



RDM

**CENTRE
OF EXPERTISE**

INNOVATION
ENGINE FOR
PORT AND
CITY

— RDM CENTRE OF EXPERTISE

Rotterdam has the ambition to become a climate resilient delta city with the most innovative and sustainable port in the world. This ambition requires investment in talent, entrepreneurship and innovation. RDM Centre of Expertise is the platform for accomplishing this; it initiates practical projects with investment from education, government and business. The objective of these projects is to produce talent and entrepreneurs equipped to help build a future-proof port and city.

CHIBB IN CONCEPT HOUSE VILLAGE
PHOTOGRAPHY: ROY BORGHOOTS



INNOVATION TEAM IHC MERWEDE
PHOTOGRAPHY: MARCEL VOGEL



FUTURE MOBILITY DURING SHELL ECO-MARATHON
PHOTOGRAPHY: SHELL





‘More and more organizations want to switch to electric vehicles, but obviously want to know what it costs first. Therefore we wanted to be able to compare the cost of our electric vehicles with the cost of conventional diesel vehicles for potential customers. It covers not only the purchase price but also the cost of maintenance and use. This we have done in collaboration with RDM CoE. Students from Rotterdam University have developed a cost model with which the Total Cost of Ownership of our sustainable electric vehicles can be precisely mapped and can be compared to that of similar conventional diesel vehicles. This tool has proved to be very valuable to us in winning orders and in making sustainable vehicle operational costs transparent to our regular customers.’



WERNER GHITTI
DIRECTOR SPIJKSTAAL ELEKTRO

‘Making existing homes sustainable is a major challenge for BAM Housing Rotterdam. In this context, we are developing the so-called Second Skin concept; homes that have difficulty preserving their energy inside receive a second skin on the outside, so that they become more energy efficient. Educational and research collaboration together with students and several research institutes has helped us realize the first Second Skin concept house in Concept House Village on Heijplaat. Consequently, we can monitor the effect this concept has on energy consumption during actual use of the properties. We would never have been able to do this if we weren't participating in RDM CoE.’

JASPER SLUIMER
DEPUTY DIRECTOR RENOVATION AND MAINTENANCE,
ENTREPRENEURSHIP & INNOVATION BAM HOUSING
ROTTERDAM

Working together on improving technical education, new knowledge and sustainable innovations that are needed for the port and city of Rotterdam



INNOVATION DOCK
PHOTOGRAPHY: MARCEL VOEGEL



BAY 2 IN INNOVATION DOCK
PHOTOGRAPHY: ROY BORGHOOTS



CROSSOVER PROJECT AQUABOTS
PHOTOGRAPHY: MARCEL VOEGEL

Within RDM Centre of Expertise (RDM CoE), educational institutions, research centres and businesses work together on improving technical education, new knowledge and sustainable innovations that are needed for the port and city of Rotterdam. This cooperation takes place in Communities of Practice within four domains: Maritime & Smart Port Industry, Logistics & Future Mobility, Energy & Process Technology and Sustainable Construction & Area Development. RDM CoE is a centre of expertise of Rotterdam University of Applied Sciences, recognized and supported by the Dutch Ministry of Education, Culture and Science. It is being developed in a public-private partnership with the Port of Rotterdam Authority and business partners at the campus of RDM Rotterdam, right in the center of the port. RDM CoE is the innovation engine for port and city.

EDUCATION & LABOR MARKET

Companies in the port, industry and maritime cluster are facing a growing shortage of technical staff. There is great need for graduates who have knowledge of new sustainable technologies and have experience with innovation processes and entrepreneurship. At the college level there is need for technically qualified professionals who can think multidisciplinary, have problem-solving abilities and who can work together (internationally).

RDM CoE contributes to educating these 'green collar professionals'. Students work together with R&D professionals from companies, as well as with teachers and researchers, on specific business innovation issues. Companies get to know the (technical) talents of tomorrow in this way. Teachers and students are challenged to approach innovations in an enterprising and entrepreneurial way. Moreover, the creativity and fresh approach of students is often of particular value to companies working on recalcitrant problems.

RESEARCH & KNOWLEDGE

RDM CoE initiates practical-oriented (design) research for investigating specific practical questions which arise in the maritime and offshore, process, energy, logistics, mobility, construction and new manufacturing industry. This research focuses on issues within and between these sectors, often across several existing specializations (crossover projects). Central to this is the development of innovative concepts and solutions that contribute to a sustainable port and climate resilient city.

New knowledge and insights gained during practical research are integrated into the programs of participating (vocational) training institutes. By doing so, these programs

continually receive up-to-date knowledge that helps students prepare for current and future strategic innovation issues.

ENTREPRENEURSHIP & INNOVATION

RDM CoE is investing in state-of-the-art facilities that enterprises or educational institutions alone cannot quickly realize. These facilities, along with commercial space for start-ups and existing businesses, are brought together under one roof in Innovation Dock. In this monumental industrial hall, innovative technological companies – often together with researchers, lecturers and students – are developing, testing and demonstrating new products, concepts and processes. This particularly applies to accelerating private business innovation projects in the port of Rotterdam. In addition, it is aimed at expanding and making accessible so-called Living Labs: facilities and infrastructure for experimentation, prototyping and testing of new products and processes.

RDM CoE brings together public and private parties in networks such as Communities of Practice (CoP's). In these communities, entrepreneurs, lecturers, teachers and students exchange knowledge and together devise new subjects for practical research and proposals for improvement of vocational education.

Within RDM CoE seven Communities of Practice are operational:

- CoP Maritime & Offshore Innovation
- CoP Logistics
- CoP Energy & Process Technology
- CoP Future Mobility
- CoP Making
- CoP Sustainable Building
- CoP Floating Construction

These CoP's work together within four domains:

- Maritime & Smart Port Industry
- Logistics & Future Mobility
- Energy Transition & Process Industry
- Sustainable Construction & Area Development

Participating in RDM Centre of Expertise

More and more companies and organizations are participating in RDM CoE. They are attracted by the unique combination of facilities in the area of product development, research opportunities and access to technical talent. RDM CoE offers companies the opportunity to present themselves to prospective employees, to examine their innovation issues and develop new concepts in an open, dynamic learning environment with state-of-the-art facilities. There are many opportunities to participate in RDM CoE:

- Communities of Practice
- Innovation Teams
- Lab facilities
- Learners Community Port
- Long-term partnerships

‘Imtech Marine has been working together with RDM CoE for some years now, for example on the project Aquabots. During this project we work together with students from a variety of educational backgrounds in building autonomous and emission-free ships. Imtech has entered a long-term strategic partnership with RDM CoE and we have established a development and test facility in Innovation Dock. We use the Imtech Marine Innovation Lab for developing and testing new ideas and concepts; utilizing student creativity and their ability to think out-of-the-box. Moreover, we can present ourselves as an attractive employer among students, enabling us to scout talented potential employees for our company.’

MART HURKMANS

MANAGER R&D IMTECH MARINE & OFFSHORE

RDM

CENTRE OF EXPERTISE

CONTACT

Are you interested in participating within RDM Centre of Expertise or do you wish to receive more information? Please contact us at:

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