of discipline | Management |

2. Research topics (only one of these projects will be funded)

Project 1: *The relevance of data ecosystems for firms transitioning towards a circular business model*

Circular Economy – The concept of data ecosystems

The integration of circular business models (CBMs) represents a transformative opportunity for industrial companies seeking sustainable growth. In this paradigm, data-driven strategies are pivotal, particularly through the emerging Data-as-a-Service (DaaS) concept. This study will explore the development of data ecosystems to support transitions towards circular business models. The research will highlight the interplay between digital transformation and sustainability in industrial contexts by focusing on how data ecosystems can enable resource efficiency, product lifecycle extension, and value co-creation. Data ecosystems, characterized by interconnected networks of data producers, consumers, and enablers, provide a framework for managing the complex information flows required in circular systems. Such ecosystems can facilitate real-time monitoring of product usage, predictive maintenance, and optimized end-of-life strategies, ultimately reducing waste and fostering material reuse. The case will examine existing operations and identify how leveraging DaaS can streamline these processes through data sharing and advanced analytics. Central to this investigation is the role of digital tools and platforms in orchestrating data flows across stakeholders, including suppliers, distributors, and customers. The study will evaluate challenges related to data governance, interoperability, and stakeholder alignment in creating a functional ecosystem. Insights from the analysis are expected to reveal how adopting DaaS enhances operational efficiency and enables new value propositions, such as



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performance-based business models and enhanced customer engagement. This research will contribute to the broader discourse on digital transformation and sustainability, offering practical recommendations for companies that align their business strategies with circular economy principles. The study aims to underscore the potential of data ecosystems to redefine industrial processes and accelerate the transition to a sustainable future.

Supervisors: Rodrigo Rabetino Sabugo (UVA), Rummy Narayan (UVA), Joonas Keranen (RMIT) Babak Abbasi (RMIT)

Research Fields: Circular Business Models, Data Ecosystems, Digital Platforms

Project 2: *Optimizing second-hand business models with tokens*

The integration of digital technologies into waste management practices has the potential to revolutionize second-hand business models, driving both economic and environmental benefits. This study will explore how Data-as-a-Service (DaaS) can optimize the second-hand business model of a waste management company by leveraging blockchain-enabled token systems. As a framework for collecting, analyzing, and sharing data, DaaS provides real-time insights into material flows, customer preferences, and operational efficiency, facilitating the transition from linear to circular waste management. The research will investigate how a tokenized system can incentivize participation in second-hand markets, fostering a culture of reuse and resource efficiency. By integrating DaaS with blockchain technology, waste management companies could potentially create transparent, traceable ecosystems where tokens serve as units of value exchange for goods, services, or environmental credits. The system rewards sustainable behaviors, such as returning reusable items or purchasing refurbished products, while the data generated could inform inventory optimization, pricing strategies, and demand forecasting. The study will also address key challenges, including stakeholder alignment, data interoperability, and system scalability. Case analysis will highlight the potential for DaaS-driven tokenization to reduce waste, lower operational costs, and enhance customer engagement by creating a seamless circular economy experience. Furthermore, by connecting stakeholders—producers, consumers, and recyclers—into a shared data ecosystem, the approach is expected to promote collaborative solutions to sustainability challenges. This research contributes to the growing discourse on digital transformation in waste management, offering actionable insights for companies seeking to innovate their business models. The findings will emphasize the transformative potential of DaaS and tokenization in creating resilient, regenerative, and inclusive circular economies, showcasing a pathway for waste management firms to align profitability with environmental stewardship in a digitally enabled future.

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Research Fields: Waste Management, Digital Transformation, Sustainability

Project 3: *Waste data markets as sources of innovations in circular business models*

Data-as-a-Service (DaaS) is emerging as a critical enabler of innovation in circular business models by transforming waste data into actionable insights and economic value. This study will explore the role of waste data markets in driving innovation for circular economy strategies, emphasizing their potential as platforms for value creation, resource efficiency, and collaboration. It will explore how waste data markets could be created and facilitated by DaaS and aggregate and monetize information on waste streams, material flows, and lifecycle performance, enabling businesses to identify opportunities for resource recovery, process optimization, and new revenue streams. Waste data markets unlock innovations beyond traditional waste management by creating transparent and standardized data-sharing ecosystems. These include predictive analytics for waste generation, matchmaking platforms for material reuse, and dynamic pricing models for secondary raw



materials. Such innovations are expected to improve operational efficiency and possibly foster the development of new circular business models, such as waste-to-resource marketplaces and pay-per-use services. The study will examine key case examples and stakeholder interactions within waste data markets and highlight how data-driven insights enable collaborative solutions. Special attention will be given to challenges such as data privacy, interoperability, market governance, and strategies to address them. The research will underscore the role of digital infrastructure and regulatory frameworks in supporting the scalability and inclusivity of these markets. Ultimately, this study will contribute to the discourse on the digitalization of circular economies, providing actionable insights for policymakers, businesses, and researchers. It will investigate the role of waste data markets, empowered by DaaS, in accelerating the shift from linear to circular economic systems, fostering innovation, and enhancing sustainability outcomes. By leveraging waste data as a strategic asset, companies can unlock new growth opportunities while contributing to global environmental and economic resilience.

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3. Employment Benefits and Conditions

The University of Vaasa offers maximum a 48-month full-time work contract. A probation period of maximum 6 months can be applied, and the annual workload for researchers is 1,612 hours / year.

The remuneration, in line with the European Commission rules for Marie Skłodowska-Curie grant holders, will consist of a **gross annual salary** of yearly 30,605.12 EUR (monthly 2,448.41 EUR gross). Of this amount, the estimated net salary to be perceived by the Researcher is 1,958.728 EUR per month. However, the definite amount to be received by the Researcher is subject to national tax legislation.

Benefits include

- Becoming a Marie Skłodowska-Curie fellow and be invited to join the Marie Curie Alumni Association
- Access to all the necessary facilities at University of Vaasa and RMIT University
- Tuition fees exemption at both PhD awarding institutions
- Travel allowance to cover flights and accommodation for participating in DREAM+PLAN events
- Up to 12 months in Australia
- 30 days paid holiday leave
- Social security coverage
- Sick leave
- Parental leave



4. PhD enrolment

Successful candidates for this position will be enrolled by the following institutions and must comply with their specific entry requirements, in addition to DREAM+PLAN's conditions.

University of Vaasa

To enrol in a Doctorate program you must meet the general conditions, which can be found through this link: [Admissions to doctoral studies | University of Vaasa](#).

RMIT University

Visit the website: <https://www.rmit.edu.au/research/research-degrees/how-to-apply>

