



INDUSTRIAL  
DESIGN  
CENTER



# HOWEST DESIGN EDUCATION

## HIGHER EDUCATION COURSES

### HOWEST

Howest, University College West Flanders sets the tone in terms of innovation and creativity in Belgium. The campus in Courtrai offers top class education ranging from product design and industrial innovation to multimedia and communication technology to digital arts and entertainment. Howest has close ties with companies in Belgium and abroad. The result is a cross-pollination between young designers, companies and non-profit organizations. This synergy between industry and education produces tangible results in research and innovative products.

### INDUSTRIAL PRODUCT DESIGN (bachelor)

The bachelor Industrial Product Design is a three-year product designer course (m/f). The challenge is developing new products and improving existing ones, from concept to realization. In this professional bachelor course the emphasis is on applied and competency-based education. It is all about achieving a design ready for production.

A basic knowledge of theory complements practical experience. Graduates have a wide basic knowledge and are immediately employable in the design departments of companies, innovative SMEs or engineering firms.

### INDUSTRIAL DESIGN (master)

The master course in the industrial design science of Howest is a four-year engineer's course specializing in product design. The course programme focuses a great deal of attention on research and design methods to create concepts and products. Via the study of literature, patent research, the analysis of actual technology, extended test campaigns and user analysis these masters seek a perfect match between technology, users and their environment. The result? Innovative products for the future.

### INTENSIVE PROGRAM

During the Intensive Program (IP) "a multidisciplinary approach to product innovation" for the bachelor and master courses in Industrial (product) design the students in Courtrai – together with their European colleagues – spend two weeks dealing with concrete company issues. In 2008 this earned Howest the prestigious Design Management Europe Award.

#### CONTACT

[www.howest.be](http://www.howest.be), [www.industrieelontwerpers.be](http://www.industrieelontwerpers.be)  
[industrialdesigncenter@howest.be](mailto:industrialdesigncenter@howest.be)



# INDUSTRIAL DESIGN CENTER

## INDUSTRIAL DESIGN EXPERTISE

### EXPERTISE

As a center for training, research and service, the Howest Industrial Design Center (IDC) is fully embedded in the bachelor Industrial Product Design and the master Industrial Design. Industrial Design Center houses various research groups under one roof and combines its extensive expertise in traditional, rapid & virtual prototyping, light technology, creative methodology, sustainable design and assistive technology. The center validates its expertise in practice. To develop the expertise even further there is an ongoing interest in new multi-disciplinary research projects at the request of businesses.

### FACILITIES

Industrial Design Center has state-of-the-art equipment at its disposal. Companies are free to use these instruments and call on the extensive network of specialists as well.

### COMMUNICATION

Industrial Design Center is a platform that keeps a finger on the pulse in the field of product development. IDC informs Howest alumni and partner companies on trends and social topics in the field. These topics are highlighted at events, lectures, training or study tours.

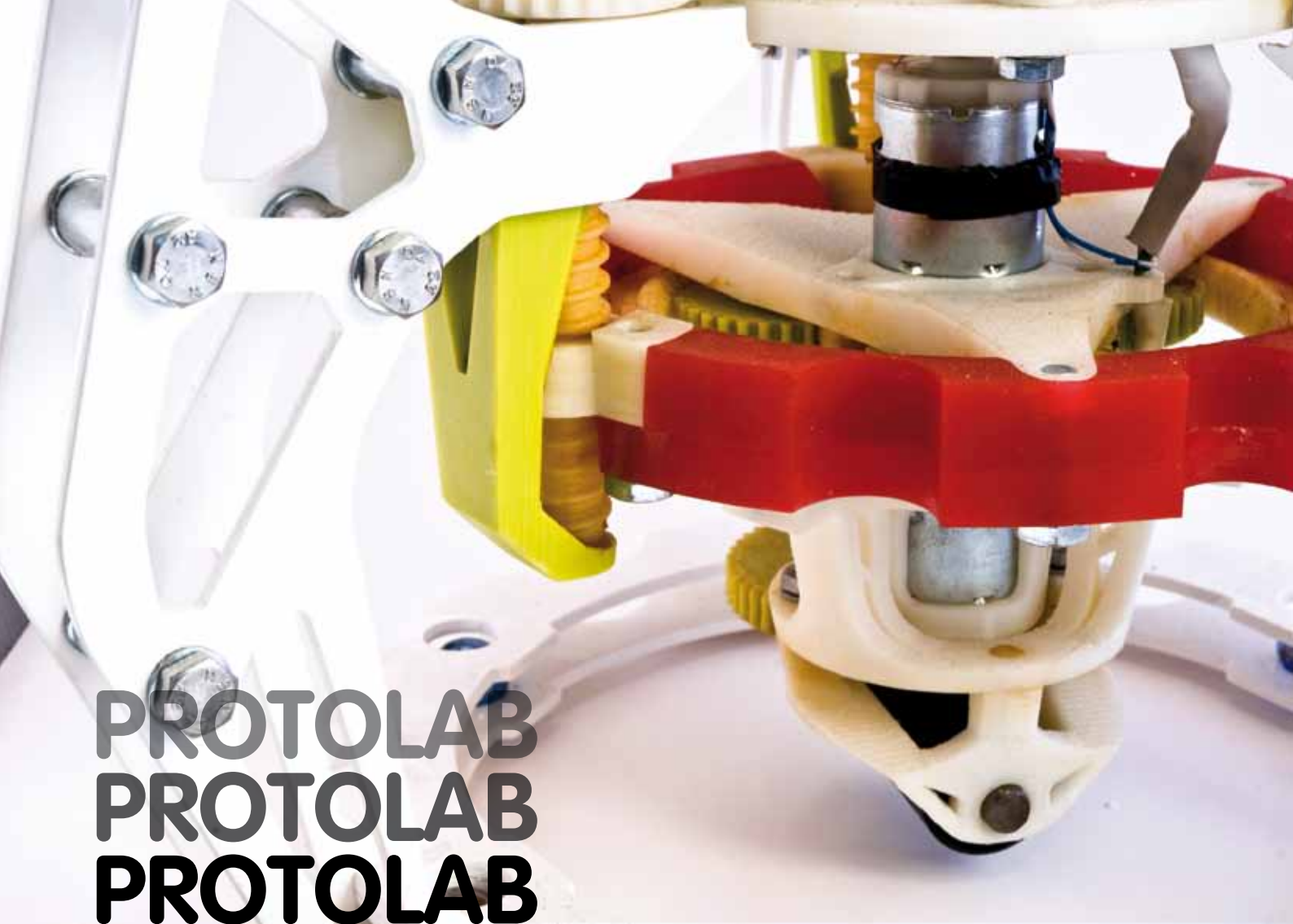
### EDUCATION

Industrial Design Center links higher education and business. Qualitative knowledge and experience are exchanged this way.

### CONTACT

[www.industrialdesigncenter.be](http://www.industrialdesigncenter.be)

[industrialdesigncenter@howest.be](mailto:industrialdesigncenter@howest.be)



# PROTO LAB LAB LAB

## PROTOTYPING AS A TOOL IN THE DESIGN PROCESS

### RESEARCH

Prototypes are indispensable in any design process. Howest's ProtoLab has created a distinct profile for itself with regard to 'traditional, rapid & virtual prototyping'. The focus is on materialization and new applications of existing techniques and technologies in domains like architecture, occupational therapy, product design and digital arts. Via investment and permanent updating of knowledge, ProtoLab is able to respond to special requests by companies.

### SERVICES

For companies, ProtoLab always tries to find the suitable prototype in function of design, context, objectives, and the available technology. The lab has at its disposal rapid prototyping technology (3D printing), a vacuum casting set up, a 3D-measuring bench with optic laser scanner, a laser cutter, thermoforming equipment as well as traditional prototyping techniques and materials (wood, synthetic materials, composites). ProtoLab collaborates with other research centers and service companies. Companies sometimes need 3D-measuring, principle scale-models, functional prototypes or dummies for communication or marketing or any other form of validation. ProtoLab produces limited series of functional parts or products for special applications.

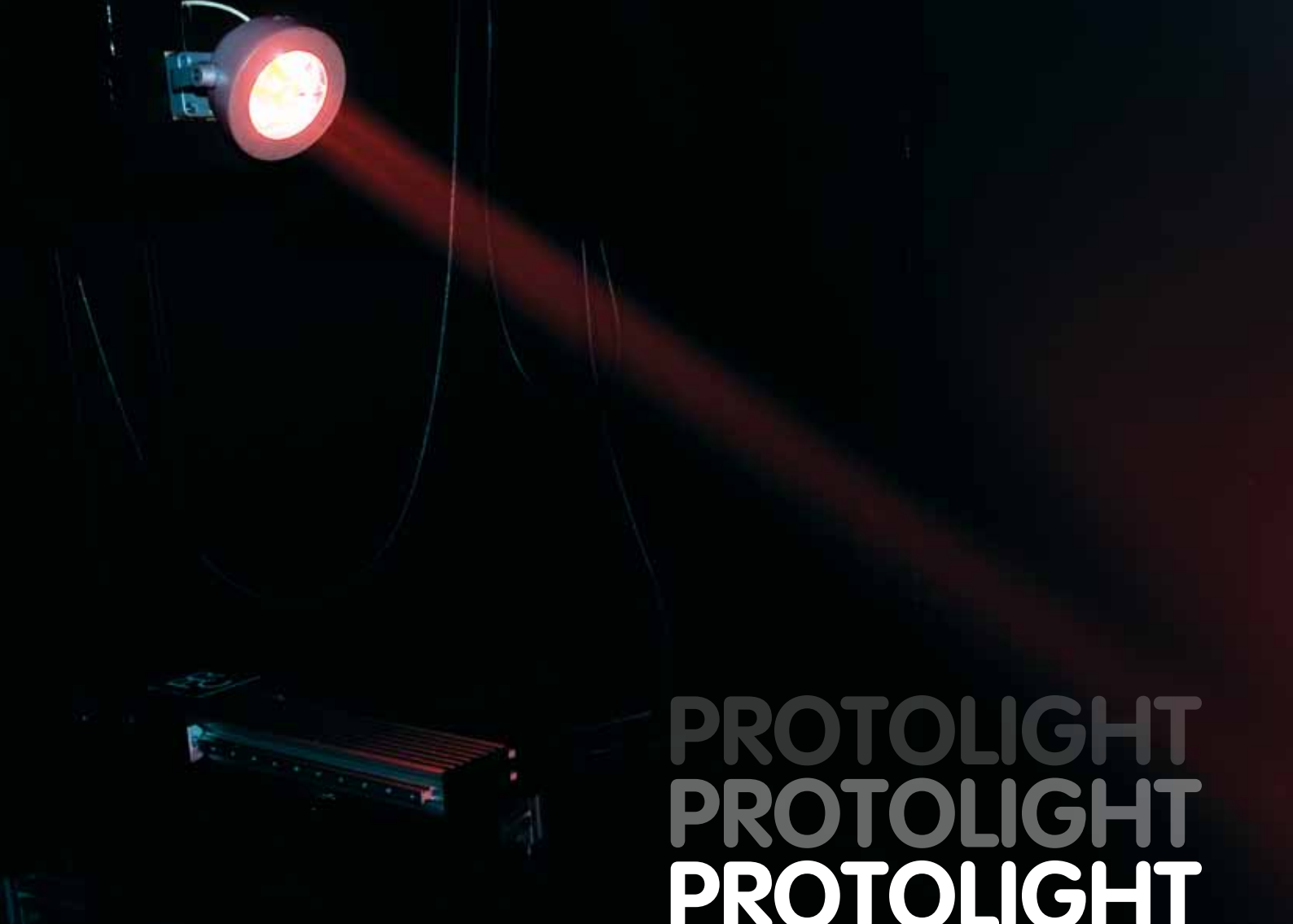
*"We urgently needed a model replica of a shaft with a moving lift cage. Both the visual and the technical aspects were important here. Although a simplification of the real object was required, the result was more than just a principle scale-model. Moreover, ProtoLab offered a good price/quality ratio."*

Peter Coopman van Liffen Coopman

### CONTACT

[www.protolab.be](http://www.protolab.be)  
[protolab@howest.be](mailto:protolab@howest.be)

ProtoLab promotes its expertise via presentations during workshops (also at the request of companies), events, course material, demonstrations, trade fair stands and publications.



# PROTOLIGHT PROTOLIGHT PROTOLIGHT

## SHAPING LIGHT

Within the Howest Industrial Design Center, Protolight is the expert center for lighting. This research cell promotes innovation in lighting. ProtoLight tests and implements new technology and processes in various disciplines. The expert center also promotes its knowledge at lighting companies, individual designers and (interior) architects.

### RESEARCH

With the input of the Howest bachelor course in Industrial Product Design and ProtoLab, ProtoLight is working on a methodology to design and prototype reflectors for lighting equipment. Reflectors (mirror optics) direct the light beams of a light source as efficiently as possible in order to create a certain light effect. These methodologies and techniques are interesting for companies that integrate reflectors in industrial products. To realize prototypes quickly, ProtoLight uses techniques like photo goniometry, reflection-transmission measuring equipment, light simulation software (Photopia, Relux), 3D-scanning and (rapid) prototyping.

### SERVICES

Companies can perform light measurements. The photo goniometer measures Light Distribution Curves (LDC). The reflection-transmission meter determines the transparency or reflection of materials like synthetics, glass, coatings, and sheet material. Moreover, efficiency studies and optimisations of lighting equipment and fittings according to simulations are possible.

*"ProtoLight offers new perspectives to optimise products and the necessary supplementation in prototyping & testing. Our company takes part in the research. This is an inspiring win-win situation for the company, the whole sector and the students at Howest."* Peter Ameloot, Delta Light.

Partners and interested companies are welcome to use the extensive materials library. They can also take part in the seminars where ProtoLight shares its knowledge and expertise with anyone who is interested.

### CONTACT

[www.protolight.be](http://www.protolight.be)

[protolight@howest.be](mailto:protolight@howest.be)



# INNOWIZ INNOWIZ INNOWIZ

## HOW ARE YOU CREATIVE?

### RESEARCH

Creativity techniques enhance the creative thinking process of teams and individuals and provide extra incentives for companies that implement innovation processes or change. For some years the Howest Industrial Design Center researchers have been intensively researching 'applied creativity'. The result is INNOWIZ (INNOvation WIZard), a guideline that assists in innovations. INNOWIZ was developed at the request of the industry. The objective is to remove barriers regarding creativity and to mould the idea into something tangible for all entrepreneurs and at all company levels. On the basis of methodology, projects are approached in a manner that is both creative and results-oriented, in four steps. INNOWIZ also offers an extensive online database of creativity techniques, using both analogue and advanced interactive Web 2.0 tools. Anyone can consult the database (open source). The system is updated regularly with new tools.

INNOWIZ shows organizations and companies the way in creativity techniques and their applications. The researchers are constantly looking for companies to start up new multidisciplinary projects.

*"The aluminium sector is in full swing; the number of applications and particularly the processing of the material is evolving at breakneck speed due to the many advantages of aluminium. Remi Claeys Aluminium called on INNOWIZ to work out a number of new directions. Thanks to the young, creative team at Howest and their enthusiastic approach, there were quick concrete results. INNOWIZ offered a session in 'creative thinking' in a well thought-out process. Their experience in constructive 'out of the box' thinking helped us along at great speed."*

Hubbe Vanneste, Remi Claeys Aluminium.

### SERVICES

INNOWIZ provides an individual toolbox with creativity techniques that fit in with an organization's specific challenges. The creativity cell regularly provides training or lectures on creativity and innovation (also on the request of companies).

### CONTACT

[www.innowiz.be](http://www.innowiz.be)  
[innowiz@howest.be](mailto:innowiz@howest.be)



# DESIGN FOR SUSTAINABILITY

## PLAY IT FORWARD

### RESEARCH

Sustainable product development is a form of innovation which, besides environmental advantages, also provides economic and social and cultural benefits. It is a globally acknowledged necessity and everyone wants to contribute. However, its practical integration in companies is often a stumbling block. The “Design for Sustainability” research programme supports sustainable product development and innovation of industrial goods and ‘systems service systems’ in companies. The programme focuses on the product technical and market related aspects of sustainable product development, both within the current tendencies and within the expected developments.

### SERVICES

In collaboration with BECO, Pantopicon and Flanders InShape/IWT, the “Design for Sustainability” research cell has developed a business game that enables Flemish companies gain experience with sustainable product- and services innovation. The three Ps of sustainable development (People, Planet, Profit) are the pillars of the game. Apart from eco-innovation, the game also takes into account social and economic sustainability. In the game, the company comes face to face with future challenges regarding sustainability. Individual barriers and possibilities are the hot topics of conversation and they lead to innovative ideas.

Design for Sustainability promotes its expertise via presentations during lectures (at request only), trade fairs and publications.

### CONTACT

[www.play-it-forward.be](http://www.play-it-forward.be)  
[designforsustainability@howest.be](mailto:designforsustainability@howest.be)



# DESIGN FOR EVERYONE

## ASSISTIVE TECHNOLOGY

### RESEARCH

Design for [everyone] is a research project which is the result of the collaboration between Howest's Industrial (Product) Design and Occupational Therapy courses. The research bridges modern design and assistive technology (technological aids for those in need of care). Human-centered design techniques enhance personal involvement in the design process of both designers and patients. Ergonomic models and rapid manufacturing techniques are perfect for developing products in small series for specific end-users. An individual assistive product is custom made for one single user in one specific context. The person in need quickly adapts to the instrument that way. Within the Fablab-philosophy there is a need for products that are adjustable to local or personal requirements. Practically and economically speaking this is unattainable in mass production. Ergonomic models and observation techniques demand intense involvement of the end-user. This leads to new insights and it enhances the product affinity between the patient and his or her assistive tool.

### SERVICES

Nine top aids in a row: the guitar aid, backpack aid, drink aid, serving aid, hands-free stool, collapsible table, MP3-player aid for wheelchair users, speech computer and ice-cream aid. The research cell Design for [everyone] worked in close collaboration with partners like in-HAM.

Design for [everyone] promotes its expertise via presentations during lectures (also at the request of companies), trade fairs and publications.

### CONTACT

<http://designforeveryone.howest.be/>  
[designforeveryone@howest.be](mailto:designforeveryone@howest.be)



# DESIGN EDUCATION PROGRAMS

## THE AGE OF DESIGN

In various ways the Industrial Design Center (IDC) contributes to high-quality education. Developing educational programmes that stimulate creative thinking processes in pupils, students and teachers, foster entrepreneurship, introduce young people to the world of industrial design, encourage them to choose a scientific or technical education are only a few examples. IDC connects the various educational levels which yields a natural cross-pollination. This mutual influence takes place during interactive workshops, by offering didactically innovative material or showing them around the Howest design studios.

### GIRLS FOR DESIGN

Girls for Design is an initiative of Howest supported by Vlaanderen in Actie (Flanders in Action) and Wetenschap maakt knap (Science makes you Smart). The aim is to make science popular. Girls for Design plunges senior high school students into the amazing world of innovation, creativity and technology. Pupils take on the challenge of designing a product themselves. In this experimental way they become acquainted with all sorts of creative and technical tools related to industrial product design.

### MYMACHINE

MyMachine is an initiative of Howest, Intercommunale Leiedal and Streekfonds West-Vlaanderen. Together primary education, higher education and secondary technical educations build dream machines. Primary school children devise a 'dream machine' (IDEA). Howest students of industrial (product) design develop these ideas further (DESIGN). Finally the pupils in secondary technical education build the machines (PRODUCT). In 2009 the United Nations presented MyMachine with a World Summit Award. The project also won the Design Management Europe Award '09 in the category non-profit for the integration of design as key-element in strategy, project management and project process.

*"Introducing young people today to technology and industry in a creative way – to kindle their interest in technical professions – is an ongoing challenge and absolutely vital for every high tech company in Flanders."*

Frederic Dryhoel, Picanol Group

### CONTACT

[www.girlsfordesign.be](http://www.girlsfordesign.be), [girlsfordesign@howest.be](mailto:girlsfordesign@howest.be)  
[www.mymachine.be](http://www.mymachine.be), [info@mymachine.be](mailto:info@mymachine.be)



## THE NEW OLD GENERATION...

Industrial Design Center regularly informs the alumni of the bachelor Industrial product design and the master Industrial design of lectures, job vacancies, competitions and activities for designers. Four times a year the Industrial Design Center invites well known designers and speakers for a Designtalk and keeps anyone who is interested informed of its own research themes and those of partner organizations. The open door days of Howest and other network gatherings strengthen the alumni network in Flanders. "Week van het Ontwerpen" (Design Week) in Courtrai promotes the results of students and alumni which are shown to the public at large. The Howest bachelor and master courses in Industrial (product) design are the driving force behind the activities of NPO Designregio Kortrijk and are the fellow founders of the competency pool for Product Design and Industrial Design, Flanders InShape.

*Please send any questions or suggestions regarding alumni operations to [alumni@howest.be](mailto:alumni@howest.be)*

### VACANCIES

In the search for young talent Industrial Design Center (IDC) also extends a helping hand to businesses. Howest and IDC distribute job information to alumni and students and organize a 'job-happening' at the campus. Each year young Howest-designers have been very successful in design competitions. Every year the Industrial Design Center updates all contact information regarding its alumni.

### ALUMNI

Over the last decade there have been many changes in higher education. The bachelor-master transformation makes higher demands of the master course in the field of research and academic education. This has resulted in the specialization Industrial Product Design on the level of a professional bachelor. This bachelor fills in the need for a professional product designer. Due to the constant exchange between the bachelor and master courses, between students, the alumni and professional fields, graduate industrial project designers are immediately able to take their place in the labour market. They are ready to design the innovative products of the future.

#### CONTACT

[www.howest.be/alumni](http://www.howest.be/alumni)  
[alumni@howest.be](mailto:alumni@howest.be)



CALL FOR...  
CALL FOR...  
CALL FOR...

## CALL FOR INTEREST AND PARTICIPATION

### HOW DO I PARTICIPATE?

The fields of research described above are mainly demand-driven. In other words they involve applied research. The Industrial Design Center is therefore in tune with what companies need. Let us know which research subjects interest you. There are many possibilities for collaboration.

### DESIGN ASSIGNMENTS

Teachers include concrete cases in their lessons. In their training students work on your company issues. In return you get a host of ideas that are worked out in detail.

### PROJECT WEEKS

During the project weeks students in multidisciplinary teams work out solutions to complex industrial challenges. The Intensive Program "a multidisciplinary approach to product innovation" is an annual international project week. In 2008 this initiative received the Design Management Europe award.

### BACHELOR OR MASTER EXAM

During a bachelor or master exam, final year students have to do an internship with a business company. The internship is immediately followed by a graduation project, on which the student is expected to work for one year.

### DEMAND DRIVEN RESEARCH

Together with industrial partners the Industrial Design Center regularly submits new project dossiers in the form of an innovation study/project, or via TETRA, IWT, Flanders InShape, and so on.

### LONG-TERM RESEARCH

Industrial partners can become a Howest-partner in the college doctorates.

### MADE-TO-MEASURE SERVICES

Industrial Design Center has expertise in prototyping, light technology, creativity methodology, durable product development, design for [every]one and cross training educational programmes. Please contact us for more information.

### WORKSHOPS AND COURSES

Check our website [www.industrialdesigncenter.be](http://www.industrialdesigncenter.be) regularly for an overview of events where you can find us. We also give lectures on demand.

### POSTGRADUATE IN INTEGRAL PRODUCT DEVELOPMENT

This is a special course for people who wish to do a refresher course in the broad field of product development.

### NETWORK

You are always welcome to attend Designtalks and other Howest events.

### CONTACT

[www.industrialdesigncenter.be](http://www.industrialdesigncenter.be)  
[industrialdesigncenter@howest.be](mailto:industrialdesigncenter@howest.be)



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## COME AND VISIT US

### ADDRESS

#### Visitors address:

Howest  
Industrial Design Center  
Marksesteenweg 58  
8500 Kortrijk  
Belgium

#### Correspondence address:

Howest  
Industrial Design Center  
Graaf Karel de Goedelaan 5  
8500 Kortrijk  
Belgium

### PHONE

T +32 (0)56 24 12 11  
F +32 (0)56 24 12 24

### WEB

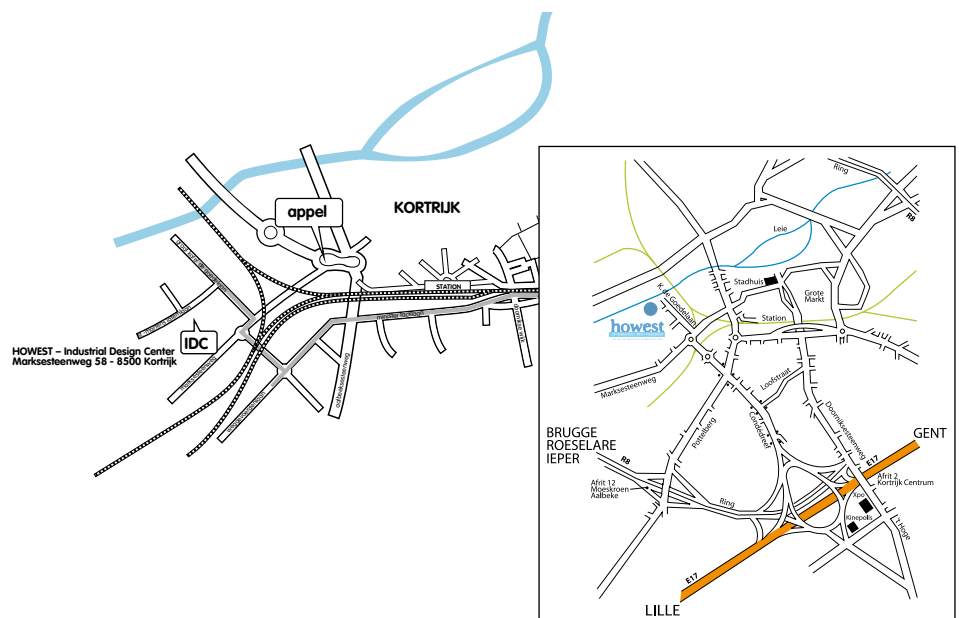
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[www.howest.be](http://www.howest.be)  
[www.industrieelontwerpers.be](http://www.industrieelontwerpers.be)

### LINKEDIN

group industrial design center

### EMAIL

[industrialdesigncenter@howest.be](mailto:industrialdesigncenter@howest.be)



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