

JOINT MASTER PROJECT (JMP)
ID 4045

INNOVATION IN PRODUCT MARKET COMBINATIONS

THE JOINT MASTER PROJECT (JMP) IS AN INTEGRAL DESIGN PROJECT. THE PROCESS STARTS WITH THE QUESTION 'WHAT TO DESIGN?' AND RESULTS IN DELIVERABLES, SUCH AS A CONTEXTUAL ANALYSIS OF THE COMPANY, AN OVERVIEW OF FUTURE OPPORTUNITIES FOR NEW PRODUCT DEVELOPMENT, AN ELABORATED DESIGN OF THE BEST OPTION AND, IF FEASIBLE, A PROTOTYPE OF THIS OPTION.



DESIGN
FOR OUR
FUTURE

ABOUT THE JOINT MASTER PROJECT

THE JOINT MASTER PROJECT IS PART OF THE MASTER'S PROGRAMME OF THE FACULTY OF INDUSTRIAL DESIGN ENGINEERING AT DELFT UNIVERSITY OF TECHNOLOGY. STUDENTS COMPLETE THEIR FINAL DESIGN ASSIGNMENT IN THIS COURSE BEFORE THEY GRADUATE. STUDENTS FROM ALL THREE MASTER'S PROGRAMMES OF THE FACULTY FORM A DESIGN TEAM THAT CARRIES OUT A FULL PRODUCT DEVELOPMENT PROCESS OVER A PERIOD OF FIVE MONTHS. STARTING WITH THE DEFINITION OF A PRODUCT STRATEGY FOR A BUSINESS, ULTIMATELY THE COURSE AIMS AT ENDING WITH A 'PRODUCT DESIGN' – PREFERABLY IN THE FORM OF A PROTOTYPE PLUS A PRODUCTION PLAN.

WAY OF WORKING

The product development process consists of three phases. First, the team forms a picture of the company and its environment with the aim of identifying and defining promising areas for new product ideas. This phase results in a well-founded proposal for the further development of a product idea (design goal).

In the second phase, the team generates product ideas and develops a number of concepts based on a problem definition and a programme of requirements. In consultation with the company, one of the concepts is selected.

In the final stage, the team develops the selected concept further. Technical drawings are prepared, a prototype or other representation is made and the production, financing and marketing plan for the product are taken into consideration. Each phase is concluded with a presentation meeting.

WHAT CAN A COMPANY EXPECT?

A multidisciplinary team of four to six students from all three master's programmes works 2,000 man-hours on the company assignment under the supervision of experienced staff. The three master's programmes have the following profiles:

- › Integrated Product Design is a systematic approach to product development that deals with all aspects relevant for the design of a new product, such as function, form, use, production, sales, economics and sustainability. The IPD master focuses on the integration of these aspects and covers all phases of the product development process. The IPD programme centres around mass-produced consumer products and includes product service systems and products for professional applications.

NEOPOST ZIP&GO

QUALITY CONTROL AND PROBLEM PREVENTION OF YOUR PARCELS

Client: Neopost Technologies BV

Students: Albert Soler Mas, Marta Axpe, Federico Trevia, Roald Piera and Rinze Venderbosch

THE CHALLENGE

The postal sector is undergoing major changes. Physical mail volumes are waning. They are being replaced by digital solutions. To anticipate the changing needs of post offices and their customers, Neopost is searching for new products and/or services that would benefit from its huge customer base (600,000 customers), high-tech R&D and production plants, and worldwide supply chain. In the past few months, several companies all over the world have introduced locker shipping systems on the market, which allow consumers to ship and pick up their parcels 24/7. On the basis of the initial figures, this product service system is expected to experience substantial growth.

FINAL DESIGN

Parcel sending and receiving needs more than flexibility. Confidence, security and ease of use are also vital. The new Neopost Zip&Go is a machine that complements the recently installed lockers by increasing quality control and preventing problems with your goods.



- › Design for Interaction teaches students to design innovative and appropriate products and services by placing the key aspects of human-product interaction – use, understanding and experience – in the centre of the design process. The Dfl master is specialised in analysing and conceptualising human-product interactions in relation to the physical, cultural, technological, and societal contexts in which the product is used, and creating suitable designs for these interactions.
- › Strategic Product Design teaches students how to choose a strategic product direction based on insights from the external environment (market analysis, consumer and behaviour research, trends and future scenarios, governmental policies, and new technologies and materials) and the wishes and possibilities of the company (product strategy, brand identity, mission/vision, resources). Translating the chosen strategic product direction into proposals for product concepts (including engineering and design guidelines) is also a central concern.

WHAT IS EXPECTED FROM THE COMPANY?

The success of the project depends to a large extent on good communication between the team and the company. The company provides the necessary information and environment to enable the students to carry out the design project in a real-world situation.

The company representative should give feedback on interim results during the project and be present at the introductory visit and the three plenary presentations. The presentations last approximately half a day each. Thus the company's total estimated time investment in the project is three to four days.

WHO CAN APPLY FOR THIS COURSE?

For the Joint Master Project, the faculty primarily seeks the participation of Dutch producing companies with a minimum of 20 employees in the field of consumer products or B-to-B products with some level of user interaction.

However, in our experience, overly general criteria often fail to yield results. An informative talk with our contact person and a visit to your premises will provide better insight into the mutual benefits.

[IO.TUEELFT.NL/JMP](http://io.tueelft.nl/jmp)



FRUGAL THERMOMETER DESIGN OF A FRUGAL THERMOMETER FOR RURAL UGANDA

Client: Leiden University Medical Center (LUMC)

Students: Caspar Smits, Alkistis Kokorikou, Eleonora Ibragimova and Jingwen Yao

THE CHALLENGE

Together with this faculty, LUMC aims to develop an appropriate thermometer for village health care workers in Africa – it must be affordable, hygienic, reliable, safe, user-friendly for different cultures and able to operate in tropical contexts. The project – ‘50 cent Frugal Thermometer for Africa’ – aims to combine the strengths of both universities (LUMC: medicine and anthropology, IDE: user-centred design, technology and business models). The project should result in a device that any village health care worker in Africa can use to detect fever at an early stage.

FINAL DESIGN

To measure the patient's temperature, the thermometer (Stamp) is placed on the forehead of the patient. It uses infrared technology to read the temperature within a few seconds. Feedback is given with an audio signal that informs the user it has measured the temperature. The reading is displayed on the interface in a combination of numbers as well as colours and a smiley face for illiterate users.

COLLABORATION DETAILS

- › The Joint Master Project starts in February and September.
- › Participation fee amounts from € 2,500 to € 7,500 (excl. VAT), depending on company size.
- › Additional project-related costs may be incurred. Decisions about the use, making and costs of a prototype or other representation will be discussed between the student team, the company and supervisors.
- › The expected result is a prototype or other representation, together with a marketing plan and to-the-point reports.
- › Industrial property rights will be transferred to your company.

In addition, the General Provisions for co-operation in education at the faculty of Industrial Design Engineering apply to this course. The General Provisions can be found at: www.io.tudelft.nl/en/cooperation/contracts/.

CONTACT

For information on the Joint Master Project and possibilities to participate, please contact:

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For information on other opportunities for collaboration with the faculty of Industrial Design Engineering, please send an e-mail to: collaboration-io@tudelft.nl.

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