

# Engineering: people's work

Annual report 2023





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## Our people, our strength

We have a clear mission, and it is at the heart of everything we do: through the projects we work on, make a positive contribution to overcoming the major challenges facing society. Together with our clients and collaboration partners, we want to generate social value and contribute to a future-proof world.

The key factor in achieving this is our people. They acquire our expert knowledge, share and expand it with clients and partners, collaborate, build trust, and devise concrete solutions to the challenges our world is faced with.

Would you like to know more about Witteveen+Bos's efforts to help overcome these challenges? In our Annual report 2023, you can read about how our talented employees work each day to ensure a better world for tomorrow.

# An unpredictable and demanding world



**Relatively speaking, 2023 began uncertainly. The turbulent political situation at home and abroad and the increasing complexity of the challenges facing society demanded flexibility both from us and from our clients. The task we faced was that of performing our work in a reliable and stable manner in an unpredictable and demanding world.**

Our annual figures demonstrate that we were successful in doing this. In 2023, a total of 1,451 Witteveen+Bos employees worked across the world on issues related to water, energy, infrastructure, the environment, and construction. We increased our revenue to EUR 177 million. We also managed to improve our profitability, with an ultimate net profit of EUR 18.3 million. At the same time, we invested in carbon-neutral business operations, which saw us decrease our carbon footprint per employee.

## Value for society through projects

In 2023, many of our clients were faced with challenges resulting from global issues such as climate change (it was both the hottest and wettest year ever), urbanisation and liveability in cities, biodiversity loss, and the energy and water transitions. These worldwide issues were compounded at a more local level by challenges including the nitrogen issue, the asylum seekers crisis, the VenR replacement and renovation programme, and the housing crisis. The urgency of tackling these issues and transitions is increasingly being felt by a wider spectrum of the community, and we were successful in helping many clients address the task. On more than 4,700 projects across 43 countries in 2023, we provided added value to clients and society through designs, studies, advice, and (digital) services.

In Belgium, for example, we are working on the Oosterweel link, whose aim is to create a greener, healthier and more accessible Antwerp. It is a project that will benefit the city and boost the economy. Last year also saw us working a lot in and around the only natural area in the Netherlands on the UNESCO World Heritage List: the Wadden Sea. At this location, a complex challenge must be tackled that

involves facilitating the energy transition while preserving ecology and biodiversity and maintaining the accessibility of the Wadden Islands. We are approaching this task by conducting the necessary studies, thinking outside the box, and collaborating with other experts. Collectively, Belgium and the Netherlands are on the eve of a water transition. Due, among other things, to climate change, intensive water use, and (micro)contaminants, we are increasingly being faced with water abundances or shortages, or with insufficient water quality. Clean water and protection against flooding are not luxuries – they are necessities. That is why Witteveen+Bos works with a diverse range of clients to research, develop, build, and provide advice on various issues relating to water. In 2023, for instance, we were involved in a pilot for the innovative DEXSORB filter, a new adsorbent for removing PFAS and pharmaceutical residues from wastewater. We are also working on a complex dyke reinforcement task on the Krachtige IJsseldijken Krimpenerwaard (KIJK) project. The 10-kilometre-long dyke is home to a major, intensively used connecting road and is almost entirely built up with houses, businesses and heritage sites. It also protects an area in which 200,000 people live, work and recreate. The project represents a challenging task for which we are working together with project partners to develop a design and carry out several complementary studies. In Cartagena in Colombia, we are working with local partners to create draft designs and concrete project proposals for addressing flooding and declining water quality in the area. These plans will be developed into a preliminary design and tender-ready projects. As well as addressing the water problems, the various projects also provide opportunities in the areas of employment, the economy, biodiversity, and health. Global urbanisation is continuing steadily. Cities represent home bases for the many residents who live, work and recreate in them. They are also where social,



economic and environmental issues converge, providing fascinating challenges for our consultants and engineers. Last year, together with clients and partners, we worked on creating a climate-adaptive Groenplaats in Antwerp. This project incorporates issues involving water, greenery, public spaces, accessibility, and urban mobility – both above and below ground.

The foundation of our company is the provision of in-depth expertise and a high level of quality on complex, integrated projects. By striving for excellence, we increase the impact we generate for clients, colleagues and society. We devise valuable, sustainable and impactful solutions, setting high ambitions for the contributions we make and upholding reliability in every collaboration we undertake. Making optimal use of the wide range of expertise, backgrounds and perspectives present within our organisation, we constantly look at what can be done differently, smarter and better.

## The organisation – who we are and what we do

Witteveen+Bos is a consultancy and engineering firm that provides solutions to the challenges facing society in the fields of energy, water, infrastructure, the environment, and construction. Accommodating new, talented employees and offering them room to grow in a culture of trust and



entrepreneurship is in Witteveen+Bos's DNA. It is also part of our company mission, which forms the basis of the four corporate objectives we report on.

Witteveen+Bos N.V. is a statutory two-tier company and acts in accordance with the requirements applicable to such an organisation. The day-to-day management of the company is the responsibility of the board of directors, whereas external supervision is provided by the Supervisory Board, ensuring continuity. With twenty offices in ten countries, including nine offices in the Netherlands, we maintain close relationships with clients, collaboration partners, projects, and the labour market. For an overview of the different companies in the Witteveen+Bos Group, see chapter 3 below.

Our 'product-market combinations' (PMCs) are responsible for (new) assignments and for exhibiting entrepreneurship. PMCs are grouped into four knowledge areas, represented by our four business lines: Infrastructure and Mobility; Built Environment; Deltas, Coasts and Rivers; and Energy, Water and Environment. The company's management and business lines are supported and advised by the departments: Communications; Facility Management; Finance; Information Management and Digital Support; Legal and Quality; ICT; and HR. The departments are responsible for the smooth running of our essential corporate processes. With our organisational structure, we ensure a network is created in which colleagues from various countries and disciplines can collaborate, bringing knowledge and experience together from across the world to produce the best possible solutions.

Our clients include public and private organisations – from national governments, provinces, municipalities and water authorities to contractors, architecture and engineering firms, energy and drinking water companies, railway and port authorities, and industry. We serve these different markets from offices in the Netherlands, Belgium, Indonesia, Kazakhstan, Latvia, Panama, Singapore, Ghana, the United Kingdom, and the United Arab Emirates.

## 2023

Owing to poor market conditions all over the world, 2023 began in relative uncertainty. Wage and energy costs rose, contributing to high inflation, while labour market shortages were exacerbated. With the help of improved management information and by focusing heavily on financial project management, however, we were able to make timely adjustments. This meant that, despite the range of (global) uncertainties, 2023 was a good year financially for Witteveen+Bos. Our total revenue in 2023 was EUR 177 million, of which EUR 154.5 million was own revenue. Our net result in 2023 was EUR 18.3 million, meaning our net profit margin relative to total revenue and own revenue was 10.3 % and 11.8 % respectively. In 2022, these figures were 8.1 % and 9.6 %. The quality of our revenue in 2023, therefore, was an improvement on the preceding year. Our higher net result in 2023 relative to 2022 can be explained in part by a higher chargeable total, lower allocations to project provisions, and the release of guarantee provisions. Various market movements – including improvements in our existing markets, such as water – and our ability to react quickly to these also played an important role in our positive annual figures. More detailed financial information is available on page 7.

Following several years of significant staff growth, we deliberately chose to limit this in 2023. Last year, Witteveen+Bos comprised 1,451 employees; in 2022, this total was 1,427. That represents a slight growth of 1.7 %. Following several years of corona, the pressing question arose of how we could best preserve our corporate culture and transfer it to new employees. Partly for this reason, a conscious decision was made to limit staff growth and explicitly invest in onboarding 'neWBies' on projects and into our corporate culture. In 2023, sick leave at the company rose to an average of 4.4 % (from 4.2 % in 2022), which is in line with an unfortunate national trend. For us, this is reason enough to conduct an in-depth investigation into the increase's causes, which we will do in 2024 while also offering accessible psychological support and conducting a pilot on managing energy levels.



### Working for the future with targeted investments

The increasingly complex and rapidly changing world we live in demands agility and flexibility from our employees and our organisation. For this reason, we consciously invested last year in our people (talent development), in sustainability and digitalisation, in onboarding new colleagues, and in strengthening our market position in several new markets, such as the energy transition, the nitrogen issue, and the VenR replacement and renovation programme.

### Innovative client-oriented solutions

Digital innovations are driving changes in our world, leading to new market opportunities and groundbreaking solutions to the challenges facing society. Digitalisation, however, also places new demands on our business operations and our work on projects. That is why we continued to invest in improving our digital organisation, including information security and cybersecurity – for example, by extending our ISO 27001 certification. To further strengthen our digital transition, in 2023 we also acquired GriDD Consultancy B.V. and incorporated it into our organisation. This acquisition represents the next step in improving client interactions through digital applications.

### Developing our professionals

Learning is an essential component of our company vision. We believe that a healthy, diverse and resilient group of employees who are quickly able to adapt is a solid foundation for a stable future. We therefore encourage Witteveen+Bos employees to be lifelong learners, both personally and professionally, in order to stimulate the organisation as a whole to improve and grow. Last year, we launched PLUSschool, a new learning management system focused on employee development. All available learning opportunities and pathways are accessible in a single, user-friendly system. PLUSschool is based on our vision on learning, which centres around 'learning from and with each other through the work we do'. PLUSschool is also used on projects to facilitate collaborative learning with partners and clients. Various learning forms are combined in PLUSschool, such as training, guidance and feedback, and learning at work.

### Witteveen+Bos: net climate-neutral by 2030

In our climate policy, established in 2021, we included the target of achieving climate-neutral internal business operations by 2030. This means reducing our total emissions as much as possible while upholding these priorities: reduce, increase sustainability, and only as a last resort compensate. In 2023, we committed heavily to climate-neutral mobility and sustainable procurement. Through our 'W+B on the mOve' mobility programme, we reduced the use of petrol-powered cars. We invested in new electric project cars and launched several mobility pilots, including for shared electric cars and a 'cycle to work' pilot that featured electric bikes and speed pedelecs. In terms of sustainable procurement, we took a close look at our existing catering policy, aiming to minimise carbon emissions and provide sustainable alternatives while preserving a sufficient range of choice. Following an initial investigation, we made small adjustments that resulted in a relatively large emissions gain. We also managed to reduce the energy consumption of heating and cooling at our head office. The business lines also worked on implementation plans to make our projects climate-neutral by 2040.

### Reacting agilely to market movements

Our resilience was tested last year by challenging markets. In the Netherlands and Belgium, for example, we faced postponements or shutdowns of projects due to the nitrogen issue. It forced us to think differently: though construction projects halted, the demand for nitrogen calculations increased sharply. By responding quickly to the changing market conditions, we managed to turn this development into an opportunity. In the infrastructure world, following several decades of new construction, we now see the emphasis shifting to maintenance and management and to the renovation or replacement of existing structures. For several years, we have been investing in knowledge development, advanced calculation methods, and an aligned process approach to properly address the issues associated with the VenR replacement and renovation programme. We are now reaping the benefits of these investments, working on several VenR assignments. The same is true of the energy transition. The increasing



percentage of electricity in the energy supply is putting stress on the electricity infrastructure. To ensure reliable and safe operations, it is necessary to restructure, expand and reinforce the grid and its high-voltage substations. We have chosen to focus on heating, hydrogen and high-voltage, in combination with strategic collaborations. Our PMC structure means we are agile and can easily respond to changing market conditions, making it possible for us to capitalise on opportunities.

## Detailed financial report

Since 2018, partly due to the organisation's rapid growth in staff, a decline in our chargeable score had been visible. In 2023, we managed to reverse this trend. By consciously choosing to limit growth, we achieved a higher chargeable score than in preceding years. Focus, calm, and an improving market also contributed to an increase in chargeable score. We also saw an improvement in project management, which allowed for a more adequate response to potential risks. As a result, allocations to project provisions decreased relative to the previous year.

The balance increase of projects in progress and accounts receivable was less than that of revenue, which was reflected in our increased liquidity at year end. In 2023, significant attention was placed on controlling working capital, which ensured that it was stable over the whole year. Timely invoicing throughout the year, however, remains a point of attention.

Due to our improved liquidity, in 2023 we made an additional repayment on our long-term liabilities of EUR 1.5 million, in addition to the regular repayment of EUR 0.4 million. Due to a higher net result and the decrease in long-term liabilities, the solvency ratio at year end increased from 44.1 % to 44.7 %. In contrast, an increase in short-term liabilities and short-term receivables meant that the current ratio at year end decreased from 1.78 to 1.69. Nevertheless, the values of both the solvency ratio and current ratio show that, at year end, Witteveen+Bos was in a good position in terms of liquidity.

Stable profits – and, as a result, stable dividends – together with a stable strategic course, are important for the continued existence of our participation system. This system makes it possible for Witteveen+Bos to partly finance its own long-term growth by issuing shares to supplement bank credit. In 2023, we issued shares with a total worth of EUR 1.1 million. Following profit sharing payments to all employees, the company's operating result was paid out to shareholders in the form of dividends. This form of profit sharing underscores a deep conviction of ours: everyone who contributes to Witteveen+Bos's success shares in that success. It also stimulates us to make every year a successful one and not to rely on past achievements.

Generally speaking, Witteveen+Bos takes a cautious approach to risks. On projects, we seek to limit our liability to clients to a reasonable level. The monitoring of projects and contracts by our Legal and Quality department contributes to the mitigation of risk. All new employees also complete an e-learning module on risk awareness in the areas of integrity and compliance. The increasing amount of work being done on digital solutions demanded an expansion of our risk management model. In 2023, Witteveen+Bos began the implementation of an integrated QHSEI management system – a system for managing quality, health and safety, the environment, and information security. The QHSEI management system comprises a set of agreements that make clear what is expected of employees when it comes to working on projects or within the departments and explains how we communicate and report on this. It also outlines the procedures we follow in doing so.

As a result of our business operations, Witteveen+Bos may be involved in claims, proceedings or investigations that have possible financial and/or other consequences for the company. We expect that any potential negative financial developments have been adequately accounted for as at the end of 2023.

In order to control financial risks, we work worldwide using the same project administration systems, with the different entities' financial records being maintained in a single

integrated system. Continuous efforts are being made to improve information provision, in part through the use of visualisation tools that make information available which is up-to-date and both time- and location-independent. To limit currency risks, contracts are concluded in euros or US dollars wherever possible and, also wherever possible, any contracts with subcontractors are concluded in the same currency.

Given the various uncertainties at home and abroad, in the coming years we will continue to operate with caution. In 2024, we will continue to focus on retaining long-term economic value by remaining adaptive while ensuring productivity and cost control.

## Corporate governance

The board of directors of Witteveen+Bos consists of Wouter Bijman, Stephan van der Biezen and Eveline Buter. The Supervisory Board (RvC) consists of Hans van der Ven (chairperson), Angelique Hekman, Peter Reinders and Daniëlle van der Sluijs. Daniëlle was appointed as the RvC's fourth member at the Annual General Meeting (AGM) in April 2023. At the AGM in April 2024, Hans van der Ven will step down from the RvC; the role of chairperson will be taken over by Peter Reinders. At the same meeting, a new member will be nominated to replace Hans. In their current compositions, Witteveen+Bos's board of directors and RvC both possess a balance between male and female members.

Witteveen+Bos strives to ensure that the male-female ratio in its various management layers adequately reflects its staff population. In the management layers below the board of directors, this ratio in 2023 was as follows. Of the four business line managers, one was a woman. Of the 39 PMC leaders, 32 were male and 7 were female. Of the seven heads of department, four were male and three were female. This means that our target ratios have not yet been achieved everywhere.



## 2024 and beyond

The 2023 financial results put us in a strong position for the start of 2024. This year, in a challenging environment characterised by constantly changing circumstances, we will be maintaining the strategic course we have set out on. Our revenue is expected to increase as a result of the organisation's further growth, and we aim to keep our reduced working capital down on a more permanent basis. We are also working on a treasury management programme that will help ensure profit flows and cash flows in our various entities across the globe remain in line with one another. Together with the departments, work will continue on Witteveen+Bos's digital architecture for project organisation and integrated corporate information provision. In line with CSRD regulations, from 2025 we will be required, in addition to our financial reporting obligations, to report comprehensively on sustainability. The preparations necessary for this will continue in 2024. Our endeavours in this and other fields mean we are well placed to tackle, together with our clients and partners, the important challenges facing society all over the globe. Like all our Witteveen+Bos colleagues, we are very much looking forward to the task.

Deventer, 18 March 2024

### Board of Directors of Witteveen+Bos N.V.

Wouter Bijman  
Eveline Buter  
Stephan van der Biezen



## 'Business as usual'

With this report, the Supervisory Board of Witteveen+Bos N.V. (hereafter 'RvC') aims to provide the stakeholders of Witteveen+Bos with an insight into how the RvC performed its supervisory role in 2023. Following a process of coming to terms with the corona crisis and the war in Ukraine, global peace was still not in sight in 2023. The rift between Russia and the West deepened further; the violent conflict between Israel and Hamas seems, for the time being, unresolvable; the world's largest countries – China, Russia, America and India – are being governed in an increasingly autocratic manner, with long-term consequences for global free trade; and the Netherlands is experiencing political fragmentation that is at odds with the need to tackle the many contemporary challenges as a united whole.

Given this context, Witteveen+Bos can be pleased that it was a year of 'business as usual'. All RvC meetings with the board of directors could again be held in person, which greatly facilitated substantive discussion on what were sometimes difficult topics. In terms of financial results, 2023 ended well, which we are grateful for! Just as in 2022, at the start of the year it did not look as though that would be the case. An important focus of discussions with the board of directors in 2023 was why the chargeable score again lagged behind budget and what structural measures could be taken to get a better grip on this. The volatility of developments in liquidity, too, was focused on, as was how the board could obtain more control of invoicing, ensuring a greater capacity for prediction and more stable development. What impact this had on the company maintaining its desired level of resilience and on the size of dividend payments was also addressed.

Extensive discussions with the board were also held on market developments both within the Netherlands – for example, the nitrogen issue – and internationally. In light of our areas of expertise, the knowledge we have built up, and our manner of operating, where do the growth opportunities lie for Witteveen+Bos and what adjustments are needed in our strategy for us to continue to develop internationally in a way that suits us? Important discussions on these topics will continue being held in 2024. Particular focus was devoted in 2023 to our significant activities in Belgium. We were introduced to the new managing director of Belgium and

saw evidence that the intensive process of improvement that began in 2022 is starting to produce the desired results. We are confident that this trend will continue.

Further digitalisation, both as a selling point and as an internal evolution, is essential for Witteveen+Bos's development. To strengthen our position in the digitalisation market, therefore, we acquired GriDD Consultancy B.V. Proper integration of GriDD into the W+B organisation was important and we requested that the company devote significant attention to this. Cultural differences and the process of integration were also addressed at length during an in-depth discussion with the board on the company's general vision on acquisitions.

This year, significant attention will be given to developing digital products and integrating them into our services. Continuing to digitalise processes at W+B is necessary for establishing ourselves as frontrunners and offering an attractive proposal to talented new employees.

Following the pandemic, the rate of sick leave improved only moderately. This was, incidentally, not restricted to our company, but is rather a trend in society. Together with sick leave, hybrid forms of working – partly from home, digitally, and partly at the office – were an important area of focus for the RvC in its meetings with the board. We are pleased, therefore, that the board has made this a central point of attention in 2024 and intends to analyse what its consequences are for Witteveen+Bos's physical locations.





Continuing labour market shortages – particularly in the engineering field – is a source of concern for the RvC. Our opinion, however, is that Witteveen+Bos is well positioned in this battle with our competitors: our focus on sustainability, ethical practices, a healthy work-life balance, and individual entrepreneurship fits in well with the wishes, needs and ideas of the emerging generation. In 2023, we again had a substantive and open discussion with Witteveen+Bos's Works Council. Besides discussing sick leave and social safety, we also exchanged views at length on the possibilities of expanding the participation system.

The tasks of the RvC also include overseeing compliance and risk management. This last topic, in particular, was discussed in depth during RvC meetings. It is pleasing to see that no specific issues arose in the area of compliance and that the training sessions on (un)wanted conduct were well received within the organisation.

The RvC was provided with reinforcement in 2023 through the addition of Daniëlle van der Sluijs. Expansion of the RvC to four members is in line with the organisation's overall growth. As a result of his term of office concluding and his not being eligible for reappointment, at the 2024 Annual General Meeting (AGM) Hans van der Ven will step down from the RvC. Peter Reinders will take over the role of chairperson, ensuring that continuity is maintained. A recruitment process has begun to fill the upcoming vacancy on the RvC; we expect to be able to recommend a new candidate for appointment at the AGM in April 2024.

Based on the analyses that have been carried out, we endorse the board of directors' profit appropriation proposal. We also recommend – based in part on a meeting that was held with the accountant – that the Annual General Meeting adopt the annual financial statement and discharge the board of directors from liability for its management and policies and the RvC for its supervisory duties. Looking to the year ahead, the RvC's focus will again be on productivity and financial results. Despite the current results being good, there is still room for improvement. 2024 will also be an important year in terms of imminent changes, enforced by the regulatory bodies, in reporting on

sustainability. Given the attention that we have been devoting to the topic for years, we believe this is a great opportunity for Witteveen+Bos.

In 2024, we would like to reflect further, together with the board of directors and the shareholders, on how the organisation can continue to be effectively managed – in line with the organisation's growth, internationalisation, digitalisation, and desired improvement in results – in an increasingly complex society.

2024 began for Witteveen+Bos with a well stocked portfolio that includes many great, attractive projects. Let us hope that the domestic and international situations we have no influence over improve throughout the year, with progress towards peace in war-torn countries and a stable government in the Netherlands.

Our thanks go to the board of directors of Witteveen+Bos as it continues its search for challenges, opportunities, and possibilities offered by market developments such as the energy transition. The board's efforts ensure that the continued existence of the company remains uncompromised. Our special thanks go to all Witteveen+Bos employees, whose abilities and efforts contributed to Witteveen+Bos's financial result in 2023 and ensured that the year again ended on a high note! We also thank our clients for placing their trust in Witteveen+Bos.

We look forward to an energetic and effective 2024 for Witteveen+Bos and its employees and go into the year full of confidence.

Deventer, 18 March 2024

**Supervisory Board**

Hans van der Ven (chairperson)

Angelique Heckman

Peter Reinders

Daniëlle van der Sluijs



Chapter 1

# Value for society as a shared priority

## Contribute to solving major challenges facing society

**In line with our core values, we are committed to the clear mission of making a positive contribution to solving the important issues currently facing society through the projects we work on. Together with our clients and collaboration partners, we want to add social and economic value and create a future-proof world.**

We are increasingly working on (more) complex challenges, including the changing climate, global urbanisation, sharply declining biodiversity, the energy and water transitions, and – at a more local level – social challenges including nitrogen,

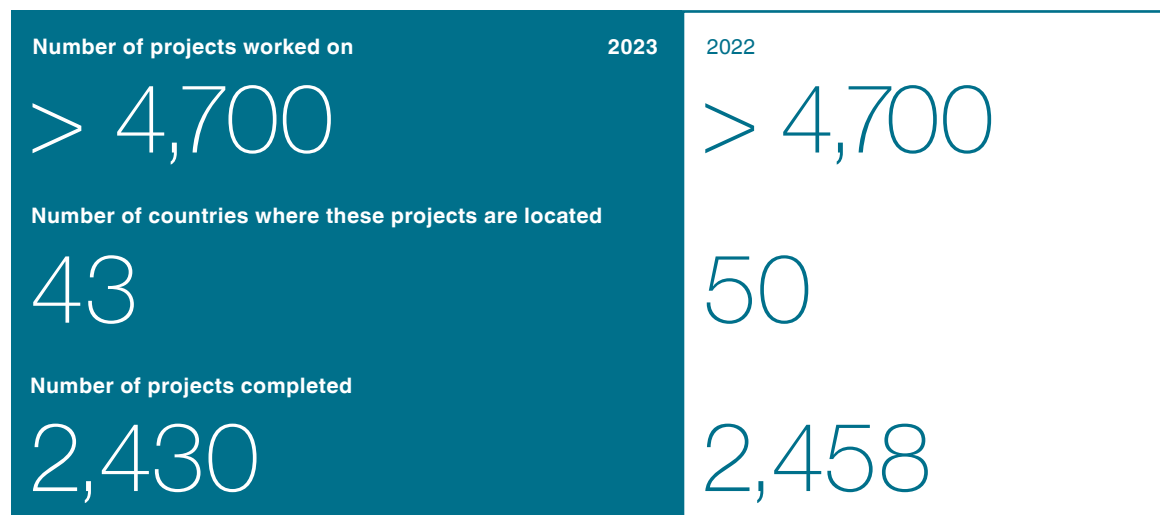
asylum seekers, replacement and renovation, and housing. All these issues involve many stakeholders, which means that collaboration between public and private parties, thorough analyses and research, and the capacity to act are required.

In 2023, we provided added value to clients and society on more than 4,700 projects across 43 countries through designs, studies, advice, and (digital) services. By exploiting our expertise, organisational strength, knowledge, experience, data, and technology, we devise concrete, sustainable and integrated solutions. We are active throughout the chain – from policy, planning processes and design to contract preparation and works supervision. We strive to deliver the highest quality and, in everything we do,

we stimulate the move to a more climate-neutral, nature-inclusive and circular economy.

Witteveen+Bos aims to create sustainable long-term relationships with clients, partners and research institutes. We believe that knowledge expands through collaboration. As a result of the exchanges with our clients and partners, as well as internally between colleagues, ingenious solutions are brought to life. We couple lofty ambitions regarding our contributions with reliability in collaborations, for we believe that this is the path to valuable, sustainable and impactful solutions. A demonstrable capacity to act, too, is a prerequisite for this, especially now that issues are becoming larger and increasingly multifaceted.

### OUR PROJECTS





**+ Data management:  
Dutch governmental offshore wind ecological programme**

Since 2016, the Dutch governmental offshore wind ecological programme (Wozep) has carried out structured research on the ecological impact of offshore wind farms under assignment to the Ministry of Economic Affairs and Climate Policy. Wozep focuses on the most significant knowledge gaps surrounding offshore wind farms' ecological impact. Under assignment to Rijkswaterstaat, Witteveen+Bos has been responsible for Wozep's data management since 2019. To be able to estimate what the ecological impact of a wind farm will be before a permit for it is granted (part of the site selection decision), a lot of information is required. Wozep provides this in various forms, including feasibility studies, international inventories of data and knowledge, model development, and research including field observations. The knowledge thus obtained is valuable input for the design process and decision-making related to wind farms. The aim of data management on Wozep is to make possible and ensure the standardised storage of all data collected within the programme, resulting in transparency regarding available data and stimulating the reuse of data and models.



**+ Veilige Vecht exploratory study:  
water security through systems measures**

The dykes on the Vecht river between Dalfsen and Zwolle no longer meet legal flooding standards. Under assignment to the WDO Delta water authority, and together with them as well as Royal HaskoningDHV and Land-iD, Witteveen+Bos conducted a comprehensive variant analysis as part of the Veilige Vecht ('Safe Vecht') project. Its goal was to determine the best way to restore water security in this part of the Overijssel province.

The Veilige Vecht project is part of the national HWBP flood protection programme, which aims to ensure that all dykes in the Netherlands meet legal standards by no later than 2050. The exploratory phase of the project is intended to result in a preferred variant. Many of the dykes and floodplains involved lie in protected nature reserves: the Natural Ecological Network and the 'Uiterwaarden Zwarte Water en Vecht' Natura 2000 area. This protected status and the underlying natural and cultural values of the locations are constant factors in decisions made during the studies.



**+ Water stewardship:  
sustainable water management in practice**

Action is required to ensure that fresh water remains available for current and future generations. Responsible management of water sources is brought together on water stewardship programmes. For years now, Witteveen+Bos has worked with businesses and governments on these programmes to devise concrete solutions.

'Water stewardship involves proactive and integrated action to maintain the availability and improve the quality of water for people and the environment. But it's also about acknowledging and understanding in a broader context,' explains Heleen de Fooij, project manager for strategic water studies. 'Like the impact of water use and water scarcity on local communities, biodiversity, and climate change.'

## Taking responsibility

**As an engineering firm, we want to assume responsibility for our role in addressing sustainability issues and creating social impact. As well as doing this in our business operations, we can generate value for society together with our clients and partners through the projects we work on.**

To identify which areas we can add the most value in, a materiality analysis is carried out with our stakeholders every four years. The last comprehensive analysis took place in 2020, with an update occurring in 2022 based on input from our employees. A shared finding from both external and internal stakeholders is that Witteveen+Bos makes an above-average contribution in the areas of infrastructure, social equality, and water and sanitation. Employees also indicated that they consider it important for Witteveen+Bos to place extra focus in the coming years on energy, circularity, climate and biodiversity. These, above all, are the areas where Witteveen+Bos can make a bigger material difference. In recent years, therefore, we developed a strategy on these topics and areas of work that includes long-term goals and has since been laid down in policy.

### Climate and biodiversity

In 2022, we established what our climate ambitions are.

Our climate policy consists of three pillars:

1. Choosing more sustainable markets and projects. Our focus lies on projects that directly contribute to the climate challenge (e.g. the energy transition, climate change adaptation, and biodiversity). We want to limit our work for the fossil fuel industry;
2. Making our designs more sustainable. Our targets:
  - by no later than 2030, we will be using our advice and designs to maximally contribute to improving biodiversity;
  - our advice and designs will be climate-neutral by no later than 2040;

3. Making our business operations more sustainable. By 2030, our internal business operations will be climate-neutral. More information in this available in chapter 3.

#### Multiyear Climate and Biodiversity programme

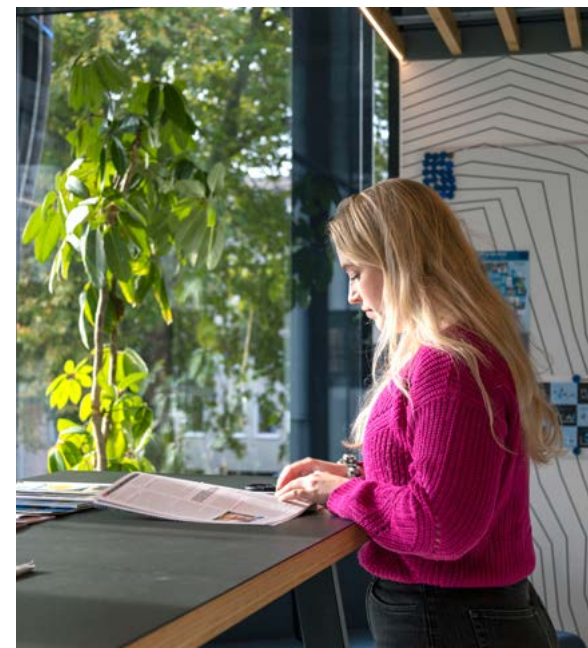
In 2023, we took important steps towards implementing our climate policy in order to realise its ambitions. We introduced, for example, the multiyear Climate and Biodiversity programme, which provides roadmaps for the respective components of biodiversity and the climate (pillar 2).

At the heart of this programme is the desire to realise the company's climate ambitions in our business lines and PMCs. After all, this is where projects are carried out together with clients and partners. The programme, therefore, is designed to support, stimulate and develop our PMCs and business lines.

In this context, all business lines and a number of PMCs have prepared business implementation plans. The plans identify the top five opportunities for increasing biodiversity on projects and reducing the overall footprint and carbon emissions of our project portfolio. The plans consider both what we can do in our own designs and what is needed in this respect in the chain.

To help conduct the above analyses, a tool for identifying key focus areas at the PMC level, among other resources, has been made available. This tool makes it easier for PMCs to identify which activities and aspects have an environmental impact and, above all, which actions are available to them.

We see stimulating biodiversity, too, as a design challenge, and we actively bring it to the attention of our clients.



In 2023, we further developed our method of **integrated design** and further developed and integrated the **Building with Nature** sustainable design principle. These steps ensure that stimulating biodiversity is included in the design process in a logical and structured way.

Central to our design methodology is a landscape-ecological systems analysis (LESA). This analysis ensures that any measures impacting on nature are suited to the 'DNA' of the relevant project site. An LESA allows us to identify how a site's ecosystem functions. Another important tool is formed by the ecological design principles enshrined in TRIAS Ecologica.

#### TRIAS Ecologica

- 1 Allow nature to take its course and preserve valuable features of the nature and landscape.
- 2 Nature is central, with 'human functions' being incorporated later into the natural design.
- 3 People are central, with natural functions being added as much as possible to the design. Whatever you do, do it with minimal impact on nature.



## SROI

Our Social Return on Investment (SROI) policy aims to have an impact on society by investing in increasing employment opportunities for people with a (greater) distance to the labour market. The policy applies to the Netherlands is based on four pillars: Work, Education, Social and Community-Based Activities, and Procurement.

For a consultancy and engineering firm, implementing SROI policy within the Work pillar is challenging. Clients set requirements which demand that applicants be specifically assigned to a certain project or come from the relevant municipality. An additional barrier is that our work typically requires specialist knowledge. By working together with clients to identify opportunities to realise SROI ambitions, however, we succeeded in 2023 in offering seven employees opportunities in the municipalities of Amsterdam, Haarlem, Zandvoort, Rotterdam and Den Bosch. For the Education pillar, a group of enthusiastic and motivated colleagues provided tutoring, as well as homework and Technasium assistance, at a community centre and a primary and secondary school in Amsterdam Zuidoost. In Kortenhoef, colleagues also gave a **guest lesson** on water management to group 5 pupils at a primary school while, in Deventer, secondary school students worked on water quality as part of the Ecolyceum (Etty Hillesum).



#### + HOV4 connects key locations in Eindhoven region

The Eindhoven region is growing and jobs are becoming available in increasing numbers. For this reason, the Province of North Brabant and the Eindhoven and Veldhoven Municipalities want to increase the accessibility of important residential and work locations. Witteveen+Bos is conducting an exploratory study for a fourth HOV (high-quality public transport) route in the region.

The route will connect Eindhoven's central station to the Veldhoven De Run business park – where, for example, the Máxima MC medical centre and ASML are located. This will make public transport in the region faster, more reliable, and more sustainable. The connection will feature fewer stops and zero-emission vehicles, with a greener layout in the surroundings meaning the local area benefits too. New housing projects will also help create a more appealing living environment. Instead of increasing car traffic, HOV4 is intended to provide an effective alternative for accessing the station, Eindhoven's city centre, and the business park. The project will therefore have a positive impact on liveability, safety, and air quality in the area.



**+ Salt dam at IJmuiden sea lock**

The new sea lock in IJmuiden is the largest lock in the world. A large lock, obviously, means larger ships can be accommodated, but it also has a downside. The exchange of sea and canal water that occurs with each use means that salt water enters the North Sea Canal. Too much salt water in the canal negatively affects its ecology, as well as impacting on drinking water, nature, agriculture, and horticulture. Measures are needed to prevent this. In the near future, the salt water will be sluiced back to sea through 'selective extraction'. This will be done by means of a salt dam in the Binnenspui Canal. Part of the canal will first be deepened. Because salt water is heavier than fresh water, the salt water will naturally flow to this newly created deepest point. Pillars with baffles between them placed here create a 'letter box' at the bottom of the canal. When the pumping station is activated, more salt water will be released at the same volumetric flow rate. The salt dam, therefore, will ensure that the level of salt water is reduced. Under assignment to contractor Van Hattum and Blankevoort, Witteveen+Bos completed preparations for the works contract and is currently supervising the D&C contract.



**+ Support during reception crisis based on facts, knowledge and determination**

Around the world, people are being forced to flee their home countries. In the Netherlands, too, this is leading to an increased flow of refugees. To accommodate these people, sufficient reception locations are needed. Witteveen+Bos is supporting the Central Agency for the Reception of Asylum Seekers (COA) by providing a wide range of consultancy services for the construction of these locations. Almost without exception, these assignments involve tremendous time pressure and are placed under a magnifying glass by the political community and the wider society. Witteveen+Bos has been working with COA for some time now. The framework agreement that underpins this collaboration means that urgent assignments can generally be taken on quickly. Some 200 assignments were carried out in 2023, encompassing permit applications, spatial planning procedures, environmental and local area studies, and building advice. Some assignments involve redeveloping existing sites, but the vast majority focus on consultancy and support related to (potential) new reception locations.



**+ E-MERGE partners 'unclog' 110 kV grid in Overijssel**

Our electricity grid needs to be expanded and strengthened to accommodate rising demand as a result of heat pumps, electric mobility, and increased industrial usage. Transmitting sustainably generated (i.e. solar and wind) energy, too, requires greater grid capacity. To create this, E MERGE consortium partners Witteveen+Bos and Bilfinger Tebodin are designing a hard branch in Almelo Noord under assignment to TenneT. A hard branch will increase the transmission capacity of the existing 110 kV grid and prevent it from becoming congested when unwanted current from the parallel 380 kV grid 'leaks in'.

According to project manager Erwin Visser, a project like the hard branch in Almelo Noord demands a digital approach: 'Clients like TenneT want their programme of requirements to be demonstrably reflected – for example, in an auditor's report – in digital 3D designs. This works best in a digital environment, in which a design gets updated in real time and is accessible to all stakeholders.'





**+ Sustainably removing pharmaceutical residues from wastewater**

Medicine use in the Netherlands is on the rise, leading to more and more pharmaceutical residues in surface water. These have a negative impact on aquatic flora and fauna and, ultimately, on the production of drinking water. Water authorities are faced with the challenge of removing as many of these residues as possible in a sustainable and energy-efficient way. In a pilot at the wastewater treatment plant in Lelystad, we investigated a sustainable alternative: DEXSORB. This adsorbent, produced from maize, possesses a promising capacity to remove pharmaceutical residues and PFAS as a result of its highly selective nature. DEXSORB's major advantage is that it can be chemically regenerated at low temperatures. This offers advantages in terms of sustainability when compared to common fossil fuel-based adsorbents or other methods such as ozone treatment.

'The value we add to pilots like this comes from exploiting our process engineering knowledge to incorporate new technologies and process steps at large-scale wastewater treatment plants,' explains Tiza Spit, process technologist at Witteveen+Bos. 'Because we don't have ties with any particular technology, we can provide independent advice. Water authorities can then decide for themselves, based on hard data, how to keep the quality of their effluent within the established standards.'



**+ KIJK: Hollandsche IJssel dyke reinforcement**

The Hollandsche IJssel dyke is being strengthened and raised to ensure the safety of the more than 200,000 residents of Krimpenerwaard. The project partners of the KIJK project are currently working on the first works execution designs. The project will reinforce ten kilometres of dyke on the banks of the IJssel between Krimpen aan den IJssel and Gouderak. Due to the complex nature of the project, which includes both technical and financial challenges, the expertise of the water authority and the engineering firms and contractors was brought together at a relatively early stage of this phase.

KIJK aims to minimise the risk of flooding as much as possible so that people can continue to live, work and enjoy their lives in safety. Under assignment to the collaboration between Boskalis and Van Hattum en Blankevoort, Witteveen+Bos and Royal HaskoningDHV have been involved in the plan implementation and works execution phases. The project is being carried out for the Schieland and Krimpenerwaard water authority as part of the national HWBP flood protection programme.



**+ Realising sustainable ambitions on North Tunnel renovation**

Over the next few years, Rijkswaterstaat will renovate seven tunnels as part of its PTZ project. The North Tunnel is one of these; it requires significant maintenance. This tunnel under the Noord river has been in use since 1992, forming part of the A15 motorway between Alblasterdam and Hendrik-Ido-Ambacht. Renovation on the tunnel will start after 2025, with the technical installations being replaced and maintenance on the concrete being carried out. These measures will mean the tunnel is soon ready for the future.

TEC, the collaboration between Witteveen+Bos and Royal HaskoningDHV, was involved in the contract preparation phase and also conducted an energy scan. The tunnel's current energy consumption and that which will be required in the future were both examined, with methods for using energy as efficiently as possible being analysed. Rijkswaterstaat aims to work in a climate-neutral and circular manner by 2030; for this reason, significant attention is being given to these aspects at this early stage. The PTZ project's ambition is to take the lead in increasing sustainability within the VenR replacement and renovation programme.

## Collaboration is key

Our fields of operation and corporate processes as well as those of our partners and clients are increasingly being dominated by global transitions. The interaction among technology, organisation and the local community on projects is becoming more complex and, as a result, multidisciplinary collaboration is becoming even more important. We believe that knowledge expands through collaboration – it is there that ingenious solutions are brought to life. This is why we developed a method, featuring three building blocks, for conscientiously entering into and giving form to collaborations, and why we also created a platform for exchanging knowledge and experiences. These tools allow us to work together to create relevant and up-to-date guidelines which (further) enhance our knowledge and collaboration skills.

Hereafter is a selection of our collaborations in 2023 across all business lines in the areas of innovation and digitalisation, on projects, and in partnerships and consortiums – both in the Netherlands and abroad.



## Safety

Construction is one of the sectors where the most workplace accidents occur. As consultants and engineers, we can make the construction industry safer by considering safety issues in designs, during construction, and while providing supervision and direction. We have signed the GCVB ('governance code for safety in construction'), which makes safety awareness a compulsory element of tenders and contracts, and we participate in the code's lead group. In line with this code, we have embedded the actions we are committed to in our organisation. In the coming years, we will be contributing further to the code's ambition: structural improvement of safety in the construction industry. Since 2017, Witteveen+Bos has been certified under the Safety Culture Ladder and, last year, we reached **step 4** (of a possible 5).

## The digital engineer

Digital innovations are driving changes in our world, leading to new market opportunities and groundbreaking solutions to the challenges facing society. We believe that by combining human ingenuity with technology, we can develop better solutions and increase the quality of our services. Humans and technology hand in hand.

Last year, we launched and further developed several digital products to support our services. The Permit Tool, for example, was launched and the Pedestrian Traffic Monitor and Bicycle Traffic Monitor were further developed. A comprehensive overview of our digital services can be found at [digitalsolutions.witteveenbos.com](https://digitalsolutions.witteveenbos.com). To further strengthen our digital transition, we acquired GriDD Consultancy B.V. and incorporated it into our organisation. This acquisition represents the next step in improving client interactions through digital applications. In our podcast 'De Digitale Ingenieur', we bridge the gap between our work as engineers and the digital world. The podcast can be found on various streaming services, including Spotify.

### Collaborations in the area of innovation (and research)

- Sustainable embankment staircase: custom-printed
- Coral growth thanks to 3D printing
- Out of the box: getting artists involved on projects
- Innovation Programme 'Future-proof infrastructure'
- Consortium selected to scale up Dutch fast charging infrastructure
- Recycling assets: how to approach it

### In the area of digitalisation

- Cost calculation tool for heat network feasibility
- Witteveen+Bos acquires GriDD

### On projects

- Conservation advice for bridges and locks in Amsterdam
- Nature-inclusive design for Evides
- Fehmarn Belt Fixed Link monitoring system
- Geothermal energy's untapped potential-
- Symbiosis of humans and nature: Rotterdam as national park

### As a supplement to our services

- Witteveen+Bos's Odour Lab and Odour Balance: partners in odour
- Nijhuis Saur Industries and Witteveen+Bos to work more closely together
- Oxand – More room for mobility and nature on A9 Badhoevedorp-Holendrecht

### Partnerships and consortiums

- Water as Leverage Cartagena
- Sea level rise: how can the Netherlands change along with it?
- Ramboll, Royal HaskoningDHV and Witteveen+Bos pursue innovative underground tunnel projects together

## Talents

### Sander:

**'I most enjoy connecting with people'**

Sander ten Pas worked as a design lead on the Meuse Delta Tunnel. After starting as an intern at Witteveen+Bos, he has now worked at the company for two decades, where it feels like he starts a new job every few years.

### Meuse Delta Tunnel

'When I started at Witteveen+Bos, I thought: in 20 years' time, I don't want to have already seen and done everything. To avoid this, I tried not to change roles too quickly. It'd be so boring if there was nothing left to explore, I thought. Now I know better. Developments follow each other so fast; the challenges for us as engineers are huge – it never ends! It feels like I start a new job every three to five years. In recent years, I worked as a design lead on the Meuse Delta Tunnel, part of the Blankenburg Link. In a technical sense, it was very challenging! Now I focus on medium-sized projects with shorter lead times. More is asked of me in a commercial sense on these projects, which is lots of fun and teaches me a lot.'

### Antwerp and Copenhagen

'My favourite days are those when my laptop stays closed. I most enjoy connecting with people. Projects run more smoothly when the communication is good, you know who's doing what, and you can empathise with one another. A few weeks ago, I was in Vancouver for a new project. The earlier exchanges via Teams had been difficult, but after we had spoken to each other in person, the communication became much more open. Sometimes, it helps to live close to a project for a while. For the Oosterweel link, I lived in Antwerp; for the Fehmarn Belt Fixed Link, I lived in Copenhagen. On location, you connect better.'

### Virtual construction

'I really enjoy working together with contractors. Safety and risk management are important factors in a design. As the construction phase is often the most complex, in the Constructability group we use 4D models to make it transparent. These models are 3D models to which a fourth dimension is added: time. This allows us to visualise every step in the construction process and identify conflicts before they become a problem. The possibilities of 4D are endless. We're currently using a model to understand the environmental impact of construction equipment. Looking forward, that's important. In the future, electrification should allow us to reduce construction emissions. How much charging capacity and how many battery packs do we need? When? And: Where do we put them? All that information can be put in a 4D model.'



### ‘Producing clean drinking water is always a puzzle’

**Drinking water – we all need it. This is exactly why Luuk Tetteroo became a water technologist. His challenge: to produce safe drinking water with the least possible environmental impact.**

‘I was good at maths and physics, so a career in engineering was a no-brainer. But more specifically? When you’re a student, you’re pulled at from all sides, and the players with the most money pull the hardest. So after I graduated, I decided to create a matrix for myself: Which conditions did my future job need to meet? I realised I didn’t want to contribute to creating more pollution. I wanted meaningful work and decided to look into water treatment, because water is a basic need. With the help of Witteveen+Bos, I’ve since completed a master’s degree at IHE Delft in water and sustainable development.’

**Curious about Luuk’s whole story?**

[Read it on witteveenbos.com/stories/luuk-tetteroo](https://witteveenbos.com/stories/luuk-tetteroo)

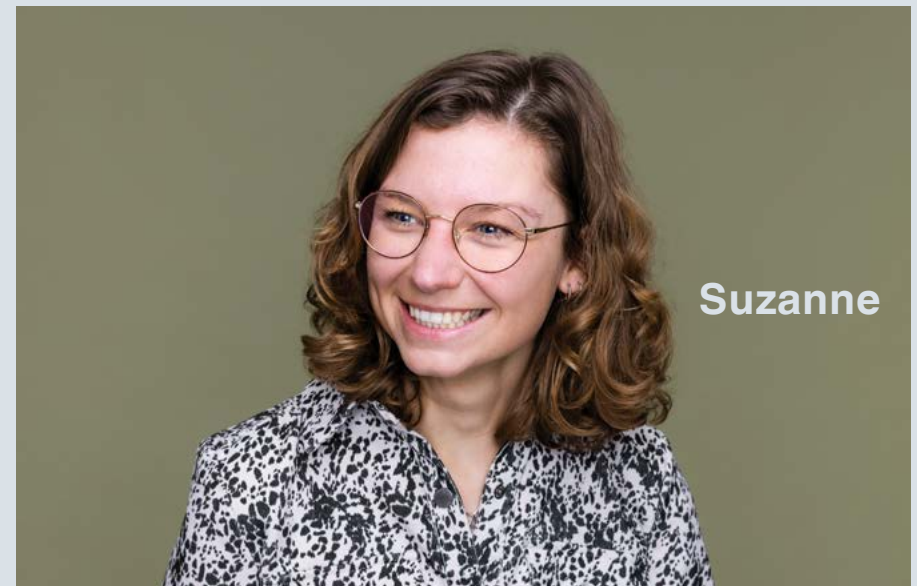
### ‘Robust nature essential for people and society’

**Ecologist Suzanne Kanters specialises in systems analyses. Together with a growing group of colleagues, she investigates how natural areas can be improved. After all, that is beneficial for both people and society.**

‘As a child, I was always outside: examining bugs, catching spiders – that sort of thing. I’d take dead birds home and examine, for example, how their necks worked. My mum was fine with it as long as I kept the animals and plants outside! During careers day at primary school, I dressed up in – wait for it – zip-off trousers and Teva sandals with socks. I even had binoculars. One biology teacher I didn’t like very much almost ruined things for me, but I ended up studying biology anyway and eventually become an ecologist. I don’t examine dead birds anymore; I’m now interested in how ecosystems function.’

**Curious about Suzanne’s whole story?**

[Read it on witteveenbos.com/stories/suzanne-kanters](https://witteveenbos.com/stories/suzanne-kanters)



## ‘Energy is everywhere’

**Mohammed Al-Bouawad is an energy systems engineer at Witteveen+Bos specialising in hydrogen. He knows as well as anyone that the optimal energy system depends on the situation.**

‘Energy is such an interesting phenomenon. The first law of thermodynamics is that you can neither create nor destroy energy: it’s always there. But it can take a different form – for example, changing from wind to electricity or from molecule to heat. Fossil fuel energy is a highly concentrated form and is therefore practical, but converting it results in considerable damage to the climate and environment. To stop being dependent on fossil fuels, all we theoretically need to do is cover a small piece of the Sahara in solar panels. ‘Then do it,’ you’re probably thinking! Unfortunately, it’s not just feasible logistically. In the energy transition, it’s important to find the best solution for each situation. In warm, sunny countries, energy is obtained from the sun; in areas where it’s frequently very windy – like Flevoland, where I live – we tend to build wind turbines. The Dutch energy system of the future will consist of different sources of energy, including wind, solar, heat from the ground, biomass, and hydrogen.’

**Curious about Mohammed’s whole story?**

[Read it on witteveenbos.com/stories/mohammed-al-bouawad](https://witteveenbos.com/stories/mohammed-al-bouawad)



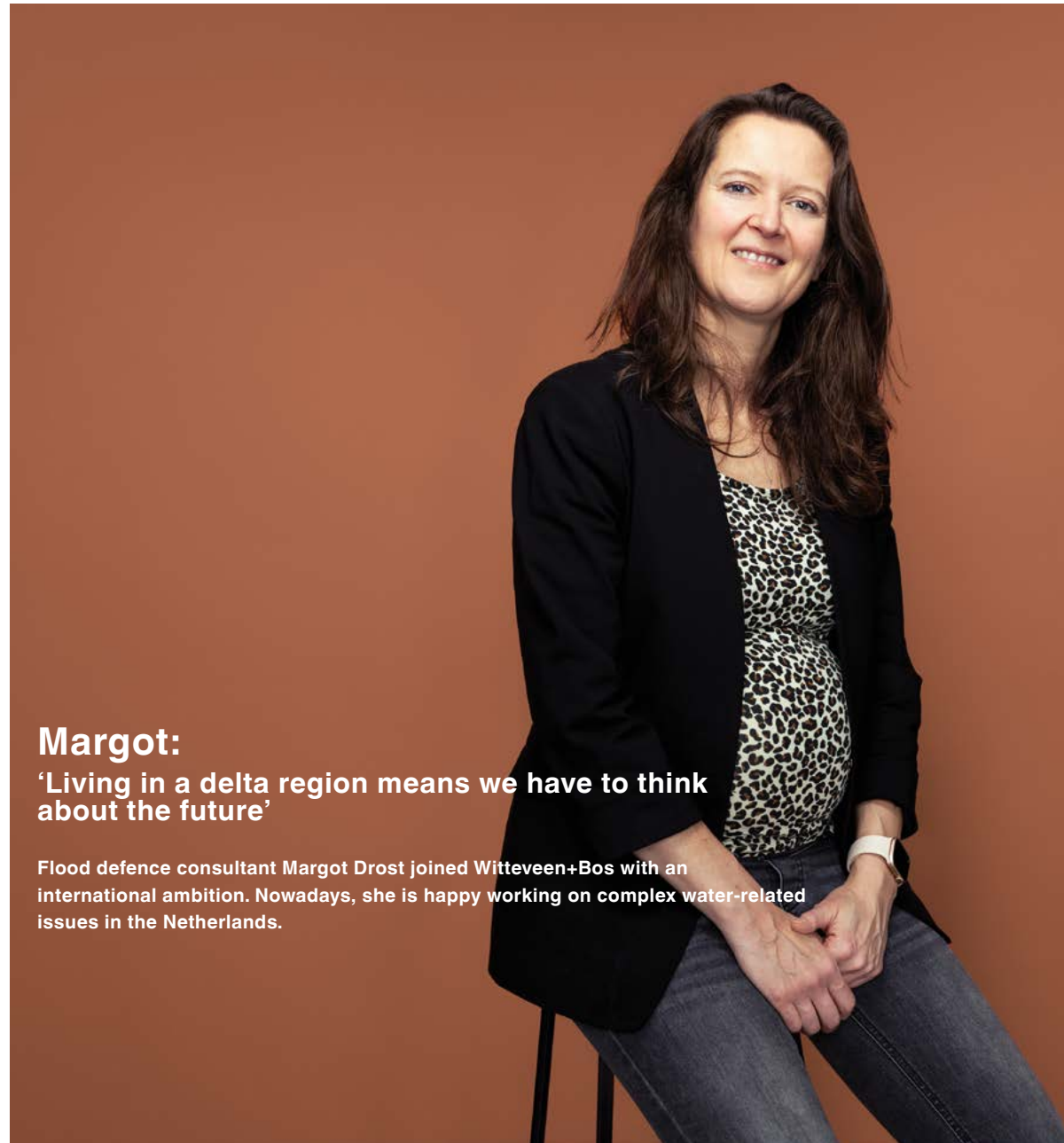
## ‘Civil engineering has a direct impact on the world’

**Her entrepreneurial knack led her to study business administration. As office manager for our Panama office, Mariela also came to appreciate the impact civil engineering has on society.**

‘As a young girl I always was busy, either playing in the park with my friends or trying to earn extra cash by selling cakes and lemonade. I have carried this energy and entrepreneurial spirit with me throughout my career.’  
Mariela de Urriola grew up in Panama City, in the heart of the thriving, bustling metropolis. Her entrepreneurial spirit led her to choose an education in business administration/finance, when at the age of 17, at the end of high school, it came down to making a choice. ‘Although I had a keen interest in liberal arts, I opted for finance/business. Given the economic situation at that time, BA could offer me more and better opportunities in the labor market. And sure, after my getting my bachelor degree in banking and financial management, I started my career in banking. Throughout the years, I also worked in finance for a private company and an educational institute.’

**Curious about Mariela’s whole story?**

[Read it on witteveenbos.com/stories/mariela-de-urriola](https://witteveenbos.com/stories/mariela-de-urriola)



## Margot:

**‘Living in a delta region means we have to think about the future’**

Flood defence consultant Margot Drost joined Witteveen+Bos with an international ambition. Nowadays, she is happy working on complex water-related issues in the Netherlands.

### **Barcelona, Bolivia and Kazakhstan**

‘During my civil engineering degree, I chose to concentrate on water management because I had the ambition of contributing to a better and fairer world. I studied on exchange in Barcelona, did an internship in Bolivia, and completed a graduation project in Bangladesh. I chose Witteveen+Bos because it allowed me to develop my expertise while also providing international opportunities. When they were looking for someone to go to Kazakhstan, I put my hand up. It was an opportunity to realise my ambitions. I ended up spending six months there. It was a challenging time which really broadened my outlook. Back in the Netherlands, I eventually made the move from water management to flood defences. I wanted to focus on bigger, more integrated projects.’

### **Dyke reinforcements**

‘I now work as a flood defence consultant and am also a group leader. Most of my work involves dyke designs or issues related to them. In 2023, for the national government, we reviewed all dyke assessments carried out since the Water Act 2017: what’s the current state of affairs and what does that mean in terms of costs? One of our most significant conclusions was that even more money should be devoted to water security. By conducting more stringent assessments early on, the Netherlands can ensure the resources available to it are used as efficiently as possible.’

### **The Netherlands as delta region**

‘There’s no acute danger of flooding in the Netherlands; we’re generally more concerned about the future. That’s because we live in a delta region. We drain quite a lot of water via rivers and the coast is threatened by rising sea levels. At the beginning of my career, I wanted to contribute to ensuring basic water services were in place around the world. Nowadays, I derive great satisfaction from working on complex water-related issues in the Netherlands. What do the consequences of climate change mean for our work? Are we doing what’s right or do we need to rethink our approach? Through the work I do, I’m genuinely contributing to a future-proof Netherlands.’



#### + Study of railway track stability

For many railway embankments in the Netherlands, it is not known whether they would remain stable under more intensive use or in a changing climate. With train traffic growing, it is imperative to find out whether the earthen structures on which the tracks rests are sturdy enough – especially considering 8 out of every 10 railway embankments are more than 100 years old. To investigate this, in 2020 ProRail established the ‘Programma baanstabieleit’ research programme, for which four engineering firms measured the stability of over 2,600 kilometres of railway embankments in the Netherlands. Witteveen+Bos, Arcadis, Sweco and Royal HaskoningDHV worked together to draw up an inventory of existing railway embankments’ quality. At the end of 2023, their efforts revealed that, as had been expected, several routes required further investigation. This will take place in the programme’s second phase, during which insights from the first phase will be enriched with archival research, site-specific knowledge, and ground surveys. The routes on which more, faster or heavier trains are already scheduled to ride will be given priority, and in some locations measures are already being implemented.

#### + Greater impact by working digitally with ANT

By working in a data-driven and digital way on projects, we can make a greater impact. One such way involves using our online platform ANT, a tool for design and project management developed by CollaborAll and Witteveen+Bos.

ANT helps make tasks of increasing complexity manageable. Projects increasingly involve the use of data, disciplines, and collaboration partners. Overarching themes such as sustainability, circularity and biodiversity make the data flow larger and more diffuse. ANT makes it possible to set up the design process quickly and flexibly, and to monitor quality and progress during both the design and construction phases. This is achieved by managing and streamlining data and making it accessible to partners. As a result, every specialist works in real time using the same up-to-date data. The opportunities offered by this automation make the collaboration between Witteveen+Bos and its partners simpler. ANT has already been successfully employed on major infrastructure projects in the Benelux region, such as the Oosterweel Link, Zuidasdok, and the Lemmer-Delfzijl waterway.

#### + ‘Meten is weten’ pilot: opportunities for livestock farmers

In North Brabant, a pilot led by Witteveen+Bos has been launched to measure emissions from livestock barns using a uniform approach. The pilot involves taking readings of nitrogen, methane and carbon emissions at highly frequent intervals, resulting in reliable, demonstrable emission level measurements. This measurement approach forms the foundation of a new manner of granting permits which provides livestock farmers with opportunities to reduce their emissions. 25 livestock farms are participating in the ‘Meten is weten’ (‘to measure is to know’) pilot. When applying for or renewing a permit, livestock farmers must be able to demonstrate reductions in nitrogen and greenhouse gas emissions. Applying new, low-nitrogen barn concepts is no longer sufficient legal proof of this. This has created an impasse, with the solution potentially lying in permit issuance based on target rather than means requirements – in other words, moving from barn concepts to actual emissions reductions. The Province of North Brabant wants to use the pilot to gain practical experience with the continuous measurement of emissions and gain insight into the feasibility of issuing permits on the basis of target requirements. The move also provides livestock farmers with the opportunity to adapt their barns and business operations so that nitrogen and greenhouse emissions remain within the set limits. To make this possible, a reliable means of establishing emissions levels based on a uniform approach to measurement is required.



# Oosterweel and Groenplaats: an underground jigsaw

**Urban development is becoming more complex and challenging. The number of functions in what is often a restricted project area is increasing. At the same time, we are facing challenges relating to residential building, climate change, spatial quality and mobility. In the Belgian city of Antwerp, much of this complicated jigsaw puzzle is being completed underground. Take the Oosterweel tunnel project and the renovation of the historic Groenplaats square, for example.**





How can Witteveen+Bos play a role in this dynamic playing field? Can we create added value for this generation and the next? What are the opportunities and problems that we need to respectively seize and avoid? Our experts Bart Jansen and Ben Catry are familiar with the issues. Based in Belgium, both have contributed to the prestigious Oosterweel project and the renovation of the Groenplaats, a charming square near Antwerp Cathedral.

### The car is king

‘Every city has its specific challenges,’ says Bart. ‘However, there are always common, overarching themes such as mobility. That was one of the key focal points in both projects. Good accessibility by car and parking options – until recently almost the only mobility parameters in Belgium – are still important but not everything. Alternative, sustainable modes of transport are becoming more important: public transport or attractive pedestrian and cycling routes. Some cities have low-emission zones in which (certain) vehicles are banned. Several years ago, that would have been unthinkable.’

‘That’s right. In terms of mobility, our cities, and Antwerp in particular, are in transition,’ Ben adds. ‘The car is no longer king, but banning cars completely from the city centre is a bridge too far. There is not (yet) sufficient political or social support for that.’

### Breaking the deadlock

Ben: ‘The fact that public support for investments in traffic infrastructure is declining is clear from the deadlock in the Oosterweel project. The original idea of completing the Ring around the city and solving the congestion problem encountered a great deal of opposition. The scope of the project needed to be broadened, with less impact above ground level. Otherwise, it would continue to meet opposition from citizen campaigners and other organisations. It was only after traffic was directed underground where possible and a high quality urban space was created above ground that the plan was approved by all the stakeholders.’

‘We saw the same happening with the Groenplaats,’ says Bart. ‘Facilities for cyclists, cars and the metro needed to be

provided, but preferably underground to make room above ground for other functions. Even with underground mobility, creating ‘good quality urban space’ proved anything but easy.’

## Groenplaats: mobility underground, green above ground

**Residents of Antwerp want a liveable and sustainable city with a healthy balance between the various aspects: economic, social, physical-spatial, ecological and institutional. This was revealed by the city monitor with which the municipality collects information from its residents. Spatial quality, sustainable mobility and climate adaptivity are key factors in this, with urban green spaces and underground infrastructure as important facilitators.**

‘Cities like Antwerp are rightly focusing more on green facilities,’ says Bart. ‘Parks, green squares and neighbourhood allotments cool down the city and reduce the heat island effect.’



They also limit the risk of flooding, improve air quality and increase social cohesion. In short, aspects that promote well-being and public health.'

Ben: 'However, the integration of green in the Groenplaats was not evident. A grassy square with shrubs and trees does not lend itself to organising markets and other events. We see the same issue in shopping streets. There, too, everyone prefers green areas. But we also need sufficient space for loading and unloading, parking, bicycles, cars, public transport, pedestrians or pavement cafes. And the facades must be accessible at all times to the fire service. So trees must not be planted too close to each other. In short, a design is often a compromise in which the parties concerned look for the solution with the widest possible support, taking a range of interests and wishes into account.'

### Ingenious underground

Due to the limited space above ground and the many different functions, the Witteveen+Bos design is largely underground. It includes the renovation of the premetro station, the car park with more electric vehicle and shared mobility facilities, and a new

bike parking facility. The underground space will therefore become an extension of the renovated Groenplaats square, with sufficient provisions for public transport.

Antwerp is also focusing on climate adaptation. Urban green spaces and water discharge are ways to make the city less vulnerable to heat problems and flooding. For that reason, the city wants to make the Groenplaats greener by planting trees and water collection facilities.

Bart: 'Our design envisages the construction of two water buffers and an entirely separate sewer system beneath the Groenplaats and the neighbouring streets. The Groenplaats will have an ingenious underground system, which can accommodate the roots so that adult trees can continue to grow.'

## Oosterweel: broad support for mega project

**The Oosterweel project, involving the extension of the Antwerp Ring, is a textbook example of combining mobility and spatial quality. From mainly focusing on mobility and promoting traffic flows, the project has evolved into a spatial assignment for a large area around the Ring. Here, the problem was not so much the limited space but about generating support from residents and other stakeholders.**

Ben: 'The Oosterweel project creates so much more urban space that the integration of green facilities is a no-brainer. Above ground, there will be extended green zones in or near the city. But it is important that designers also incorporate green in other subprojects. Together, we need to safeguard the ideal urban mix.'



### Every city dweller counts

Bart: 'A city is not just the sum of buildings, functions and use of public spaces. Above all, a city is for and created by its residents. This cannot be expressed in numbers. It involves hundreds, sometimes thousands of different individual wishes and expectations, which may be the same but equally often conflict. Designers need to take all this into account. Local stakeholders often have a decisive influence on the design and construction process.'

'By engaging Antwerp residents early on in the design process, we managed to create an optimal, broadly supported design within the set time parameters,' says Ben. 'Stakeholders were invited to contribute during the design phase. So we collected ideas and then discussed, chose or scrapped options in a carefully considered process.'

### Start of construction

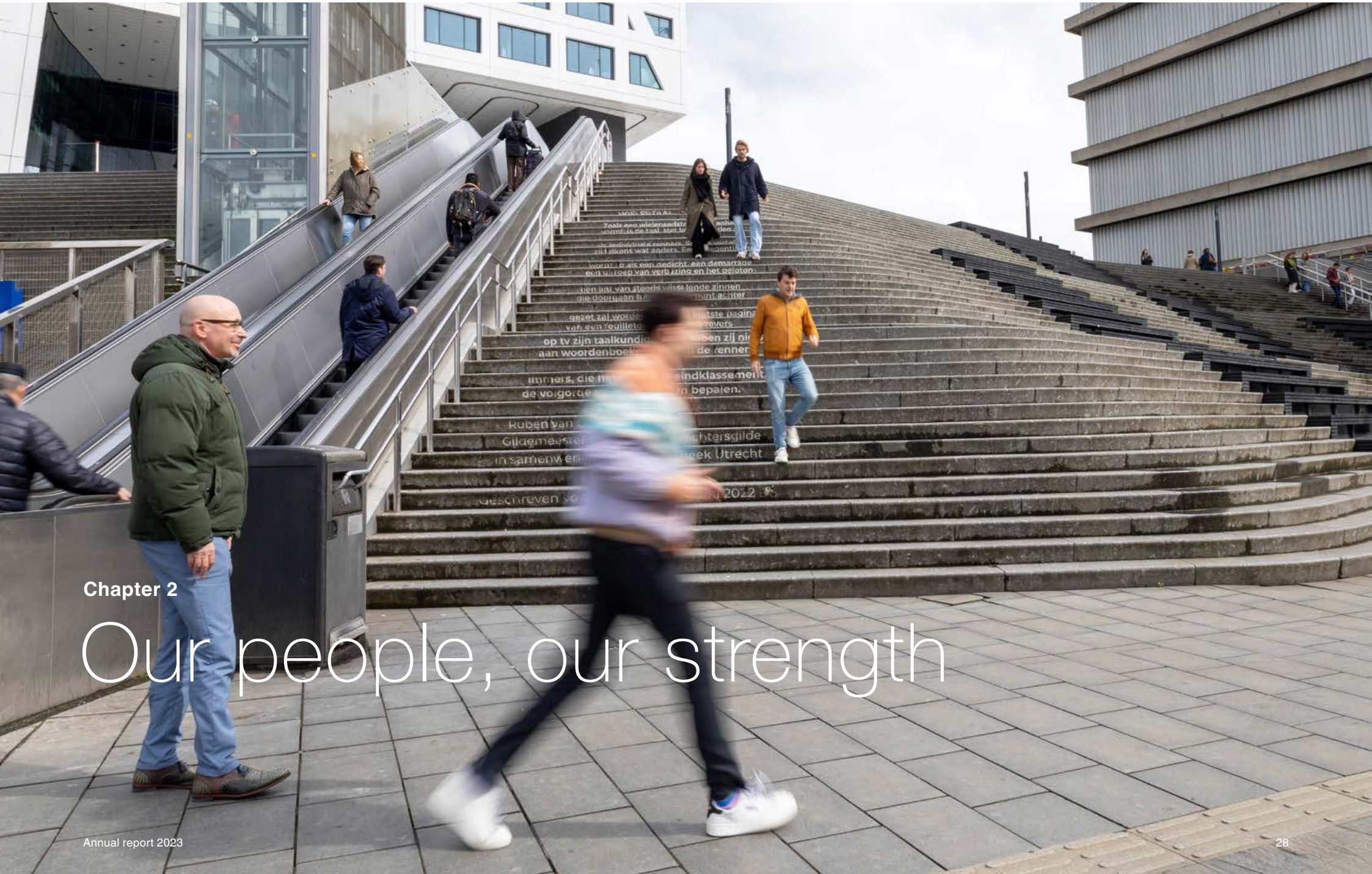
Bart: 'As an engineering and consultancy firm, we are in an ideal position to tackle difficult issues from a technical and economic perspective. To formulate well-considered, calculated answers to covering the Ring, for example. How can this be achieved in technical terms within the existing standards and rules? How do we do this as sustainably and cost efficiently as possible? What are possible alternatives? And what are the advantages and disadvantages of each option, now and in the future? Incidentally, we see the latter on the widest possible urban design scale as well as in a social context. Ultimately, there was understanding for the decisions taken, and the project was claimed and defended by most of the stakeholders. The extensive preliminary phase proved not to be a delaying factor but an accelerator. After years of stagnation, construction started in 2018.'

### Bart Jansen

Civil engineer with extensive knowledge of urban-infrastructure projects. Joined Witteveen+Bos Belgium in 2013. Highly experienced project manager and group leader in urban renovation, bridges, tunnels, port areas. Involved in the specifications for the Scheldt tunnel Oosterweel. Currently working with the client on the action plan for the specifications, tender and construction of the Groenplaats.

### Ben Catry

Civil engineer and spatial planner. Joined Witteveen+Bos Belgium in 2020. Project manager with experience in urban infrastructure projects: roads, noise barriers, sewerage and projects focused on sustainability. Involved in improving the sustainability of Oosterweel and above ground design of the Groenplaats.



## Chapter 2

# Our people, our strength

## Making a difference – The best solutions are designed together

In 2023, a total of 1,451 Witteveen+Bos employees from 8 different countries worked all over the world on devising solutions to the complex issues facing our clients. In approaching this challenge, we draw on a diverse range of backgrounds, perspectives, and areas of expertise. We work in a culture of trust and entrepreneurship that is shared by our internal colleagues as well as our external partners and clients, with collaboration forming the basis for our provision of high-quality, innovative services.

Developing and retaining a diverse range of talented employees, as well as attracting future talents, is an equally important part of our DNA. Our people are our strength, which is why we strive for a group of employees who can bring in different insights from their different fields, backgrounds and cultures. We take great care in creating the conditions in which our people can utilise their strengths and develop to their full potential, both at work and in their free time. We also encourage positive energy through collegial participation in social and sports activities.

### Dynamic labour market

In our quest to retain talent, we are faced with an incredibly dynamic labour market. Students' interest in technical degrees is declining. At the same time, the various transitions underway in society demand solutions in which technology plays an important role. This has led to shortages in the supply of (technical) talent and intensified competition among employers to retain employees with skills in these fields. We, too, are experiencing this dynamic.



Nevertheless, in 2023 we were reasonably successful at filling our vacancies across the globe.

### Growth

Following several years of high staff growth, in 2023 the number of Witteveen+Bos employees increased by a modest 1.7 % (1,451 employees compared to 1,427 in 2022). We deliberately opted for this limited growth in order to explicitly invest in onboarding new employees ('neWBies') at our organisation.



total number of employees

1,451<sup>↑</sup>

(2022: 1,427)

total number of FTE employees

1,311.0<sup>↓</sup>

(2022: 1,311.2)



Male/female ratio

67/33

(2022: 68/32)



## Lifelong learning

Learning is an essential component of our company vision. We believe that a diverse and resilient group of employees in possession of up-to-date specialist knowledge and the ability to adapt to developments is a solid foundation for a stable future. We therefore encourage Witteveen+Bos employees to be lifelong learners, both personally and professionally. Investing in every one of our employees also means that the organisation as a whole can continue to improve and grow.

### Our vision on learning

We learn all throughout our lives, wherever we are. Learning occurs in both planned and spontaneous settings – at a client’s premises, on a project, over coffee, in a training session, or during a walk with a colleague. Our vision on learning is based on Charles Jennings’s 70:20:10 model. According to this model, you learn most (70 %) by doing. A variant on this is learning from and with your colleagues

through the work you do (20 %) – i.e. coaching, mentoring, intervention, and other forms of interaction with colleagues. The last form of learning is responsible for 10 % and takes place in more formal and school-based settings, such as (online) training sessions, workshops, or courses. For each employee, a mix of these three forms is employed in an individual pathway for learning both within and outside project teams.

### Triple ladder

We believe it is important that every employee be given opportunities to develop in a role that energises them. We strongly encourage employees to shape their careers in consultation with their managers. Adopting a ‘working is fun’ principle, we support individual development that takes place in a naturally appropriate manner, supplemented occasionally by a push from the organisation to accelerate development – either to guide or, in the interest of the employee, to halt (just as you guide a ship through waves).



Interns

129<sup>↓</sup>

(2022: 150)



Graduating students

146<sup>↓</sup>

(2022: 165)



Total

275<sup>↓</sup>

(2022: 315)



Investment in training (EUR)

1,210,383<sup>↑</sup>

(2022: 1,183,157)

Total internal training courses

526<sup>↑</sup>

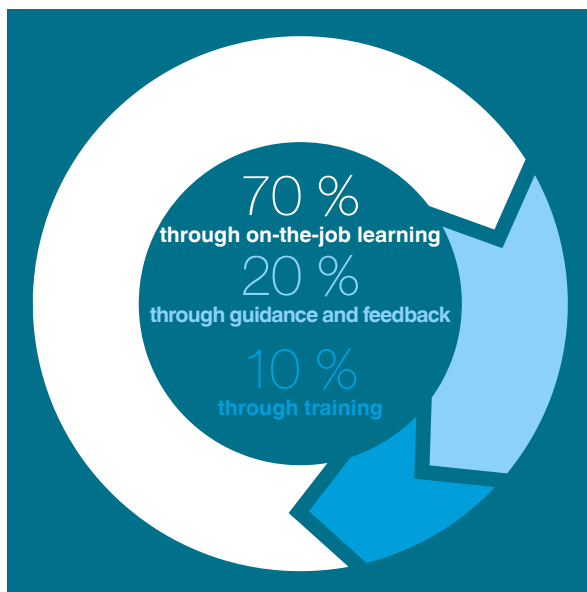
(2022: 346)

Participants in internal training courses

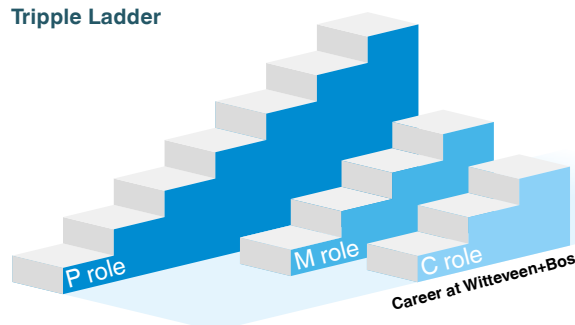
4,719<sup>↑</sup>

(2022: 3,247)

To make this approach possible, we employ the ‘triple ladder’, differentiating between three roles in an employee’s functioning: the professional role (P role), management role (M role) and commercial role (C role). An employee’s development begins with the P role. Here, they can develop themselves further as experts. Advancement in the M and/or C roles is also possible. The exact route an employee’s development pathway takes is dependent on personal preferences, talents and ambitions, as well as the needs of the organisation.



Tripple Ladder



### Stimulating digital abilities

Digitalisation is having a major impact on our profession. Being able to work with new technologies requires new skills. But digitalisation is also placing new demands on our business operations and project activities. For this reason, we are stimulating digital expertise at the company via two pathways: the acquisition of new digital skills (mastery) and the promotion of digital leadership.

We offer our employees ample opportunities to participate in any relevant study or training courses. Investing in knowledge of and skills in all relevant software platforms and digital tools ensures that expertise is retained at the company. It can then be applied directly on projects. In order to embed digital competencies for the long term, ‘digital learning pathways’ have been integrated into our internal learning platform. These are learning pathways that follow the certification levels of commonly used applications; they are designed to enhance an individual’s skills within that person’s personally tailored training pathway. Digital leadership, on the other hand, refers above all to offering space for knowledge development and innovation, with knowledge being shared internally in an accessible manner via ‘tech meet-ups’, active communities, and events.

### PLUSschool

PLUSschool is our own, in-house training institute. PLUSschool’s course offering is based on our vision on learning, which focuses on ‘learning from and with each other through the work we do’. Last year, we launched a new learning management system which allows us to focus even more on employee development. All available learning opportunities and pathways are now accessible in a single, user-friendly system.

PLUSschool is also used on projects to facilitate collaborative learning with partners and clients. Various learning forms are combined in PLUSschool, such as training, guidance and feedback, and learning at work. This variation ultimately contributes to a more effective and enjoyable learning experience.



## A healthy working environment

For us, providing a stimulating working environment with a healthy work-life balance and creating the necessary conditions for good physical and mental health is essential. It offers our employees a foundation for getting the best out of themselves and utilising their talents to the fullest. Unfortunately, in 2022 sick leave rose and, in 2023, that trend continued. Health-related leave at the company rose from an average of 4.2 % in 2022 to 4.4 % last year,



### Sick leave

4.4 %<sup>↑</sup>  
(2022: 4.2 %)



in particular due to an increase in long-term leave. This is in line with the national trend. Psychosocial strain plays a major role in this sick leave, with much of it being work-related.

In light of the above, in 2023 we devoted extra attention to dealing with work pressure and reducing psychosocial strain. Our internal 'Connecting' campaign was launched, aimed at making work pressure and mental health discussable topics while also providing practical tips and offering an online training course. The relevant topics were also included in our starters programme for new employees, and we now offer a (mandatory) e-learning module on the subject to new employees at the company. A 'culture of open conversations' course was also added to our course offering and many managers have now participated in a workshop on sick leave prevention and supervision.

**Social safety**

Social safety is closely linked to a healthy working environment in which employees feel valued, respected and supported. From conversations with employees in late 2022 on unwanted conduct and how we can work together to make the topic discussable, we learned that progress can still be made in this area.

For this reason, active efforts (policies) have been made to promote social safety right across the organisation, both through prevention and by addressing unwanted conduct. Central to this are awareness of one's own behaviour and the signalling and discussion of problems. Managers have an exemplary role in this as well as the responsibility to ensure a safe working environment is provided.

**In-depth investigation**

Despite a range of initiatives and interventions, sick leave at the company has increased. Nevertheless, our conclusion was that, ultimately, many factors play a role. We are therefore going to conduct further research into the causes of sick leave in 2024. We will also launch a pilot on managing energy and offer accessible psychological support.



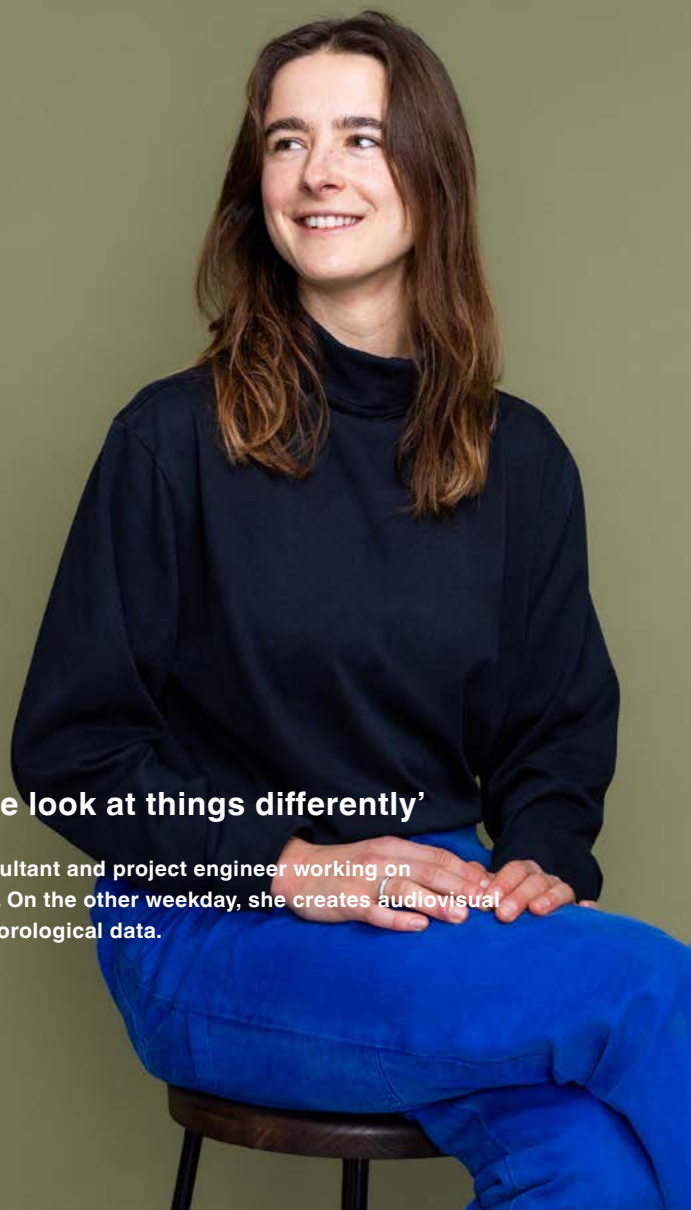


## Talents

### Emma:

**‘Art is a way to make people look at things differently’**

Four days a week, Emma Little is a consultant and project engineer working on resilient and sustainable water systems. On the other weekday, she creates audiovisual installations using freely available meteorological data.



### **Lofty green ambitions**

‘In Canada, where I grew up, I was always outside. We’d often walk barefoot through the forest. Then I started doing ballet: for 20 to 30 hours a week, I was inside on a hard floor. After four years of disciplined training, I thought to myself: What am I doing? I missed the outdoors, so I decided to quit ballet and focus on a different ambition: contributing to the connection between people and nature. I studied chemical engineering and, after graduating, moved to the country my mother comes from. The Netherlands is a small country with lofty green ambitions. Here, the effects of human activities are clear to see; climate issues are tangible, in particular due to our location largely below sea level.’

### **Treating rainwater**

‘After coming to the Netherlands, I completed a master’s degree in environmental engineering at TU Delft. I use the technical knowledge I gained there in my current role at Witteveen+Bos. As a consultant, I form the bridge in project teams between my technically-minded colleagues and our clients’ green ambitions. To maintain groundwater levels in Amsterdam, for example, we’re testing a system that will allow us to treat rainwater on location in sewers and then let it drain into the soil. On this project, I’m working closely with the people from Waternet responsible for ensuring clean sewers. My task involves taking the input from these and other stakeholders and making it quantifiable for the purpose of a sustainable design. I really enjoy doing that, because I get to go to a lot of different places and speak with a lot of different people.’

### **Audiovisual installations**

‘Four days a week, I work at Witteveen+Bos. On the other weekday, I work on improving my Dutch and on a creative project with my boyfriend. We create audiovisual installations using freely available meteorological data. It’s our form of activism and a way to express ourselves through art. It’s also a great way to make people look at things differently. Conversations on the climate crisis tend to stall because of facts; human emotions get forgotten. If you look beyond what’s quantifiable, though, our motivations often turn out to be the same. Art makes us feel; it connects people.’



### ‘My strength is connecting people’

**Natalie van Nunen is an urban designer at Witteveen+Bos. Since 2023, she combines working in the Netherlands with stints in Dubai. Her goal: to be the link between W+B in the Netherlands and abroad.**

‘As a child, I wanted to be a scientist because I wanted to understand how things work and how they could be different. My father and I used to take apart old electrical appliances. We’d look at their insides and then reassemble them. I have an aptitude for maths but also a creative side. Ultimately, I studied civil engineering at TU Delft.’

‘As an urban designer at Witteveen+Bos, I combine the creative with the technical. I devise and develop smart solutions for the design – or redesign – of urban environments. We approach design challenges holistically, explicitly investing in communication between the designers, stakeholders and project team. This ensures that we make a positive impact on people’s lives as well as on the environment. I find that incredibly valuable.’

**Curious about Natalie’s whole story?**

[Read it on witteveenbos.com/stories/natalie-van-nunen](https://witteveenbos.com/stories/natalie-van-nunen)

### ‘I could write a book about it’

**It is time for consultant Ton Deekens to hang up his boots. After 40 years at Witteveen+Bos, he has entered retirement. He travelled the world for his job, including to Curaçao, Jamaica and Sint Maarten.**

‘In 1981, after completing my studies, I wound up by chance in Curaçao. Through a friend, I got a job there in road construction. When that work ended, I became involved in building a water treatment plant on the island. This was for a then subsidiary of Witteveen+Bos. As a down-to-earth person from Groningen, it made me realise the world had more to offer. In 40 years at Witteveen+Bos, I ended up seeing quite a lot of it. My wife and I spent four periods in the Caribbean: one each in Jamaica and Sint Maarten and two in Curaçao. A few times I was sought out by someone, but for most of my travels I determined my own direction.’

**Curious about Ton’s whole story?**

[Read it on witteveenbos.com/stories/ton-deekens](https://witteveenbos.com/stories/ton-deekens)



## ‘We have to approach spatial quality in an integrated manner’

**Martijn Franssen is group leader for the Landscape Architecture and Heritage group – relatively speaking, a modest discipline when he started at Witteveen+Bos several years ago. Now, he and his colleagues are indispensable, what with the extensive and complex challenges facing rural areas.**

‘My father’s an architect, my mother a botanist. As a landscape architect, I’ve ended up more or less in the middle. I came to Witteveen+Bos twelve years ago, after working at a monodisciplinary landscape architecture firm. Landscape architecture was still a young discipline then – I only had one colleague. We did a lot of missionary work together, though, and now it’s an integral part of many projects. A bridge doesn’t exist in a vacuum; it’s part of a landscape that has a history and people. More and more value is being placed on landscape design and spatial quality, which is why we prefer to get in as early as possible on projects we contribute to.’

**Curious about Martijn’s whole story?**

[Read it on witteveenbos.com/stories/martijn-franssen](https://www.witteveenbos.com/stories/martijn-franssen)



## ‘Projects in other countries broaden your horizons’

**With the group he created, Global Port Solutions, engineer Joris Schoolderman works on port projects all around the world. For him, a project is only truly successful when it has been fun to do.**

‘When I was five, we moved to the United States for my father’s job. Years later, I returned to the Netherlands to do a master’s in civil engineering. Immediately following my studies – now 15 years ago – I started working in the ports industry. Since then, I’ve regularly travelled abroad for Witteveen+Bos to places like the Middle East, Indonesia and Kazakhstan. I feel like a citizen of the world and enjoy working on projects with an international scope. Maybe that’s why I’ve always focused on projects involving ports. Ports are the primary connection between a country and the rest of the world.’

**Curious about Joris’ whole story?**

[Read it on witteveenbos.com/stories/joris-schoolderman](https://www.witteveenbos.com/stories/joris-schoolderman)



Witteveen+ Bos

Chapter 3

# Sustainable business operations

## Anticipating future developments

It is crucial for Witteveen+Bos that we continue to grow and evolve in step with a changing world. In our business operations and in collaborations, for example, we need to be able to quickly and effectively incorporate and adapt to developments in digitalisation, laws and regulations on data, privacy and compliance, and corporate social responsibility. This requires an organisation and employees who think ahead and are resilient and adaptive.

### Climate-neutral business operations by 2030

In the climate policy we established in 2021, we included the target of achieving climate-neutral internal business operations by 2030. To achieve this, we want to reduce our total emissions as much as possible using a three-stage model that upholds the priorities of first reducing, then increasing sustainability, and only as a last resort compensating. In 2023, we committed heavily to climate-neutral mobility, reduced energy use, and sustainable procurement.

#### W+B on the mOve

Last year, the 'W+B on the mOve' mobility programme was launched, which involved investigating and assessing together with colleagues how we can travel more sustainably. This resulted in several mobility pilots, including one for shared electric cars and a 'cycle to work' pilot that featured electric bikes and speed pedelecs. We also reduced the use of fossil fuel cars by transitioning to new electric project cars.

#### Energy consumption

We were able to further reduce energy consumption at our head office by more precisely controlling our heating and cooling settings. Reductions were also achieved by preventing offices from being opened unnecessarily. Our additional office in Deventer, for example, was closed around the Christmas holidays. Applying the same philosophy in our company restaurant meant we could

reduce energy consumption even further.

#### Sustainable procurement

In terms of sustainable procurement, we took a close look at our existing catering policy, aiming to minimise carbon emissions and provide sustainable alternatives while preserving a sufficient range of choice. Utilising the results of an internal study, we were able to make small adjustments that resulted in a relatively large emissions decrease.

### Digitalisation of processes and infrastructure

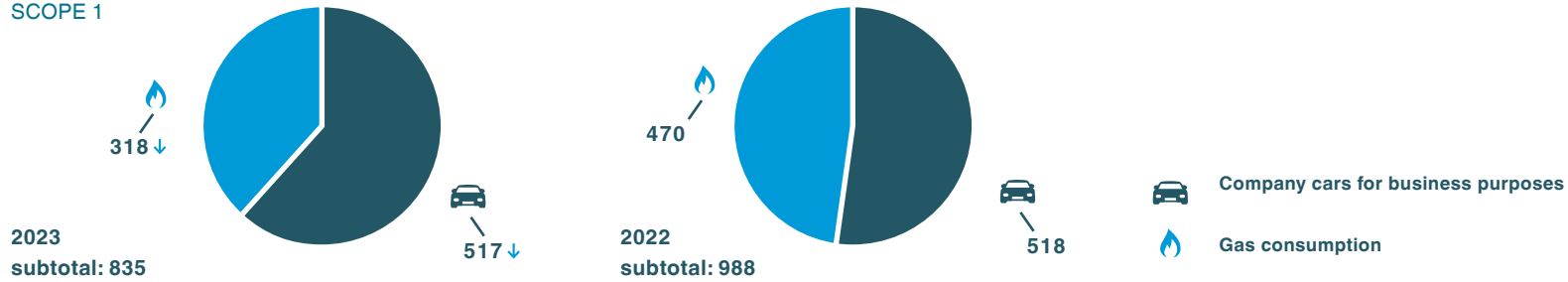
Digitalisation is having a major impact on our profession – for example, by improving the accuracy, efficiency and speed of calculations and processes. But digitalisation is also placing new and different demands on our internal business operations. Working in the cloud and in online project environments offers great flexibility and easy access, but it also brings with it cybersecurity risks.

We are also looking at the many opportunities artificial intelligence (AI) can offer our work, without ignoring the fact that its application and potential risks need to be thoroughly researched.

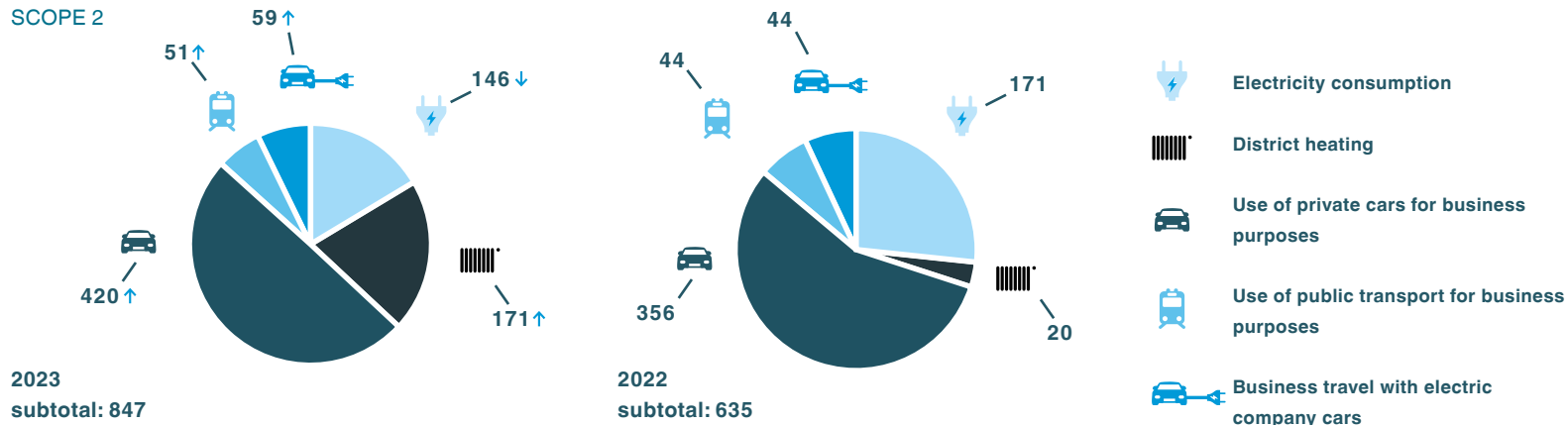


EMISSIONS PER SCOPE IN TONNES CO<sub>2</sub>

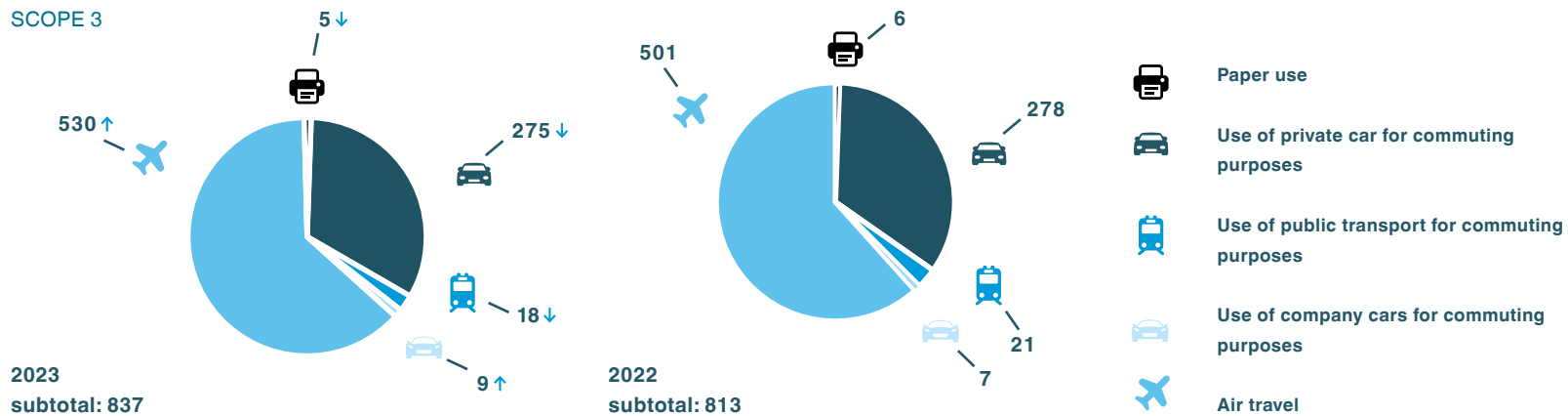
SCOPE 1



SCOPE 2



SCOPE 3



TOTAL  
**2,520** ↑  
 tonnes CO<sub>2</sub>  
 2023  
 2022  
 total: 2,436

KEY FIGURES FOR BUSINESS OPERATIONS



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

7,677,541<sup>↑</sup>

(2022: 6,495,644)

Business purposes

**2023: 6,496,968** <sup>↑</sup>

(2022: 5,306,113)

Commuting purposes

**2023: 1,180,573** <sup>↓</sup>

(2022: 1,189,531)



Use of private cars for business purposes (km)

2,249,187<sup>↑</sup>

(2022: 1,902,836)

Use of company cars for business purposes (km)

657,838<sup>↓</sup>

(2022: 677,903)

Use of company cars for business purposes (l)

137,674<sup>↑</sup>

(2022: 134,266)



District heating (hot water in gigajoule)

1,822<sup>↑</sup>

(2022: 1,012)



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

91,540<sup>↓</sup>

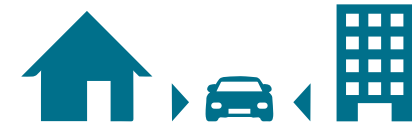
(2022: 189,162)



Paper use (kg)

4,290<sup>↓</sup>

(2022: 5,164)



Use of private cars for commuting purposes (km)

1,424,662<sup>↓</sup>

(2022: 1,437,725)

Use of company cars for commuting purposes (l)

10,280<sup>↑</sup>

(2022: 2,915)



Air travel (km)

3,247,440<sup>↑</sup>

(2022: 3,083,555)



Electricity consumption (kWh)

1,710,722<sup>↑</sup>

(2022: 1,326,656)

### Information security and cybersecurity

Several optimisations were carried out in terms of detection and response in the areas of information security and cybersecurity. These included additional security measures and simulations. New policy frameworks and practices were also established, including a software development process and a data classification policy. Partly as a result of these efforts, we were able to extend our **ISO 27001** certification.

We also set up a secure, self-initiated online project environment. Within this environment, we can work together safely with our clients and collaboration partners.

### User-centred

In optimising our internal business operations, we attempt to put the user at the centre of everything. Digitalising more and more processes helps employees work more efficiently and with greater enjoyment. Our mission is to unburden users through safe and reliable standard solutions. By ensuring effective essential services, we want to encourage digital collaboration and facilitate innovation. In 2024, this vision will be translated into a policy centred around architecture and implementation.

## Safety

Each year, partly in connection with Safety Culture Ladder standards, we conduct internal audits to monitor what is going well and what can be improved. These audits take place at offices, on project sites, and at clients' premises. A report is prepared each quarter, including a 'safety poster' featuring the key areas of concern. This method was chosen so that the power of visual communication could be harnessed in keeping our employees up to date. The quarterly reports form the basis for meetings of the general quality and sector quality teams, as well as for meetings between the heads of department and board of directors and among the heads of office.

In 2023, 265 reports were made concerning (near) accidents, unsafe situations, or opportunities for

improvement (in 2022 there were 202). 62 % of these reports regarded opportunities for improvement or 'other' concerns, with 38 % being related to (near) accidents, incidents, and unsafe situations.

### QHSEI management system

In early 2023, we made the switch to a new, integrated QHSEI management system for our global organisation. This system comprises a set of agreements on quality, health and safety, the environment, and information security. It promotes collaboration while monitoring security risks, privacy agreements, and sustainability issues. It does this by making explicit what is expected of whom on projects and in processes and by laying out how we as a company communicate and report on these topics.

## Working with integrity and commitment

We aim to be a reliable and engaged partner to all our stakeholders. Our responsibilities and the way we do business are outlined in our **company code**. All Witteveen+Bos employees worldwide must act in accordance with this code and the agreements arising from it. We facilitate training, dilemma sessions, assessments, and other activities in the area of compliance.

Our company code links our values and beliefs with the OECD Guidelines for Multinational Enterprises. Witteveen+Bos is also a member of the United Nations Global Compact (UNGC). We emphatically endorse the UNGC's ten principles on human rights, labour rights, the environment, and anti-corruption.

Witteveen+Bos is committed to ensuring that human rights are upheld throughout the entire chain in which we are active. Specifically, this means ensuring a safe and fair working environment for all individuals, in which there is no room for discrimination. We only work with suppliers who share our conviction that fair work practices and a safe working environment are essential to upholding human rights.

Since last year, we actively endorse the Modern Slavery Act. The principles of this act have been incorporated into our corporate processes and our criteria for tenders and projects. Our commitment to this has contributed to increased awareness when choosing suppliers and collaboration partners.

### ESG: a step further

Non-financial data is becoming increasingly important as strategic information for stakeholders, including for our clients and for us as an organisation. ESG criteria (i.e. environmental, social and governance-related criteria) comprise new benchmarks for company activities that could have an impact on society or the environment.

The European Union regards the reporting of non-financial information to be equally as important as traditional financial reporting, and it must ultimately meet the same standards of quality. This is the aim of the Corporate Sustainability Reporting Directive (CSRD), the new EU directive which Witteveen+Bos must comply with from financial year 2025. Accordingly, we are now in the process of further refining our ESG monitoring and reporting.

We have already been making non-financial information available for several years now through sustainability reports and a four-yearly materiality analysis. We also developed an **SDG impact tool** for this purpose. In 2023, we began preparations for reporting in a CSRD-compliant manner and, in early 2024, we will be conducting a double materiality assessment in connection with this. It will entail an increase in the number of subjects and factors to be measured. A redesign of our processes and systems will be necessary to ensure high quality and reliable data is available, and in 2024 we will further adjust our organisation to accommodate this.

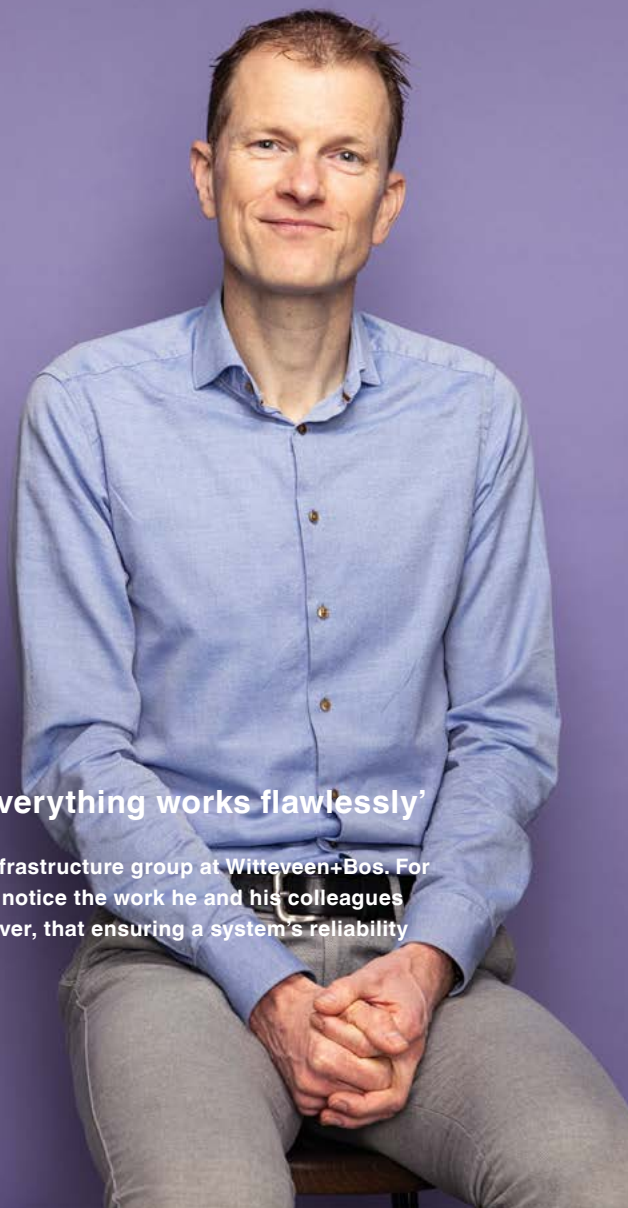


## Talents

### Arnout:

**‘It’s a sport to ensure that everything works flawlessly’**

Arnout Boer is group leader for the ICT Infrastructure group at Witteveen+Bos. For him, the fact that people do not generally notice the work he and his colleagues do is a compliment. He does stress, however, that ensuring a system’s reliability and user friendliness is hard work.



#### **Complex**

‘The ICT department is responsible for things like workstations, applications, the network, our data centre, and our cloud environment. Because of its size and its many areas of focus and interconnections, Witteveen+Bos is an interesting place for an IT professional. Effective security is becoming increasingly important. We’ve built a big wall around our data centre, but you can’t do that with cloud services. Before we make cloud applications available to colleagues, therefore, we very carefully check the security of the service.’

#### **Unburdening the user**

‘Typical activities at a consultancy and engineering firm include making digital designs, performing complex calculations and managing projects. Each one requires something different from the network. For me, it’s a sport to work with the team to ensure the required capacity is available and that everything works flawlessly and securely. To unburden users, it’s essential that risk analysis, strict procedures and expert knowledge are present.

One example is our process for implementing new forms of security, such as improvements to two-step verification. First, we test these within our own department, often coordinating with the ICT focus group too. Only once we know they work do, we roll them out for the whole company.’

#### **Advanced Lego**

‘After 25 years working in ICT, I know I get the most enjoyment out of ensuring the essential services are in order. Sometimes, complex replacements are needed to ensure the basic infrastructure remains strong. Last year, for example, we replaced a number of crucial central components in our data centre, including the systems that house our project data. It was like an advanced version of Lego. We replaced the components preventively, otherwise the risk of problems would have been too high. In total, it involved more than 150 terabytes. Our colleagues noticed virtually nothing. In our profession, much of the work we do is invisible. That’s why it’s nice, once in a while, to be able to tell people exactly what the ICT team does. During our Spring TKB (Technical Contact Meeting), for example, I had the chance – together with our head of department, Gerrit Jan – to talk about how ICT deals with unexpected events. It was a great experience.’

## ‘Without risk management, we wouldn’t survive’

**Ruben Groeneveld is an in-house lawyer at Witteveen+Bos. An important task for Ruben and his colleagues is risk management. After all, being able to take on engineering work is dependent on solid contract preparation.**

‘I chose to study law because I found criminal law interesting and exciting. At that stage, my ambition was to become a practising lawyer. During my studies, however, after completing an internship at a law firm, it became clear to me that this didn’t appeal to me as much as I first thought. I wanted to orient myself more broadly. Then I came across a job ad from Witteveen+Bos. As an in-house lawyer, I’m involved in a variety of areas, including contract and procurement law. On top of this, increasingly complex legislation is making our work even more challenging.’

**Curious about Ruben’s whole story?**

[Read it on witteveenbos.com/stories/ruben-groeneveld](https://witteveenbos.com/stories/ruben-groeneveld)



## ‘The trick is to plan as realistically as possible’

**Eva Pieëte is a project supervisor at Witteveen+Bos. Her task: help project managers get the job done on time and within budget. Planning, risks, quality and finance are the key elements in achieving this.**

‘I began my career in the insurance industry before winding up at Nefit Bosch. There I realised that I enjoy working in a technical field. I’m now at Witteveen+Bos, where I get to contribute to a diverse range of tangible projects. One project will be a dyke reinforcement, whereas the next could involve a tunnel or bridge. To gain a better understanding of the work my more technically minded colleagues do, I recently took a course in civil engineering and practice. It’s not that I have any technically oriented ambitions myself, but that knowledge makes it easier for me to appreciate what my colleagues do, which gives me confidence during conversations with them to obtain information.’

**Curious about Eva’s whole story?**

[Read it on witteveenbos.com/stories/eva-pieete](https://witteveenbos.com/stories/eva-pieete)

## ‘In the battle for talent, I can fully exploit my worth as a marketer’

In 2023, Jocelyn Paul joined Witteveen+Bos as an online marketer. Part of her job involves marketing Witteveen+Bos as an attractive employer. Targeted campaigns and a new company website are some of the tools she uses for this.

‘Before Witteveen+Bos, I worked at the furniture store Eijerkamp, where I was responsible for e-commerce and online campaigns. I got used to working in a very data-driven way there. Each week, I performed analyses, and then we adjusted our content and strategy based on the results. I’ve brought that method of analysis with me to Witteveen+Bos. My colleagues are really excited by the insights data can provide. We use them, for example, when designing campaigns to attract new employees. In the battle for talent – but also when promoting a course or area of expertise – I can fully exploit my worth as a marketer.’

Curious about Jocelyn’s whole story?

[Read it on witteveenbos.com/stories/jocelyn-paul](https://witteveenbos.com/stories/jocelyn-paul)



## ‘Got an idea? Go for it – that’s me!’

Project manager Willemijn van Norel’s personal motto for 2024 is ‘3, 2, 1 – go for it!’ Fortunately, Witteveen+Bos’s culture of entrepreneurship gives her the freedom to go all out, with Willemijn recently making a move internally.

‘Following my studies, I worked here for two years as a premises and facilities project officer and really enjoyed it. But I’d always wanted to do a master’s and thought: if I’m ever going to do it, it has to be now. I chose the International Business degree at Maastricht University, specialising in change management (‘Management, Change and Consultancy’). This choice stemmed from that first period at Witteveen+Bos: so many different people work together here, and although communicating well sounds simple, it’s actually the most difficult thing there is. Delving into change management theory and its patterns, group dynamics, needs, and tactics seemed like a good place to start!’

Curious about Willemijn’s whole story?

[Read it on witteveenbos.com/stories/willemijn-van-norel](https://witteveenbos.com/stories/willemijn-van-norel)



# The challenge on the Wadden Sea

**It is the only Dutch nature reserve on the UNESCO World Heritage List: the Wadden Sea. Many functions, stakeholders and complex challenges facing society converge in this equally unique and beautiful nature reserve. In a single area, there are forces at play with regard to preserving ecological values and biodiversity, enabling the energy transition, maintaining the accessibility of the islands and preventing the islands from flooding.**



In our projects in and around the Wadden Sea region, we aim to strike a good balance between what is currently needed and what is sensible with a view to the future.

Our perspective aims to meet the needs of the current generation, such as energy supply, flood safety, socio-economic development and accessibility, without sacrificing future generations or the area's future resilience.

We try to achieve this by thinking outside the box, conducting studies and pooling knowledge and expertise by working together. In 2023, we worked with various clients on a variety of issues in and around the Wadden Sea.

### Ameland shipping route – navigating between different interests

For the people of Ameland, it is their lifeline: the ferry to and from the mainland. For years, the navigation channel used by the ferries between Holwert and Nes is being dredged intensively. It is a consequence of the morphological conditions: the Wadden Sea along the Frisian coast is accreting. With the growth of salt marshes and mud flats, channels become narrower and shallower and retreat. The route being sailed has become longer and more winding in recent decades, and it is sometimes hard for ships to pass each other. The dredging work for which Rijkswaterstaat is responsible has a negative impact on the nature of the Wadden Sea World Heritage Site. It also creates relatively high management and maintenance costs. Rijkswaterstaat is therefore working on a reliable and sustainable long-term solution. Stakeholder manager Sanne Ruiter: 'This is a special project, because we are dealing with two environments: an island and the mainland. The interests are not always the same. Therefore, the project team has devoted a lot of energy in involving both environments.'

[Read more](#)

### Witteveen+Bos joins successful seagrass project

A lot of work has been carried out in recent years aimed at restoring seagrass meadows in the Wadden Sea. So far, the results have been nothing short of remarkable, with plant numbers near the small island of Griend increasing from 200,000 to more than a million. Witteveen+Bos will now be joining the University of Groningen, the Fieldwork Company and Altenburg & Wymenga to help boost seagrass restoration. The five-year research and implementation project commissioned by Rijkswaterstaat focuses on continuing the current success in the Wadden Sea and restoring seagrass to Grevelingenmeer and Veerse Meer. In the past, the seagrass meadows in the Wadden Sea and the South-Western Delta covered thousands of hectares and played a crucial role in the natural environment as well as the economy. However, the construction of water management facilities, the spread of seaweed diseases and deteriorating water quality have all had a detrimental effect on seagrass populations in most Dutch waters.

[Read more](#)



## Environmental impact study PAWOZ

The Programme Connection Wind at Sea (Programma Aansluiting Wind op Zee, PAWOZ) is investigating routes for connections from wind farms in the North Sea to Eemshaven. The green energy generated is crucial to meet the Climate Agreement. However, the route of the connection crosses the Wadden Sea, as well as high-quality agricultural land. Witteveen+Bos is working with Royal HaskoningDHV on an Environmental Statement and integrated impact analysis of the pros and cons of the various transport routes. PAWOZ focuses primarily on the routes available for distribution of power from two wind farms above the Wadden Islands. However, more wind farms will be installed in the North Sea in the future. For this reason, routes are also being considered for future opportunities for power lines and/or hydrogen pipelines from new wind farms. The routes run from (future) wind farms in the North Sea, through the Wadden region, along the Wadden Sea coast, across the mainland to the national high-voltage grid at Eemshaven and to the Netherlands Hydrogen Network.

[Read more](#)

Marine ecologist Just van der Endt on our approach:

### ‘Keeping the energy transition going without causing irreparable natural damage, that’s the trick’

‘To move away from energy production from coal and gas, offshore wind farms are one of the best available technical solutions for now. It is essential to learn continuously during and from projects in terms of ecological protection so we can ensure that both the energy transition and nature transition at sea are successful. This is why we integrate nature-inclusive design and mitigation measures into our plans and designs. We then measure in practice whether the stimulating and protective measures for fish, birds and other wildlife actually work. As a marine ecologist, I mostly operate at the interface of knowledge development and implementation. This includes, among other things, developing and designing nature-inclusive stone filling around the foundations of wind turbines. I also contribute to research and environmental impact studies on impacts of offshore wind. Within the KOBINE project (Kosten en Biodiversiteit Natuurinclusieve Energie - Cost and Biodiversity Nature-Inclusive Energy), we are studying different types of reef structures.



‘Thereby, we map the ecological added value and the costs of these types of reefs within wind farms. This way, we can determine which ones have a favourable cost level, allowing for scalability. From a broad perspective, it is important for engineering firms, universities, knowledge institutes and others to work together so we can keep up with the scaling-up of offshore wind through innovation in impact reduction. This is only possible if we share knowledge and join forces.’



Chapter 4

# Economic value

## Financial base

Witteveen+Bos strives to achieve healthy financial results. These are essential for us to be able to invest in innovation, digitalisation, making our business operations more sustainable, and developing our people. A sound financial basis is also a precondition for continuing our ownership structure and creating value for our stakeholders in the long term.



**Revenue**  
in thousands of euro's

176,970<sup>↑</sup>  
(2022: 165,620)



**Own revenue**  
in thousands of euro's

154,503<sup>↑</sup>  
(2022: 139,251)



**Net result**  
in thousands of euro's

18,255<sup>↑</sup>  
(2022: 13,391)

### Healthy results

Owing to poor market conditions all over the world, 2023 began in relative uncertainty. Wage and energy costs rose, contributing to high inflation, while labour market shortages were exacerbated. The task we faced was to continue doing our work in a reliable and stable manner in an unpredictable and demanding world. Despite global uncertainties, 2023 was a good year financially for Witteveen+Bos. Our total revenue in 2023 was EUR 177 million, of which EUR 154,5 million was own revenue. Our net result in 2023 was EUR 18,3 million, meaning our net profit margin relative to total revenue was 10.3 %. In 2022, this was 8.1 %.

In 2023, we actively pursued a higher level of chargeable work. Increased attention for project management, a more conscious focus on project work, and limited growth all contributed to an increase in profitability. Improvements in our existing markets and our ability to react quickly to market movements resulted in positive annual figures.

More detailed financial information is available in the Board of Directors' Report.

### Outlook for 2024

We were able to get off to a strong start in 2024 thanks to the results we achieved in 2023. In a persistently challenging environment characterised by constantly changing circumstances, in 2024 we will be maintaining the strategic course we have set out on. We will continue to focus on retaining long-term economic value by remaining adaptive while ensuring productivity and cost control. Our revenue is expected to increase as a result of the organisation's further growth, and we aim to keep our reduced working capital down on a more permanent basis. We are also working on a treasury management programme aimed at ensuring the profit and cash flows in our various entities across the globe remain in line with one another.





## Consolidated balance sheet (Before Profit Appropriation)

	31 December 2023		31 December 2022	
<b>ASSETS</b>				
intangible fixed assets	526		320	
tangible fixed assets	16,723		17,457	
financial fixed assets	+	389	+	467
<b>Fixed assets</b>		<b>17,638</b>		<b>18,244</b>
projects in progress		27,040		27,386
receivables		31,159		26,343
liquid assets	+	25,263	+	17,163
<b>Current assets</b>	+	<b>83,462</b>	+	<b>70,892</b>
<b>TOTAL ASSETS</b>		<b>101,100</b>		<b>89,136</b>
<b>LIABILITIES</b>				
<b>Group assets</b>		<b>45,172</b>		<b>39,288</b>
<b>Provisions</b>		<b>5,367</b>		<b>6,907</b>
<b>Long-term liabilities</b>		<b>1,142</b>		<b>3,068</b>
projects in progress		10,233		6,844
other short-term liabilities	+	39,186	+	33,029
<b>Current liabilities</b>	+	<b>49,419</b>	+	<b>39,873</b>
<b>TOTAL LIABILITIES</b>		<b>101,100</b>		<b>89,136</b>

(amounts in thousands of euros)

### Instructions for the reader

The summarised annual financial statement is a condensed version of the 2023 consolidated annual financial statement of Witteveen+Bos N.V. This summarised statement does not include all the information provided in the consolidated version. It should be read, therefore, together with the consolidated statement and the outlined accounting policies and explanatory notes included therein. The 2023 consolidated annual financial statement of Witteveen+Bos N.V. can be obtained from the company.

### Principles for preparing consolidated balance sheet, profit and loss account, and other financial statements

The consolidated annual financial statement of Witteveen+Bos N.V., from which this summarised statement is derived, has been prepared in accordance with Title 2.9 (Book 2) of the Dutch Civil Code.

## Consolidated Profit and Loss Account

	31 December 2023		31 December 2022	
<b>Company revenue</b>		<b>176,970</b>		<b>165,620</b>
costs of work contracted out		22,467		26,369
salaries		80,669		73,400
national insurance and pension contributions		20,748		19,207
depreciation		2,757		3,053
other operating costs	+	25,592	+	25,961
<b>Total operating costs</b>	-	<b>152,233</b>	-	<b>147,990</b>
<b>Operating result</b>		<b>24,737</b>		<b>17,630</b>
interest gains and losses		-/- 390		-/- 364
exchange rate differences	+	-/- 79	+	332
<b>Financial gains and losses</b>	+	<b>-/- 469</b>	+	<b>-/- 32</b>
<b>Result before taxes</b>		<b>24,268</b>		<b>17,598</b>
taxes	-	6,013	-	4,207
<b>Net result</b>		<b>18,255</b>		<b>13,391</b>

(amounts in thousands of euros)

## Consolidated Cash flow statement

	31 December 2023		31 December 2022	
<b>Operating result</b>		<b>24,737</b>		<b>17,630</b>
non-cash items		995		5,247
change in working capital		695		-/- 4,194
interest paid and profit tax	+	-/- 3,219	+	-/- 4,966
<b>Total of various changes</b>	<b>+</b>	<b>-/- 1,529</b>	<b>+</b>	<b>-/- 3,913</b>
<b>Cash flow from operating activities</b>		<b>23,208</b>		<b>13,717</b>
<b>Cash flow from investing activities</b>		<b>-/- 2,089</b>		<b>-/- 2,391</b>
<b>Cash flow from financing activities</b>	<b>+</b>	<b>-/- 13,019</b>	<b>+</b>	<b>-/- 16,463</b>
<b>Net cash flow</b>		<b>8,100</b>		<b>-/- 5,137</b>

(amounts in thousands of euros)

## Independent Auditor's Report

### To the Supervisory Board and board of directors of Witteveen+Bos N.V.

#### Our assessment

The summarised 2023 annual financial statement (hereinafter 'the summarised annual financial statement') of Witteveen+Bos N.V., located in Deventer, has been derived from the audited 2023 annual financial statement of Witteveen+Bos N.V.

It is our assessment that the attached summarised annual financial statement is consistent, in all material respects, with the audited 2023 annual financial statement of Witteveen+Bos N.V., in line with the principles described in the notes.

#### The summarised annual financial statement consists of:

- 1 The consolidated balance sheet as at 31 December 2023.
- 2 The 2023 consolidated profit and loss account.
- 3 The 2023 consolidated cash flow statement.

#### Summarised annual financial statement

The summarised annual financial statement does not contain all the notes required by Title 2.9 (Book 2) of the Dutch Civil Code. Reading the summarised annual financial statement and our report on them, therefore, cannot substitute for reading the audited annual financial statement of Witteveen+Bos N.V. and our auditor's report on it dated 18 March 2024.

#### The audited annual financial statement and our auditor's report on it

We issued a positive assessment of the audited 2023 annual financial statement of Witteveen+Bos N.V. in our auditor's report dated 18 March 2024.

#### Responsibilities of the board of directors and the Supervisory Board for the summarised annual financial statement

The board of directors is responsible for preparing the summarised annual financial statement in line with the principles described in the notes. The Supervisory Board is responsible for supervising the company's financial reporting process.

#### Our responsibilities

Our responsibility is to provide an assessment on whether the summarised annual financial statement is consistent, in all material respects, with the audited annual financial statement, based on tasks performed by us in accordance with Dutch law, including the Dutch standard 810 ('Oprichten om te rapporteren betreffende samengevatte financiële overzichten').

Utrecht, 18 March 2024

Deloitte Accountants B.V.  
drs. S. Bakker RA

## Financial health

Due to our improved liquidity, in 2023 it was possible for us to make, in addition to the regular repayment of EUR 0.4 million, an additional repayment of EUR 1.5 million on our long-term liabilities. Due to a higher net result and a decrease in long-term liabilities, the solvency ratio at year end increased from 44.1 % to 44.7 %. An increase in short-term liabilities and receivables meant that the current ratio at year end decreased from 1.78 to 1.69. Nevertheless, the values of both the solvency ratio and current ratio show that, at year end, Witteveen+Bos was in a good position in terms of liquidity.

**solvency**  
in procents

44.7 %<sup>↑</sup>  
(2022: 44.1 %)

**Current ratio**  
in thousands of euros

24,737<sup>↑</sup>  
(2022: 17,630)

**net profit margin**  
in procents

10.3 %<sup>↑</sup>  
(2022: 8.1 %)

## Participation system

Witteveen+Bos's shares have been in its employees' hands since 1992. For a healthy participation system now and in the future, it is important to have enough shares available for new participants and sufficient room for new partners.

For this reason, the system has grown significantly in its more-than-30-year existence. As at 1 July 2023, the company is owned by 754 participants (18.5 % of total shares), 125 partners (28 %) and 42 premium and senior partners (53.3 %). The participation system helps us fulfil our mission; it stimulates our entrepreneurship, increases engagement, and contributes to the continued existence of Witteveen+Bos.

## Talents

### Martijn:

**‘We’re a product factory in a project organisation’**

Product engineer Martijn Nieuwenhuijse works on creating and developing digital tools, such as YourView and the client portal. ‘I’m no genius, but I do like thinking up and designing new products with the team, which we always do in close collaboration with technical experts.’



### Inventor

‘I saw the Gyro Gearloose character in Donald Duck and thought: that looks like a cool job. When a family friend began studying industrial design at TU Delft, I knew exactly what I wanted to study too. I was five years’ old at the time. Ultimately, though, I ended up doing a master’s in strategic product design, which is about the strategy behind products: How do you market a product? Is there a demand for it? The year I spent on the board of my student association was also very instructive in that respect. I’m not actually like Gyro, because I don’t tinker around in a shed, but I do like thinking up and designing new things – digital products to be precise.’

### Product vs project

‘My graduation project at Witteveen+Bos was about the difference between products and projects. Witteveen+Bos is a real project-oriented organisation. In an environment like that, how do you ensure that products become profitable? The solution turned out to be starting a separate PMC focused exclusively on developing and marketing digital products. My graduation project provided the research evidence for doing this. We’re now a product factory in a large project organisation. We have both internal and external clients, though the latter are still getting used to the fact that Witteveen+Bos now also designs and develops products.’

### Client portal

‘We work closely with our colleagues when developing digital products. After all, it’s their challenges we’re devising solutions to. One example is the client portal: an online environment which will allow Witteveen+Bos’s clients to track a project’s progress. Through market research and internal meetings, we’re trying to determine what needs the portal should meet. As soon as work on a product has begun, I go looking for enthusiastic launching customers. They can advertise it via word of mouth – both within the organisation and among clients. By now, most of our colleagues know who we are; it’s time to show what we can do.’



### **‘My ideal is a healthy and sustainable living environment for all’**

**Filiz Kesmer is an environmental impact assessment consultant at Witteveen+Bos. She believes in an interdisciplinary approach and is determined to carry on the philosophy of the late Diederik Bel.**

‘In my youth, we’d often take road trips – to Turkey, for example, to visit my grandparents. During that long journey, we crossed many countries. I’ve always found it fascinating how people from different backgrounds and in different phases of their lives live together, and how it works better in some countries than others. I believe that equal access to objective data helps bridge gaps in society. That’s why I value facts and substantiation. I think your actions should be replicable and based on the truth – only then can you have meaningful conversations and create a level playing field.’

**Curious about Filiz’ whole story?**

[Read it on \[witteveenbos.com/stories/filiz-kesmer\]\(https://witteveenbos.com/stories/filiz-kesmer\)](https://witteveenbos.com/stories/filiz-kesmer)

### **‘The challenge is to understand the idea behind a bridge’**

**As a structural engineer, Maarten van der Wateren works on the replacement and renovation of civil engineering structures – bridges to be precise, which can pose a real puzzle.**

‘During my internship, I immersed myself in fatigue calculations; after graduating, I continued in that direction. The Netherlands has lots of old bridges and other infrastructure in need of maintenance. Steel rusts, concrete can crack, and rivets can come loose. Through area studies and on-site inspections, we test the safety of bridges for Rijkswaterstaat. That’s quite a challenge sometimes, as some of these structures predate the Second World War. The trick is to understand the original idea behind a bridge. We then use a mathematical model to determine what needs to be done. A hundred and one factors influence the final decision.’

**Curious about Maarten’s whole story?**

[Read it on \[witteveenbos.com/stories/maarten-van-der-wateren\]\(https://witteveenbos.com/stories/maarten-van-der-wateren\)](https://witteveenbos.com/stories/maarten-van-der-wateren)



## ‘Rapid change requires the courage to make choices’

**Marc Schot is a sustainable energy and infrastructure consultant. He wants to help the energy transition move forward – to ensure it ultimately succeeds. To stay fresh, on Fridays he works on developing the most sustainable beer brewery in the Netherlands.**

‘I did a master’s in energy system optimisation and then, before joining Witteveen+Bos, worked at Liander for five years. It was a good place to learn more about the electricity grid. Transport scarcity is a big challenge right now – the grid is full. After an instructive period, I felt the need to work somewhere where I could contribute to solutions. That’s how I ended up at Witteveen+Bos. As a sustainable energy and infrastructure consultant, I form the bridge between my more technically-minded colleagues and our clients. Sometimes I feel like I work in a giant library and can draw from an infinite source of in-depth knowledge. Here, I can really contribute to the energy transition.’

**Curious about Marc’s whole story?**

[Read it on \[witteveenbos.com/stories/marc-schot\]\(https://witteveenbos.com/stories/marc-schot\)](https://witteveenbos.com/stories/marc-schot)



## ‘You can’t tame nature, so we work with it’

**Martine Slob is a designer working on integrated design challenges in water management. In 2019, she completed her graduation project – a stream diversion design – at Witteveen+Bos. Since then, she has worked at the company in the Water Management PMC. Recently, Martine has increasingly been filling the role of project manager.**

‘I grew up on a farm in Krimpenerwaard, a water-rich area where I spent a lot of time canoeing. When I was 15, the waterway next to our house was widened. This piqued my interest. Not long after, I got a job with the water authority as a youth representative. That’s how I discovered the hidden world behind the various waterways and diverse range of water systems in the Netherlands. In the west, a controlled polder landscape exists; in wooded, eastern areas, on the other hand, streams are afforded more space and allowed to overflow their banks. I ended up studying water management at Rotterdam University of Applied Sciences. I found the technical aspect and the diversity of water management in different areas most enjoyable. That’s why I ended up at Witteveen+Bos.’

**Curious about Martine’s whole story?**

[Read it on \[witteveenbos.com/stories/martine-slob\]\(https://witteveenbos.com/stories/martine-slob\)](https://witteveenbos.com/stories/martine-slob)