



Erasmus Centre for Data Analytics
Hands-on preparation for a data-driven future

Urban Digital Innovation Executive Leadership Programme

Working towards climate neutral cities

Partners



**Gemeente
Rotterdam**

RSM *Erasmus* | Rotterdam School of Management
Erasmus University



TNO
innovation
for life



**European
Network of
Living Labs**

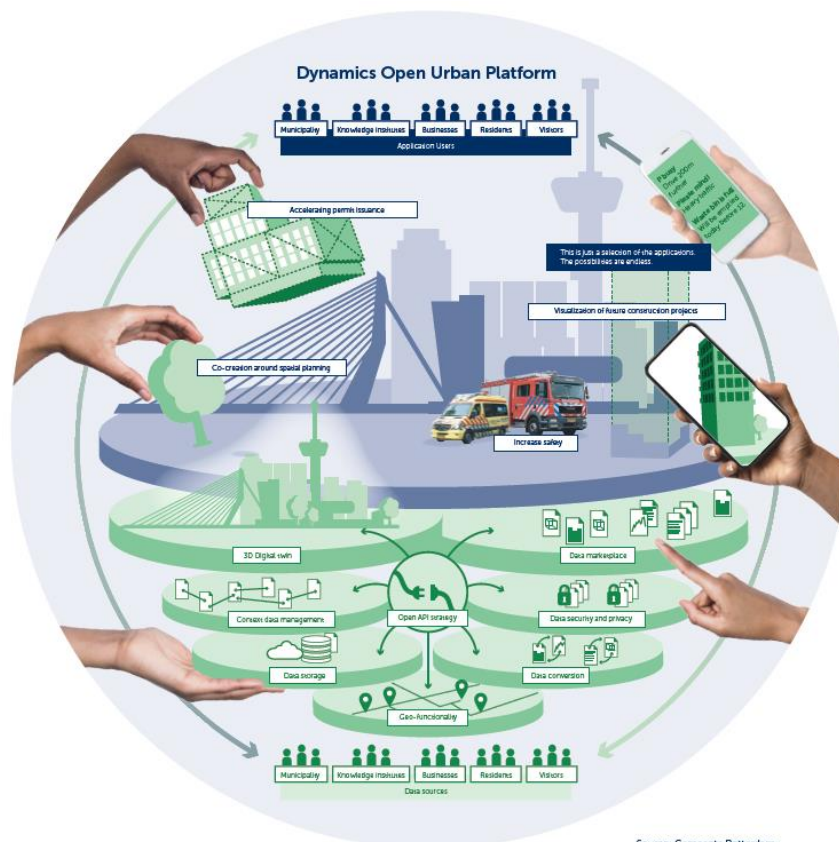


1. Introduction

Climate change and environmental degradation are an existential threat to Europe and the world. To overcome these challenges, the European Green Deal will transform the EU into a modern, resource-efficient, and competitive economy, ensuring: no net emissions of greenhouse gases by 2050, economic growth decoupled from resource use, no person and no place left behind. The European Commission adopted a set of proposals to make the EU's climate, energy, transport, and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. Cities will play an important role in realizing the ambitions of the European Green Deal. And for the green deal to success, cities need to change their innovation ecosystem, working in new agile ways with academia, start-ups, corporates, and citizens, while realizing the potentials of using digital technologies, data platforms and Artificial Intelligence. At the same time cities need to remain critical about some of the challenges, such as ethics, inclusion, and accountability of their digital innovations.



This Urban Innovation Executive Program provides an in-depth multidisciplinary orientation on the topic of Smart & Resilient Cities and Urban Communities. It frames the future of our cities within the context of the 4th Industrial Revolution. It introduces the building blocks for successful digitalization and innovation strategies for communities, cities and regions, such as agile governance, innovation for scale, finance and business models, citizen engagement, digital inclusion, agile regulations and ethical frameworks - and a touch of technology. The programme is powered by learnings and results from the EU funded [Ruggedised smart city project](#).



Source: Gemeente Rotterdam

Urban digital innovation ecosystem (source: Gemeente Rotterdam)

2. Learning Objectives of the programme

The programme has seven key learning objectives:

1. Provide a comprehensive framework in response to the question: how to prepare for and facilitate resilient, inclusive, successful cities within the context of digitalization and the digitalization driven 4th Industrial Revolution towards the green digital deal.
2. Understand and apply critical building blocks of a comprehensive digitalization strategy for a city or community to include agile governance, ethics, trust building, digital fundamentals, finance & business models and inclusive design approaches.
3. Provide holistic multidisciplinary perspective on urban (data driven) innovation
4. Facilitate cross department team building and alignment
5. Optimize learning & organizational impact by hands-on / applied approach
6. Offer opportunity to deepen expertise on specific topics or in specific application domains in follow up electives.
7. Develop a critical perspective on topics such as ethics, inclusion, accountability- and vendor lock-in.

3. Unique elements of the programme

The programme is developed and offered by experts on digitalization and urban digital innovation. It offers the following unique elements:

1. Holistic set-up with wide range of topics that will be covered
2. International renowned guest speakers
3. It plays a key role in the transformation of cities' ecosystems towards the green deal ambitions, enabled by agile and digital innovation
4. Participants work in small teams and apply learnings to their own urban innovation challenge
5. It inspires participants through peer-learning and an outside-in perspective.
6. Due to the setup the programme is also interesting for international audience
7. Site visits and experience in Rotterdam
8. Optional coaching trajectory after the core programme.



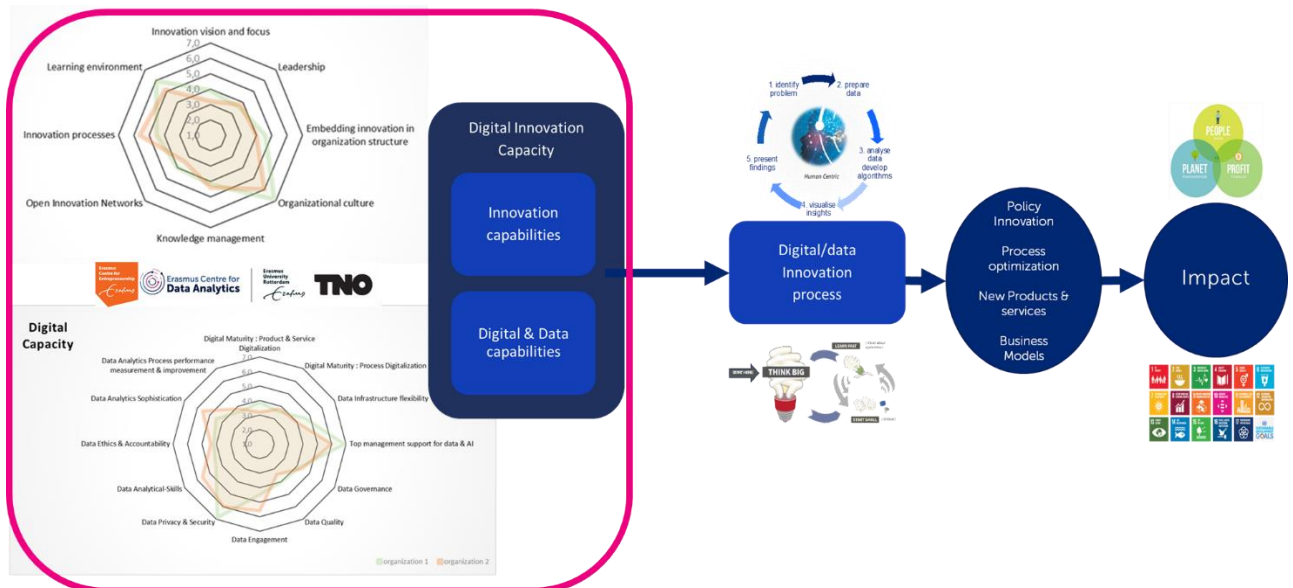
4. Who should attend?

Leaders and innovation teams with the following profile:

- Leaders and practitioners at municipalities and regional authorities, including those working in areas of sustainability, energy, digital and data, innovation.
- Leaders and practitioners at semi-governmental organizations (e.g., utilities, transport operators)
- Leaders and practitioners at companies that stand to contribute to urban innovation agendas or expect to make their inroads into this arena in the foreseeable future

5. Maturity measurement

Before the programme every participating team will be asked to fill out a questionnaire. The questionnaire will assess the maturity of the organization with regards to **technology/digital capabilities** on the one hand, and the **innovation capacity/organizational capabilities** on the other.



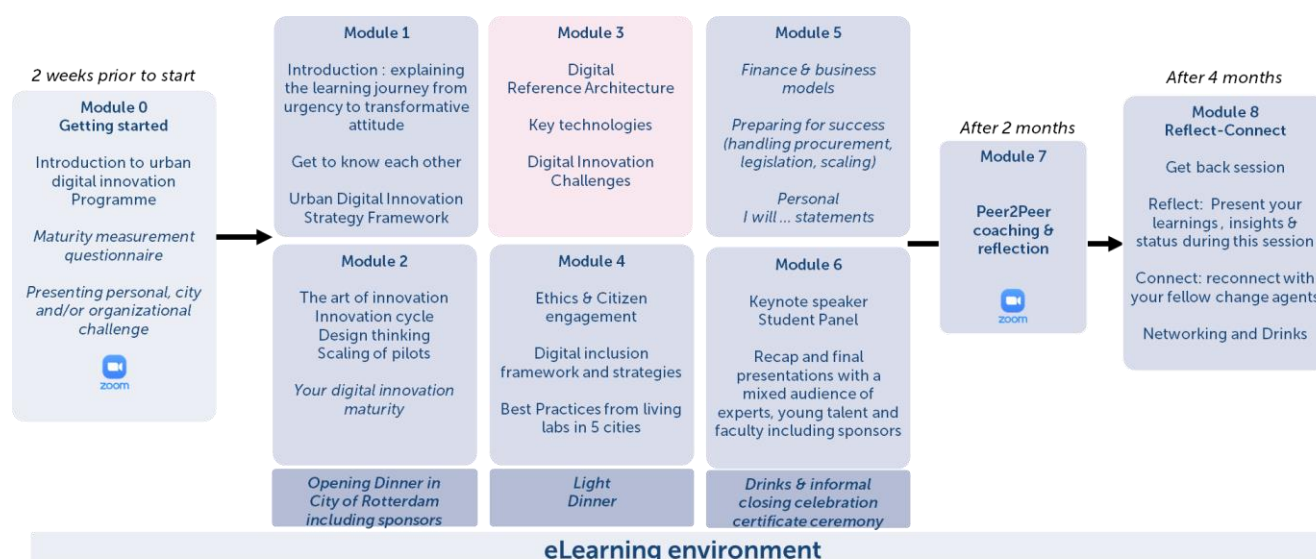
6. Action learning project

Participants bring their own ambitious urban digital innovation challenge or opportunity to work on during the programme. Examples of such projects can range from realizing smart energy applications, Citizen engagement tools for green digital deal, optimizing potential of renewable energy, Data driven optimization of smart buildings, Optimizing door to door mobility. The action learning projects throughout the week build up to make the Strategic Impact. If participants are not from the same organisation, then they are matched with other participants working on a similar challenge during an intake session. Throughout the course week there are several exercises and reflection sessions where participants receive coaching and peer feedback on their urban innovation challenge. At the end of the week participants create a short pitch presentation which summarized their main learnings of the week and how they will apply these to their urban innovation challenge.

7. Programme Design


The pilot edition of this programme starts on Wednesday September 20, 2023¹. This edition will be in person on **campus of Erasmus University Rotterdam**. The programme features three lunches and two dinner sessions. Following the core programme modules, a follow-up online peer2peer coaching session is organized among the participants after two months. **Optional coaching sessions** can be offered by programme partners to provide more in-depth guidance on their urban innovation challenge. After about four months a get back session of half a day will be organized, where participants update each other on the progress of their urban digital innovation challenges and reaching the climate neutral mission. The coaching sessions and half-day get-back session will be scheduled in consultation with programme participants.

¹ Depending on number of registrations (minimal class size 18 participants)



Detailed schedule core programme modules (subject to modifications)



Day 1: Wednesday 20-9-2023

| Module | Topic | Subtopics | Time |
|--------|--|--|-------------|
| 1 | Welcome Introduction | Introduction urban innovation & programme | 9:00 – 9:30 |
| 1 | Get to know each other | Group activity to get to know each other and the challenges each has | 9:30-10:15 |
| | | Break | 10:15-10:30 |
| 1 | urban innovation strategies | Framework on urban innovation strategies Innovating within complexities of cities Importance of data sovereignty Planning urban digital innovation in time | 10.30-11.45 |
| 1 | | Action learning project exercise – structure your project towards the framework and order the aspects | 11.45-12.30 |
| | | Lunch | 12:30-13:30 |
| 2 | Building blocks of innovation Powered by  | <u>Skills class: The art of innovation</u> <ul style="list-style-type: none"> The innovation factory, enablers and blockers building a digital innovation ecosystem The Innovation cycle (from idea--> PoC --> PoV --> Scale up) Creating a portfolio of innovation initiatives How do you scale? How do you avoid death by pilots? Where to involve certain stakeholders? Open innovation & procurement | 13:30-15:45 |
| | | Break | 15:45-16:00 |
| 2 | Digital Innovation Maturity per team or city | Results Maturity measurement of participating cities and teams Implications for personal project | 16:00-17:30 |
| | | travel to dinner location | 17:30-18:00 |
| | | Rotterdam Urban Innovation Diner Rotterdam Stadsbrouwerij (incl tour) | 18:00-21:30 |

Specific learning objectives of the day:

1. Understand complexity of digital innovation in urban context
2. Understand key innovation building blocks: enablers, blockers, pipeline and portfolio
3. Understand how innovation and digital capabilities are mutually related and what the maturity of the organization/city is
4. Understand how to build a digital innovation ecosystem (triple helix) in urban context


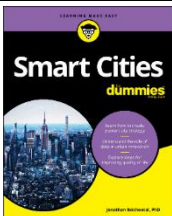
Day 2: Thursday 21-9-2023

| Module | Topic | Subtopics | Time |
|--------|--|---|-------------|
| 3 | Digital Fundamentals Powered by  | Digital Reference Architecture Common dataspaces and role of interoperability Role of open data standards Tour de Horizon of relevant technologies and <u>their relevance towards digital green deal</u> , including data, (IoT) Infrastructure / sensing & cloud, Urban Data platforms, Digital twinning, Artificial Intelligence for green deal use cases, Immersive technologies (AR/VR/Metaverse), Blockchain and geo-spatial analytics. | 9:00-10:15 |
| | | Break | 10:15-10:30 |
| 3 | Digital Fundamentals | - continued - | 10:30-11:00 |
| 3 | Digital Innovation Challenges | <i>Discuss digital challenges among participants</i> | 11.00-11.45 |
| 3 | Trust building | Trust building & Data sharing | 11.45-12.30 |
| | | Lunch | 12:30-13:30 |
| 4 | Ethics & Citizen engagement Powered by  | <ul style="list-style-type: none"> • Citizen engagement strategies: why, how and how to act upon (user insights/design thinking and citizen as co-creators) • Ethics • Linking design thinking to citizen engagement • How can digital support citizen engagement, examples e.g. gamification, use of immersive technologies (AR/VR) | 13:30-15:00 |
| | | Break | 15:00-15:15 |
| 6 | Digital inclusion | <ul style="list-style-type: none"> • Digital Inclusion framework and strategies <i>Results Maturity measurement of participating cities and teams on Digital inclusion</i> | 15:15-16:15 |
| | | Break | 16.15-16.30 |
| 4 | Urban digital Innovation learnings from practice | Urban innovation towards green digital deal: experiences from European Living Lab and digitalization projects City and innovation project examples: <ul style="list-style-type: none"> • City of Rotterdam – urban data platform - Roland van der Heijden, Gemeente Rotterdam • Smart Living Lab Scheveningen: Tijn Kuyper, Gemeente Den Haag • Rhein Metropole case on digital twin, urban project orchestration initiative (Severine Trouillet, Dassault Systèmes expert speaker) • Speaker from Eurocities network Panel / reflection (takeaways, learnings, what can you apply from your project & reflection) | 16:30-18.00 |
| | | Light dinner | 18.00-19.30 |

Specific learning objectives of the day:

1. Understand the digital fundamentals for a city, how cities are migrating their data and applications from functionally oriented closed data silos to open digital ecosystems, powered by digital twins, data platforms, 3D city models and AI
2. Understand the importance of open data standards and interoperability
3. Understand key challenges in data sharing, trust building and mitigating measures
4. Understand challenges of (digital) ethics and citizen inclusion
5. Learn frameworks to engage with citizens in digital innovation using design thinking approaches
6. Learn how to set up living labs and move from experiments and living labs to scaling, based on (sustainability) examples

Day 3: Friday 22-9-2023

| Module | Topic | Subtopics | Time |
|--------|-----------------------------|--|-------------|
| 5 | Finance & business models | New business models and financing in the context of digital innovation | 9.00-10.15 |
| | | Break | 10.15-10.30 |
| 5 | Preparing for success | Financing and steering procurement of digital innovation programs Preventing vendor lock-ins Dealing with legislation | 10.30-11.30 |
| | | <i>Prepare final pitches & I will statements / photoshoot</i> | 11.30-12.30 |
| | | Lunch | 12.30-13.30 |
| 6 | Keynote |   Keynote Jonathan Reichental: Smart cities for Dummies Student Panel/Reflection | 13.30-14.30 |
| | | Break | 14.30-14.45 |
| 16 | Final Session with sponsors | Final Session with a mixed audience of experts, young talent and faculty including sponsors (15-20 minutes) <ul style="list-style-type: none"> - Recap of the programme and main take-aways - Presentations per group of their project and main learnings and actions - Presents personal I will statement and role as leader Feedback and discussion with panel of experts | 14.45-16.15 |
| | Closure | Closure of programme Informal closing drinks with Handout certificates | 16.15-17.00 |

Specific learning objectives of the day:

1. Understand how digital innovation (for green deal) in urban contexts can be financed.
2. Understand the criteria for success, including preventing vendor lock in, innovative procurement and complying with legislation
3. Understand your role as leader
4. Apply all learnings to your case

8. Key Faculty and Speakers



Bas Boorsma is a leading urban innovation and digitalization specialist & executive with over 20 years of experience in the 'smart city' space. He serves as Professor of Practice at the Thunderbird School of Global Management at Arizona State University. He has worked as Chief Digital Officer (CDO) to the City of Rotterdam. Bas is also Vice President EMEA of the Cities Today Institute, and also serves as Member of the Board, at the Smart City Association Italy (TSCAI). Bas is the author of the well acclaimed book "[A New Digital Deal](#)".



Liesbet van Zoonen is professor of Sociology and dean of the Erasmus Graduate School of Social Sciences and the Humanities at Erasmus University Rotterdam. Her research covers a wide range of issues in the social sciences and humanities, but all concern the question whether and how digital and popular culture is a relevant resource for civic understanding and social participation. Her work currently is focused on civic engagement and governance in smart cities. She leads the [Leiden-Delft-Erasmus Centre for BOLD Cities](#)



Ferdinand Jaspers is programme director at the [Erasmus Centre for Entrepreneurship](#). His teaching and consultancy activities focus on innovation leadership. Based on his expertise at the intersection of strategy, innovation, and entrepreneurship, he teaches courses and provides masterclasses, workshops and boot camps on corporate entrepreneurship, innovation excellence, and entrepreneurial culture. With a rigorous academic perspective, Ferdinand draws upon and helps you move beyond approaches such as lean start-up, design thinking, business modelling, and effectuation. Together with experts from DSM and ING, Ferdinand founded the ECE Innovation Leadership executive programme. He holds a PhD from RSM.



Haydee Sheombar is an experienced international business consultant, academic researcher and speaker who works with leaders in both the public and private sector. She has advised (the board room) on various topics, including digital transformation, strategy, organisational & process redesign, and customer experience. Helping managers, leaders and policy makers to implement change. With a MSc degree in Electrical Engineering and a PhD in Economics she has mostly worked at the intersection of information technology and business/society. She has over 20 years international experience at PWC and IBM as a Consultant, Smarter Cities Director, Client Executive, and Business Development Executive. To gain a profound understanding of the exponential change of today's Digital Age, Haydee researches how digital technologies (e.g. AI, IoT, platforms) shape business, society, our lives and our behaviour. She has a research affiliation with the Erasmus University Rotterdam and the Erasmus Centre for Data Analytics. In 2015 Haydee founded Kankan*Tree BV, Digital Engagement research led Consulting firm committed to "transforming organisations and the way they engage citizens, customers and employees".



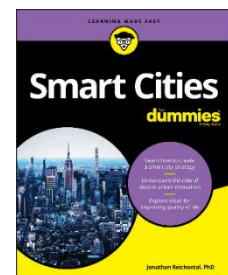
Marcel van Oosterhout works as adjunct executive director for the Erasmus Centre for Data Analytics and as co-lead for the Erasmus Energy Transition programme. Marcel likes to initiate and develop innovative ideas and projects on the edge of science and practice, which combine people, technology, knowledge, and innovation. Linking the academic world with the business world and creating societal impact gives him a lot of energy. Marcel holds a PhD from Rotterdam School of Management, Erasmus University. During his PhD he analysed how organizations can become more agile and how Information Technology can support organizational agility. Marcel has extensive experience in developing and leading innovative research projects and programs (government funded, EU programs and company contract research projects). His areas of expertise and interest include smart cities, urban data platforms, smart sustainable energy and smart logistics.



Jonas Onland is the CEO and co-founder Serendipity, specialist digital transformation and keynote speaker. He is a member of the Nexus Global Network (<https://nexusglobal.org/>) with 20 years' experience in business and government (local, national and European level). His background is in programme management, technology and marketing. Jonas is also a specialist in ecosystem and innovation management.



Dr. Jonathan Reichental is the founder of [Human Future](#), a global business and technology advisory, investment, and education firm. Previous roles have included senior software engineering manager, director of technology innovation, and he has served as chief information officer at both O'Reilly Media and the City of Palo Alto, California. In 2013 he was recognized as one of the 25 doers, dreamers, and drivers in government in America. In 2016, he was named a top influential CIO in the United States and in 2017, he was named one of the top 100 CIOs in the world. He has also won a best CIO in Silicon Valley award and a national IT leadership prize. Reichental is a recognized global thought leader on several emerging trends including urban innovation, smart cities, sustainability, blockchain technology, data governance, the fourth industrial revolution, and digital transformation. He holds several degrees including a Ph.D. in Information Systems. He is an adjunct professor in the School of Management at the University of San Francisco and instructs at several other universities. Reichental is a popular global keynote speaker and writer. He has written three books on the future of cities: [Smart Cities for Dummies](#), Exploring Smart Cities Activity Book for Kids, and Exploring Cities Bedtime Rhymes.



Justine Gangneux has a background in Political Sciences (Université Paris 1 Pantheon-Sorbonne) and Sociology (University of Glasgow). She is currently working for [Eurocities](#), the largest network of European cities which aims to foster collaborations and knowledge exchange on a wide range of topic including digital transformation and sustainability. She leads the [governance workpackage](#) of the EU-preparatory action to develop a blueprint for the upcoming [data space for smart communities](#). As part of this work, she engages with cities on questions related to governance between different types of stakeholders when it comes to data sharing and building trustworthy data ecosystems. Prior to this, Justine was based at the [Urban Big Data Centre](#) (Glasgow) where she conducted research on

how [Scottish local authorities used and shared data in the context of the Covid pandemic](#).

9. Programme Fees

The programme fee for this four-day programme is as follows (all fees excl VAT):

| | |
|--------------------|-------------|
| Individual: | 3.250 euro |
| Team of 2 persons: | 6.000 euro |
| Team of 3 persons: | 8.250 euro |
| Team of 4 persons: | 10.000 euro |

This fee includes access to the online learning environment and materials, three lunches, 2 dinner sessions, two books (Smart Cities for Dummies and A new digital deal), access to one peer-coaching online moderated session and access to the get back session. An additional fee applies for teams or individuals that want to take part in an **optional more in-depth coaching programme** with one of the partners after the Rotterdam week. This depends on the needs of the team and the intensity of the required coaching.

10. Programme partnership & contributions

In the programme we combine research- and practice-based insights from leading Professors with best practices and learnings from urban professionals and thought leaders, leading tech companies and start-ups. The programme is a collaborative effort among the following partners:

Partners



The programme development for this educational programme has received funding from the EU funded Ruggedised project. The Ruggedised project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731198. The sole responsibility for the content of this document lies with the Ruggedised project and does not necessarily reflect the opinion of the European Union.

11. Information and registration

Information on the programme including new dates.

<https://ecda.eur.nl/education/urban-innovation-executive-leadership-programme/>



Contact person

Dr. Marcel van Oosterhout
Adjunct Executive Director

Erasmus Centre for Data Analytics

Email: moosterhout@rsm.nl

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