

Facts & Figures

2015



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Portrait

Vision

TU Delft believes its role in society is to supply technological solutions that take us significantly further along the road towards sustainability and a flourishing economy. We position ourselves as an open academic community which, through its academic staff and graduates, is represented throughout the academic world and also rooted in our own regional and national, social and economic environment.

Mission

TU Delft's mission is to make a significant contribution towards a sustainable society for the 21st century by conducting ground-breaking scientific and technological research – acknowledged as world class; by training scientists and engineers with a genuine commitment to society; and by helping to translate knowledge

into technological innovations and activities with both economic and social value.

Values

The core values that guide all those associated with TU Delft are:

- Respect
- Integrity
- Expertise
- Transparency
- Avoidance of conflicts of interest

Our modus operandi as an institution is trust – by which we mean that every member of our community is expected to comply with our core values, to draw inspiration from them and to feel responsible for upholding them. Everyone at TU Delft should act with a sense of social responsibility and be aware of technology's value to and impact upon society.





Delft University of Technology at a Glance



Finances

Equity	357,9 mln
First income stream	398,5 mln
Second income stream	47,7 mln
Third income stream	127,7 mln

Education

Bachelorprogrammes	16
Masterprogrammes	31
Student population	19613
PhD Students	2575
International students	3151
First year students	4245
Master degrees	2251

Research

Professors (fte)	232
Publications (scientific)	5139
Promotions	371

Valorisation

Startups	17
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Personnel

Scientific staff (fte)	2668
Scientific staff (head count)	2935
Professional services (fte)	1898
Professional services (head count)	2168

Faculties

- Architecture and the Built Environment
- Civil Engineering and Geosciences
- Electrical Engineering, Mathematics and Computer Sciences
- Industrial Design Engineering
- Aerospace Engineering
- Technology, Policy and Management
- Applied Sciences
- Mechanical, Maritime and Materials Engineering



Education and Students

- TU Delft has developed a portfolio of 16 BSc programmes (including two joint degrees), which cover the broad range of engineering disciplines.
- The university offers more than 30 MSc programmes, several of which are unique in the Netherlands.
- Some of these degree programmes are offered in conjunction with other institutions, under the auspices of either the 3TU Federation (the collaborative venture of the three Dutch universities of technology) or our alliance with Leiden University and Erasmus University Rotterdam.
- Our MSc programmes are taught in English, as are our Aerospace Engineering and Applied Earth Sciences BSc programmes.



Bachelor

- Aerospace Engineering
- Applied Earth Sciences
- Applied Mathematics
- Applied Physics
- Architecture, Urbanism & Building Sciences
- Civil Engineering
- Clinical Technology (joint degree)
- Computer Science & Engineering
- Electrical Engineering
- Industrial Design
- Life Science and Technology
- Marine Technology
- Mechanical Engineering
- Molecular Science and Technology
- Nanobiology (joint degree)
- Systems Engineering, Policy Analysis & Management

Master

- Aerospace Engineering
- Applied Earth Sciences
- Applied Mathematics
- Applied Physics
- Architecture, Urbanism and Building Sciences
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Computer Engineering
- Computer Science
- Construction Management and Engineering
- Design for Interaction
- Electrical Engineering
- Embedded Systems
- Engineering and Policy Analysis
- Geomatics
- Industrial Ecology
- Integrated Product Design
- Life Science and Technology
- Management of Technology
- Marine Technology
- Materials Science and Engineering
- Mechanical Engineering
- Nanobiology (joint degree)
- Offshore and Dredging Engineering
- Science Education and Communication
- Strategic Product Design
- Sustainable Energy Technology
- Systems and Control
- Systems Engineering, Policy Analysis and Management
- Transport Infrastructure and Logistics

Post-master

- Berlage Master in Architecture and Urban Design
- European Postgraduate Masters in Urbanism

Online Education



MOOCS in 2015 and 2016

- Data Analysis: Take it to the MAX()
- Introduction to Water & Climate
- Solar Energy
- Product Design: The Delft Design Approach
- Industrial Biotechnology
- Introduction to Functional Programming
- The Basics of Transport Phenomena
- Circular Economy: reuse, recycle, reuse
- The Next Generation of Infrastructure
- Introduction to Drinking Water Treatment
- Sustainable Urban Development: Discover Advanced Metropolitan Solutions
- Leadership for Engineers
- Responsible Innovation
- Geohydrology
- Estimation Theory
- Introduction to the Treatment of Urban Sewage
- Open Government
- Building with Nature
- Pre-University Calculus
- Framing: Learn How to Debate and Create Powerful Messages
- An Introduction to Credit Risk Management
- Topology in Condensed Matter: Tying Quantum Knots
- Creative Problem Solving and Decision Making
- Introduction to Aeronautical Engineering
- Wind Energy

Professional Education Courses

- Economics of Cyber Security
- Text Mining and Analytics
- Energy Friendly Renovation Processes
- Forensic Engineering
- Dashboards with Excel
- Advanced Credit Risk Management
- Data Governance
- Algorithmic Governance
- Responsible Innovation
- Design of Closure Works
- Membrane Filtration

Online Courses

- Aerospace Engineering
- Wind Energy
- Solar Energy
- Engineering & Policy Analysis
- Drinking Water Treatment
- Sanitary Engineering
- Waste Water Treatment
- Urban Drainage and Water Management
- Costa land Ocean Engineering
- Project Management

Scientific Focus



Architecture and the Built Environment

- Architecture
- Architectural Engineering & Technology
- Urbanism
- Management in the Built Environment
- OTB Research for the Built Environment

Civil Engineering and Geosciences

- Structural Engineering
- Geoscience & Engineering
- Hydraulic Engineering
- Water Management
- Geoscience & Remote Sensing
- Transport & Planning



Industrial Design Engineering

- Design Engineering
- Industrial Design
- Product Innovation Management

Technology, Policy and Management

- Engineering Systems & Services
- Multi Actor Systems
- Values, Technology & Innovation





Aerospace Engineering

- Aerodynamics, Flight Performance and Propulsion & Wind Energy
- Aerospace Structures & Materials
- Control & Operations
- Space Engineering

Applied Sciences

- Bionanoscience
- Biotechnology
- Chemical Engineering
- Imaging Physics; Radiation
- Quantum Nanoscience
- Radiation Science & Technology



Mechanical, Maritime and Materials Engineering

- Biomechanical Engineering
- Systems & Control
- Maritime & Transport Technology
- Precision & Micro-systems Engineering
- Process & Energy
- Materials Science & Engineering



Electrical Engineering, Mathematics and Computer Sciences





- Applied Mathematics
- Electrical Sustainable Energy
- Intelligent Systems
- Microelectronics
- Software & Computer Technology





Delft Research- based Initiatives

- Its public mission and core values place TU Delft as an academic institution at the heart of society.
- Its scientists and researchers are working to resolve some of the great and pressing issues of our time in four main areas: energy, health, the living environment, and infrastructure and mobility.
- Helping to solve these and similar problems requires a considerable amount of innovative research and represents an enormous challenge for our staff and students.

		Energy	Deltas, Infrastructures & Mobility	Health	Global
Research fields					
		<ul style="list-style-type: none"> • Wind energy • Solar energy • Energy networks • (chemical) Storage • Energy efficiency in design • Energy efficiency in industry • Energy in the built environment • Geo-energy • Biomass • Nuclear energy 	<ul style="list-style-type: none"> • Vital infrastructures for Water Safety and Smart Mobility • Sustainable, efficient transport • Logistics & mainports • Safe sustainable deltas and metro-poles • Connective theme: Resilient, Durable Infrastructures 	<ul style="list-style-type: none"> • Medical imaging & image guided medicine • Interventions & Care • Targeted molecular technology • Vitality 	<ul style="list-style-type: none"> • Science and Technology for Global Development • Sustainable solutions in close cooperation with partners in developing countries • Water • Urbanism • Healthcare • Energy • Disaster Resilience
Start		2009 8 Faculties	2009 5 faculties	2009 6 Faculties	2015 8 Faculties

TU Delft Institutes

TU Delft has collated certain specific fields into a number of university-wide institutes. Each TU Delft institute is headed by one of our leading scientists.

TU Delft Process Technology Institute

The TU Delft Process Technology Institute (DPTI) focuses its educational and research efforts on realising significant scientific breakthroughs that enable (bio)chemical, energy and materials industries to meet sustainability challenges of the future.

TU Delft Robotics Institute

This institute unites all the university's research in the field of robotics. The scientific challenge facing the robotics institute is to get robots and humans to work together effectively in unstructured environments and real settings.

TU Delft Transport Institute

Transport is an essential part of our society. Whether driving to work in a car, cycling to the supermarket, or having a package delivered to your home, we all use transport on a daily basis. However, we also experience the disadvantages of transport every day, in the form of traffic jams, accidents and environmental pollution.

TU Delft Climate Institute

Spread all over the TU Delft campus are researchers working on the topic of 'climate', either by producing climate sensors or models that describe our climate, or by working on ways to cope with climate change. Their expertise is brought together in the TU Delft Climate Institute.

TU Delft Wind Energy Institute

DUWIND is TU Delft's wind energy research organisation. Its research programme covers almost all aspects of modern wind turbine technology, and is conducted across five faculties in 13 research groups. Each of the groups at these faculties has its own specific expertise, but an increasing number of research questions require a multi-disciplinary approach.

TU Delft Space Institute

Founded in November 2014, the TU Delft Space Institute is the latest addition to the fold. It brings together five faculties on three research themes: Sensing from Space, Distributed Space Systems and Space Robotics.



TU Delft Sports Engineering Institute

The TU Delft Sports Engineering Institute combines the expertise of five faculties. The aim of the institute is to promote and organise research and education in the field of performance enhancement in elite sports as well as the promotion of sport, play and exercise to create a healthier society.

TU Delft Safety & Security Institute

The TU Delft Safety & Security Institute develops fundamental technologies and models for safety and security in the private sphere, the public sphere, and movements between the two.

The institute is a research and capacity-building partner in the field of safety and security. It forms a platform for cooperation with industry and government and encourages multidisciplinary collaboration.

Entrepreneur- ship@Delft



YES!Delft is the high-tech entrepreneurs centre with a clear mission: we build the leading firms of tomorrow. We inspire students, professionals and scientists to take their first steps along the path to becoming an entrepreneur and offer them the necessary support to turn their enterprise into a 'leading firm'. YES!Delft focuses on companies with a technological, innovative and scalable product or process.

Number of companies supported by YES!Delft

Start-up companies	70
Growing companies	22
Alumni companies	25

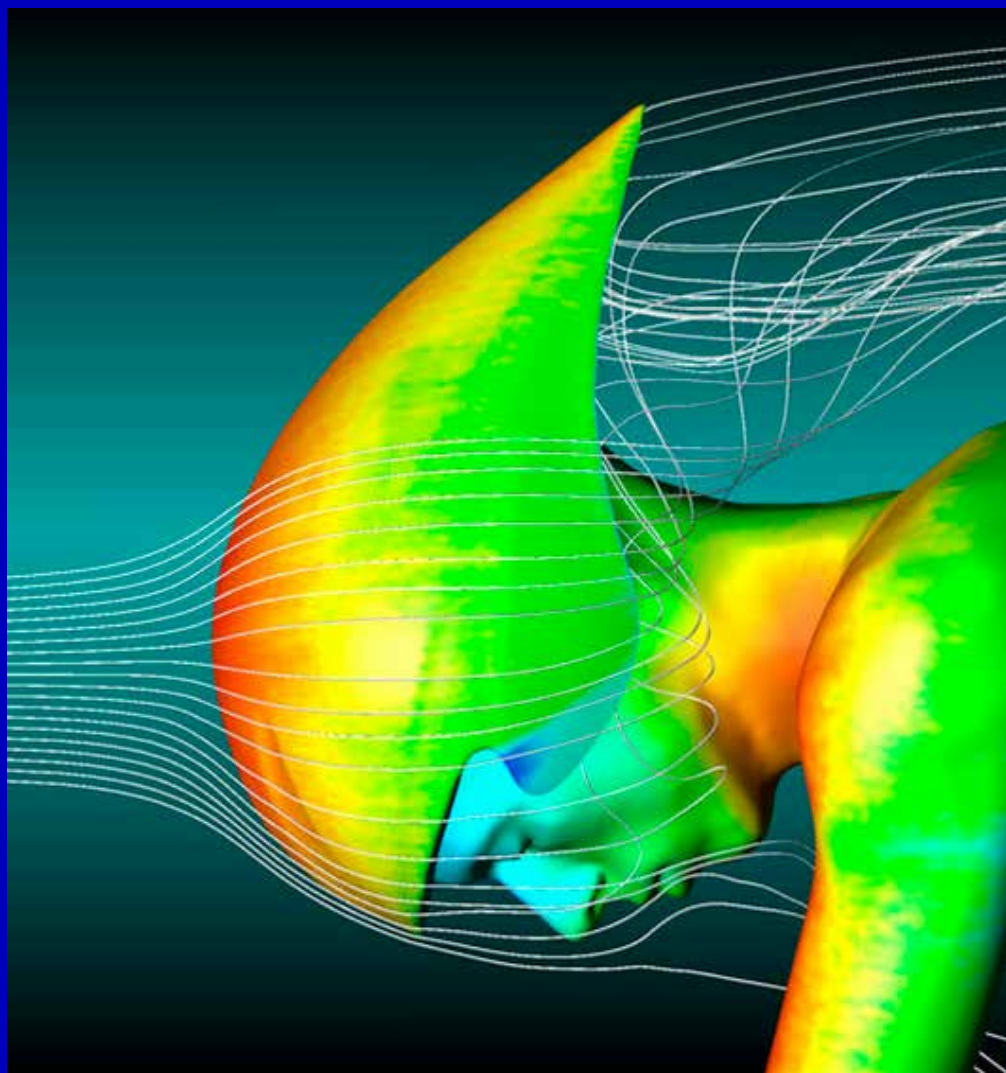
Number of companies per focus area *

Industrial Solutions	38
ICT	34
CleanTech	29
Consumer Products	18
MedTech	12

*Companies can be part of multiple focus areas

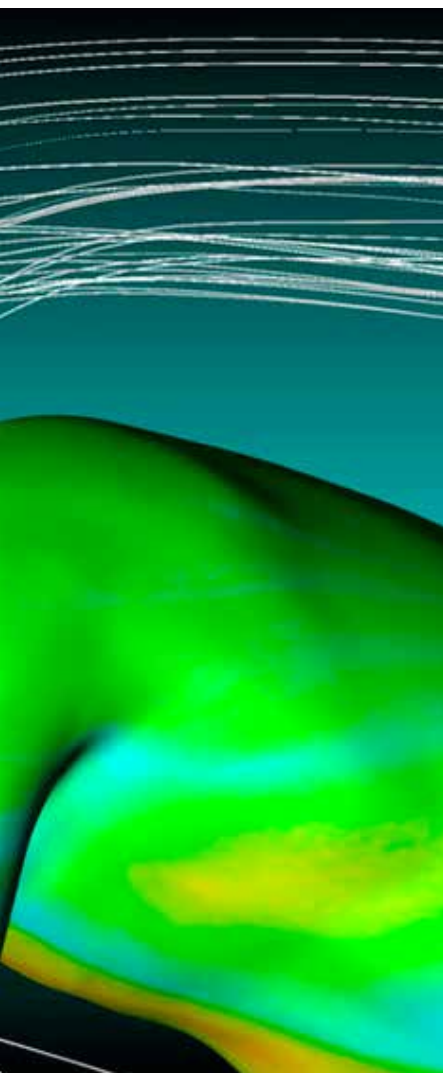


Valorisation



Valorisation Centre

Knowledge valorisation is the creation of social and economic value on the basis of scientific knowledge and skills. The Valorisation Centre stimulates and facilitates knowledge valorisation and provides necessary support for TU Delft scientists and support staff. This includes R&D subsidies (funding for research projects), R&D project management, Intellectual property, business development and cooperation with companies.



Grant agreements signed by the European Union's H2020

Ranking among higher education institutions	14
Number of participants	59
Projects	20

Grants in 2014

ERC Grants	11
Dutch (Veni/Vidi/Vici) Grants	7
STW Valorisation Grants*	9
NWO Take Off	7

*STW Valorisation Grants have changed to NWO Take Off Grants as of mid-2013

TU Delft Alumni





Alumni Worldwide 2015
Based on LinkedIn

Total	83232
The Netherlands	62976
United States	1914
United Kingdom	1393
Germany	1314
Belgium	1174
Spain	833
Italy	728
China	699
France	684
Switzerland	651
Australia	534
Other	10332

Global connections

Worldwide Partnerships

TU Delft's international partnerships' focus on university to university and research institute relations directly linked with strategic government contacts and worldwide industry partners in finding innovative solutions for global challenges.

Our researchers are involved in collaboration activities with a great number of partner institutions around the globe. These connections are based on researcher-to-researcher networks, where shared curiosity and focus bring researchers together in areas of mutual interest in terms of research and/or education.

The university's international strategic partnerships thrive on these solidly-built, long-term researcher relationships, some of which over the past four years have grown into TU Delft Joint Research Centre initiatives based in Brazil (Campinas), China (Beijing, Guangzhou, Nanjing, Wuhan) and Vietnam (Hanoi).

Number of responses from active learners around the world in MOOCs



Network memberships - Some examples

3TU: Eindhoven University of Technology, Twente University and TU Delft

LDE: Leiden University, TU Delft, Erasmus University Rotterdam

CESEAR: 53 universities of technology in Europe

IDEA LEAGUE: ETH Zurich, RWTH Aachen, Chalmers University of Technology, TU Delft

EUA: European Universities Association

An inspiring campus

Our campus provides an attractive environment for everyone who works at, studies at or visits TU Delft. It is organised in a manner designed to appeal to the lifestyle of today's students and staff, and flexible enough to accommodate education, research, new and established businesses, guest accommodation, as well as sporting, cultural and other leisure activities. The planned Delft Technological Innovation Campus will be closely integrated with the university campus.

Research Infrastructure

In order to attract outstanding scientific talent, conduct ground-breaking research and train new generations of engineers, TU Delft is heavily dependent upon excellent and expensive infrastructure. This is what makes it possible for us to test the real-life practicality of models simulated on computers, for example – something no other Dutch university is able to do on such a large scale. It is a defining element of TU Delft's profile in the international research landscape.



TU Delft Library

3TU.Datacentrum possesses the knowledge, experience and tools needed to archive research data in a standardised, secure and well-documented manner.

It provides the research community with:

- an enduring archive for storing of scientific research data;
- permanent access to research data and tools for its reuse; and,
- advice and support on data management.

Research Facilities

Aerospace Engineering

- Aeroplane hangar
- Cessna Citation II jet aircraft
- Clean room for satellite building
- Flight Arena 'cyberzoo'
- Flight simulator Simona
- Kite laboratory
- Micro Air Vehicle Laboratory
- Propulsionlab (being built now)
- Structures & Materials lab
- Wind tunnels (low and high speed tunnels)

Applied Sciences

- Chemical labs
- Fermentation labs
- Molecular biology labs
- Bioprocess Pilot Facility
- Microscopy labs
- Laser labs
- Cleanrooms
- Nuclear research reactor

Architecture and the Built Environment

- Architecture Model Hall
 - Four 3D printers
 - Experimental 3D lab
 - Five lasercutters
 - Two CNC milling machines
 - Render farm
- Architecture Library
 - 35.000 books
 - 14.000 maps
 - 550 atlases
 - 260 magazine titles

Civil Engineering and Geosciences

- Cloud lab
- CT scanner
- Driving simulator
- Dummy drill pit
- Self-driving car
- Traffic drone
- Water lab

Electrical Engineering, Mathematics and Computer Sciences

- Else Kooi Lab, cleanroom for microsystems
- Sustainable Energy and High Voltage lab
- Insight Lab for AI and Computer graphics
- Radar and Telecommunications lab

Industrial Design Engineering

- Applied labs
- Consumer Research Product Evaluation Lab
- Foundational labs
- ID Studio lab
- 'Made Of..' materials library
- Model making and machine lab
- Perceptual intelligence lab
- Physical and ergonomics lab

Mechanical, Maritime and Material Engineering

- Clean room for micro/nano
- Driving and racing simulator labs
- Fluid mechanics lab
- Graphene and thin film deposition lab
- Materials lab
- Mechatronics lab
- Perfect reactors lab
- Process technology lab
- Robotics lab
- Water tank and towing tank

Technology, Policy and Management

- Policy analysis simulation lab
- Serious game

History of the University

1842 - 1864: Royal academy

On 8 January 1842, King Willem II founded the 'Royal Academy for the education of civilian engineers, for serving both nation and industry, and of apprentices for trade'. The academy also educated civil servants for the colonies and revenue officers for the Dutch East Indies.



1864 - 1905: Polytechnic School

An Act was passed on 2 May 1863 imposing regulations on technical education as well as bringing it under the influence of the rules applying to secondary education. Then, on 20 June 1864, a Royal Decree was issued ordering the Royal Academy in Delft to be disbanded to make way for a new 'Polytechnic School'. The school went on to educate architects and engineers in the fields of civil engineering, ship-building, mechanical engineering and mining.



1905 - 1986: Institute of Technology

On 22 May 1905, an Act was passed acknowledging the academic level of the Polytechnic School's technical education and it became a Technische Hogeschool, or 'Institute of Technology'. Queen Wilhelmina attended the institute's official opening ceremony on 10 July 1905. The institute's first Rector Magnificus was the Professor of Hydraulic Engineering ir. J. Kraus. The institute was granted corporate rights by an Act passed on 7 June 1956.



1986 - present: Delft University of Technology

It was an Act which took effect on 1 September 1986 that officially transformed the Institute of Technology into Delft University of Technology, abbreviated to 'TU Delft' from the Dutch name *Technische Universiteit Delft*.



Rankings

THE Ranking

	World	Engineering & Technology	Reputation Ranking
2015			
2014	71	19	42
2013	69	23	51-60
2012	77	32	51-60
2011	104	22	49

QS Ranking

	World	Engineering & Technology	Natural Sciences
2015	64	19	66
2014	86	16	79
2013	95	15	63*
2012	103	18	91
2011	104	18	79

Leiden Ranking

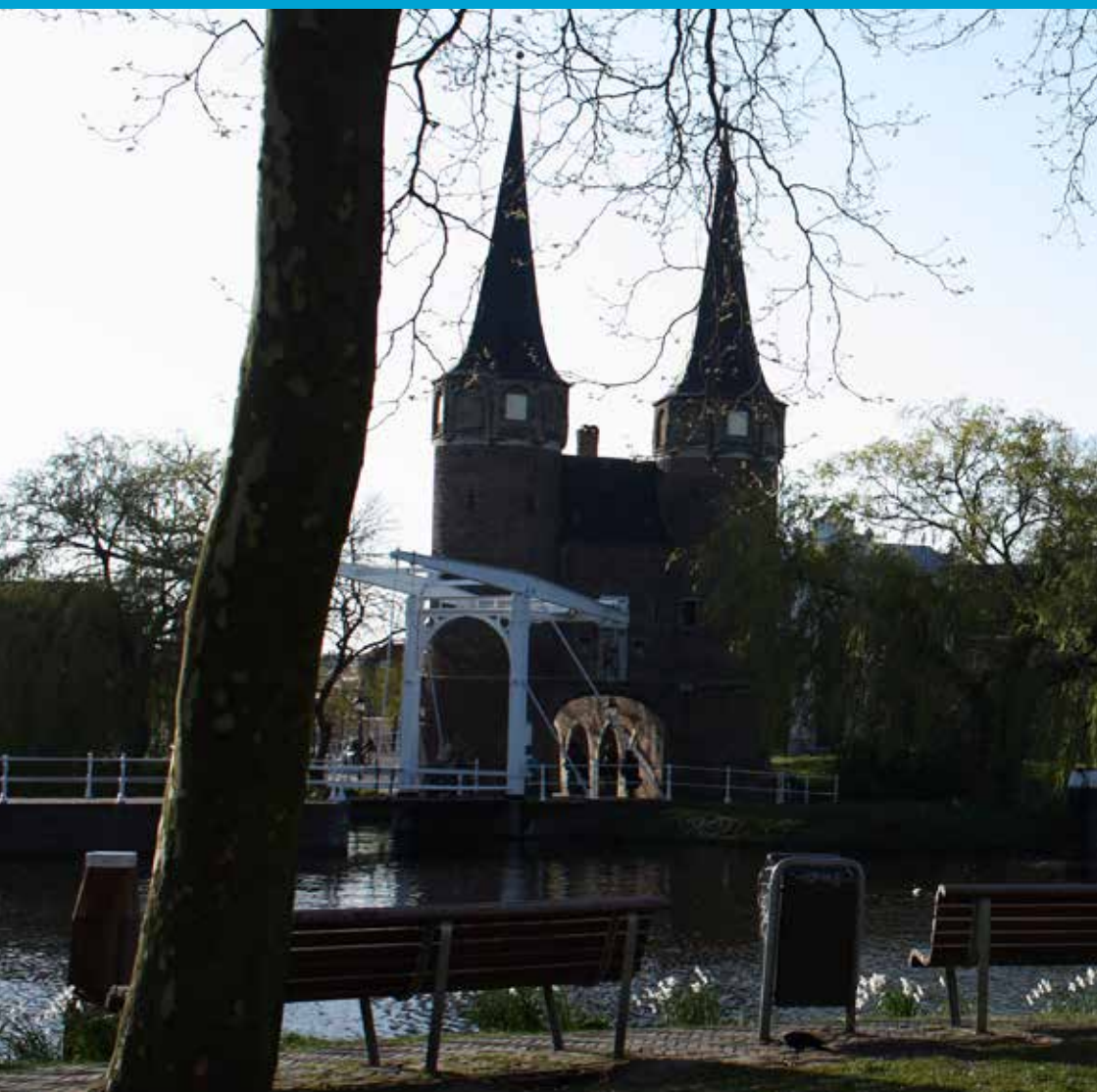
	PP top 10 %	MNCS	UI
2015	102	-	4
2014	148	141	4
2013	164	168	2
2012	-	-	
2011	115	99	

ARWU Ranking

	World	Field Engineering & Technology	Subject Computer Science
2015	201-300	101-150	101-150
2014	201-300	101-150	101-150
2013	201-300	101-150	101-150
2012	201-300	76-100	101-150
2011	151-200	76-100	



The city of Delft



The city of Delft is strategically located at the heart of the Dutch knowledge economy and is within easy reach of the TU Delft campus by bike or public transport. The close connection between the city and the university brings together the best of both worlds. During the past two decades, Delft has rapidly transformed from an industrial centre to a hub for the Dutch knowledge economy. It is a historical city that was established in the 13th century with a rich history including the world-famous 'Delft Blue' china, celebrated painters such as Johannes Vermeer, and scientist such as the inventor of the microscope Antoni van Leeuwenhoek. Delft's slogan is: 'Delft, creating history'. But Delft also constantly looks to the future in order to keep the city vibrant and prosperous. The university and companies based in Delft play an important role in this mission.



City of Delft statistics

Square kilometres: 24

Population: 100.061

Café's, bars and restaurants: 228

Connectivity

To Rotterdam by car 15 km, 20 min

To Rotterdam by train 10 services per hour, 15 min

To Amsterdam by car 66 km, 44 min

To Amsterdam by train 4 services per hour, 58 min

To Schiphol airport by train 6 services per hour, 40 min



**Colophon:****Production**

TU Delft, department Communication

Tekst and Figures

René Haverslag (Strategic Development,
TU Delft)

Design and layout

Saskia de Been (Media Solutions, TU Delft)

Traffic

Media Solutions, TU Delft

Printer

Edauw & Johannissen

More information

obi@tudelft.nl

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These Facts & Figures are also available
on our website www.tudelft.nl

