

# Engineering: people's work

Annual Report 2018





Project Afsluitdijk, the Netherlands

# Engineering: people's work

Annual Report 2018



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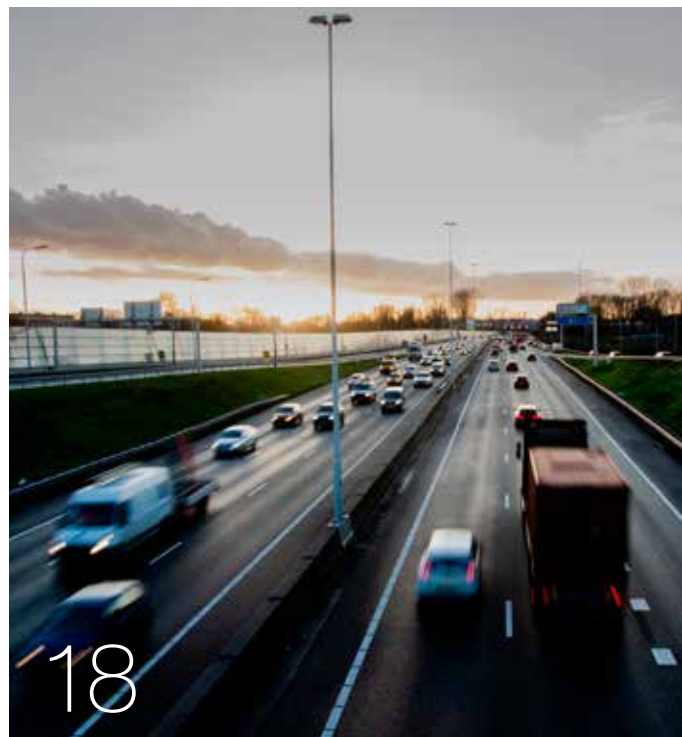
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Project Flood channel Veessen-Wapenveld  
(in the framework of the Room for the River programme)  
won the Dutch Building Prize in the beginning of 2019 in  
the category Civil Works of Art



## REPORT OF THE BOARD OF DIRECTORS

**The Amsterdam North-South Metro Line (Noord/Zuidlijn) is one of the Netherlands' most complex infrastructure projects and was successfully opened in July 2018. Witteveen+Bos worked on this project with partners for 25 years, so the opening was the highlight of 2018 for us. Throughout the year, we contributed to challenges of the future, such as the energy transition. This includes projects such as electric transportation, reducing CO<sub>2</sub> emissions in both the industrial and public sector, and making residential areas independent of natural gas. The increase of our work in the context of the energy transition resulted in launching a product-market combination in this area in early 2019. On balance, we closed 2018 with a total revenue of 132.9 million euros and a net result of 11.3 million euros.**

Witteveen+Bos is an engineering consultancy company offering solutions to social challenges in the fields of water, infrastructure, environment and construction projects. For our employees, we are a platform for discovering, developing and deploying talents to create social value. Based on these elements in our mission, four corporate objectives were defined, about which we write in this annual report.

Our first corporate objective is to create added value for society through our projects. The social goals are based on the SDGs (Sustainable Development Goals) of the United Nations. Our seven sustainable design principles (SDPs) enable us to put sustainability into practice. At the end of 2018, 87 % of all colleagues worldwide were already familiar with the SDPs. Furthermore, we developed an SDG Impact Tool in 2018 for determining and increasing the contribution of our projects to achieving the SDGs.

In 2018, Witteveen+Bos again carried out the successful Plus+ Innovation Programme, which is aimed at developing new solutions for today's challenges in river deltas, infrastructure, 'closing the loops', and sustainable cities. The winner was +Circular Design, a tool visualising the circular potential of a design and comparing improvements. This and various other innovations have been applied for clients already.

Talent development is our second corporate objective. The economy and the labour market improved in 2018, which resulted in an increased inflow of personnel (226) as well as a higher outflow (155). On balance, the size of our workforce grew from 1,054 to 1,125 employees. This growth was mainly realised in the Netherlands and Belgium. Via the PLUSschool for Professionals, we reinforced the substantive development, leadership and engagement of our employees.

The manner in which we organise our business operations also creates value, which is our third corporate objective. In late March, our sustainably renovated office at Leeuwenbrug in Deventer was opened. In part thanks to these renovations, we have exceeded our target of a 28 % reduction in CO<sub>2</sub> emissions per capita compared to the reference year 2007. In September, Witteveen+Bos opened a pop-up office at the campus of Wageningen University & Research, and our new corporate website went live at the end of this year.

We are committed to working worldwide in a culture where compliance and adherence to the Company Code of Conduct are part of our daily routine. In 2018, we appointed an Ethics and Compliance Officer, responsible for preparing and executing the Corporate Compliance Programme.

Creating economic value has been defined as our fourth corporate objective. Witteveen+Bos N.V. worked on approximately 4,000 ongoing and new projects in 2018, generating a total revenue of EUR 132.9 million. Internal revenue accounted for EUR 101.1 million of this total. The net result in 2018 amounted to EUR 11.3 million, yielding a net profit margin of 8.5 %.

In 2018, we prepared a ten year outlook for Witteveen+Bos. We reserved a key role for our neWBies - employees that have been with us for less than five years - to be part of this process. In summary, we see Witteveen+Bos as a worldwide integrated company with a sustainable and innovative profile. We are developing into an initiator of solutions to social issues and a learning place for professionals.

We are pleased to share our work and results for 2018 in terms of our four corporate objectives with you. We have indicated for each corporate objective which initial steps we take in 2019 in order to achieve our vision of Witteveen+Bos in ten years' time. This is part of the preparations for our formal 'Integrated Reporting'. This concerns a summary annual account allowing organisations to present their sustainable operations and how their strategy, governance, performance and outlook create social and economic value in the short, medium and long term.

We are convinced that Witteveen+Bos is well-positioned to address the challenges of the future. We are looking forward to 2019, which we expect to be positive in all respects.

Deventer, The Netherlands, 23 March 2019

Board of Directors of Witteveen+Bos N.V.  
Karin Sluis  
Stephan van der Biezen

## REPORT OF THE SUPERVISORY BOARD

**The Supervisory Board of Witteveen+Bos N.V. is pleased to present this report to the stakeholders of Witteveen+Bos in order to provide insight into the performance of our supervisory duties in 2018.**

Four regular meetings with the Board of Supervisory Directors were held in 2018. In each meeting, the four corporate objectives of Witteveen+Bos were on the agenda: social value through projects, developing talent, sustainable business operations and economic value. We discussed the strategy to achieve these corporate objectives with the Board of Directors, and reviewed progress. We subscribe to the Board's choice to develop a sustainable and innovative corporate profile, and support its course to also view Witteveen+Bos as a training institute.

We received detailed quarterly financial reports, and in the meantime we were kept up-to-date with summaries of relevant financial information. At every meeting, we discussed developments in work in progress, invoicing, liquidity and the result with the CFO and the Board of Directors. We have repeatedly asked attention for financial hygiene within Witteveen+Bos, and we wholeheartedly support the choice of reducing the working capital as a spearhead for 2019.

Regarding personnel, issues such as diversity, management development and the PLUSschool for Professionals were discussed. Furthermore, we discussed the long-term surveys of employee participation in greater detail. Other key issues during the past year were the corporate compliance programme and risk management. Finally, we frequently discussed internationalisation and housing.

In 2018, in addition to the regular Supervisory Board meetings we attended meetings with employees and management to discuss the above points of attention and other issues. Such meetings also enabled us to become aware of other issues within Witteveen+Bos. We are pleased with the open, transparent communication between the Supervisory Board and the Board of Directors in the past year, and we regularly provided unsolicited advice on various topics.

Inca van Uuden requested discharge as a Supervisory Board member. In 2018, a new Supervisory Board member was recruited. This person will be nominated at the General Meeting of Shareholders in April 2019.

The financial statements were prepared by the Board of Directors and audited by the company's external auditor, Deloitte. The financial statements were discussed in the presence of the external auditor. The Supervisory Board supports the Board of Director's proposal for dividend distribution. We propose that the General Meeting of Shareholders adopt the annual financial statements, discharge the Board of Directors from liability for its management and policies, and discharge the Supervisory Board from liability for the performance of its supervisory duties.

In the run-up to 2019, the 2019 business plan and budgets for the coming year were reviewed. The Board of Directors has defined the digital transition and working capital as key focal areas in 2019, and the Supervisory Board will be closely involved in this process. Other themes on the agenda include internationalisation, ICT policy, risk management, diversity and inclusiveness.

We would like to thank the Board of Directors and the employees of Witteveen+Bos for their commitment and enthusiasm in the year under review, and we look forward to a successful, healthy 2019 for the company and its staff.

Deventer, The Netherlands, 23 March 2019

Supervisory Board  
Hans van der Ven (Chairman)  
Gerard van de Aast  
Inca van Uuden







## REPORT OF THE STAKEHOLDER PANEL

On Tuesday 5 March 2019, a draft version of the 2018 Annual Report was discussed with a panel consisting of four external stakeholders. Four members of Witteveen+Bos' corporate social responsibility (CSR) team were also present. The stakeholders reviewed the report with a positive yet critical view, and advised on points for improvement. Their recommendations have been directly incorporated into the final version of this Annual Report where possible, while others will be used as recommendations for next year.

### Report of the Supervisory Board

The stakeholder panel concludes that the Supervisory Board's report is mainly process-based and does not offer much content. The panel advises to set out the Supervisory Board's opinion on Witteveen+Bos' chosen objectives and strategy. The panel also suggests outlining the role of the Supervisory Board in relation to the participation system.

### Sustainable Development Goals and sustainable design principles

The fact that Witteveen+Bos is working on translating the SDGs (Sustainable Development Goals) into practical applications is perceived as a positive development. The panel advises explicitly showing that the organisation is experimenting to find the right format, communicating that the SDG Impact Tool is in development.

The sustainable design principles are a key tool in creating social value and increasing the contribution to the SDGs, and play a justified key role in Witteveen+Bos' work. The principles are clear and well-conceived and help the organisation make a concrete contribution to sustainability. The application of the sustainable design principles in the project InnovA58 provides a clear example of the contribution of the design principles.

### CO<sub>2</sub> reduction

Adjusting Witteveen+Bos' business operations result in a relatively minor CO<sub>2</sub> reduction in comparison with the potential CO<sub>2</sub> reduction ensuing from consultancy and design. The panel recommends creating more insight into the emissions in scope 3 of the CO<sub>2</sub> performance ladder in order to manage on CO<sub>2</sub> reduction in projects.

### Safety

The stakeholder panel notes scant reporting on safety, whereas this is a hot topic in Witteveen+Bos operational ecosystem. The panel advises setting out Witteveen+Bos' activities as three pillars (environment, design and occupational health and safety). This is in line with the Governance Code Health and safety in construction that was signed by Witteveen+Bos; Witteveen+Bos is part of this lead group. The panel suggests including available key ratios on internal occupational health in the annual report.

### Transparency

The annual report provides an accurate impression of Witteveen+Bos, but does not offer much insight into the dilemmas that the organisation experiences. For example, it would be good to mention the company's major staff turnover in the past few years. The panel also recommends writing about measures implemented in the context of the GDPR. This was a major issue in 2018.

Another great addition to the report could be a description of the acceptance policy of projects. The reasoning and considerations of whether or not to accept a project would create more clarity about the organisation's strategy.

### Integral reporting

The members of the stakeholder panel indicate that Witteveen+Bos' reporting about its four corporate objectives can be classed as integral reporting. The stakeholder panel makes a few suggestions for further development of annual reporting, with the advice to consider an external audit of non-financial information.

### Stakeholder panel

Machiel Crielaard, Directorate-General of Public Works and Water Management

Eibert Jongasma, Overijssel Nature Conservation Organisation

Robert Koolen, Heijmans

Remco Neumann, Port Authorities Rotterdam





## MISSION AND VISION

**We have a clear mission statement: 'Witteveen+Bos offers its clients value-added consultancy and top-quality designs for water, infrastructure, environment and construction projects. We use our high-end expertise to resolve complex issues and are a committed partner for our clients. We attach great importance to our independence and to our corporate culture, allowing all our employees to excel, fully utilising their talents and maximising value for clients.'**

### Vision

Witteveen+Bos is an engineering consultancy that seeks to offer the very highest level of quality. To us, being top class means: to excel in your own work, collaborating with other top class partners and working in a culture based on entrepreneurship and trust. These elements form our DNA, and are the strengths enabling us to distinguish ourselves in the market, allowing for long-term independent continuity.

### Knowledge development and innovation

At the core, our work is about knowledge: bringing together the right expertise to help solve challenging issues in water, infrastructure, environment and construction projects. We set high standards. At Witteveen+Bos, state-of-the-art expertise is based on passion for the profession. Our employees want to know everything there is to know in their field, from geotechnical engineering to mechanical engineering and from water management to environmental law. By sharing and developing knowledge and deploying it worldwide, we can devise the most effective solution for each client's project.

### Sustainable collaboration

The issues we tackle are becoming increasingly bigger and complex. To develop sustainable solutions, our staff works in international and multidisciplinary project teams alongside colleagues from various backgrounds. We always try to assemble the best possible team. We regularly collaborate with external partners, either on specific projects or in formal strategic alliances and joint ventures with other leading consultancies and complementary organisations.

### Entrepreneurship and trust

Our corporate culture is characterised by trust and scope for entrepreneurship. We work in an informal atmosphere, and employees indicate that they feel engaged with the organisation. Together we are Witteveen+Bos - connected worldwide. It is essential that everyone is allowed to do what he or she does best, and that we offer an environment that promotes creativity and innovation. We are convinced that professionals know best how to do their jobs. They have the intrinsic motivation to develop and contribute to a better society with their work. By pursuing mainly organic growth, we can retain our identity and safeguard our corporate culture.

### Clients

Both public and private sector clients call on us to help resolve the challenges they face. In the public sector, we work for the national government, water boards, and provincial and local authorities. We provide advice to contractors, engineering and architectural firms, energy and water companies, railway and port authorities, and industry. Our activities cover the entire chain, from policy development and design to contracting and supervising the performance of work. We aim to establish long-term relationships with our clients that enable us to meet their needs and expectations as effectively as possible while delivering maximum added value.







## Organisation

The Board of Directors is in charge of the day-to-day management of Witteveen+Bos N.V. The Supervisory Board monitors the company's continuity by providing external supervision. With over 1,100 colleagues, we operate close to our clients, projects, partners and the employment market. Our 21 offices are located in eleven countries worldwide, with seven permanent offices and a pop-up office in the Netherlands. We have organised employee participation in Belgium, Indonesia, Kazakhstan and the Netherlands. In the other offices, consultations are held directly with the employees.

Our 36 small organisational units - the Product-Market Combinations or PMCs - are responsible for contract management and acquisition. These PMCs are clustered into four business lines focusing on the following areas of expertise: Built Environment; Deltas, Coasts and Rivers; Energy, Water and Environment; and Infrastructure and Mobility. Worldwide, the business lines form a matrix structure within the regions. This creates a network allowing employees from various disciplines and different countries to collaborate on projects.

The business lines and the management are supported and advised by the corporate departments Communications, Facilities, Finance, Human Resources, ICT and Legal and Quality.

## Compliance and integrity

The Company Code describes our principles and how we do business at Witteveen+Bos, including our individual and collective responsibilities to all our stakeholders. In addition to our own values and convictions, the Company Code is based on the OECD Guidelines for Multinational Enterprises. Witteveen+Bos is a member of the United Nations Global Compact. We have adopted the ten UNGC principles in the areas of human rights, labour rights, environment and anti-corruption.

All our Witteveen+Bos people together can realise our mission and vision. This is why we are committed to working worldwide in a proactive compliance culture in accordance with the Company Code of Conduct and the associated policies. In 2018, we appointed an Ethics and Compliance Officer, responsible for preparing and executing the Corporate Compliance Programme.



Overview business lines and PMCs as at 1 January 2019

directors	The Netherlands	Afrika, Europa and the Americas	CIS-countries (Commonwealth of Independent States)	Middle East	South-East Asia and Australia
Business line Built environment	Area Development	Resilient Infrastructures United Kingdom		Water and Urban Development Dubai	
	Buildings				
	Environmental Law and Permits				
	Planning Studies and Process Management				
	Urban Development				
	Energy Transition				
Business line Deltas, coasts and rivers	Ecology	Water and Infrastructure Latvia	Water and Infrastructure Russia		Hydraulic Infrastructure and Geotechnical Engineering Indonesia
	Coasts, Rivers and Land Reclamation				Water Management Indonesia
	Flood Protection and Land Development				Water and Infrastructure Singapore
	Hydraulic Structures and Geotechnical Engineering				
	Ports and Waterways				
	Water Management				
Business line Energy, water and environment	Wastewater	Sustainable Environmental Solutions Belgium	Water and Environment Kazakhstan		Water and Environment Vietnam
	Assetmanagement				
	Soil Remediation and Sustainable Land Management				
	Digital Technologies				
	Drinking Water				
	Industry and Energy				
	International Technical Assistance				
Business line Infrastructure and mobility	Civil Structures for Railways				
	Construction Management	Infrastructure and Spatial Design Belgium			
	Infrastructural Engineering				
	Smart Infra Systems				
	Traffic and Roads				
	Underground Infrastructure				

product market combination (PMCs)





## OWNERSHIP STRUCTURE

**Witteveen+Bos N.V. is fully owned by its employees, since in 1992 an employee share ownership system was introduced.**

Employees in the Netherlands with an indefinite-term contract and a part-time factor of at least 20 % are invited to buy shares. Outside the Netherlands, employees can buy notes, which are similar to share certificates. Additionally, employees can be invited to participate as a partner, premium partner or senior partner.



The employee participation supports our company culture, which is based on entrepreneurship and trust. This is why we aim for a high participation degree and want the number of subscribers to be higher than the available number of Witteveen+Bos shares. For a healthy participation system, it is important to have sufficient shares available in the future for new members and sufficient room for new partners. This is why we are conducting a long-term survey of the participation system since 2018.



The net profit is distributed annually through a profit-sharing scheme for all employees and dividend allocations to all shareholders. This reflects a central tenet of the Witteveen+Bos philosophy: everyone within the company contributes to our success, and hence everyone should share in the benefits of that success.





## CORPORATE OBJECTIVES

**Witteveen+Bos has a dual mission: we develop sustainable solutions to complex challenges in the fields of water, infrastructure, the environment and construction, and we want to enable all our employees to excel. To fulfil this mission, we have committed to dedicating ongoing attention to four corporate objectives: adding societal value through projects, developing talent, sustainable operations, and economic value.**

### **Objective 1: Societal value through projects**

Our primary corporate objective is based on the first part of our mission: to add value to water, infrastructure, environment and construction projects. The 17 Sustainable Development Goals (SDGs) of the United Nations (UN) constitute the starting point of our objective: a worldwide action plan to ensure a socially, ecologically and economically sustainable world by 2030.

Based on a materiality analysis in 2016, we consulted with internal and external stakeholders to investigate how Witteveen+Bos can maximise its contribution to these goals. In 2017, all four business lines determined which of the 17 SDGs they could most contribute to through their projects and with their knowledge. In the coming years, we plan to assess all completed projects using a SDG Impact Tool, which was developed internally at Witteveen+Bos. This will enable us to increase the impact generated through our project work.

As SDGs focus on developing countries, Witteveen+Bos translated the SDGs into 'hot topics' relevant to our projects. We translated the seven sustainable design principles (SDPs), ensuring maximum contribution to these societal goals in each project. These SDPs are: designing with nature, flexible design, circular design, multifunctional design, participative design, social design and Trias (use of energy and raw materials is limited and optimised). These SDPs are part of our Quality System, which is based on the most recent ISO 9001 and SCC standards.

### **Objective 2: Talent development**

Our second corporate objective is based on the second part of our mission: we want to provide a platform for our staff to achieve their ambitions and fully develop their talents. We aim to be a good employer by promoting diversity and enabling our employees to realise their full potential.

Our corporate culture of trust and entrepreneurship is aimed at ensuring good in-company relationships and caring for each other. We also aim to ensure that employees gain optimal satisfaction from their work and that we have sufficient in-house talent for career development and promotion to management or other positions. Finally, Witteveen+Bos contributes to high-quality technical education and training programmes, and events designed to encourage young people to study technical subjects.

### **Objective 3: Sustainable business operations**

Sustainable business operations was defined as our third corporate objective. In order to work on projects and develop talent, we must have professional ICT systems, comfortable business premises and effective operational processes. This means that our departments provide professional support to each business line and offices, with a view to maximum value creation. Ensuring our mobility is more sustainable, reducing our CO<sub>2</sub> emissions and promoting corporate social responsibility (CSR) in the supply chain are other key pillars.

### **Objective 4: Economic value**

Achieving healthy financial results is essential to ensure the company's long-term continuity. Good financial results are necessary to ensure sufficient scope for innovation and other new developments, and to invest in people. We therefore aim to realise a healthy annual net profit margin of at least 8 % and an annual workforce and revenue growth of 3 to 5 %.

### **Ten-year vision**

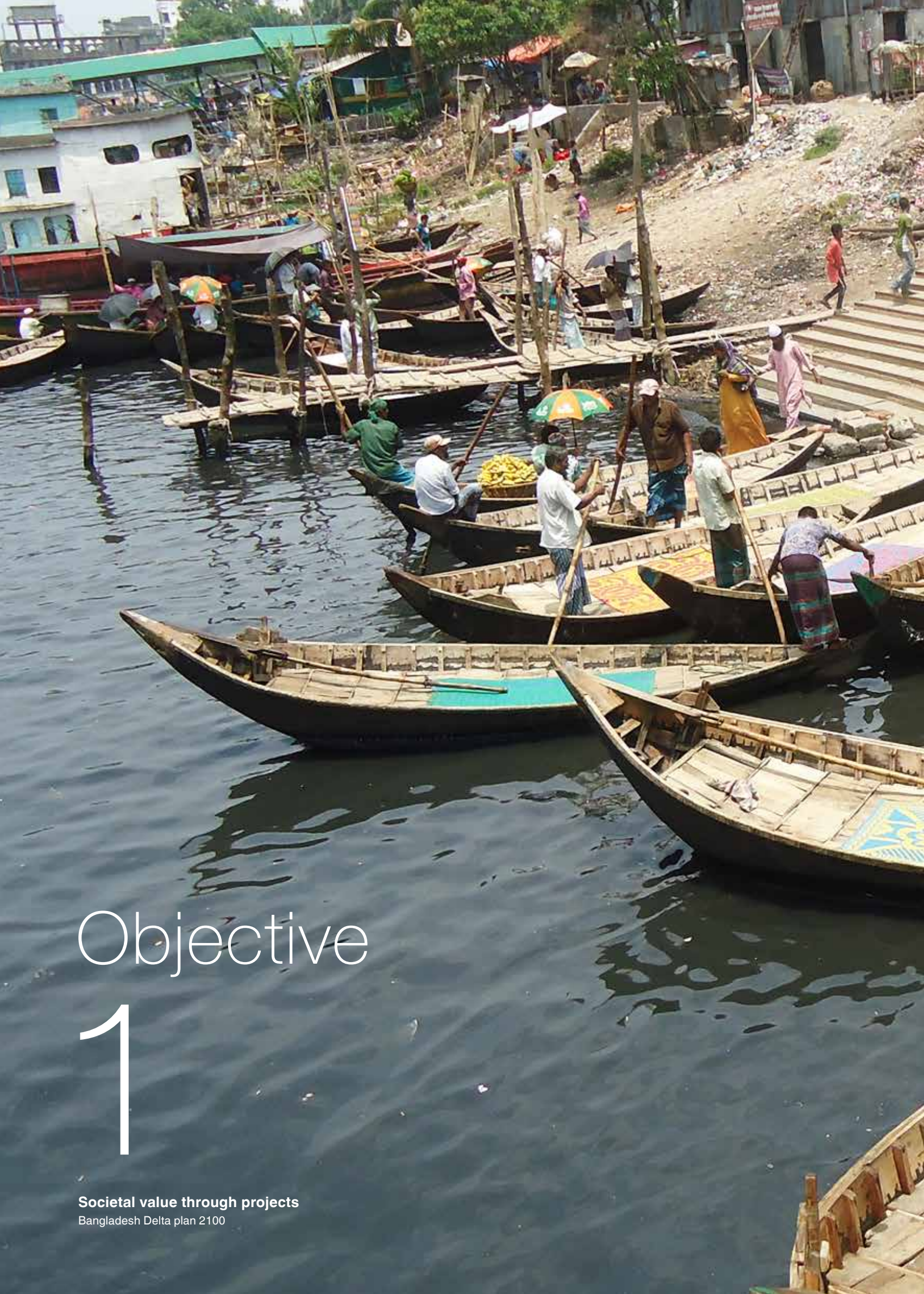
In 2018, we outlined a vision for what Witteveen+Bos will look like ten years from now. Our neWBies - employees that have been with us for less than five years - helped develop this vision. In summary, we see Witteveen+Bos as a worldwide integrated company with a sustainable and innovative profile. We are developing into an initiator of solutions to societal issues and a learning place for professionals.

In the sections below, we report on the progress on our four corporate objectives. For each objective, we set out the activities and progress on a set of Key Performance Indicators (KPIs). Furthermore, for each objective, we detail where we aim to be in ten years' time, and the first steps needed in 2019 to realise this ambition.









# Objective

# 1

**Societal value through projects**  
Bangladesh Delta plan 2100







## SOCIETAL VALUE THROUGH PROJECTS

In 2018, we worked on approximately 4,000 projects in 41 countries worldwide. According to our internal and external stakeholders, Witteveen+Bos can create the highest societal value and make the greatest contribution to the United Nations' Sustainable Development Goals by offering sustainable solutions in its projects. Our seven sustainable design principles are a key tool in that regard.

### Sustainable design principles

In March 2018, we highlighted the Sustainable Design Principles (SDPs) internally and externally with the W+B special 'Sustainable design'. This edition set out appealing projects where the principles had been applied. The SDPs were highlighted internally to design leaders by having them attend specific training, increasing awareness of the design principles. By late 2018, 87 % of employees indicated they were familiar with the SDPs. 46 % of them actually considered the principles in projects. In order to ensure more frequent and more structural application of the principles, we will conduct a pilot in four PMCs in 2019 to determine the most effective approach.

KPI 2018	Result
100 % of employees are familiar with the sustainable design principles.	87 % of employees are familiar with the sustainable design principles (measured in a survey among all employees worldwide).
100 % of employees considered and/or applied the sustainable design principles in projects.	46 % of employees applied the sustainable design principles in projects (measured in a survey among all employees worldwide).

### SDG Impact Tool

Naturally, we also want to know the societal value of applying our SDPs. This is why we developed the SDG Impact Tool in 2018. This is an instrument to measure our contribution to realisation of the Sustainable Development Goals. In 2019, we will perform a baseline measurement, enabling us to determine our ambition at corporate level based on that outcome.

Many SDG sub-objectives were defined specifically for developing countries. This is why in 2019, we are also working on a method to determine our contribution to other challenges, focusing on the countries where we have our offices and where we undertake our projects.

This approach was informed by a first materiality analysis conducted in 2015 which helped to identify our potential contribution to the SDGs. In 2019, we will update this analysis, to assess both our potential contribution to the SDGs and to other societal challenges. This updated analysis will form the basis of our first result-KPIs for this corporate objective.

### Dilemmas

Potential projects frequently pose dilemmas. This involves issues such as 'Do we want to work on all projects, even if these are a source of social unrest?' Or 'Do we want to work in all countries, in principle, even if there is a regime that is controversial, or if the country's standards and values are dissimilar to ours?' We have become used to adequately discussing such aspects and issues from all perspectives before deciding to put in a bid for a potential project. We will continue this type of discussion in 2019.

### Safety

Construction is one of the most unsafe sectors for occupational health. Annually, the number of fatal and major injury accidents is still unacceptably high. As consultants and engineers, we are able to contribute to making the construction sector safer by considering safety aspects in our design, during the construction phase and during supervision and management.





To this end, we signed the Governance Code for Safety in Construction. In 2018, we joined a lead group for enforcement of the Code. In parallel, we were issued a Level 3 certification on the Safety Ladder: this certifies safety in our own operations. In 2019, we will complete an integrated safety programme converging both tracks in order to improve our worldwide and company-wide safety.

A special safety programme is IMPAKT. In the past four years, Witteveen+Bos, with its partners Royal HaskoningDHV and Pilz Netherlands, carried out the IMPAKT programme at the instructions of the Secure Work programme of Rijkswaterstaat (the Directorate-General of Public Works and Water Management), surveying and improving the functional equipment safety, cyber security, physical security and asset management of 460 assets in the Netherlands. Based on this successful partnership, the parties decided to combine their expertise, experience and capacity into a new partnership: IMPAKT IB.

#### **Innovation**

In 2018, we sought to embed our market-driven innovation into our regular operations with the Plus+ Innovation programme. Based on the five Innovation Hubs (Smart Cities, Smart Cycles, Smart Deltas, Smart Infra & Mobility and Smart Company), 58 innovation teams took part in a competition to develop the best innovations brought forward by the business lines and departments of Witteveen+Bos.

Internal and external innovation jury panels and a competitive innovation bootcamp selected the nine best innovations for the five-month accelerator phase in order to develop a prototype and get it ready for market. We intensively collaborated with innovation partners such as Hogeschool Saxion, Delft University of Technology, Wageningen University & Research, Business Innovation Centre De Gasfabriek in Deventer and Cleantech Centre Zutphen.

During the Innovation Week, +Circular Design was elected the overall winner. In addition to new innovations, we also continued development of innovations from the previous innovation programme in 2018. For example the Automated Quay Wall Design tool, automating the design of quay walls to reduce the risk of human errors.

#### **Awards**

In Singapore, Witteveen+Bos won the Winsemius Award for the Virtual Design & Digital Construction project. This involves smart application of digital data from the design phase to allow for a high degree of digitisation and automation of the construction phase. In collaboration with Nijhuis Industries, Cabot Norit Activated Carbon, Waternet and TU Delft, Witteveen+Bos also took home the Innovation Award for the 1-STEP® filter for post-treatment of wastewater purification effluent. In a compact system, the filter dramatically decreases the levels of floating particles, phosphate, nitrogen, metals, organic micro-pollution and medication residue.

#### **Ten-year vision**

If you walk into Witteveen+Bos in ten years' time, all project activities will make a significant contribution to sustainability: circular, at least CO<sub>2</sub> neutral, socially and financially sustainable. We will operate supply-driven, generating complete solutions and investible propositions based on our domain knowledge and data. For example for the development of a fully climate-neutral circular urban district. We are looking for the right partners and work in different roles: sometimes as an advisor, in other cases as a developer or co-contractor.

#### **Spearhead for 2019: CO<sub>2</sub> neutrality and circular design**

The first step we are taking towards the ten-year vision is improving our knowledge of CO<sub>2</sub> neutral and circular design. The Netherlands aims to be a circular economy by 2050. The national government developed the nationwide Circular Economy Programme for this purpose. Rijkswaterstaat aims to have circular operations by 2030, without any waste flows. Demand for knowledge and expertise regarding circular design is also huge in other places in the world, for example in Dubai and Singapore, and we aim to make a significant contribution in the context of this spearhead. We will make our sustainable design principle 'Circular Design' ready for application worldwide for all our colleagues. We expect that the +Circular Design Tool will be a very useful instrument in this context.





## APPLYING THE SUSTAINABLE DESIGN PRINCIPLES

Witteveen+Bos is conducting a plan study for Rijkswaterstaat for expansion of several lanes on the A58 motorway. In addition to 'regular road widening', innovation plays a key role in the A58 project, causing the project to be renamed 'InnovA58'. The goal is to turn the A58 motorway into a smart, sustainable and future-proof road. A large part of the innovative power in this road widening project is planning space in a smart and multifunctional way. In this project, Witteveen+Bos applies three of its seven sustainable design principles.

### Circular design

Project InnovA58 was the first time Rijkswaterstaat ever asked for a circular design for a road widening. Witteveen+Bos and Rijkswaterstaat distinguished between prevention (not doing what does not really have to be done), value preservation (of existing objects) and value creation (of new buildings). For road design, road layout and new artworks, the most circular variants have been mapped out. Project InnovA58 has been an inspiration to develop the +Circular Design Tool (see page 41), a programme that shows the circular potential of a design and compares improvements. A reuse scan has also been developed for InnovA58, which is applied to every work of art to be replaced. This provides an approximate insight into the possibilities for 1-on-1 reuse of released components. Because the entire planning study is flexible, there is still room for circular and other innovations in later project phases.



### Participative design

For InnovA58, Witteveen+Bos created an interactive online information portal for e-participation to allow residents to react to the designs in their own area. An interactive participation option was added to reach a larger, more diverse feedback base (more young people, more parents, more working people) than the customary participation instruments. For a challenging part of the road section, design workshops were held in order to come to the best solution together with the municipal authorities and the water boards.



### Trias

InnovA58 investigated which infrastructure works (particularly viaducts and flyovers) of the current road system could be maintained in the new design, thus limiting the demand for new raw materials and energy. Witteveen+Bos advised on how the energy infrastructure for the collection, transport and storage of renewable energy could be realised. This made the design as energy and resource efficient as possible. With the intervention of InnovA58 an 'energy corridor' will be facilitated, enabling various regional stakeholders to actively contribute to the energy transition. Finally, at the object level, the multifunctional use of asphalt, for example for heat extraction, was also considered. This also yielded energy savings.



Scan the QR code for a video about the seven sustainable design principles.









INTERVIEW







# Antwerp Water Plan

**Our climate is changing worldwide. Urban areas become subject to major social, ecological and economic challenges. Antwerp Water Plan offers a long-term framework to give water a new place in the city, countering flooding and increasing the residents' water awareness. Witteveen+Bos is collaborating with the firms De Urbanisten and Common Ground in the Water Plan, which is designed to help the city evolve into a water-safe and attractive living environment. Wim Debucquoy, project leader, and Thomas Alderweireldt, hydrologist and GIS expert, are working on developing an innovative methodology from both Belgium and the Netherlands to provide cities with a robust climate plan.**

'We are merging the spatial and technical aspects into a single plan'





## 'This is a wonderful instrument to contribute to SDG 11:

The Antwerp Water Plan requires a new approach. It is a climate plan, rather than a classic sewer plan. The plan unites several aspects: spatial planning quality, flooding and water awareness of the residents, linking various building blocks for countering flooding to the city's urban architectural structures. Linking the measures to 'city typologies', you can see which measures will best be applied where.

In this project, Witteveen+Bos is responsible for the technical, hydrological components of the project: flood calculations, sewer models, risk and damage charts. The result is a hydrological map combined with the spatial planning analysis prepared by De Urbanisten design consultants: the basis for the vision. The firm Common Ground is responsible for the external communication and participation.

Thomas, hydrologist: 'The city of Antwerp is larger than just the city centre. It is spread out over nine districts, including more suburban areas.' Wim, project leader, adds: 'There is a cohesion between the urban design of the city and how we organise the water systems. We aim to shift from the artificial water city, with extensive underground sewer networks, to a natural water city, where existing water flows such as stream beds, the river Scheldt and the docks of the Port of Antwerp can be used for drainage. The link with the upscaled level was integrated into the project during the realisation.'

Meanwhile, a vision and a flexible plan on how the water systems in Antwerp can be better structured and made more robust has been prepared. This is further specified into

research cases for a precipitation cascading scenario and for a densely populated urban district. This allows for researching the plan's benefits if carried out, in terms of spatial planning, reduced flooding and water awareness.

The Antwerp Water Plan project has highlighted the talents of the Witteveen+Bos experts. Thomas: 'Wim is excellent in communication with the client, and also connecting to the urban architect and ensuring true integration. Wim is the perfect 'translator'. Wim: 'Thomas is solid as a rock in modelling and at home in the GIS work'. Thomas: 'GIS as in ArcGIS mapping and analytics, not GI's.' Wim smiles and continues: 'And of course the new damage calculation tool. Thomas dives into the





## safe, resilient and sustainable cities.'

software and takes out the errors. The collaboration with the Dutch colleagues is also special in this project. The work was distributed over the various experts in consultation, and we had a fixed project day in the Rotterdam office.'

The two collaborated with other groups within Witteveen+Bos for various specialist fields. Thomas: 'Here in Belgium, we tend to work in a broader field. But now I know how to find the right person for a more specific question. That is also useful in the future. We can already see new projects arising due to this collaboration.'

The Antwerp Water Plan project applied sustainable design principles. As Wim explains: 'The project intended climate adaptation, sustainability and spatial planning,

liveability and water awareness. To achieve these goals, we have focused on the principles of flexible design and participatory design. The Water Plan is based on building blocks such as infiltration crates, water squares, draining channels and green roofs. Such building block are soon accessible to everyone getting to work in the city. In the future, with each restructuring of the city, the Water Plan will be used as a guideline for every square, street, pavement or parking space.'

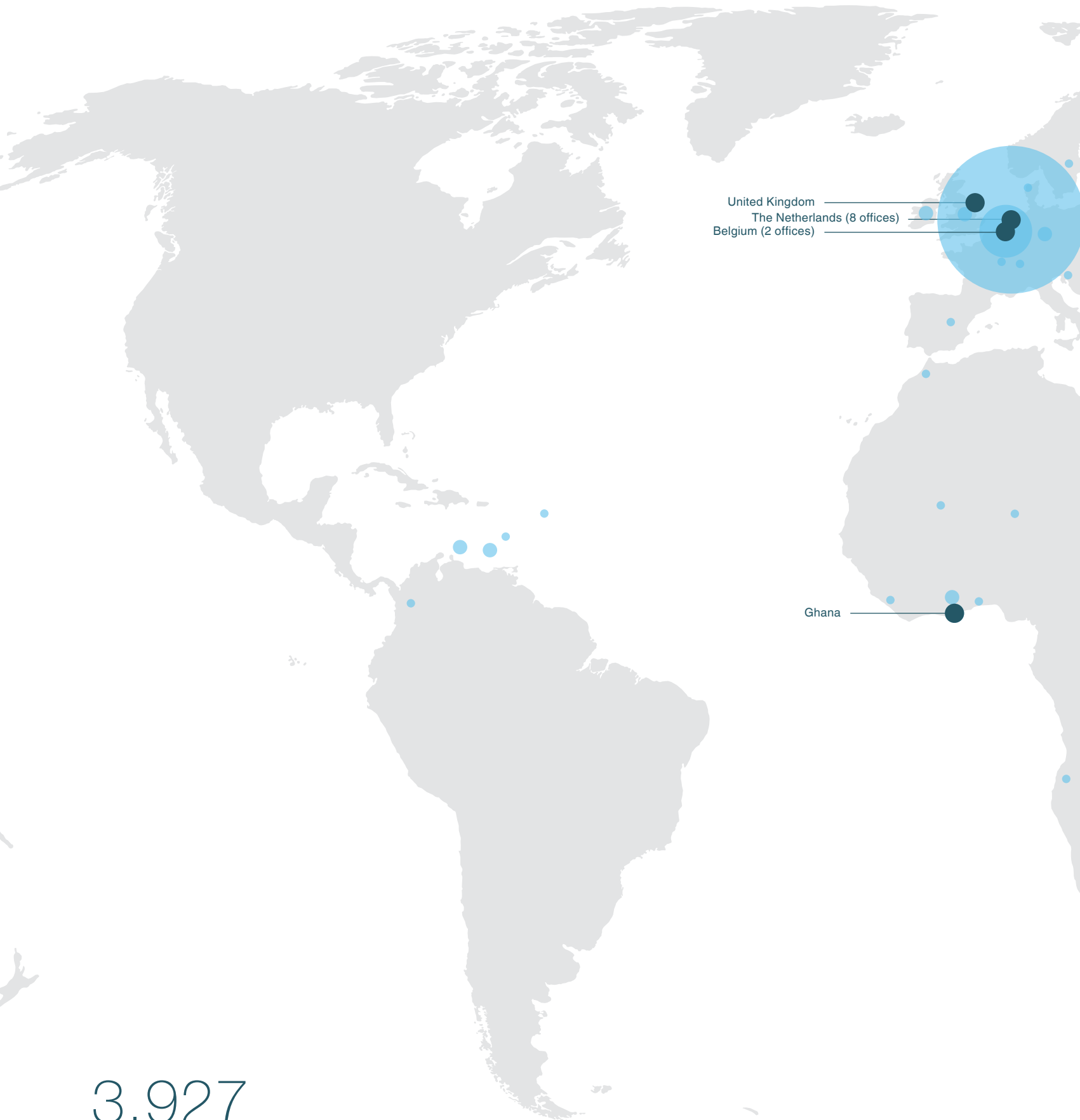
Thomas: 'The methodology we developed can be applied in any big city. This is a wonderful instrument to contribute to SDG 11: safe, resilient and sustainable cities. Working with blocks, it allows for adjustment to the local situation. For example, Jakarta has a

completely different groundwater system than Antwerp, so you need to make that a key focus. Certain building blocks can be further specified. Upscaling the methodology in other cities in Belgium or the Netherlands would make perfect sense.' Wim: 'We made a proposal for a project in Brussels, inspired by the insights we gained with the Antwerp Water Plan. We will be applying our experience now.'

The next phase of the Water Plan is scheduled for completion in the summer of 2019. Wim: 'We will effectively redesign, calculate and check to see if our conceptual ideas will work in three project areas. This is where we gain insights and we will use these to sharpen our current vision. I dream that everything we came up with in this Water Plan will be 'common sense' in Antwerp by 2030.'



# PROJECTS 2018

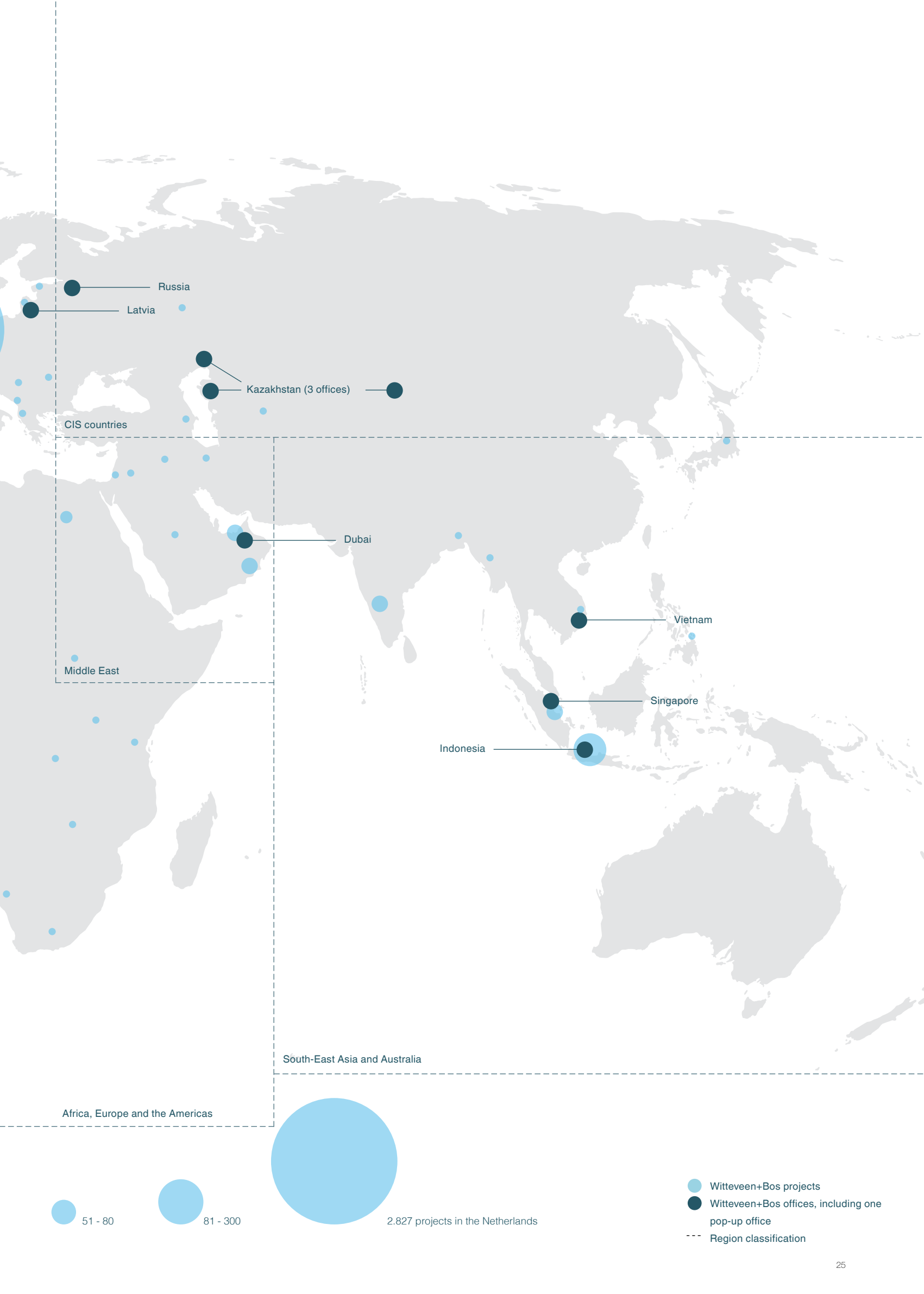


3.927

Africa, Europe and the Americas 3.820 projects  
CIS countries 4 projects  
Middle East 17 projects  
South-East Asia and Australia 86 projects







51 - 80

81 - 300

2.827 projects in the Netherlands

- Witteveen+Bos projects
- Witteveen+Bos offices, including one pop-up office
- Region classification





**+ Back-office for technical issues**

The Utrecht Ring road merges a large amount of regional and through traffic. About 180,000 vehicles pass the A27/A12 on a daily basis. This results in congestion, noise, air pollution and rat-running traffic on surrounding roads. This is why the Utrecht Ring road is set for a major upgrade. Witteveen+Bos has been selected to provide expert services to Rijkswaterstaat as a technical help desk during the upgrade. We will provide technical advice, prepare request specifications, provide advice on pipe and cable relocation, and manage a BIM data room. Additionally, we will support Rijkswaterstaat during the tender procedures, commissioning and construction. Rijkswaterstaat has stated that Witteveen+Bos has provided a major contribution to previous milestones achieved.

Utrecht **the Netherlands**

**+ Residual heat of industrial plants heats 500,000 homes**

Various industrial plants and government bodies are collaborating in setting up a regional heat network in the province of Zuid-Holland. The companies that will supply heat to the network each have between 5 and 200 MW of residual heat available. This could potentially provide heat to 500,000 households, to some of the regional greenhouse companies as well as other energy consumers. Witteveen+Bos and its partner Rotterdam Engineering are presenting the business case for these connections based on our knowledge of industrial residual heat recovery and linking up these systems. including issues such as safety, security of supply and feasibility.

province of Zuid-Holland **the Netherlands**





**+ Replacement issue energy sector**

In this emerging period of energy transition, power generation is increasingly decentralised. Combined with the current condition of the grid, there is a major replacement and renovation issue. Different heavy-duty high-voltage power stations are required; major parts, including transformers and circuit breakers, need replacing. In partnership with Bilfinger Tebodin and Petersburg Consultants, Witteveen+Bos has created an engineering process for this purpose. We also perform inspections of the current conditions of the installed infrastructure, creating designs and specifications to enable contractors to safely and adequately replace the selected parts.

southern region **the Netherlands**

**+ Sustainable wastewater purification plants for breweries**

After the successful start-up of the new water purification plant at the Duvel Moortgat Brewery in Puurs, Belgium, Witteveen+Bos worked on sustainability projects for another five breweries in 2018. On a weekly basis, the quantity of water purified in Puurs equals four Olympic swimming pools. Biogas is generated from the wastewater that is used to generate steam necessary in the production process. Based on intensive purification, some of the purified water can be used as recuperation water for non-food related applications. The remaining purified water that fulfils strict discharge standards can be returned to the environment. The Puurs brewery continues its journey toward sustainability in close collaboration with Witteveen+Bos. In 2018, we worked on expansion of the wastewater purification plant for the Achouffe brewery and the design of a purification plant for the Birrificio Del Ducato brewery.

various locations **Belgium and Italy**





### + Controlled dyke subsidence

As a component of the Flood Protection Programme, Witteveen+Bos collaborated with Deltares on the POVM Eemdijk trial. This trial researches how and when a structurally reinforced dyke subsides to flooding. This is simulated by increasing extreme water loads against the trial dyke in combination with excavating at the toe. The first controlled subsidence trial was a trial dyke made of sand and clay without any structural reinforcement. Subsequently, a pull-over test was used to test the strength of various sheet pile panels in combination with the soil. The third trial was a trial dyke structurally reinforced with a steel sheet pile wall. Intensive monitoring, analysis of the measurements and comparison with calculation models allowed us to generate a high volume of useful knowledge that can make dyke reinforcement better, quicker and cheaper in the future.

Eemdijk **the Netherlands**

### + Infrastructure ecoresort

On Mahé Island, the largest island of the Seychelles, Jamal Al-Ghurair Est. is developing a luxury sustainable ecoresort. Witteveen+Bos is designing the required infrastructure to connect the one hundred villas located on a steep, rocky mountain to the existing water system, power grid and road network. Power is fully generated off-grid, mainly based on solar energy. The drinking water is fully captured from rain water. We designed a network of pedestrian paths, roads for light electric vehicles, suspended bridges, sky walks and lookout platforms to allow visitors to fully enjoy the views of the Indian Ocean.

Mahé Island **Seychellen**





**+ Vibrations research metro**

Upon completion, the Cross Island Line will be the longest metro line in Singapore, with about 50 kilometres of tracks. Witteveen+Bos researched the effect of vibrations of the operation of the future line on the environment, for example the low-frequency noise that passengers feel or hear due to vibrations of trains passing by. Two calculation steps were completed. A general assessment calculation model was prepared using a combination of ArcGIS and two-dimensional finite element models, and an evaluation model with measured vibration data. The sensitive locations that were highlighted in this evaluation were subsequently researched further in order to prevent vibration impact of the metro line.

Singapore **Singapore**



**+ Impulse economy and logistics due to shipping bypass**

The Itaipu dam in the river Paraná is the world's largest hydro power station. It generates 75 % of Paraguay's power requirement and 17 % of Brazil's power requirement. Witteveen+Bos researched the technical, economic, environmental and social viability of constructing a bypass for shipping traffic. In our design, the 125 meter elevation differential was bridged by a six-kilometre channel with four locks. The construction of this bypass will result in sustainable water management, based on a water displacement loss of under 0.6 % of the water volume required to generate power. On the other hand, it allows for sustainable water transport as an alternative to road transport. The bypass drives economic development for five countries in the drainage basin of the Paraná: Argentina, Bolivia, Brazil, Paraguay and Uruguay.

border area between **Paraguay and Brazil**





#### + Anticipating climate change

Sea levels are rising and in the future, weather conditions will tend toward more frequent extremes. This is why the 32-kilometre Afsluitdijk road will be upgraded: the dyke will be raised at parts of the crest and the Wadden Sea side will be provided by the applying new cladding. The draining capacity will be increased by expanding the drain locks and integrating pumps. At the behest of construction consortium Levvel, Witteveen+Bos worked on the design of the dyke and existing and new draining complexes. The design work will continue until late 2019 and the construction started in April 2019.

Afsluitdijk **the Netherlands**

#### + Knowledge and technology as the new standard

Witteveen+Bos has been working on the North-South Metro Line (Noord/Zuidlijn), a 9-kilometre metro line connecting Amsterdam's North and South districts via eight stations, for almost 25 years in the project consultancy group (Adviesbureau Noord/Zuidlijn). The opening in July 2018 completed one of the Netherlands' most challenging infrastructure projects. The incredible range of technologies in the design and realisation of drilled tunnels, sunken tunnels, extremely deep construction sites, pneumatic caissons, soil freezing and monitoring, were updated and improved to accommodate the exceptional local conditions (weak soil base and high water levels). As an additional challenge to this, the impact of construction on train and metro traffic and as well as impact on buildings in the historic city centre had to be minimised. The knowledge gained was shared with others in the field and research committees, and even resulted in updated guidelines for underground construction. Witteveen+Bos will use its knowledge and experience in a design for the next ground-breaking iconic project: the Oosterweel connection, near Antwerp, Belgium.

Amsterdam **the Netherlands**





#### + District of the Future

The Netherlands has the challenge to make 7 million homes independent of natural gas. The District of the Future programme in the province of Gelderland and the Gelderland Energy Deal is assisting forty pioneering residential districts in this process. Witteveen+Bos is supporting district teams in the development of their plans to ensure that the transition is technically feasible, affordable and has full support of residents. Retrofitting existing residential areas to disconnect from natural gas is a challenge because in addition to the technical transition, such a change has financial, organisational, social and economic impacts. Our task is to identify the optimal balance. For some homes, residual heat is available; for others connection to geothermal energy is more viable. In order to reduce costs, it is crucial to transition the energy system during natural replacement moments or other infrastructure upgrades. It is expected local community support for the transition will increase, if it is linked to other improvements such as reducing traffic load of the local roads.

province of Gelderland **the Netherlands**



#### + Increasing liveability based on redesign

In 2010, the City of Haarlem prepared an area vision for the city centre of Haarlem. This aim is to minimise car traffic in the city centre as much as possible to increase liveability. Although part of the city centre had been redesigned this way already, the entrance into the city centre, including the Houtplein square, has not yet been redesigned. Together with OKRA Landschapsarchitecten (Landscape Architects), Witteveen+Bos is working on developing preliminary design through to final design for Houtplein. The brief is to design a square that accommodates a substantial number of buses while simultaneously keeping it safe enough for ongoing bicycles and enough space for pedestrians. Residents were consulted during various stakeholder engagement events and via the online participation platform houtplein-inbeeld.nl

Haarlem **the Netherlands**



INTERVIEW







# Milestones in construction

**3D printing is an enthralling technology. You can print medical prostheses, food, but also parts of transistor radios that have not been manufactured in years. Or homes. Unless you have spent the past few years under a proverbial rock, you will have noticed it: 3D concrete printing (3DCP) is bound to become the disruptive innovation to turn the construction sector upside down. In 2018, the plans for project Milestone were presented to the world: five boulder-shaped homes will be realised using a 3D concrete printer at a lush, tree-studded development location in Meerhoven, a district of Eindhoven, the Netherlands. Theo Salet, senior advisor, forms the bridge between science and industry. Marijn Bruurs is involved in various 3DCP projects for Witteveen+Bos.**

‘Project Milestone is a wonderful example of bringing together knowledge institutions and industrial parties on a project basis to develop new technologies.’





## 'The higher goal is digitising construction. 3D concrete

Technology development in this project is still in full swing. The various components of the first Milestone homes are still made in the print lab. The last home is set to be fully printed on site. This project is an initiative of Eindhoven University of Technology (TU/e), Witteveen+Bos, Weber Beamix, Van Wijnen, Vesteda and the City of Eindhoven. These parties are collaborating in researching 3D concrete printing at TU/e, which is set to take technology to the next level. In mid-2019, the first home, the 'flat boulder', is scheduled for realisation, and the other homes will follow quickly.

Theo Salet is senior advisor at Witteveen+Bos, and is also the professor leading the research. He can explain exactly what this technology is adding. Theo: 'I happened to fall in love with concrete printing, but that is not the final goal. For me, the key theme is the digital transition in

construction. Printing is a way to enable digital work. Digitisation of construction has three aspects for me: economic (productivity), sustainability and social impact.

The sustainability aspect is key. Printing is an interesting technology because this is a form of additive manufacturing: it places materials exactly and only where it is necessary. This is the opposite of subtractive manufacturing, where you remove materials that are not necessary to come to a product, for example if you are milling something. Additive manufacturing leads to using less material. This is a major advantage in sustainability. The production of concrete is the source of 5 % of CO<sub>2</sub> emissions produced by humans. We have to do something about that. Developing this technology can contribute to that. Think about the development of more sustainable print

mixtures that may not require cement, for example.'

In addition to the potential sustainability advantages, digitisation in construction can also have a major economic impact. Marijn Bruurs, advisor digital construction, says: 'Construction is now running at high capacity, but labour productivity in construction has been more or less constant over the past twenty years. Other industries applied digital technology to become 30 to 50 percent more productive. The new housing target is expected to increase worldwide by about 30 percent in the coming three decades, while the number of construction workers is set to decrease by the same percentage. This means that unless we increase productivity in construction by application of digitisation, buildings will become prohibitively expensive to many people.'





# printing is just an example.'

Theo adds: '3D concrete printing is the first step towards digitisation of construction. We should be realistic; just concrete printing will not fully digitise construction. We are now gaining experience in digital production in construction with 3D concrete printing. But to make digitisation a real success, we need to digitise as many steps in the process as possible, including groundworks, installations and finishing. Sometimes people ask me if this is about to cost a lot of jobs in construction for people who don't have many alternatives in the job market. However, soon it will not be necessary for construction workers to overtax their bodies, as in particular the heavy loads work will be taken over by robots. The work is not going to disappear. It will just change.'

The design of the Milestone homes by architect Jelle Houben is rather striking. Is this what we

can expect from 3D concrete printing? Theo: 'Digitisation absolutely has implications to aesthetics in construction. It allows for more aesthetically pleasing structures. Homes that do something to people's experience and have an impact on people that way, on their well-being. This may sound soft, but still: a thing of beauty makes you smile, doesn't it? We can provide the growing world population with a roof over their heads by fitting people into huge skyscrapers, but that may not make them happier. The natural social context that people need is not an easy commodity in flats, for example. I think, people are just 'not built' for that type of home.' Well,' says Marijn, 'Perhaps that is too philosophical. Plenty of architects would disagree.' Theo: 'Undoubtedly. But it is safe to conclude that digitisation allows for industrial customisation, for designs catering to human and individual needs.'

And in the short run? Marijn: 'It would be amazing if this technology is picked up by passionate entrepreneurs who see opportunities for 3D concrete printing within their sector or company. This takes the technology to the next level.' Theo: 'This is why all my research data and accumulated knowledge are available to the public. This will help the distribution of technology. Everyone can get to work with it, and help it spread. I see that the industry is picking this up, that is the goal. But now the next step is coming. Construction is like a huge ocean-going tanker that does not easily veer off its scheduled course. It takes a lot of time and work. Bringing knowledge institutions together with industrial parties on a project basis helps develop new technology. Milestone is a wonderful example of that.'





Objective

2

**Talent development**

VAM-Berg Wijster - From waste disposal to cycling track







## TALENT DEVELOPMENT

**Developing top talent is a key corporate objective of Witteveen+Bos, arising directly from our mission. We are committed to training and developing top talent, increasing diversity, and ensuring an adequate inflow of employees with the right technical baggage. This is designed to result in a group of expert employees who are very engaged in their work, with their colleagues, the company, and their own talent development.**

### Workforce

On 31 December 2018, Witteveen+Bos had 1,125 employees worldwide. This corresponds to a net workforce increase of 71 employees or 6.7 %, which is well over the targeted workforce increase of 3 to 5 %. This growth was mainly realised in the Netherlands and Belgium. It is the net result of an extremely high inflow of 226 new colleagues. The large outflow of 155 people is similar to last year's outflow level. This means that the 2018 outflow percentage is 14.7 %. The ideal percentage of people leaving the company annually is under 10 %, allowing for balanced employee dynamics. For this reason, we are not happy with the large outflow and will continue to focus on reducing this percentage. Personnel key figures that provide insight into the composition of our workforce may be found on pages 44 and 45.

### PLUSschool for Professionals

The substantive development of Witteveen+Bos employees was a key focus in the form of the PLUSschool for Professionals. The internal project management courses were updated, with a specific variant for the departments. Specific development processes were created for designers and group leaders. Additionally, colleagues were coached in having so-called +TALKs to display their knowledge of and passion for their field. Finally, we focused on international talent development, among other things by organising extra training worldwide and working with personal development plans in an increasing number of countries.

### Diversity

Our workforce is becoming more diversified. This is a desirable development. In our view, higher diversity of our project teams adds major value in projects. Mental ownership and 'shared impact' are key instruments in this respect. This is why diversity was once again a key focal point. The share of women among partners and senior partners has increased, and is gradually more in line with the gender ratio in the workforce overall. An English starter programme was launched. Communication tools (including the corporate website) were improved, and needs and ideas were captured from our internationals stationed in the Netherlands. The insights gained will be set out in a vision on diversity in the coming year.

### Measuring talent development

Our annual talent development score achieved is our indicator for talent development. Our 2018 talent development score of 7.5 indicates that Witteveen+Bos makes a very satisfactory contribution to the development of our employees' talents. However, we have not achieved our target of an average score of 8 or more on the three components. Another point of attention is the fact that the percentage of employees who participated in job performance interviews falls far short of the target (48 % in the past two years compared to the target of 80 %).

### Awards

Our CEO, Karin Sluis, won the 2018 European CEO of the Year Award, a competition organised by the British Association of Consulting Engineers (ACE). Karin Sluis won the award for her contribution to the engineering sector and connecting the Sustainable Development Goals with engineering work.

In 2018, our colleague Emiel van Druten won the Delfland Thesis Award for his thesis 'Pumping Stations for the Future' about renovating the







KPI 2018	Result
The number of interns and final-year students must equal or exceed 20 % of the total workforce of Witteveen+Bos (at 31 December 2018).	In 2018, Witteveen+Bos hosted 299 interns and final-year students. Compared with our total worldwide workforce of 1,125 employees, this amounts to 27 %.
At least 80 % of all employees have had a job performance interview in the past two years.	56 % of all employees have had a job performance interview in the past two years. In 2018, job performance interviews were conducted with 28 % of all employees.
We aim for female employees to account for 25 % of future partner nominations. This is a male-female ratio that corresponds to the gender ratio among new colleagues joining the company.	14 new partners were appointed in 2018: 3 women and 11 men. Although the absolute number of female partners has increased, the ratio of 21 % falls short of the target percentage.
Employees can use a 'Talent Development Score' to indicate whether they have been given every opportunity to utilise and develop their talents. We aim for an average score of 8 or more on all three components.	<p>The Talent Development Score is determined on the basis of three questions:</p> <ul style="list-style-type: none"> <li>- to what degree do you feel able to utilise your talents at Witteveen+Bos? Average score: 7.48</li> <li>- to what degree do you feel able to develop your talents at Witteveen+Bos? Average score: 7.40</li> <li>- how do you rate the working atmosphere at Witteveen+Bos? Average score: 7.68</li> </ul> <p>The overall score for these three elements is 7.52.</p>

Vissering pumping station and making it more sustainable. In Slovenia, Manca Petek won the Preseren Award for her master thesis about rain water erosivity. She was the first woman to win this award. Witteveen+Bos graduate Stefan Gerrits won the Hydraulic Engineering Award with his thesis about offshore wind farms with an energy island.

#### Ten-year vision

If you walk into Witteveen+Bos in ten years' time, you will meet a highly diverse group of people. The diversity on the work floor will be even higher than it is now, and we will be working with a broad range of external professionals. You will more frequently run into people with a background in digital technology, the financial or social sector. Everyone you meet focuses on maximum professional and personal development: Witteveen+Bos is the place to be for best development after your full-time education, and the PLUSschool is an established brand.

#### Spearhead for 2019: Onboarding and Development

The first step we take towards the ten-year vision is improving how people join Witteveen+Bos. We have concluded that our labour market communication allows for a great ability to recruit new talents. In the coming year, we aim to improve and monitor the onboarding experience of new colleagues worldwide. This will accelerate their bond with our company and enhance our mutual relations. Our internal training in the starter programme will be on the agenda continuously for the first two years of joining the company. In the subsequent period, we will set up a Medior programme, explicitly focusing on personal and career development.



INTERVIEW







# The entrepreneurial project engineer

The world around us is changing and Witteveen+Bos sees it as its task to ensure its engineers and advisors evolve in response to this. This implies seeking answers to current challenges, innovating, and offering our colleagues plenty of room for developing new products and tools. Joris van den Acker and Milicia de Kok demonstrated how this came together in the second edition of our innovation programme. With some help from Evan Low of the Plus+ Innovation programme, they developed +Circular Design: a programme that charts the circular potential of a design and compares improvements. They showed in-depth knowledge and their skills as a product developer and entrepreneur.

‘Entrepreneurship is really part of our daily routine now.’





‘Based on the confidence that the organisation gives us,

As specialists in circular economy and the reuse of residual substances, challenges regarding circular construction are daily routine for Joris and Milicia. ‘Measuring circularity and making it readily comprehensible is fairly challenging,’ says Joris. ‘We experimented with Sankey diagrams to visualise energy and material flows. But we were looking to develop our very own in-house method for actual integration of circularity into design processes and easy visualisation. Only then upscaling becomes possible.’ The innovation programme proved to be a good platform to develop this.

Milicia: ‘This programme enabled us to easily contact specialists within Witteveen+Bos, for example regarding construction physics and data science, reinforcing our team.’

During the seven-month cycle time of the programme, Joris and Milicia’s team developed an MVP (Minimum Viable Product) of their +Circular Design programme. Joris: ‘It was a unique process. We started with an abstract idea. At that point, we were not convinced that we could win the programme with the idea. When we were about mid-way,

we had to change gears. The innovation programme team pressed on us to start specifying our idea towards a usable product if we wanted to achieve something real. In connection with requests from internal assignments, this gave our team the impulse to accelerate development.’ Milicia adds: ‘Precisely because our confidence is growing and demand is increasing, we are still being enabled to further develop our product. We are also reviewing new internal partnerships to link our programme to other programmes and fields of expertise.’





## MEASURING CIRCULARITY

+Circular Design is an easy-to-use tool that provides insight into the use of materials in design projects. The visualisations generated by the programme enable the designers to measure and compare the circularity of a design, and to explore the potential for improvement. The programme explores whether the materials used for the construction of a new bridge, for example, can be dismantled, transported and reused at another location at the end of the bridge's lifespan.



## PLUS+ INNOVATION PROGRAMME

The internal Plus+ Innovation programme challenges colleagues to develop their innovative ideas bottom up into concrete products and services in line with the needs of our clients and market developments. The second edition resulted in 58 registrations. The top 15 most innovative ideas were offered a development process. The +Circular Design tool was chosen as the winner by the external jury panel, the programme leaders and the Witteveen+Bos colleagues.

we will continue developing our tool, and ourselves'

Witteveen+Bos is committed to giving colleagues room for developing new products and services, encouraging entrepreneurship in the full breadth of the organisation. This is even more successful if we align to the perspective of the client, generating enthusiasm for new products and services. Milicia: 'We discussed the details of what the program should offer with various people, and we integrated their input in new versions. It is great to be able to do this. We really have full responsibility for the product. This also requires different skills. Pitching at trade events, for example. Customised presentation of

the program to explain to clients how +Circular Design can offer insight into their circular improvement potential. Entrepreneurship is really part of our daily routine now.'

Evan is a mechanical engineer, and was mainly active as a soundboard via the online innovation platform during the first edition of the innovation programme. 'When I was asked to be a coach in the second edition, I felt privileged. I learned so much about leadership and being in charge in this role.' Evan collaborated extensively with Joris and Milicia's team as the manager of the

Smart Cycles Innovation Campaign. 'As a coach, I helped them specify the ideas, for example by asking critical questions. Our innovation programme is not a step by step plan based on a fixed scenario. Naturally, there are sessions about content. But mainly, it is offering a playing field to develop internal ideas. They had to do the playing. My role was mainly about connecting and motivating people.'

The product video of +Circular Design and the other innovations are available at [vimeo.com/album/5579944](https://vimeo.com/album/5579944).



## PERSONNEL KEY FIGURES



Number of employees in Full-Time Equivalents (FTEs)

1,025<sup>↑</sup>  
(2017: 977)

Number of employees

1,125<sup>↑</sup>  
(2017: 1,054)

Male/female ratio

70/30  
(2017: 70/30)

Average age

37.6<sup>↓</sup>  
(2017: 38.0)



Different nationalities

28<sup>↑</sup>  
(2017: 25)



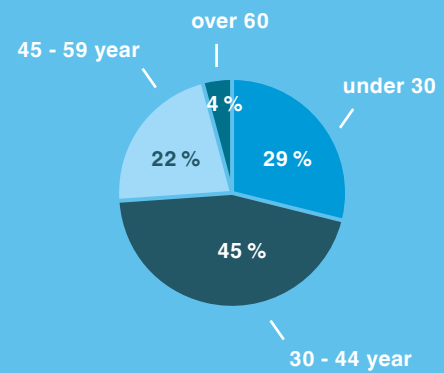
Employees hired

226<sup>↑</sup>  
(2017: 160)

Employees leaving

155<sup>↑</sup>  
(2017: 135)

Staff age distribution

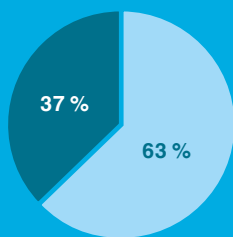


Employment contracts

part-time



419<sup>↑</sup>  
(2017: 385)



full-time

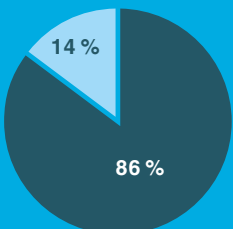


706<sup>↑</sup>  
(2017: 669)

fixed-term contract



163<sup>↑</sup>  
(2017: 134)



indefinite-term contract



962<sup>↑</sup>  
(2017: 920)

Workforce by country

**The Netherlands**  
2018: 920 / 2017: 842

**Belgium**  
2018: 89 / 2017: 74

**United Kingdom**  
2018: 2 / 2017: 1

**Ghana**  
2018: 7 / 2017: 6



**Latvia**  
2018: 6 / 2017: 6

**Kazakhstan**  
2018: 50 / 2017: 65

**Russia**  
2018: 2 / 2017: 1

**Dubai**  
2018: 4 / 2017: 8

**Vietnam**  
2018: 3 / 2017: 2

**Indonesia**  
2018: 32 / 2017: 41

**Singapore**  
2018: 10 / 2017: 8





**Sick leave rate  
(The Netherlands)**

2.8 %<sup>↑</sup>

(2017: 2.5 %)

**Level of Education the Netherlands**

**Intermediate voc-ed**



140<sup>↑</sup>

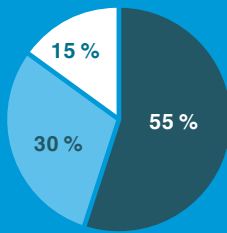
(2017: 135)

**higher voc-ed**



273<sup>↑</sup>

(2017: 253)



**university**



507<sup>↑</sup>

(2017: 454)

**In-company training and education**

987<sup>↓</sup>

(2017: 1,182)



**Investment training and education (euro)**

765,959<sup>↑</sup>

(2017: 587,313)





Tom Wilms

## Taking charge of your career

Gaining experience abroad in Indonesia was something I was very interested in taking up. I was able to arrange for just that in close consultation. That is an example of how Witteveen+Bos gives you the opportunity to take charge of your own career. The key theme in my work is that I want to contribute to a sustainable world. Not just in terms of technology, but also in terms of the environment and ecology. Previously, I was part of our CSR team. Now, I am the leader of further development of the sustainable design principles. Together, we research what is working well and what could be improved within the various business units. Going deeper into the right choices, promoting awareness and making results more explicit. That is a very positive thing. I have learned so much by taking sneak peeks into other people's 'kitchens', so to speak, and by becoming the group head.



Ivana Prusina

## Transferring knowledge

A presentation training we received to prepare for our +TALKs in September was a great help in sharpening up my story and approach. It is important to understand how to efficiently get your idea across to a broader audience. This experience is now helping me in my daily work. Effectively transferring and using knowledge is essential to me. After obtaining my doctorate in Applied Marine Sciences and having worked at University, I wanted to find a job to apply my knowledge and expertise in a more impactful way. And also to gain new knowledge. The consultancy work I do at Witteveen+Bos, in particular regarding offshore development, gives me the option of collaborating with the entire chain of stakeholders involved in projects: government bodies, NGOs, private companies. For me, that cohesion is necessary to go forward and make valuable steps for society. And for nature!



## Scope for cross-over

My graduation period with Witteveen+Bos was a great welcome! With my 'cross-over' background in water and energy, I had two coaches, one from the DKR sector and one from the GOM sector. I soon received a zero hours contract, and that work was so captivating that I almost forgot to graduate over the summer holidays. The Delfland thesis award was a great appreciation. In my job at Witteveen+Bos, I try to put the findings from the thesis into practice as much as I can. Meanwhile, I am in the new Energy Transition PMC, and serve as a student coach myself, which I enjoy very much. I recommend starters to be gutsy, take up the challenges and do fun stuff. Don't be afraid to hear 'no' or to make a mistake.



Emiel van Druten

## Dynamics and challenges

My master thesis was based on a very scientific approach. It was an honour that my alma mater, Ljubljana University, awarded me the Preseren Prize for best master thesis. After graduating, I went to look for a job in the Netherlands for further professional development. I knew Witteveen+Bos through my internship in the Netherlands and various projects. Naturally, moving from Slovenia to the Netherlands is a major step. There are differences in projects and culture, and learning a new language can be challenging. My W+B colleagues were very understanding and supportive. The chance to have Dutch language training one day per week was incredibly helpful. I think it is highly valuable to work in various roles in different projects. What I love about working for Witteveen+Bos is that it is very dynamic and we always aim for new challenges in our projects. That stimulates developing my talents.



Manca Petek



Antoinette van Kolthoorn

## At home and on adventures

I see my career as a great adventure. My job satisfaction highlights the choices I made so far. I love 'building' and doing what really interests me. That is how I can best develop myself and make worthy contributions. I was trained as a business economist. I joined the company in 2007 as an HR advisor, and was immediately impressed with the wonderful engineering work. That should be more visible! The switch to Head of Communication after two-and-a-half years felt logical to me, even though it was a very different field of expertise. A great job where I could use all my energy in professionalisation of our corporate communications for over nine years now. The ambitions of Witteveen+Bos are very much in line with my own, and I feel at home with the people working here. I am very pleased with my new challenge as the programme manager of our digital transition. It is very special that Witteveen+Bos truly gives you the opportunity to shape your own career!



Aries van Beinum

## Knowledge development plays a key role

What I love about Witteveen+Bos is that there is plenty of room for pioneering. I was working on a major project for Rijkswaterstaat when it became clear that knowledge development was required to create new guidelines. I initiated a promotion research project at Delft University of Technology, combining science and practical application. The knowledge we gained was subsequently used by Rijkswaterstaat to improve the guidelines. This was a great challenge and logical follow-up step for me. Do not be afraid to take the lead in your development. What opportunities do you see? What ideas do you have? Discuss it with your colleagues and your manager, because often you will find there is room to do it. As a PMC manager, I try to communicate that. To all colleagues of all ages.



## Seeing opportunities and taking them

When I joined Witteveen+Bos as a designer, I was immediately encouraged to make my ambitions come true. So I graduated in Structural Engineering at Delft University of Technology based on evening studies. Because I am interested in the full breadth of the organisation, I have served as the Secretary of the Works Council for the past six years. To transfer specialist knowledge, I have been working as a part-time Mechanics teacher to foreign students at Saxion University of Applied Sciences for the past four years. This has also proven a wonderful way to keep my edge. At Witteveen+Bos, I have been able to develop a wide range of skills and expertise. I can recommend everyone to become part of large projects where possible, because you learn so much from that. And keep your eyes peeled for development opportunities.



Marc Taken

## Innovation and cooperation

In the first few months of joining Witteveen+Bos, I was also completing my promotion research focusing on innovative technology and processes for nitrogen recovery from human urine and its valorisation as a raw material. For me, it is really interesting and fun to have time for further innovation and knowledge development. In the industrial water field, we have extensive and excellent collaborations between the Witteveen+Bos offices in Belgium and the Netherlands. Another bonus is the low threshold in the organisational culture. That is very pleasant. I love contributing to Dutch research projects. In Antwerp, I am primarily focusing on client-driven solutions, although innovative research is making headway here as well. What I love about working for Witteveen+Bos is the wide range of projects. The dynamic environment keeps up the challenge.



Marlies Christiaens





# Objective

# 3

## **Sustainable business operations**

Solar panels on the sustainably renovated office Leeuwenbrug Deventer (energy label A+++)







## SUSTAINABLE BUSINESS OPERATIONS

**Witteveen+Bos can create value based on sustainable operations, among other things by increasing sustainability of buildings and mobility. We seek to reduce our environmental footprint and to promote reduction of CO<sub>2</sub> emissions throughout the entire supply chain. Improvements in business processes and work methods also contribute to more sustainable business operations.**

### Renovation of Leeuwenbrug office in Deventer

In 2018, we moved back into our largest office, Leeuwenbrug in Deventer, after completion of a large-scale renovation. The building is now almost energy-neutral (BENG): fully free from gas, reduced from 55,000 m<sup>3</sup> of gas per year previously, and equipped with 326 solar panels and an innovative TripleAqua heat pump. This pump can heat and cool the building and has internal heat and cold storage. In combination with a substantial increase of the building's insulation value, a major improvement in energy performance was realised.

A number of years ago, we introduced the PLUSworking concept. Our Leeuwenbrug office was renovated in accordance with this formula. The superfluous office furniture that no longer fitted in with PLUSworking was donated to the Deventer-Romania foundation to enter a second life as school furniture.

### CO<sub>2</sub>-footprint

We annually establish our CO<sub>2</sub> footprint in order to gain insight into our operational CO<sub>2</sub> emissions. In 2018, we calculated the footprint using conversion factors in accordance with the values at [co2emissiefactoren.nl](http://co2emissiefactoren.nl). The reported CO<sub>2</sub> footprint per FTE relates to all Witteveen+Bos employees worldwide. The footprint consists of three main elements: business premises, car use, and air travel. We aim to reduce emissions in all three areas.

#### KPI 2018

#### Result

Our internal CO<sub>2</sub> emissions reduction is in line with the overall target of a 30 % reduction by 2020 compared to the reference year 2007.

In 2018, a reduction of 40 % per FTE was achieved compared to the reference year 2007.

Maintain our CO<sub>2</sub> Awareness Certificate at Level 5 of the SKAO CO<sub>2</sub> Performance Ladder, and obtain certification in accordance with the new Quality Manual 3.0.

Our certification at Level 5 of the CO<sub>2</sub> Performance Ladder was renewed in 2018.

The renovation of the Leeuwenbrug office in Deventer resulted in a significant decrease in gas consumption. We used less air travel by making a well-considered choice in whether or not to visit sites, and by taking the train more often. The CO<sub>2</sub> reduction is mainly due to autonomous reduction caused by developments outside Witteveen+Bos' sphere of influence, such as the national rail road company switching to sustainable power.

The CO<sub>2</sub> Performance Ladder is an instrument that encourages environmental awareness on the part of private-sector companies, both in their own business operations and in project realisation. We are proud to have retained full certification in







2018 (in the form of the CO<sub>2</sub> Awareness Certificate) at Level 5 of the CO<sub>2</sub> Performance Ladder. All measures that we took in 2018 to limit CO<sub>2</sub> emissions are set out in a separately published footprint, which is available at [www.witteveenbos.com/co2-performanceladder](http://www.witteveenbos.com/co2-performanceladder).

#### **Development of corporate departments**

In 2018, we finetuned the alignment of the departments to the business. The departments were restructured and redesigned into six key functions. Communications, Facility Management, Finance, Human Resources, ICT and Legal and Quality. We made progress in process management, project management including contracting, international integration and also career development within the departments.

#### **Good Governance**

In early 2018, the governance model for our international entities was updated. This model discerns three independent roles in the management of these offices, i.e. the management role (by the executive board); the controlling and advisory role (by the departments); and the role of the shareholder we are accountable to.

#### **Compliance**

We are committed to ethics and compliance. This is embedded in our Company Code of Conduct and the associated policies. In 2018, we appointed an Ethics and Compliance Officer, responsible for preparing and executing the Corporate Compliance Programme. In 2018, training and awareness of our employees regarding compliance was a special focal point. This included an e-learning module to be completed by all employees from 2018 onwards. In 2018, attention was also paid to privacy legislation. In the Netherlands, for example, we have complied with the General Data Protection Regulation (GDPR) since the beginning of 2018.

#### **Safety**

Safety is a key component in our business operations. In April 2018, the first five product-market combinations were certified for Step 3 of the Safety Culture Ladder with full roll-out in the near future. This is designed to reinforce our safety culture and to prevent and limit the incidents as much as possible, both on the work floor and on project sites.

#### **Ten-year vision**

If you walk into Witteveen+Bos in ten years' time, you will experience fully sustainable operations: circular, at least CO<sub>2</sub> neutral, socially and financially sustainable. Additionally, in ten years' time, we are in the vanguard with our innovative operations and maximum use of digital options. With our sustainable and innovative operations, we are a leading example, increasing our brand appeal in the market and the labour market.

#### **Spearhead for 2019: Digital transition**

The first step we take towards the ten-year vision is accelerating our digital transition. We have the ambition to upscale digital entrepreneurship in 2019 and 2020. We have defined three pillars: digital organisation, digital service provision and digital talent development. These are focused on improving our digital operational organisational efficiency, increasing sales from digital services, and training all Witteveen+Bos people in the digital domain.

## BUSINESS OPERATIONS KEY FIGURES



Use of public transport for business and commuting purposes (km)

8,064,502<sup>↑</sup>

(2017: 8,060,806)

Business purposes

2018: 2,280,764 <sup>↓</sup>  
(2017: 2,382,545)

Commuting purposes

2018: 5,783,738 <sup>↑</sup>  
(2017: 5,678,261)



Use of private cars for business purposes (km)

2,924,410<sup>↓</sup>

(2017: 3,299,532)

Use of company cars for business purposes (km)

869,160<sup>↑</sup>

(2017: 790,631)

Use of company cars for business purposes (l)

169,831<sup>↑</sup>

(2017: 144,990)



District heating (hot water in gigajoule)

548<sup>↑</sup>

(2017: 38)

\* The number for 2018 includes the energie consumption of our Amsterdam office.



Gas consumption in office buildings (m<sup>3</sup>)

199,490<sup>↓</sup>

(2017: 247,730)



Use of private cars for commuting purposes (km)

3,240,623<sup>↑</sup>

(2017: 3.134.609)

Use of company cars for commuting purposes (km)

699,251<sup>↑</sup>

(2017: 629.918)



Air travel (km)

4,659,354<sup>↓</sup>

(2017: 5,714,772)



Emissie per fte in ton CO<sub>2</sub>

3,41<sup>↓</sup>

(2017: 4.09)



Electricity consumption (kWh)

1,479,264<sup>↑</sup>

(2017: 1,455,966)



Paper use (kg)\*

23,638<sup>↑</sup>

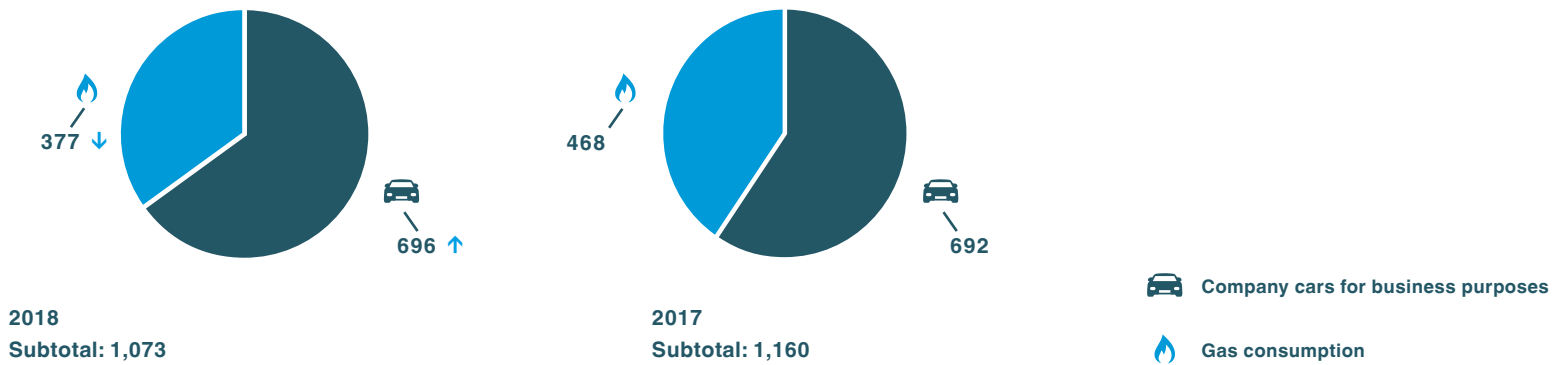
(2017: 15,381)

\* The number for 2018 also include the books that were published

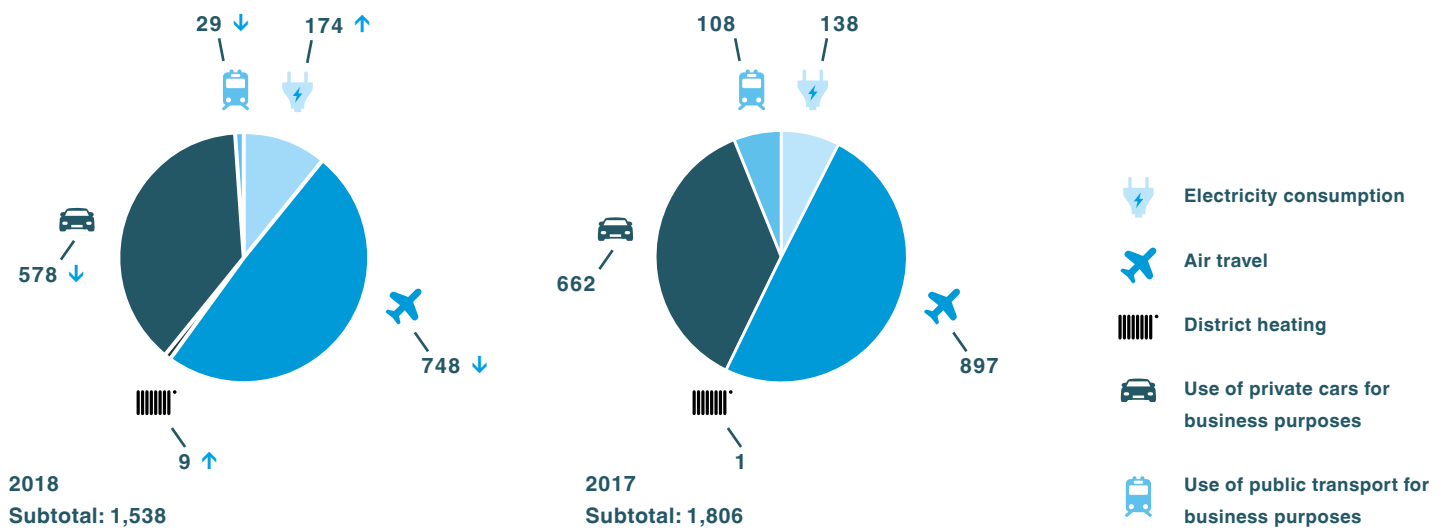


## EMISSIONS PER SCOPE IN TONNES OF CO<sub>2</sub>

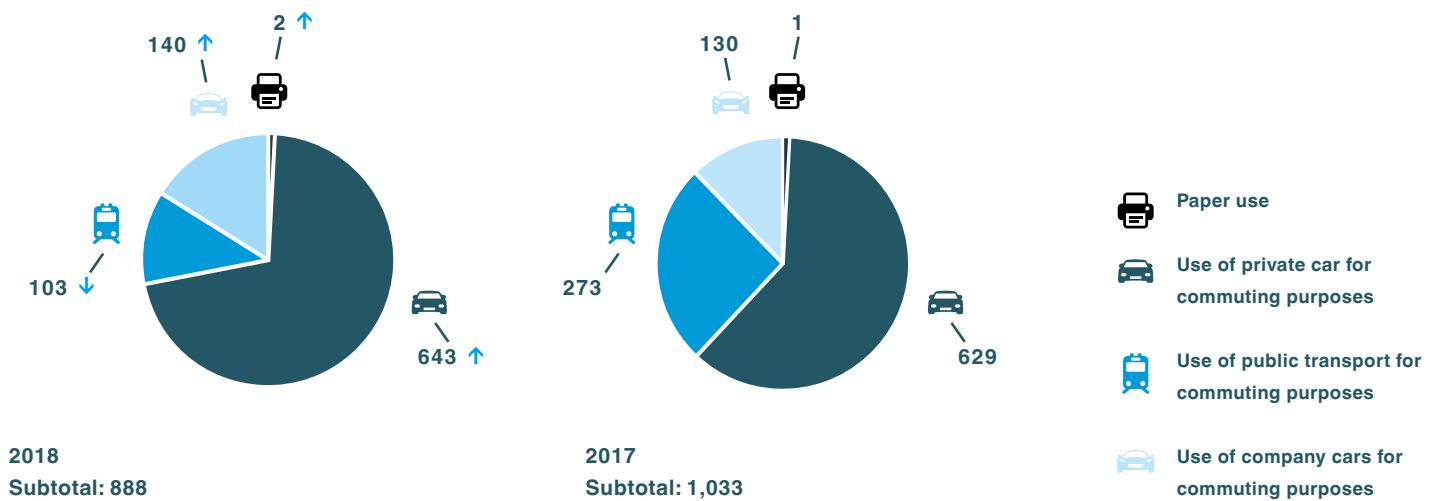
### SCOPE 1



### SCOPE 2



### SCOPE 3



### TOTAL

total: 3,999  
2017

3,499 ↓

2018



# Objective

# 4

**Economic value**  
North-South Metro Line Amsterdam





Europe



## ECONOMIC VALUE

**Witteveen+Bos aims to realise healthy financial results. A sound financial basis is an important basic requirement that enables the company to create long-term value for our stakeholders and contribute to economic growth.**

### Financial results

The total of assets decreased compared with 2017, in particular due the reduction of the total of provisions and work in progress. This is the result of the extra attention we have been giving since autumn 2018 to reduce our working capital. The solvency rate decreased to 41.5 % (2017: 42.7 %). Other financial key figures can be found on page 60.

The 2018 profit-and-loss account shows that we generated higher sales in the past year. Our revenue excluding subcontractors decreased slightly. Productivity increased, provisions had a negative effect, combining higher sales with a lower result. Compared with 2017, the net profit margin decreased due to an increase of provisions for work in progress, an increase in friction cost due to staff turnover, and a higher effective tax rate. Although the net profit margin stayed just above our minimum target of 8 %, we are not fully content with this result. In 2019, we aim to improve our profit margin, in particular based on better project controlling and reducing the outflow of employees.

KPI 2018	Result
Annual growth of own revenue of 3 to 5 %	Witteveen+Bos N.V. has a total revenue for the 2018 financial year of EUR 132,9 million, an increase of 1.6 % compared to 2017 (2017: 130,8 million euros). Revenue excluding subcontractors amounted to 101.1 million euros, a decrease of 3.0 % compared to 2017 (2017: 104,2 million).
Annual workforce growth of 3 to 5 %	The workforce grew by 6.7 % from 1,054 to 1,125 employees.
Annual net profit margin of at least 8 %	The net result in 2018 amounted to EUR 11.3 million, yielding a net profit margin of 8.5 %.

### Risk management

In 2018, we devoted special attention to corporate risk management. We charted the top risks for our four corporate objectives and we completed a first risk management cycle. The analysis showed that low liquidity will be our key short-term risk.

### Ten-year vision

If you walk into Witteveen+Bos in ten years' time, you will immediately see that we are working on design and consultancy projects similar to the current ones. We are also continuously developing new products and services in a mix of earning models. We are collaborating with many partners in an ecosystem that allows us to be joint shareholders of a development, earning profits together.

### Spearhead for 2019: Working capital

Before intensively focusing on new earning models, we focus on reducing our working capital in order to reduce our liquidity risk. The amount of work in progress and debtors has continually increased in the past few years, and overall it is now classed as undesirably high. This is why we are starting improvements in processes at project level, PMC level and corporate level. Since autumn 2018, a lead group with members from four PMCs and the Finance department has studied which measures are effective. Their findings and best practises will be shared and rolled out in the other PMCs and at corporate level.





## SUMMARISED ANNUAL RESULTS 2018

CONSOLIDATED BALANCE SHEET (before profit appropriation)	31 DECEMBER 2018	31 DECEMBER 2017
<b>Assets</b>		
Intangible fixed assets	2.123	2.844
Tangible fixed assets	21.268	17.557
Financial fixed assets	+ 2.204	1.870
<b>Fixed assets</b>	<b>25.595</b>	<b>22.271</b>
Work in progress	11.986	11.719
Accounts receivable	23.816	26.545
Cash and cash equivalents	+ 14.738	16.631
<b>Current assets</b>	<b>+ 50.540</b>	<b>54.895</b>
	<b>76.135</b>	<b>77.166</b>
<b>Liabilities</b>		
<b>Group equity</b>	<b>31.595</b>	<b>32.973</b>
<b>Provisions</b>	<b>5.278</b>	<b>5.223</b>
Long-term liabilities	10.045	11.160
Current liabilities	+ 29.217	27.810
<b>Total liabilities</b>	<b>+ 39.262</b>	<b>38.970</b>
	<b>76.135</b>	<b>77.166</b>
<b>CONSOLIDATED PROFIT-AND-LOSS ACCOUNT</b>		
	<b>2018</b>	<b>2017</b>
<b>Net turnover</b>		
Net turnover including changes in work in progress	<b>132.857</b>	<b>130.806</b>
<b>Costs</b>		
Subcontracted work	31.787	26.572
Salaries and wages	49.563	48.632
Social security and pension premiums	12.647	12.174
Depreciation of (in)tangible fixed assets	2.320	2.203
Other changes in the value of (in)tangible fixed assets	0	1.660
Other operating costs	+ 20.886	22.641
	<b>- 117.203</b>	<b>113.882</b>
<b>Operating result</b>	<b>15.654</b>	<b>16.924</b>
Interest paid (on balance)	- 308	300
<b>Result before taxation</b>	<b>15.346</b>	<b>16.624</b>
Results of other participations	+ -/- 103	-/- 283
<b>Result before taxation</b> (including other participations)	<b>15.449</b>	<b>16.341</b>
Taxation	- 4.185	3.818
<b>Net profit</b>	<b>11.264</b>	<b>12.523</b>

(amounts in thousands of euros)

## FINANCIAL KEY FIGURES



**Turnover**  
in thousands of euros

132,857<sup>↑</sup>

(2017: 130,806)



**EBITDA**  
in thousands of euros

18,077<sup>↓</sup>

(2017: 20,505)



**Net profit**  
in thousands of euros

11,264<sup>↓</sup>

(2017: 12,523)

**Solvency**  
as a percentage

41.5%<sup>↓</sup>

(2017: 42.7 %)

**Net working capital**  
in thousands of euros

21,324<sup>↓</sup>

(2017: 27,085)

**Net profit margin**  
as a percentage

8.5%<sup>↓</sup>

(2017: 9.6 %)

### Participation in employee share ownership scheme at 1 July 2018

#### participants



551

(2017: 547)

#### partners



82

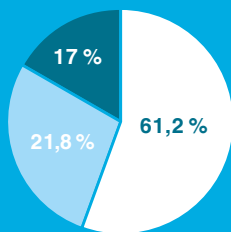
(2017: 78)

#### senior- and premium-partners



20 and 10

(2017: 19 and 10)



### Internal price of Witteveen+Bos N.V. share at 1 July 2018 in euros

5.83<sup>↓</sup>

(2017: 6.25)



## NOTES TO THE ANNUAL RESULTS 2018

This annual report contains the balance sheet and profit-and-loss account of Witteveen+Bos N.V., and the accounting principles for preparing the consolidated key figures. Please refer to the consolidated 2018 annual report as lodged with the Chamber of Commerce Trade Register for full disclosure of the assets and the results of Witteveen+Bos N.V.

### Preparation of the consolidated annual figures

The financial statements have been prepared in accordance with Part 9 of Book 2 of the Dutch Civil Code. They are based on historical costs.

### Change of accounting policies

Company premises and land were measured at actual cost up to the financial year 2017. Pursuant to RJ-Uiting 2017-2 (Dutch Accounting Board), the accounting policies have been updated as from the 2018 financial year. From now on, company premises and land will be measured at acquisition cost. The update of this policy was prospectively recognised in compliance with the transition provision set out in RJ 212.8. This update of the accounting policy for this item does not affect the opening position of 1 January 2018. The existing revaluation reserve will be released upon realisation.

### Consolidation

Insofar as actual policy-making influence exists, subsidiaries have been included in the consolidated annual accounts. Joint ventures have been consolidated in proportion to the share held in the company.

### Principles for the measurement of assets and liabilities

Land and buildings are valued at acquisition cost, minus the cumulative depreciations and impairments, if any. The depreciations are based on the forecast future economic life, applying a fixed percentage of the acquisition cost and taking into account any residual value. Depreciation starts on the date of first use. Land is not subject to depreciation. The cost of major maintenance is charged to the operating result on the date this occurs.

Financial fixed assets include unconsolidated interests in participations and partnership firms. Participating interests are measured according to the equity method.

Projects in progress for third parties are valued based on incurred costs, plus the profit assignable to the performed projects, minus losses foreseeable at the balance sheet date. Profits attributed to projects in progress are recognised based on the percentage of completion of the projects at the balance sheet date. Invoiced instalments for projects in progress are deducted from the projects in progress. Trade accounts receivable included in receivables are recognised less a provision for doubtful accounts.

Provisions are created for deferred tax liabilities, tax risks, warranties, claims, procedures and investigations, deferred employee remuneration, and liabilities in respect of participating interests.

### Principles for determination of the consolidated financial result

Net turnover and changes in work in progress include the services invoiced excluding value-added tax, and include the changes in work in progress. Revenues of projects are presented in proportion to the work completed. Salaries include remuneration paid to the Board of Directors. The pension obligations are valued according to the 'valuation to the pension fund' approach.

## AUDITOR'S REPORT

### Auditor's opinion

The summarised annual results for 2018 presented on pages 59 and 61 (hereinafter referred to as the 'summarised annual results') are derived from the audited annual results of Witteveen+Bos N.V. for 2018.

In our opinion, the enclosed summarised annual results are consistent with the audited 2018 annual figures of Witteveen+Bos N.V. in all material respects and are based on the accounting principles as set out in the notes.

The summarised annual results comprise:

- The consolidated balance sheet as at 31 December 2018;
- The consolidated profit-and-loss account for 2018;
- The accompanying notes.

### Summarised annual results

The summarised annual results do not contain all the disclosures required by Part 9 of Book 2 of the Dutch Civil Code. Reading the summarised annual results and this accompanying auditor's report, therefore, is not a substitute for reading the audited annual figures of Witteveen+Bos N.V. and the accompanying auditor's report. The summarised annual results and the audited annual results do not reflect the effects of events that occurred subsequent to the date of our auditor's report on those audited annual results (23 March 2019).

### Audited annual results and our accompanying auditor's report for the summarised annual results

We expressed an unqualified audit opinion on the audited annual results of Witteveen+Bos N.V. for 2018 in our auditor's report dated 23 March 2019.

### Responsibilities of the Board of Directors and Supervisory Board

The Board of Directors is responsible for the preparation of the summarised annual figures on the basis of the accounting principles as set out in the notes. The Supervisory Board is responsible for supervising the company's financial reporting processes.

### Auditor's responsibilities

Our responsibility is to express an opinion on whether the summarised annual figures are consistent in all material respects with the audited annual results, based on our procedures, which were conducted in accordance with Dutch law, including the Dutch Standard on Auditing 810 'Engagements to report on summary financial statements'.

Amsterdam, the Netherlands, 23 March 2019

Deloitte Accountants B.V.

Signed on the original: A.J. Heitink



‘For me, the essence of learning and performing is that you are always prepared to collaborate and embrace new insights.’ - Karin Sluis





# Employee of the Year and CEO of the Year

**Every year at the annual company conference, Witteveen+Bos selects an employee for the Employee of the Year Award. Legal specialist Barbara Zantinge-van der Staak is the 2018 winner of the Employee of the Year award. She has worked with Witteveen+Bos since 2007. Our CEO, Karin Sluis, was awarded the 2018 CEO of the Year by ACE, the British Association for Consultancy and Engineering for consultancy, management and engineering firms. This distinction is awarded to the person classed as the best European ambassador for the sector.**

In the past six years, Barbara and Karin intensively collaborated on subjects such as redesigning the legal entity of the company and the Supervisory Board.

Barbara Zantinge: 'I have a background in company law and contracts, with extensive experience in incorporating legal entities and shareholder structures. Based on my knowledge and interests, I liked being involved in Witteveen+Bos' ownership structure and working on the legal restructuring in 2012. We went from a single limited liability company to a public limited liability company with underlying limited liability companies. This was a project where I could use all my previous experience and interests.

The challenge of the past few years was to redesign the Supervisory Board. How can we make a workable, viable structure with Articles of Association and effective working platforms with the Board of Directors? The collaboration between the executives and the Supervisory Board, and also my role as the Supervisory Board Secretary, is still in development. This offers opportunities and challenges that make my work very interesting. The goal is further professionalisation, both for me personally and for the organisation.'

Karin: 'For a director, having an expert, reliable advisor is both essential and a luxury. In particular on key issues like changing the company structure. In this respect, Barbara is a true role model for optimal contribution of departments to the greater Witteveen+Bos organisation. She is pro-active, continuously expands her knowledge where required, and is always prepared to collaborate with anyone. The entrepreneurial character of the departments keeps us sharp, both as the Board of Directors and as part of the organisation.' Barbara adds: 'The organisation

offers us the opportunities and the possibilities, they create space for that. In my experience, Witteveen+Bos is a low-threshold organisation where everyone is accessible, and people feel interconnected and collegial.'

The importance of the human dimension also shows in the jury report of the CEO of the Year award. Jacolien Eijer, Director of the association Royal Dutch Engineers (Koninklijke NLI ingenieurs), nominated Karin. She wrote that Karin is capable of continuously combining inspirational leadership with a personable human touch, and that she is an accessible example to many, both inside and outside of Witteveen+Bos.

According to the Royal Dutch Engineers sector board, Karin reinforces the connection between societal challenges, scientific research, higher education and professional development and applied engineering. Karin: 'That is in line with Witteveen+Bos' DNA. We are an engineering consultancy that is all about content. It then makes sense that I want to do something in the knowledge world, making connections wherever I can. That's why I find a lot of satisfaction in my roles for Saxion University of Applied Sciences, the Netherlands Organisation for Scientific Research (NOW) and the Topsector Water and Marine in the Netherlands.

What did Karin think was the best thing about winning this Award? 'Being recognised by our peers for what we do as a company. Engineering consultancy firms can contribute so much to making the world a better place. Witteveen+Bos uses its sustainable design principles to contribute to contemporary societal challenges in all of our projects, based on the Sustainable Development Goals. On that stage in London, I was just one person representing the whole Witteveen+Bos story.'

# COLOPHON

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Cynthia Boll

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Evert van de Worp

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Isabelle Renate la Poutré

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Viorica Cernica

Witteveen+Bos

Witteveen+Bos N.V.

Leeuwenbrug 8

Postbus 233

7400 AE Deventer

The Netherlands

t +31 570 69 79 11

e [info@witteveenbos.com](mailto:info@witteveenbos.com)

i [www.witteveenbos.com](http://www.witteveenbos.com)

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Milestone Eindhoven the Netherlands



