“Exploiting big data requires a fundamental rethink of how we do business.”

Prof. Eric van Heck
New business skills are needed to work with big data in business because new technologies for big data collection, analysis and prediction create huge opportunities for business, but also ethical, legal and technical risks. Big data influences customer relationships, redefines how firms develop new products and services, changes how operations are organised and managed, improves demand and supply networks, and provides the basis for new business models.

Organisations transforming towards becoming data-driven are guided and supported by the eight-day Leadership Challenges with Big Data programme at RSM Executive Education. It connects professionals in technical- and methodology-oriented data science with professionals engaged in business analytics, links them to best business practices, and actively involves senior executives. This programme has been developed and organised by the Erasmus Centre for Data Science and Business Analytics with partners from industry.

PRACTICAL INFORMATION

Dates: Please see our website for the programme dates.
Length: 8 days
Fees: The fee for each participant of the eight-day programme is €6,450 (excl. VAT). This includes course materials, access to the e-learning platform, individual coaching during the programme, lunches, three dinners and social activities. Discounted rates apply and according to the number of participants per organisation, and are shown in the table below. For teams with more than five participants, each additional participant over five participants is €5,500 (excl. VAT).

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>Cost per participant</th>
<th>Cost for partner organisation</th>
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<tbody>
<tr>
<td>1</td>
<td>€6,450</td>
<td>€6,450</td>
</tr>
<tr>
<td>2</td>
<td>€6,250</td>
<td>€12,500</td>
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<tr>
<td>3</td>
<td>€5,950</td>
<td>€17,850</td>
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<tr>
<td>4</td>
<td>€5,750</td>
<td>€23,000</td>
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<tr>
<td>5</td>
<td>€5,500</td>
<td>€27,500</td>
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Location: Erasmus University Rotterdam
Language: English
Certificate: Erasmus Centre for Data Science and Business Analytics
Admission: Please see www.rsm.nl/lcbd
Information: Dr Marcel van Oosterhout,
Senior project manager
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E moosterhout@rsm.nl

After successful completion of the programme you will become a member of the alumni network of Rotterdam School of Management, Erasmus University.

WWW.RSM.NL/LCBD
LEADERSHIP CHALLENGES WITH BIG DATA

LEARNING OBJECTIVES
The learning objectives of the programme are to:

► provide professionals engaged in data science and business analytics with academically sound and new ways to apply big data technologies in order to design and implement innovative and successful business applications.

► improve the business skills of technically focused data scientists by exploring business thinking, business-case creation, and investigating problems from a business angle.

► improve the technical skills of business analysts as they acquire new knowledge and understanding of data science methodologies and techniques.

► increase collaboration between data scientists and business analysts by increasing mutual understanding.

► provide a cross-industry learning platform for professionals to learn from experiences in other relevant industries.

► broaden data scientists’ and business analysts’ understanding of privacy and security in order to provide solid data-driven business applications.

► engage participants with senior executives and supervisors to facilitate implementation of business applications.

WHO IS IT FOR?
Professionals in data science who are technically or methodology oriented and those in business analytics working with business models and applications, as well as senior executives and supervisors. Professionals in non-profit organisations and governments, particularly those who work on smart city concepts, may also benefit.

EXCLUSIVITY
We guarantee a collaborative atmosphere during the programme so ideas can be freely shared and discussed among professionals from a range of industries. Places are allocated on a first-come, first-served basis. If several companies from one industry want to participate, they can reserve places in a next series. It’s not possible to accommodate requests from consultancy firms for exclusive access.

BLEND LEARNING
The programme format uses blended learning; a mixture of conventional lectures, lessons and tutorials combined with online presentations and sessions. Learning materials from Erasmus University Rotterdam and other universities will be available after the programme. These include short courses and tutorials that will ensure everyone benefits from having a common set of capabilities. The e-learning environment facilitates collaboration and online meetings between participants and faculty.

COACHING
Every company team is assigned a faculty member as a coach during the programme. The coach helps teams to work on their assignments and apply concepts taught during the programme to their own cases.

<table>
<thead>
<tr>
<th>BLOCK 1: INTRODUCTION AND PREPARATION SESSION</th>
<th>BLOCK 2: CORE PROGRAMME</th>
<th>BLOCK 3: FINAL SESSION</th>
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<td>One-and-a-half days of preparation sessions, during which each participating company is expected to bring at least one case study to which the teams can apply the concepts they have learned. During this part of the programme, you will focus on the strategic importance of data-driven organisations, terminology, leadership challenges and readiness of companies, including their enterprise architecture and digitised platform. It includes case studies from other companies and short presentations from participating companies.</td>
<td>A five-day programme, during which you explore the data-driven company; technologies for analysis, prediction and visualisation, business cases, legal and privacy issues, change management, and implementation. On the final day, you will make your recommendations to senior executives as part of a presentation of case study results.</td>
<td>A one-day session for you to discuss challenges you have experienced in transforming your businesses and the implementation of your proposals. Each team’s case study results will be presented to senior management, and discussed in the class.</td>
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Previous participants have included teams from Alliander, DSM, Enexis, Lufthansa, Randstad and Sanoma.

“I was very impressed by the quality of the programme, the business expertise of Erasmus University’s faculty members and the industry experts.”

Jildert Huitema, manager marketing and market intelligence, Randstad Groep Nederland

“One of the most important features of this programme is the cross-industry set-up. It opens your world to think about other applications and to discuss common challenges and share best practices.”

Taco Wiersma, business information manager, DSM
Collective discussion and feedback for company assignments from professors and participants
Sharing of initial ideas about business cases

Module 9: Business cases and data-driven business models
- Business models and the value of information
- Developing your business case
- Best practice cases: flower auctions and energy informatics
- Work on company assignment using a business case template

Evening
Social event and dinner in Rotterdam city centre

Module 10: Ethical, legal and privacy challenges
- Ethical challenges when using big data
- Privacy and security considerations and legislation

Module 11: Implementation – changing your company into a data-driven company
- Data-driven organisation maturity
- Data-driven transformation and implementation challenges
- Management game: data-driven transformation

Module 12: Learning from practice
- Practical experiences with contributions from guest speakers about: dealing with legacy software; data engineer versus data scientist; and technical and managerial best practices
- Interactive discussion: what can incumbents learn from online players?

Module 13: Recap, presentations and final discussions
- Briefing and overview of programme highlights for participants and their senior executives and supervisors
- Results of group work: company-specific applications of big data are presented as a pitch to company executives
- Group discussion

Module 14: Business transformation management
- Business transformation management and change
- Presentations and discussion on company-specific transformation challenges

Module 15: Presentations of company-specific cases
- Results of company-specific big data applications and in-class discussions that address topics presented during the course; initial prototypes, results of analytics studies, business case calculations and videos
- Active participation from senior executives
- Evaluation of business potential, application of proper data science analysis, presentation, visualisation and credibility of the pitch, and feasibility of implementation

Evening
Closing dinner and presentation of programme certificates
Faculty members of RSM and ESE combine impeccable academic credentials with a thorough knowledge of business practice. Selected for their ability and experience in executive teaching, they will draw on their research and knowledge to deliver a unique learning experience.

PROF. ERIC VAN HECK
is a professor of information management and markets at RSM. His research concentrates on the role and impact of advanced information systems and technologies helping to solve complex societal and business challenges. Eric is working on sustainable ways of working, multi-agent systems for smart energy grids, mobile banking platform ecosystems for financial inclusion, and sustainable maritime logistical systems. His research is carried out with innovative companies and universities in Brazil, China, Europe, Indonesia, and the USA.

PROF. WOLF KETTER
is a professor of next generation information systems at RSM. He is the founder and director of the Learning Agents Research Group at Erasmus University Rotterdam, which aims to research, develop and apply autonomous and mixed initiative intelligent agent systems to support decision-making in business networks, electronic markets, energy grids and supply chain management. His is also the founder and director of the Erasmus Centre for Future Energy Business which enables robust, intelligent, efficient and sustainable energy networks of the future. Wolf leads Power TAC, a new TAC competition on energy retail markets. Since 2011, he has served as the chair of the IEEE Task Force on Energy Markets.

DR JAN VAN DALEN
is an associate professor of statistics at RSM. He is the co-founder of the recently established Erasmus Centre for Data Science and Business Analytics, and co-director of E-Urban, and leads the Urban Big Data knowledge lab in collaboration with the City of Rotterdam. Jan’s main research interests are in quantitative analysis of information, logistics, trade and organisational processes, and he has been involved in research programmes that include monitoring trade and traffic flows with CBS, trade lane risk assessment in Cassandra, and cross-chain collaboration in 4C4More/Dinalog. He has extensive teaching experience in applied statistics, forecasting and big data in bachelor, master and executive teaching programmes.

PROF. DENNIS FOK
is an endowed professor of applied econometrics at the Econometric Institute, Erasmus School of Economics (ESE). He specialises in developing models to describe, understand, and predict decisions made by consumers. His technical interests include modelling unobserved heterogeneity, marketing econometrics, and Bayesian statistics. His research has been published widely in peer-reviewed academic journals. Dennis is also associate director of the Erasmus Research Institute of Management (ERIM), and has supervised many econometrics master students with business-related data research theses.
DR JASON ROOS
is an assistant professor in the Department of Marketing Management at RSM. His research focuses on the way users and marketers engage with new media and has been published in top academic journals. Before entering academia, Jason worked as a consultant and software engineer in Seattle, USA, and was managing director of an internet marketing and software firm. He earned his PhD in marketing from Duke University’s Fuqua School of Business, and received the prestigious INFORMS Society for Marketing Science Dissertation Award in 2011.

PROF. PETER VERVEST
is a professor of information management and networks at RSM who says big data is automated decision-making combining big amounts of distributed, often poorly aligned and non-authenticated data from many sources. He sees the Internet of Things as presenting a set of technological, business and societal challenges. Peter’s contribution to the development and creation of open information systems dates back to the publication of Electronic Mail and Message Handling in 1985, a landmark publication for developing global communications networks such as the internet. His focus on smart networks resulted in the publication of Smart Business Networks in 2005 and The Network Experience in 2009. He has conducted research for large firms and the EU, and is also chairman of the complexity studies programme of the Netherlands Organisation for Scientific Research.

COLLABORATIVE PARTNERSHIPS

PA CONSULTING GROUP
is a consultancy firm specialising in management consulting, technology and innovation.

SANOMA
is a front-running consumer media and learning company in Europe. Sanoma creates high-quality, relevant, captivating content: information, inspiration, education and entertainment, across media in multiple channels.

LEIDEN LAW SCHOOL
is one of the largest faculties at Leiden University. The faculty is renowned for its research and teaching which covers the full breadth of law and goes far beyond the national boundaries.

DELFt UNIVERSITY OF TECHNOLOGY
With its unique technology infrastructure, broad knowledge base, international reputation and many successful alumni, TU Delft makes a significant contribution to find responsible solutions to the urgent societal issues facing today’s world.
Rotterdam School of Management, Erasmus University (RSM) is one of Europe’s leading business schools, and ranked among the top three for research. RSM provides ground-breaking research and education furthering excellence in all aspects of management and is based in the international port city of Rotterdam – a vital nexus of business, logistics and trade. RSM’s primary focus is on developing business leaders with international careers who carry their innovative mindset into a sustainable future thanks to a first-class range of bachelor, master, MBA, PhD and executive programmes. RSM also has offices in Chengdu, China, and Taipei, Taiwan.

RSM Executive Education
Bayle (J) Building
Burgemeester Oudlaan 50
3062 PA Rotterdam
The Netherlands

Erasmus Center for Data Science and Business Analytics is a joint initiative of various research groups within Erasmus School of Economics (ESE) and Rotterdam School of Management, Erasmus University (RSM). The Center supports organisations in turning data into business solutions, and helps companies to extract business value from their data. It also presents a platform for knowledge exchange, access to expertise, student interns, and offers research-based solutions and innovations.

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