ANNIAL REPORT 2016



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PROFILE, MISSION AND IMPACT

PROFILE

The Netherlands Organisation for Applied Scientific Research (TNO) was established under Dutch law in 1932. As an organisation operating under public law, we have an independent position. TNO's mission is to provide research and data that can readily be applied by businesses and governments. We are dedicated to goal-oriented innovation; we generate knowledge not for the sake of the knowledge itself but because of its practical application in society.

Technological advances and trends in society serve as the basis for our strategy. We have worked closely with our stakeholders to define five transition areas on which we focus. These five transition areas – Healthy Living, Defence & Security, Industry, the Environment, and Energy – are in line with the challenges and goals of Top Sectors (those identified by government as making a particularly significant contribution to the national economy) and with social issues relevant to the Netherlands and Europe.

MISSION

TNO connects people and research in order to create innovations which improve the competitive strength of companies and public wellbeing in the long term. This is our mission, and it is based on this mission that we create economic, social and societal impact in conjunction with a large number of businesses and organisations in the Netherlands and internationally.

INDUSTRY
HEALTHY LIVING
DEFENCE, SAFETY & SECURITY
URBANISATION
ENERGY



FLEXIBLE & FREE-FORM PRODUCTS
SPACE & SCIENTIFIC INSTRUMENTATION
SUSTAINABLE CHEMICAL INDUSTRY
SEMICONDUCTOR EQUIPMENT
NETWORKED INFORMATION

FOOD & NUTRITION
PREDICTIVE HEALTH TECHNOLOGIES
PREVENTION, WORK & HEALTH

MISSIONS & OPERATIONS
FORCE PROTECTION
INFORMATION SUPERIORITY
HUMAN EFFECTIVENESS
CYBER SECURITY & RESILIENCE
NATIONAL SECURITY & CRISIS MANAGEMENT

MOBILITY & LOGISTICS ENVIRONMENT & SUSTAINABILITY BUILDINGS & INFRASTRUCTURES SMART CITIES

SUSTAINABLE ENERGY
GEO ENERGY
GEOLOGICAL SURVEY OF THE NETHERLANDS

IMPACT THROUGH KNOWLEDGE DEVELOPMENT AND VALORISATION

We create impact through a process of portfolio management along the axis of the five transition areas, which involves innovating research and developing it as part of early research programmes. This research is subsequently further developed as part of public-private research with partners; this process is also referred to as 'shared innovation'. In addition, research results are further developed and applied in contract research, which is fully funded by our customers. Through this process, we bring aspects of our research increasingly closer to the market and actively transfer it through spin-outs or licences. Further information about our processes and procedures is available on TNO.nl, where you will also find additional information about the use of our patents and our official 'Research & Development' programmes.

TNO fulfils a unique role as an innovator on behalf of the Ministry of Defence, the Ministry of Social Affairs and Employment, and the <u>Geological Survey of the Netherlands</u>. In these cases, TNO is entrusted with knowledge-intensive government responsibilities relating to defence and security, workforce participation and the Geological Survey.

We have also created a programme called 'Innovation for Development', which is designed to disseminate research results to <u>small and medium-sized enterprises</u> and to use <u>innovations</u> across the developing world.

IKNOWLEDGE KNOWLEDGE TNO COMPANIES INSTITUTES INSTITUTES CONTRACT SPIN-OUTS SHARED RESEARCH INNOVATION RESEARCH LICENCES **PROGRAMMES** PRIVATE SECTOR PRIVATE SECTOR PRIVATE SECTOR PRIVATE SECTOR **PUBLIC SECTOR**

TNO'S FINANCIAL MODEL

TNO is a not-for-profit knowledge organisation. In order to ensure continuity, it is important that the expenses incurred by the organisation are covered and that the organisation generates a modest profit in order to fund investments, ensure continuity in knowledge development and a sustainable and healthy financial position for TNO.

The Early Research Programmes and Shared Innovation Programmes / PPS are always funded in part with public funds. This means that in these programmes, the funding received never exceeds the expenses incurred by TNO. In addition, the expenses associated with non-governmental public programmes, such as participation in the European Union's Horizon 2020 programme, are only covered to a limited extent. In order to be able to participate in these types of programmes, TNO is required to match the funds with government funding. This means that the modest profit to which the organisation aspires can only be generated through contract research, spin-outs or through licensing revenues.

The further development of research results for application in the market tends to be costly. While it is possible to generate profits in these types of situations, there is a delicate balance that also involves risk. Active management of the dissemination of research results and valorisation management are therefore necessary in order to manage the risks and safeguard the organisation's continuity.

ORGANISATION AND ENVIRONMENT

INNOVATION INFRASTRUCTURE

In October 2015, the Dutch national government, Top Sectors, and research and educational institutions signed the Innovation Contracts for 2016-2017. Under these contracts, the parties concerned – including TNO – formalise their commitment to the various top research sectors. The knowledge development conducted by TNO is aimed both at increasing the competitive strength of Dutch businesses and at solving major challenges facing society such as the energy transition, public safety and security, and the affordability of healthcare. TNO also aims to establish multidisciplinary partnerships between the various industries, as innovation tends to arise in the places where technology areas and applications intersect one another.

TNO is also the initiator of five of the 25 areas defined as part of the National Research Agenda in the Netherlands, and is closely involved in, and relevant to, a minimum of eighteen of these areas. The Agenda was drafted by an alliance of various knowledge organisations (the Royal Netherlands Academy of Arts and Sciences (KNAW), MKB Nederland (organisation for small and medium-sized enterprises), the Netherlands Federation of University Medical Centres (NFU), the Netherlands Organisation for Scientific Research (NWO), TO2, Vereniging Hogescholen, the Confederation of Netherlands Industry and Employers (VNO-NCW), and the Association of Universities in the Netherlands (VSNU)) and its goal is to offer a unifying agenda for research in the Netherlands and increase the flexibility of the knowledge infrastructure.

The Research Alliance published the 'Investment Agenda' on 15 September 2016, which argues the need for an additional

annual investment by a new government of 1 billion euros in knowledge and innovation. This is both a clarion call for mission-driven theme-based research and serves to strengthen the foundation of the existing knowledge infrastructure.

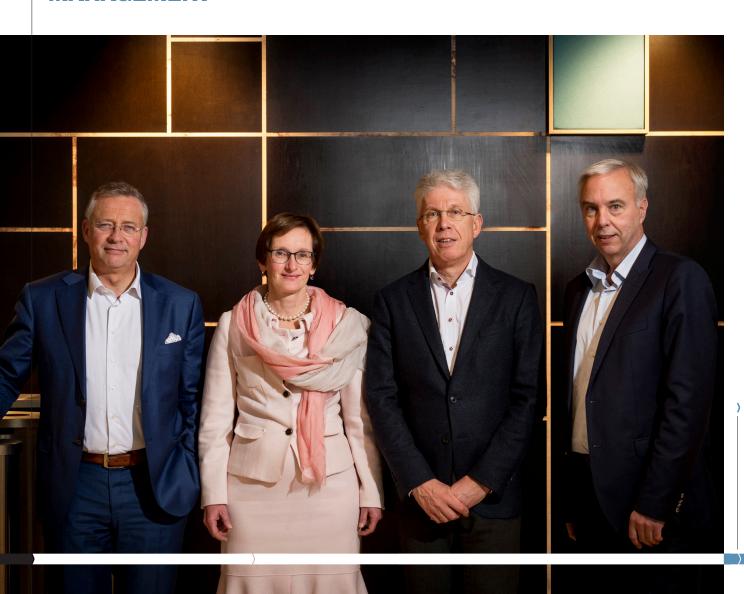
In 2016 TNO made a point of forging closer ties with its partners in the knowledge infrastructure, particularly with the TO2 partners. We worked with them to organise a successful TO2 Partner Day, which was held on 28 November and where we presented our stakeholders with a number of examples of successful partnership projects. The contracts with the four Technical Universities in the Netherlands were also intensified in terms of valorisation and tech transfer. The partners share best practices and are working on creating a shared fund for high-tech start-ups. In addition, TNO also serves as an important partner to Startup Delta, in which we collaborate with both Ms Neelie Kroes, the event's former ambassador, and her successor, His Royal Highness Prince Constantijn of Orange.

EUROPE

TNO continued to play an active role in the new Horizon2020 framework programme in 2016. During the first three years of this programme – 2014, 2015 and 2016 – TNO received around 60 million euros in funding from this framework programme. We received an additional contribution (9% of the EU contribution) from the new Dutch Matching Fund (European Research Incentive Fund), which has reduced some of our matching costs in this programme. We are therefore able to respond more effectively to other components of this programme and contribute more significantly to innovativeness in the Netherlands. In the EU's assessment of the proposals, the emphasis – in addition to excellence in research – is also on the impact of the research results. This mentality is right in line with TNO's approach and serves as another incentive to continue our participation in these programmes.

In April 2016, TNO hosted the EARTO Annual Conference, which was devoted to innovation and valorisation (EU Innovation Policy: Today's Challenges for Innovation Infrastructures within EU Innovation Ecosystems and Industrial Value-chains). TNO teamed up with the knowledge partners from Neth-ER to contribute to the interim evaluation of the Horizon2020 programme. This evaluation will be completed in 2017 and will have a significant impact on the structure and content of the next framework programme.

MEET OUR BOARD OF MANAGEMENT



OF MANAGEMENT

FROM LEFT TO RIGHT:

-) PAUL DE KROM, CHIEF EXECUTIVE OFFICER (CEO)
-) CIS MARRING, CHIEF FINANCIAL OFFICER (CFO)
-) WIM NAGTEGAAL, CHIEF OPERATING OFFICER (COO)
-) JOS KEURENTJES, CHIEF SCIENTIFIC OFFICER (CSO)

REPORT OF THE BOARD OF MANAGEMENT

2016: A TRANSITIONAL YEAR

Whereas 2015 was largely devoted to cost reductions and reorganisations, 2016 was the year of consolidation and stabilisation, allowing us to once again focus beyond the borders of our organisation, and towards the future. We created valuable innovations for our customers and launched or expanded various partnerships, with a focus on quality, valorisation and impact. We also closed the year with a strong profit, providing an essential contribution to our reserves. TNO and Energie Centrum Nederland have announced the intention of joining forces in the area of sustainable energy, establishing a new energy research centre to operate under the TNO banner. With regards to applied food research, TNO and Wageningen Research will also integrate, but under the banner of Wageningen Research. In addition, we have found a strategic partner for TNO Bedriiven and have continued to improve our internal business operations. Finally, TNO employees have gained greater confidence in the future. Overall, we are proud of our accomplishments in the past year.

Technological issues and social challenges are becoming increasingly complex. Solutions call for partnerships and a multidisciplinary approach. TNO responds to these issues by forming teams of internal and external researchers from a variety of backgrounds. This is increasingly occurring through long-term partnerships with universities and the business community. For example, we entered into four new partnerships in 2016: Aeolus, I-botics, Dutch Optics Centre and AMSystems. The proposed integrations of applied research into sustainable energy and nutrition, both to take effect starting 1 January 2018, are also consistent with this trend.

The 2,843 people employed by TNO are creating innovations on an ongoing basis – see our website, TNO.nl, for examples. A number of these breakthroughs underscore TNO's unique position. TNO developed the technology used to produce the first-ever 3D-printed crown for dental applications; to set the global record for diesel engine performance with 20% less carbon emissions at the same level of efficiency; and to develop algorithms in conjunction with Interpol in Singapore, which are used to successfully fight criminal activities on the Dark Web. Using lasers, we also created artificial laser guide stars for 'first light' with the VLT telescope in Chile and – through various pilot studies - helped type 2 diabetes patients adopt a series of lifestyle changes, thereby largely eliminating the need for medication. We also presented our Energy Vision, the main focus of which is the transition to sustainable energy, with an indispensable role for hybrid energy systems in the immediate future. This vision is fully in line with the Energy Agenda established by the Minister of Economic Affairs as published in late December 2016. As a result of the integration of their respective energy portfolios. TNO and ECN will define a new vision/strategy in 2017, a process in which we will closely involve our stakeholders. A citation analysis of TNO publications conducted by CWTS reveals that TNO is extremely well positioned amid the Dutch universities. Papers we have published together

with our partners (both domestic and international) have proven to make a significant impact. The results of the external evaluation of applied research by TNO will be disclosed in early 2017. In addition, the Board of Management has also invested in improving the financial and commercial strength of TNO Bedrijven by entering into a partnership with an experienced and successful entrepreneur.

In December 2016, TNO reached an agreement with Mr Peter Goedvolk regarding the acquisition of the majority of the shares of TNO Bedrijven. The Authority for Consumers & Markets approved the transaction on 9 March 2017, and the transfer of the shares is expected to take place on 31 March 2017. The name TNO Bedrijven will change to First Dutch Innovations: We feel this name reflects the ambition and commitment of both shareholders to boost the Dutch economy with innovative technology companies. This sale will provide TNO Bedrijven with greater financial and commercial strength, thereby generating overall new economic activity. The transaction also enables TNO to continue to stimulate economic activity by making resources available for re-investment. These resources will be invested in the initiative TechTransfer, the TNO concept to market more innovations more effectively.

Our internal business operations have been further refined and the efficiency of our support processes has been further improved. This has increased the focus on our principal activity, i.e. conducting applied research. We are pleased with the profit earned by the organisation: the resulting replenishment in reserves will partially offset the reorganisation expenses incurred in recent years in connection with the reduced government funding. In addition, the profit also includes a non-cash gain relating to the introduction of the obligation for government institutions to pay corporation tax with effect from 1 January 2016.

The results of the Employee Commitment Survey reveal that our employees have gained more confidence in, and feel a higher level of engagement with, TNO. The Board of Management is extremely grateful to all employees and the Works Council for their unwavering commitment, support and trust. They form the heart of the TNO organisation, and their talent is essential to TNO's innovation.

Articles on various issues relating to TNO appear in a variety of Dutch media every day: As a partner in innovation programmes, as a knowledge organisation, as experts, or as a consulting organisation. TNO is familiar and comfortable with each of these roles. However, we can only fulfil these roles thanks to our customers, the Council for Defence Research, our Strategic Advisory Councils and all our partners and stakeholders, as represented on the Supervisory Board, the Top Sectors, knowledge alliances, the European Commission, TO2 partners, the Dutch business community, NGOs and various ministries, including, in particular, the Ministries of Economic Affairs and Defence. We are extremely grateful to each of these entities and intend to further strengthen and expand these partnerships in the future. TNO will be celebrating its 85th anniversary in 2017: An excellent opportunity to reflect on the past, present and future.

We will be presenting the TNO Strategic Plan for 2018-2021 to the Ministry of Economic Affairs in early 2017. We are committed to a continued focus on efficiency and effectiveness, but the Board of Management also aims to take a major step in further strengthening our position, our 'Right to Play'. We seek to be more firmly established in the Dutch and international innovation landscape, to show more of the impressive work conducted by TNO employees, and to demonstrate more of the impact of our research and innovation on organisations and on society. There is no shortage of opportunities: opportunities to create a

sustainable future, both when it comes to societal challenges and in terms of contributions to the competitive position of the Dutch business community. We are looking forward to working with our stakeholders in achieving this goal.

REPORT OF THE SUPERVISORY BOARD

The Supervisory Board generally convenes at a variety of TNO sites and has also learned about various highly diverse and inspiring innovations during these company visits in 2016. The Supervisory Board is impressed by the enthusiasm and expertise of TNO's employees, who continue to permanently strengthen the role of TNO with their great passion for their field.

TOPICS

- The Supervisory Board is closely involved in developments
 relating to TO2. At the instigation of the Ministry of Economic
 Affairs, ECN's sustainable energy research will be transferred to
 TNO in 2018. In addition, the applied food research conducted
 by TNO will be transferred to WUR. The organisations
 concerned signed a number of Letters of Intent in 2016.
- The Supervisory Board has established a Quality Assurance Committee with the objective of supporting the Supervisory Board in monitoring the strategic policy and quality of the primary process.
- During the process of establishing the Strategic Plan 2018-2021, the Supervisory Board focused its supervision mainly on:
- drafting criteria and a decision-making process for creating a future-proof portfolio, in line with TNO's mandated mission;
- monitoring the performance of TNO's current international offices and the establishment of an up-to-date internationalisation policy;
- in line with the above, the creation of a policy for structured large-scale cooperation, based on the conviction that cooperation leads to innovation; and
- the preparation for the sale of TNO's majority stake in TNO Bedrijven BV and an effective organisation and governance of valorisation and technology transfer for TNO.
- On 16 March 2017, the Supervisory Board approved the 2016 financial statements, and on 7 December 2016 it approved the budget for 2017.
- The Supervisory Board conducted the annual performance reviews with the Chairman and members of the Board of Management.
- The Supervisory Board engaged an external company to conduct the annual review of its own performance.

MEETINGS

The Supervisory Board held five regular meetings in 2016, in addition to five closed meetings. Furthermore, a separate meeting was held to discuss the strategy for the period 2018-2021. The Selection and Remuneration Committee did not hold any regular meetings in the past year, while the Audit Committee and the Quality Assurance Committee each convened on two occasions.

The Committees also interacted with each other outside these meetings when necessary. The Chairman of the Supervisory Board and one of the members attended two meetings of the Works Council, in addition to holding regular meetings with the Ministry of Economic Affairs.

COMPOSITION OF THE SUPERVISORY BOARD

Since Ms J.D. Lamse-Minderhoud was unable to attend several Supervisory Board meetings due to illness, the Board was assisted by the external financial consultant, Mr P.H.J.M. Visée.

The term for Ms I.H.J. Vanden Berghe and the Chairman, Mr C.A. Linse, has been extended. Mr H.W. Broeders has been honourably discharged and has been succeeded by Mr P.J.M. van Laarhoven.

REPORT OF THE COUNCIL FOR DEFENCE RESEARCH

Against the background of radical changes in the field of security, there is a growing awareness that additional efforts when it comes to defence and security are essential. This also extends to our research activities and technology development. As part of the expansion of the armed forces in 2016, the Ministry of Defence has invested heavily in knowledge and innovation. The Strategic Knowledge and Innovation Agenda 2016-2020, which was drafted with extensive feedback from TNO and other stakeholders, provides guidelines for building defence-specific knowledge and the application of this knowledge. The Ministry of Defence, TNO and other research institutions (including MARIN and NLR) also reassessed the Defence Research Portfolio in 2016.

The Defence Research Portfolio 2016 concludes, based on the priorities set, the defence research policy and the specific knowledge requirement among end users, that there is a consistent, additional need for knowledge and knowledge accumulation among employees of the Ministry of Defence. This includes both an improvement of areas of knowledge and expertise eroded by earlier austerity policies, and the accessibility of new and innovative areas of knowledge and expertise for defence applications. The Defence Research Portfolio will take effect after the approval of the new defence budget and the resources available for knowledge accumulation in the upcoming government term. This will make it possible for TNO's Defence division to allocate people and resources to knowledge and expertise areas, the main focus of the Defence Research Portfolio.

Rather than waiting until this point, the Council for Defence Research decided back in 2016 – using the capital reserves available in TNO's Defence division – to increase knowledge accumulation. This includes what are known as 'research incentives', additional research programmes, and investments in facilities during the 2017-2019 period, including investments in hybrid warfare and directed energy weapons. In addition, a new programme for risk-bearing investigation has been established, also to promote knowledge accumulation within the existing financial scope, which will be exploratory in nature and must be innovative and original. Implementation of the programme will begin in 2017.

As part of a coordinating process, the Council for Defence Research has taken new steps toward improving the sustainability of TNO's Defence division. For example, a new international strategy includes new efforts relating to the three areas of intergovernmental cooperation, participation in programmes and projects managed by multilateral organisations such as NATO, the EU and the UN, and contracts signed with foreign governments and the business community. Knowledge accumulation can be promoted through cooperation with partners and allies and through (additional) contracts with third parties. In line with these plans, the Council for Defence Research also intends to improve interdepartmental coordination between the Ministries of Defence, Security and Justice and law enforcement agencies, and the Ministry of Foreign Affairs. The Council has also defined its position on TNO's role in innovation processes at the Ministry of Defence and within the defence and security ecosystem. TNO Defence & Security can contribute significantly to this process as a supplier of data/research and innovative solutions and, in addition, in terms of promoting and supporting innovation as a process. In addition to the Ministry of Defence, the partnership with the Ministry of Security & Justice and with the national police is being solidified. This should involve multi-year research programmes, in order to realise a firm basis of knowledge aimed at security applications. All this determines the future strategy for the Defence division, which, in turn, must become part of the coordinating TNO Strategic Plan for the years 2018-2021, which will be adopted and approved in 2017. TNO and the Council for Defence Research are currently defining their position on this issue.

An upgrade of the research facilities of TNO's Defence division is a condition for the realisation of the intentions outlined above and, more generally, for conducting applied academic and scientific research. The Council has therefore been closely monitoring the preparation and implementation of the accommodation plans in the Greater Hague Area. The renovation of the Waalsdorp site is right on schedule. The new construction work currently in progress at the Ypenburg site will be entering the construction stage in 2017. The decision regarding the future site and set-up of the HoogToxLab, currently located at the Rijswijk site, is scheduled post-2017.

We would like to draw attention to the *Innovation in Defence Day* organised in conjunction with the Ministry of Defence and the Security & Justice Innovation Conference, to which we made a significant contribution. TNO's Defence division makes a point of connecting with the other stakeholders within the defence and security ecosystem. New partnerships, such as AEOLUS along with the Defence Centre for Man and Aviation (Centrum voor Mens en Luchtvaart) or in Singapore in relation to cyber issues, are an expression of this same aspiration. As before, we also managed numerous successful, innovative research programmes as before, along with high-impact projects in the Netherlands and abroad, which collectively account for revenue in the region of 100 million euros, including 63 million euros for the Ministry of Defence.

On behalf of the Council for Defence Research, Wim Nagtegaal, Chairman

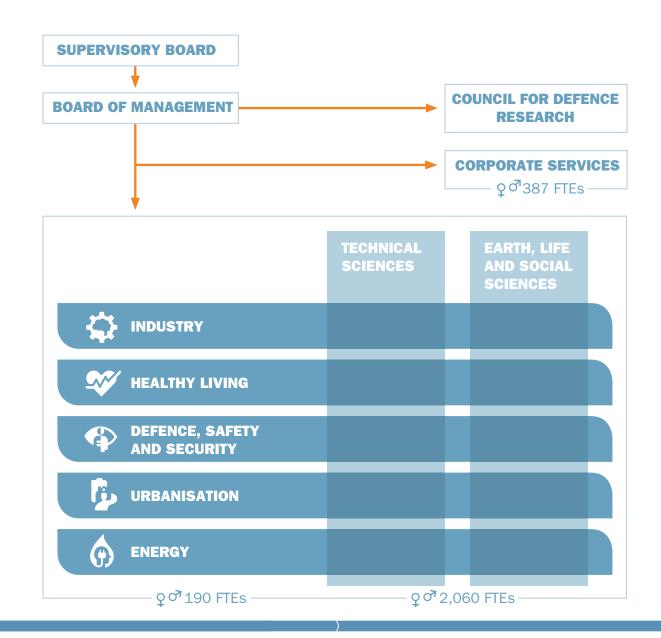
MEMBERS OF THE COUNCIL FOR DEFENCE RESEARCH

-) W. (WIM) NAGTEGAAL, VICE ADMIRAL (NOT IN ACTIVE SERVICE), CHAIRMAN
-) MR M. (MARC) GAZENBEEK, DEPUTY CHAIRMAN
-) MR H.G. (HENK) GEVEKE
-) GENERAL-MAJOR E. (ERIC) SCHEVENHOVEN
-) MR A.P. (AUKE) VENEMA
-) MR M.P.I. (MAARTEN) MANDERS, SECRETARY

TNO ORGANISATIONAL CHART

TNO is a matrix organisation divided across two axes. Our researchers, consultants and project managers are divided into two expertise areas: Technical Sciences and Earth, Life & Social Sciences (approx. 2,100 FTEs). The other axis of the matrix consists of five focus areas focusing on the five selected social transition areas to which TNO contributes (approx. 200 FTEs).

The <u>Corporate Governance</u> chapter contains more information about the role of the Board of Management, the Supervisory Board and the Council for Defence Research.



CORPORATE GOVERNANCE

STANDARDS FOR MANAGEMENT AND SUPERVISION

The raison d'être of TNO, which was established under Dutch law, is to connect people and research based on its independent position. TNO searches for practical innovations based on an objective approach in order to serve the public interest, as well as society at large and the business community.

Corporate governance refers to the totality of rules, standards and institutions for the organisation's administrative organisation, which is adequately supervised and acts responsibly and transparently and in accordance with ethical standards.

The organisation of the corporate governance system is based on the TNO Act. In addition, TNO is bound by the Code of Conduct for TO2 organisations as set out in the Dutch government's Visie op het Toegepaste onderzoek (Vision of Applied Research), the Gemeenschappelijk Normenkader voor Financieel Beheer (Shared Framework of Standards for Financial Management) and the Toezicht Semipublieke Instellingen (Regulation of Semi-Governmental Organisations).

In order to maintain standards of integrity and transparency, TNO has put in place a corporate integrity code, a complaints procedure and a whistleblower policy. This code and these regulations are based on governance codes which are applicable to public administration, the corporate sector and science, e.g. the Netherlands Code for Good Public Governance, the Corporate Governance Code and the Scientific Integrity Code.

TNO's regulations for the Board of Management, the Supervisory Board and the Strategic Advisory Councils together – along with the Mandate document – constitute TNO's Organisational Regulations. The Mandate document carefully describe the

powers granted within the organisation, in such a way that the system of checks and balances is assured. These regulations also provide that the audit firm checks compliance with the mandate every year. TNO also conducts an annual risk assessment, the results of which are recorded in a risk matrix, including mitigating measures. Furthermore, TNO also holds ISO 9001 quality certification. TNO and the authorised employees (up to and including the second echelon, as provided for in the Mandate document) are registered with the Chamber of Commerce.

BOARD OF MANAGEMENT

The Chairman and members of the Board of Management are appointed by the Dutch Crown. Their remuneration is in accordance with the Standards for Remuneration Act (Wet normering bezoldiging topfunctionarissen publieke en semipublieke sector).

The Board of Management is charged with governing TNO and is also responsible, among other things, for defining and achieving objectives and for the associated policies, strategies and results. Under the TNO Act, the Board of Management maintains a collegial governance model, in which the directors are collectively and fully responsible. In addition to the Chairman, each Board member acts on the basis of their own profile, i.e. strategic/scientific, operational, and financial.

SUPERVISORY BOARD

The Chairman and members of the Supervisory Board are appointed by the Dutch Crown for a period of five years and may be reappointed a maximum of one additional term. Their remuneration is in accordance with the Standards for Remuneration Act.

The Supervisory Board is responsible for monitoring the policies of the Board of Management and supporting the Board by providing advice. Within this context, supervision extends to the realisation of objectives and KPIs, strategy, the annual plan including an investment plan, financial reporting, and compliance with laws and regulations. The TNO Act sets out which decisions require the approval or consent of the Supervisory Board. The latter also reviews its own performance every year, as well as conducting individual performance reviews with the chairman and the individual members of the Supervisory Board.

The Supervisory Board includes three committees within its ranks: A Selection and Remuneration Committee, an Audit Committee and a Quality Assurance Committee. The responsibilities of these committees are further defined by the Supervisory Board. There are specific regulations in place for these committees. The members of the Selection and Remuneration Committee work on detailing HR issues on behalf of the Supervisory Board. The Audit Committee provides the Supervisory Board with the option to improve TNO's supervision of finances and risk management. The Quality Assurance Committee supports the Supervisory Board in the process of monitoring the strategic policy and the quality of the primary process.

The financial statements include an audit opinion provided by an auditor appointed by the Supervisory Board. The audit firm, KPMG, signed a five-year contract in 2011 for auditing the financial statements; this contract may be renewed by one year for a maximum of two times. The auditor also conducts a separate audit on the legitimacy of the receipt and expenditure of funds, in accordance with the audit protocol agreed between the Ministry of Economic Affairs and TNO.

COUNCIL FOR DEFENCE RESEARCH

Under the TNO Act, the policy for TNO's Defence division is the responsibility of the Council for Defence Research. One of the members of the Board of Management is appointed by the Dutch Crown on the recommendation of the Ministry of Defence. as well as serving as the chairman of the Council. This is important, as an effective Dutch military must continuously innovate its military capacities in order to remain ahead of its adversaries and potential adversaries. This calls for scientific support in a large number of research and technology areas. A portion of this research is so defence-specific that it must be provided by the Ministry of Defence itself. As part of these efforts, it maintains a strategic partnership with TNO. The latter has conducted the bulk of the applied scientific defence research in the Netherlands since 1947. In doing so, it works closely with the military, the corporate sector and other research and educational institutions. Defence and public safety and security constitute a closely entwined ecosystem in this process. The fact that TNO also works on behalf of other clients in the defence and security domain expands the basis for defence research and keeps it at an affordable level for the Ministry of Defence.

EMPLOYEE REPRESENTATION

TNO has two employee representation bodies in place: the Works Council and two Subcommittees.

The Works Council handles all matters relevant to employees in general and to TNO as an organisation in particular and provides solicited and unsolicited advice to the Board of Management. The Works Council holds the right of consent in two areas, in accordance with the Works Councils Act (Wet op de ondernemingsraden).

The Subcommittees convene with the Managing Directors of Expertise to discuss issues relating to the Expertise Areas.

STRATEGIC ADVISORY COUNCILS

TNO is structured as a project organisation based on specific issues. A Strategic Advisory Council is linked to each of these issues, with advisory powers relating to prioritisation and the selection of strategic issues and programmes relating to the issue in question. The Strategic Advisory Council notes external trends and developments relating to the issue and shares these with the management for that particular issue. A Strategic Advisory Council consists of leading figures from the business world, the government and research and educational institutions. These members are appointed by the Board of Management on the recommendation of the issue management. The Strategic Advisory Councils convene twice a year; their meetings are always attended by a member of the Board of Management. The chairs of the Strategic Advisory Council are invited by the Board of Management at least once a year. Topics discussed during these meetings include strategic decisions relating to roadmaps and trends and developments in applied research.

TNO BEDRIJVEN

TNO owns 100% of the shares in TNO Bedrijven BV. In order to ensure a division in the relationship between TNO and TNO Bedrijven BV, the management and the business operations are organised independently of each other under the organisation's articles of association. The result of the status of a two-tier company with a Supervisory Board is that TNO Bedrijven BV operates at arm's length from TNO.

As a majority shareholder in TNO Bedrijven BV, TNO prepares consolidated financial statements every year.

REPORT OF TNO BEDRIJVEN

The mission of TNO Bedrijven is 'impact and value creation through the valorisation of TNO research, in areas where others are unwilling or unable to act independently'. This mission has served as a guideline for several years in the operation of TNO Bedrijven.

Within this mission, TNO Bedrijven maintains three main areas:

- Joint Ventures: New technologies in which TNO Bedrijven involves at least one other market player;
- TNO Spin-outs: Repetitious work which is no longer in line with TNO's R&D environment;
- Start-ups: TNO employees who start their own business based on a licence.

JOINT VENTURES

The gap between innovative concepts and the actual market launch of a product or service increasingly proves to be too large to be bridged by a company without external assistance. The participation model designed by TNO Bedrijven, which is set out in a shareholder agreement with other shareholders, provides a solution in this case. This ensures that the management and funding of the ventures as businesses in their own right are guaranteed and that employees maintain a degree of influence and control.

TNO SPIN-OUTS

As in 2015, TNO Bedrijven did not acquire any business operations of a repetitious nature from TNO in 2016.

START-UPS

Established in January 2016, NearField Instruments BV is developing a tool which meets the urgent demand in the semiconductor market to measure extremely small structures of chips on the wafer during production (i.e. metrology). NearField has the potential to become a new Dutch high-tech flagship. The company is currently looking for strategic investors willing to invest in the development of an alpha tool.

A total of nine companies were sold in 2016, while one foundation was dissolved and the shares which Stichting TNO Deelnemingen held in TNO Deelnemingen were transferred to TNO Bedrijven. The company unfortunately posted a loss in 2016 as a result of a loss on the sale of one of the companies sold.

TNO and TNO Bedrijven aim to increase their impact through valorisation. In order to achieve this, it was decided in 2016, with the close involvement of all parties concerned, to sell a minority interest in TNO Bedrijven to a strategic market player.

The objective of this sale is twofold: Increasing the input of new ideas and the influx of new companies (in addition to the TNO companies) while at the same time increasing opportunities for investment.

The search for a suitable strategic partner was initially a broad search. In the second half of the year, a single company remained after a careful selection process. The share transfer to First Dutch (owned and operated by Peter Goedvolk) was signed on 16 December 2016. As soon as approval has been obtained from the Authority for Consumers & Markets, the transaction will be completed and the name TNO Bedrijven BV will be changed to First Dutch Innovations BV.

TECHNOLOGY TRANSFER

Technology Transfer, a key part of the valorisation process, involves the transfer of technologies to the market through the establishment of a new company (spin-off) or by providing licences to existing companies. This ensures that TNO innovations are converted into products and, by implication, into business economic activity and high-quality employment.

TNO has been successful in its efforts for many years: A number of companies have been established over the years under the umbrella of TNO Bedrijven, which currently employs a total of 1,100 people. However, the organisation's goal is to further increase and expand this, as this is perfectly in keeping with the core of TNO's mission.

TNO defined a programme for this purpose in 2016, which serves to develop high-potential new inventions into business cases, drafting a proof-of-concept where necessary.

This process also includes determining the most efficient way to launch the new product or service into the market: By means of transfer to a new or an existing company. A Tech Transfer team will be established in 2017 to manage this programme as efficiently as possible and boost the overall process.

The Tech Transfer team possesses expertise in venturing, investing, licensing, IP scouting, deal making, project management and stakeholder management. Effective, tailor-made management by TNO enables the TNO innovations to receive maximum support in a successful market launch. In addition to First Dutch Innovations, TNO will also enter into relationships with other businesses and investors. Initial steps have been taken to define collaboration with 4TU and other TO2 institutions devoted to Tech Transfer.

RUN-UP TO STRATEGIC PERIOD 2018-2021

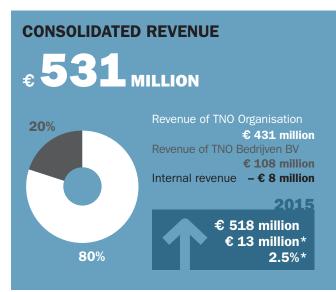
TNO began the process of reassessing its strategy. The strategy for the period 2018-2021 will be completed in March 2017, after which it will be presented to the Minister of Economic Affairs. The strategy both serves as a guideline for our activities, organisation and people and as our 'offer to society', which describes the strategic focus areas of our research in the coming years.

The strategy was based in part on close communication with our clients and other external stakeholders, including our strategic advisory councils, professional departments, Top Sectors and research partners. The results of the TO2 evaluation conducted in 2016 will be incorporated into the new strategy.

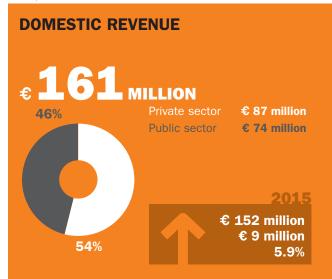
Based on the current five focus areas (Defense, Security and Safety, Healthy Living, Urbanisation, Industry and Energy), TNO has been working on the great challenges to society: A safe society, health, quality of life, competitive industry and a sustainable energy supply. Within these issues we are developing specific topics, which are selected based on the agendas of our clients and our views on trends and developments in society and technology. We measure our success in terms of impact: How successful are we in converting research results into practical solutions, so as to ensure that our clients, the government and businesses are able to achieve their goals even more effectively and efficiently based on our contribution? We have defined the following strategic objectives for the next several years: Ongoing development of the content of our portfolio; a further focus on topics where we are relevant and genuinely competitive; an expansion of (large-scale) partnerships, consolidation of our international position, growth in generating activity based on our IP (tech transfer) and reinforcement of TNO as a competitive employer, including for international talent. We will also adjust our organisation in order to be more in line with the market and facilitate greater flexibility.

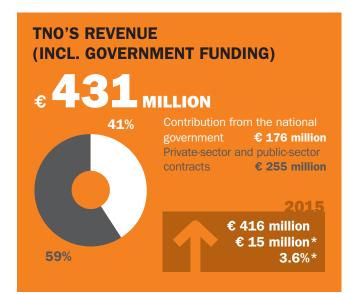
Our strategy fits in with the strategic framework of all institutions for applied research in the Netherlands, which is also scheduled to be completed in the first quarter of 2017.

KEY FINANCIAL DATA 2016

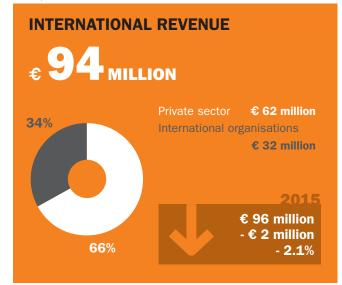


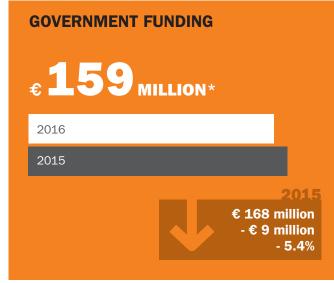
* Excluding 17 million euros VAT offset, revenue has effectively fallen by 4.0 million euros, the equivalent of 1.0%.



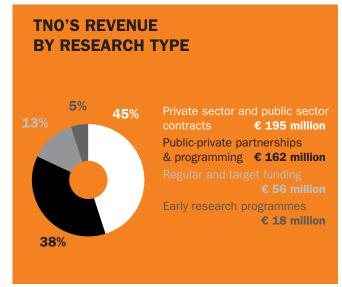


* Excluding 17 million euros VAT offset, revenue has effectively fallen by 2.0 million euros, the equivalent of 0.5%.





* Excluding 17 million euros VAT offset on account of lower advance tax deduction starting in 2016.



FINANCIAL SUMMARY

PROFIT (LOSS)

TNO booked a profit of 14.1 million euros for 2016 (2015: 2.5 million euros). These earnings are the consolidation of TNO's own result and the result of its subsidiary TNO Bedrijven. The 2016 earnings include a non-recurring €5.5 million gain relating to corporation tax, which we explain below. Excluding this gain, total earnings came to €8.6 million for 2016.

The organisation's internal business operations have been further streamlined through a coaching and efficiency process, with an improvement in the results becoming visible mostly in the second half of the year.

The 'Corporation tax' item is a new item in the profit and loss statement. Due to legislative changes, TNO became liable to pay corporation tax in 2016 on account of its economic activities. TNO and its sister organisations engaged in applied research (united in the TO2 partnership) have advocated that an exemption be granted on account of their public duties, but such an exemption has not yet been granted. In respect to this de facto tax liability, the Netherlands' TO2 institutions differ from their counterparts in neighbouring countries. Discussions with the Dutch Tax and Customs Administration (Belastingdienst) on the implementation of the new rules are ongoing.

The Corporation tax item in the 2016 profit and loss account shows a gain of 0.6 million euros. This item consists first of all of a regular liability of 4.9 million euros on the profit before tax earned in 2016. In addition, a non-recurring gain of 5.5 million euros is accounted for, which is the result of forming a deferred tax asset concerning implicit reserves, consisting mainly of real-estate properties and representing the difference between the market valuation in the fiscal opening balance and the balance sheet value shown in the financial statements. The rules for financial reporting prescribe that this tax amount must be

included in the profit and loss account following the introduction of the obligation to pay corporation tax.

The exceptional items in the 2016 earnings had a moderate overall impact. A positive contribution was made by what is known as the 'continuity allowance', a fee added to the cost prices for the purpose of financing restructuring specific areas of research. Since TNO completed a reorganisation at the end of 2015, reorganisation expenses were modest in 2016. A loss was incurred on the sale of a TNO Bedrijven subsidiary, Euroloop BV, and the selling costs of a majority interest in TNO Bedrijven BV also had a negative impact on the results. The sale of TNO Bedrijven BV is expected to be completed in 2017. Finally, there were several one-off effects relating to adjustments to real-estate related provisions, the net impact of which were not material.

REVENUE

Of the 2016 revenue increase of 14.6 million euros, 16.8 million euros was an increase in the government funding as compensation for the elimination of the VAT exemption. This concerned non-reclaimable VAT, particularly where government funding for EU-subsidised projects is concerned (see the information on direct project expenses).

The remaining revenue decrease of 2.2 million euros was mainly due to a further reduction in government funding for research of 8.5 million euros in 2016. It is for this reason that TNO carried out a reorganisation at the end of 2015, resulting in the redundancy of 86 FTEs.

For the period 2012-2016, government funding available for research was reduced from 192.3 million euros to 159.5 million euros (i.e. 176.3 million euros in revenue from government funding in 2016 less a 16.8 million euros VAT compensation). The scheduled funding reductions will continue until the end of

2018. Despite the 8.5 million euros reduction in the amount of government funding available for research, market revenue increased by 6.2 million euros in 2016. TNO's increased focus on public-private partnerships has resulted in an increase in the ratio of market revenue to government funding (excluding VAT compensation). In 2016, TNO generated an average of 1.6 euros in market revenue for every euro in revenue from government funding. In 2015, this ratio amounted to 1.5 euros in market revenue.

Consolidated revenue increased from 518.4 million euros in 2015 to 530.6 million euros in 2016. The revenue for the TNO Organisation increased from 416.1 million euros to 430.7 million euros.

The paragraphs below concern the TNO Organisation financial statements.

BUSINESS EXPENSES

A number of measures were implemented during the 2013-2015 period in order to ensure that business expenses would decrease in proportion with the expected decline in revenue.

The resulting cost management programme has led to a further 71 FTE decrease in the average number of FTEs between 2015 and 2016. (The average number of FTEs fell by 130 between 2015 and 2014.)

Wages and salaries, including pension and social security charges, increased by 1.1 million euros compared to 2015. The wages and salaries include more than 10 million euros in non-recurring expenses, which are related to the above-mentioned reorganisation. A provision for this reorganisation was formed in 2015; withdrawal from this provision is included as a movement in provisions under Personnel expenses.

Excluding this release, personnel expenses effectively fell by approximately 9 million euros.

Other operating expenses fell by 4.1 million euros compared to 2015. A total of 3.3 million euros of this decline can be attributed to the lower overall administrative expenses and 0.8 million euros to a decline in other expenses.

Direct project expenses increased by 14.1 million euros, from 56.4 million euros to 70.5 million euros. The direct project expenses for 2016 include a total of 16.8 million euros in non-reclaimable VAT, relating in particular to government funding and EU-subsidised projects; this has been funded from additional state funding provided by the government (see 'Revenue from government funding'). Adjusted for non-reclaimable VAT, the direct project expenses effectively fell by 2.7 million euros.

Amortisation costs fell by 0.3 million euros in 2016, from 17.0 million euros to 16.7 million euros (decrease in 2015 vs. 2014: 1.0 million euros). The level of investments in 2016, 28 million euros, is approximately 12 million euros higher than the amortisation costs for 2016. The investment budget for 2017 is also above the amortisation costs. This is expected to reverse the downward trend in amortisation.

RESULTS FROM PARTICIPATING INTERESTS

Results from participating interests concern TNO's participation in TNO Bedrijven and its subsidiaries. The operating income including the settlement of a positive valuation of an interest-rate swap was positive in 2016. However, this was offset by a write-down and by the sale of one of the subsidiaries, Euroloop BV. This brought the results from participating interests to -5.0 million euros.

EOUITY

A total of 8.5 million euros was invested in defence-related real estate property in 2016. The special-purpose Defence Building reserve, built up of contributions by the Ministry of Defence over the years, decreased by 5.8 million euros, corresponding to an increase in the general reserve.

This change, along with a 2.3 million euros increase in the statutory reserve, a 2.5 million euros withdrawal from the special-purpose Defence operating risks reserve, and the earnings of 14.1 million euros, has resulted in an increase in the general reserve of 20.1 million euros. A total of 124.6 million euros in equity relates to TNO's defence activities.

CASH AND CASH EQUIVALENTS

The balance of cash and cash equivalents at the end of 2016 was 129.7 million euros, an increase of 14.3 million euros.

A continuing focus on working capital management, initiated in 2015, improved the work in progress and trade receivables balances by 6.3 million euros.

The positive operating result, the loans included as part of the Future Fund launched by the Ministry of Economic Affairs, the increase in deferred income (prepayments made in respect of specific research projects) and other items resulted in an increase in cash and cash equivalents of 30.7 million euros.

This is partially offset by the fact that investments in tangible fixed assets exceeded amortisation by 11.7 million euros in 2016. Cash outflows relating to provisions amounted to 11.0 million euros in 2016; this is largely the result of the completion of a reorganisation initiated at the end of 2015. Within the balance of cash and cash equivalents, a total of 54.7 million euros has been set aside for investments in defence-related real-estate properties.

FINANCIAL INSTRUMENTS

General information

TNO uses a variety of financial instruments as part of its normal business operations which expose the organisation to market risks and/or credit risks. This concerns both financial instruments included in the balance sheet and currency forward contracts and interest-rate swaps to hedge future transactions, cash flows and interest-rate risks. TNO does not trade in these financial instruments and has procedures and guidelines in place to limit the scope and size of the credit risk for each counterparty or market. In the event of default of payment by any of TNO's counterparties, any relating losses remain limited to the market value of the instruments in question. The contract value or notional principals of the financial instruments are merely an indication of the degree to which these types of financial instruments are used, rather than of the amount of the credit risks or market risks.

Interest-rate risk

Interest-rate risk is limited to any changes in the market value of the loans received and provided. These loans are preferably subject to a fixed interest rate during the entire term of the loan. If a loan does not have a fixed interest rate, TNO's policy is to use derivative financial instruments (derivatives) in order to manage interest-rate fluctuations (i.e. during the term of the contract). The loans are held until maturity.

Credit risk

TNO is exposed to credit risk in relation to transactions. This risk relates to the loss which can potentially arise when a counterparty is in default. The risk is limited to the number and diversity of parties from which TNO is due to receive funds. A concentration of credit risk is present only with regard to the geographic spread of the outstanding receivables concentrated in the Netherlands.

IN-CONTROL STATEMENT

RESPONSIBILITY

The TNO Board of Management is responsible for the structure, existence and operation of the internal risk management and monitoring system of the TNO organisation. In addition to risk management, the purpose of this system is to ensure the realisation of the operational and financial targets and objectives as much as possible.

RISK MANAGEMENT AND MONITORING SYSTEM

The risk management and monitoring system includes the following components:

- TNO governance structure;
- Code of Conduct for TNO employees;
- · Strategic plan with external assessment;
- Internal risk management and monitoring systems;
- Internal audit function;
- External audits.

TNO governance structure

Pursuant to the TNO Act and the TNO Decree, TNO maintains a Supervisory Board and a Council for Defence Research. The Supervisory Board comprises several committees, including an Audit Committee for supervision of the risk management and monitoring system and a Quality Assurance Committee established in 2016, which supports the Supervisory Board and advises it on TNO's strategic policy and the substantive quality of TNO's primary process. Any issues of material importance are discussed by the Board of Management with the Supervisory Board and, where it concerns TNO's Defence division, with the Council for Defence Research.

Code of Conduct for TNO employees

TNO has a Code of Conduct in place for its employees, whereby the specific nature of TNO as a knowledge organisation with a public duty and responsibility is summarised in a number of core values. TNO has also introduced a system of confidential counsellors. The organisation has a whistleblower policy in place, while an Integrity Officer is charged with handling integrity issues within the organisation and discusses any issues of relevance with the TNO Board of Management.

Strategic plan with external assessment

TNO drafts a strategic plan once every four years. The current plan, Trends and Transitions for TNO, describes the strategy for 2015-2018. At the request of the Minister of Economic Affairs, this period has been reduced by one year on a one-time basis; this period will focus on the submission of innovation contracts which have been agreed between the Ministry of Economic Affairs, the Top Sectors, and TNO. The Strategic Plan is assessed by external stakeholders during the drafting process, including the Strategic Advisory Councils, with the objective of aligning with various social issues as closely as possible. The new Strategic Plan will be submitted to the Minister of Economic Affairs in spring 2017 and is subject to government approval. The strategy will be updated annually based on recent trends and developments.

Internal risk management and monitoring systems

The internal risk management and monitoring systems include the following elements:

• Planning & control cycle: An annual plan is drafted including a budget. The extent to which the objectives are achieved is assessed every month based on the budget. From 2016, progress is monitored based in part on Key Performance Indicators. The periodic results are discussed for each organisational unit on a monthly basis with a) the managing director and controller of the division in question and b) the Chief Operating Officer and Chief Financial Officer. A business review is conducted three times a year between the management team of each of the organisational units and

- the Board of Management, whereby the progress, in particular, is assessed and adjustments are made if and as necessary.
- Risk management: An organisation-wide risk analysis is drafted once a year, in which the (internal and external) risks are weighted which could potentially prevent the organisational objectives from being achieved. The top 6 of organisation-wide risks is approved by the TNO Supervisory Board, including any control measures implemented and to be implemented in the future. Within the planning and control cycle, the TNO departments submit their own departmental risks and risk management measures. The monitoring process is conducted through business reviews and monthly reports. In addition, all research projects are assessed based on risks and risk management measures prior to acceptance and during progress.
- TNO Management System: All TNO employees work in compliance with the TNO management system. This describes the management, primary, support and improvement processes based on which TNO fulfils its objectives.
 Specifically, it sets out issues relating to powers and authorisations, information security, risk analysis and risk management for projects to be managed, the composition and management of project cases, Intellectual Property policy and knowledge development. The TNO Management System is ISO-certified and is assessed annually by external auditors.

Internal audit function

The Operational Excellence & Auditing department conducts financial and operational audits. A three-year cycle has been agreed with the Supervisory Board for the implementation of the audit plan. This plan is based on the (organisation-wide) risk analysis and the process description contained in the TNO Management System.

External audits

The external auditor verifies the organisation's accounts and internal controls as part of its audit of the financial statements. The management is briefed on the findings by means of a management letter.

Furthermore, knowledge position audits are conducted for each of TNO's areas of expertise by specific committees of recognised experts in order to assess the quality and relevance to society of TNO's knowledge basis.

Any areas of improvement arising from the audits are handled by the client and checked for progress and implementation as part of the next audit.

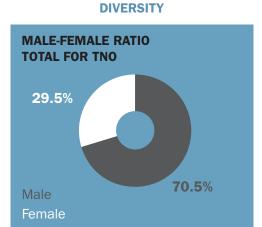
CONCLUSION

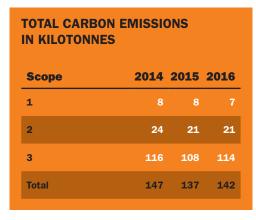
Based on the risk management and monitoring system described above and the results of the audits conducted, the Board of Management has concluded that the risk management and monitoring system is adequately organised and proved effective during 2016. There have been no facts or indications which negate this conclusion.

However, it should be noted that risks may occur that cannot be foreseen and (material) misstatements, loss, fraud and violation of laws and regulations cannot be fully excluded.

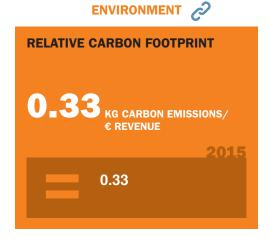
KEY FIGURES: PERSONNEL AND ENVIRONMENT 2016

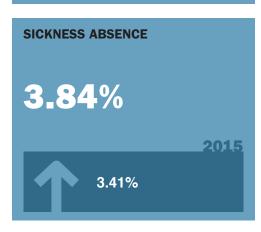






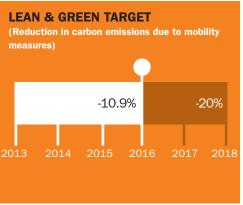
ENVIRONMENT



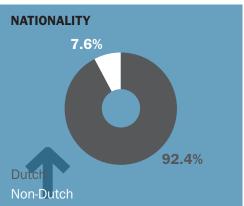




Millions of km	2014	2015	2010
Business travel	13.5	14.4	13.
Commutes	31.3	31.0	30.



EMPLOYEES ENGAGEMENT	
7.0 _{score}	
	2015
6.7	



Carbon emissions	2014	2015	2016
Gas (10E6 m³)	3.4	3.6	3.3
Electricity (GWh)	38.8	34.8	35.5
Heat (TJ)	25.3	18.2	17.2
Total	273	256	243

ENERGY CONSUMPTION

DIRECT CARBON EMISSIONS				
TJ fuel	2014	2015	2016	
Gas	108	113	105	
Diesel	10	10	10	
Petrol	9	7	6	
Total	126	130	125	

RESPONSIBLE BUSINESS

In conjunction with its stakeholders, TNO has organised itself around <u>five focus areas</u> with specific transition targets, where the impact is focused on economic, social and societal issues. Examples of these issues can be found on the home page and on TNO TIME.

In this section we discuss the decisions made by TNO in its business operations in order to create this value in greater detail – this is visualised in the Value Creation Model.

VALUE CREATION MODEL

The TNO organisation uses capital – including people, facilities and financial resources – to achieve its objectives. A number of examples are shown at the bottom of this page. The Value Creation Model shows how capital (input) is converted into innovations (output) and impact (outcome) through knowledge development and valorisation.



Human capital: Our employees contribute knowledge which they have acquired at universities or working for other employers. TNO employees develop their skills and talents by working on challenging innovations, often together with partners. There are also a number of internal training & education and trainee programmes in place. TNO employees use their knowledge and experience to disseminate their knowledge outside TNO. Around 60 TNO employees work as professors or lecturers at Dutch and international universities and universities of applied sciences. Many TNO alumni are valued employees of clients' and partners' companies.

Financial capital: TNO receives funding from the Ministry of Economic Affairs. A 2016 <u>study</u> conducted by the European Association of Research and Technology Organisations (EARTO) shows that for each euro paid in government funding, a total of 3.8 euros is channelled back into society.

TNO was one of the nine European knowledge organisations on which this study was based.

STAKEHOLDERS

Continuous communication with our stakeholders is vital in order to create the social and economic impact required. Each issue has its own <u>Strategic Advisory Council</u>, whose members represent TNO's most relevant stakeholders.

The Top Sectors are also consulted on research and innovation agendas of the business community, research and educational institutions and government. Specific examples from 2016 include the Strategy 2018-2021 component, which was discussed in the meetings of the Strategy Advisory Councils. This is discussed separately with the chairmen of the Strategic Advisory Councils, leading representatives of the Top Sectors, the Council on Defence Research, and several departments. Another example is the information sessions for local residents relating to the new buildings constructed at the Ypenburg site.

TNO also consulted dozens of national and local political representatives in 2016. The Dutch Parliament (i.e. the Senate and the House of Representatives) is one of TNO's key stakeholders, as consistent political support is essential for the organisations for applied research. TNO employees with technical expertise regularly brief the Dutch House of Representatives, Parliamentary Committees and individual party experts on specific issues. TNO believes it is an important part of its public role to inform Members of Parliament about issues such as technological trends, the feasibility and practicability of proposals, and the implications of policy decisions and other decisions. Our experts are therefore essentially always available to shed light on some of these issues.

Potential new employees are also regarded as key stakeholders by TNO. We pay extra attention to this scarce target audience in the form of specific events. Candidate satisfaction was measured for the first time in 2016. Any improvements required will be made in 2017.

You can find a list of stakeholder meetings here.



STRATEGY

For TNO, maintaining sustainable business operations also means paying attention to how our organisation achieves the social impact through the five issues. The organisation continued with the FOCUS project in 2016, which is aimed at further improving our processes. In addition, TNO maintains a CSR steering committee which identifies a number of strategic priorities each year.

Focus from the CSR Steering Committee

The business operations are gradually becoming more sustainable. The following topics received special interest from the CSR Steering Committee in 2016:

- Lean and Green: Implementing mobility measures to reduce our carbon footprint;
- Social Return: Work for people estranged from the labour market;
- Creating Shared Value: Raising awareness of, for example, TNO project managers of the value for TNO and its stakeholders of the economic, social and societal results achieved.

The year 2016 also saw the launch of a European Horizon2020 project called 'Joining Efforts for Responsible Research and Innovation' (JERRI). TNO uses this project to determine its position and objectives in society in line with the expectations of our stakeholders in terms of areas which play a role in research and innovation. These areas are Integrity, Gender, Open Access, Science Education and Societal Engagement. TNO's partner in this project is the German-based Fraunhofer Gesellschaft. The goals for each of these areas for both organisations will be set in 2017, and the project will be completed in 2019.

MATERIALITY MATRIX

The fives issues identified by TNO as 'material' were tested among a small group of stakeholders in 2016 through individual interviews. The result is shown in the Materiality Matrix. TNO's impact on society is described in the showcases. A stakeholder dialogue will be conducted in 2017 as part of the abovementioned JERRI project. The results of both dialogues will be incorporated into the amended CSR policy in 2017.













FIVE KEY SUSTAINABILITY ELEMENTS

The five sustainability elements include:



GOOD RESEARCH



HEALTHY EMPLOYEES



REDUCING THE ENERGY IMPACT



SAFETY



SOCIAL ENGAGEMENT

A number of topics have been identified for each of these material issues, and each topic includes a description of the goal/objective, strategy used and the results achieved. The key elements and topics are shown on the right.

KEY SUSTAINABILITY ELEMENTS AND TOPICS













HEALTHY EMPLOYEES











REDUCING THE ENERGY IMPACT





SAFETY









SOCIAL ENGAGEMENT





DETAILS ON RESPONSIBLE BUSINESS

The five key sustainability elements and twelve topics are detailed on the following pages.





Objective

TNO is committed to maintaining high ethical standards and our stakeholders have found that TNO operates on an ethical basis. Our organisation seeks to meet the expectations of society and to continue learning from ongoing trends and developments.

Strategy

We identify scientific integrity, business integrity and personal integrity. The ethical conduct of TNO is facilitated and assured in the following ways:

- Based on a vision in which our core values are the central focus;
- With clear standards defined in the TNO Code;
- With an organisational structure which promotes high ethical standards and good governance through the separation of organisation and functional components and an organisation as detailed in the section on Corporate Governance;
- By investing in raising awareness among our employees (and other stakeholders if necessary) of our position and dilemmas;
- By establishing clear rules about who people can turn to, on a confidential basis if necessary, if they perceive any problems relating to integrity or have a complaint about the organisation.

We measure compliance with ethical standards each year, and since 2016 integrity has been a Key Performance Indicator. We invest in ongoing development, and as and when necessary we adequately anticipate signs from within and outside the organisation regarding unethical, or seemingly unethical, behaviour, should these become the topic of discussion. The Integrity Officer is consulted as and when necessary, so

as to solve any undesirable situations through the management line to the extent possible.

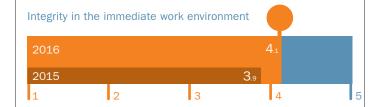
The objectives and strategy are detailed in the Annual Plan on Integrity 2017 and are assured, among other things, by the contribution and procedure of the Integrity Committee and the Integrity Officer.

Results

TNO operates, and will continue to operate, on an ethical and independent basis.

- TNO complies with the basic standards for the integrity organisation drafted by the national government.
- The annual Employee Commitment Survey reveals that familiarity with, and acting in accordance with, the TNO Code have increased slightly: From 3.6 in 2015 to 3.7 in 2016 and from 3.9 in 2015 to 4.0 in 2016 (on a 5-point scale).
- Employees also feel that ethical conduct in the immediate workplace has improved (4.1 compared to 3.9 in 2015 on a 5-point scale). Employees are familiar with the TNO Code of Conduct and act in accordance with this Code.
- One formal report was made by an employee under the whistleblower policy in 2016.

Further information about this subject.















Q GOOD RESEARCH



CLIENT SATISFACTION

Objective

A higher degree of satisfaction among our customers with the added value and management of our projects which support TNO's strong position in the applied research infrastructure.

Strategy

Customer satisfaction is measured throughout the year by an external company using a sampling method for each separate issue. The information is shared with both the individual project manager and his or her manager and is also collected at the TNO level. Furthermore, a <u>formal complaints</u> procedure has been published on TNO.nl describing the complaints procedure.

Results

- The general customer satisfaction score for the projects we managed in 2016 is 4.30 (2015: 4.21).
- Our knowledge and expertise scored 4.60 (2015: 4.48).
 Both scores are measured on a 5-point scale.
- No letters were received in 2016 invoking the TNO complaints procedure.

Further information about this topic.

GOVERNMENT INFORMATION (PUBLIC ACCESS) ACT

Our goal is to respond in a timely manner to all requests in order to ensure that the interests of the applicants and transparency of information are served as effectively as possible, with due respect for the interests of our stakeholders and customers and the privacy of our employees.

- A total of 39 new requests were received in 2016 pursuant to the Government Information (Public Access) Act, including 18 addressed directly to TNO and 21 requests concerning opinions adopted by other administrative bodies.
- There were two objections to the primary decision of TNO relating to a request under the Government Information (Public Access) Act addressed directly to TNO.

The Penalty Payments (Failure to Give Timely Decisions)
Act was not invoked until October 2016. The link between
the Government Information (Public Access) Act and the
Penalty Payments (Failure to Give Timely Decisions) Act
was eliminated effective 1 October 2016.

Contact details



Q GOOD RESEARCH



Objective

Achieving excellence in research and sustainability of the research groups in order to generate the desired impact.

Strategy

The research groups collectively constitute the TNO technology portfolio. Our status as a knowledge organisation is audited once per strategy period (i.e. every four years) by an external committee through a Knowledge Position Audit (KPA). The recommendations of the committee and the measures proposed on this basis are discussed with the Board of Management. These measures are included in the regular planning cycle and evaluated by the research group in a midterm review.

Results

- A KPA was conducted in 2016 in the research groups of the Nanotechnology cluster.
- The research groups scored 4.0 and 5.0 (on a 5-point scale).
 A score of four represents an internationally operating research group, while a score of five denotes a global leader in a specific area.
- The Ministry of Economic Affairs commissioned an independent committee to conduct the TNO evaluation in accordance with a set of procedures drafted by the Rathenau Instituut as part of the evaluation of applied research. The committee paid a three-day visit to TNO for this purpose. The results of this evaluation will be disclosed in early 2017.











- Midterm reviews were conducted in all clusters as part of the TNO evaluation process.
- Independent research conducted by the Centre for Science and Technology Studies at Leiden University (CWTS) shows that TNO can compete with both the leading European RTOs and Dutch universities when it comes to the impact of its publications.

Further information about this subject.





ANIMAL TESTING

Objective

TNO aims to actively reduce the use of animal testing and the discomfort experienced by test animals. TNO is committed to ethical treatment of laboratory animals across the entire value chain.

Strategy

- In its research programmes, TNO aims to replace, reduce and refine (the 'three Rs') animal testing, with a focus on development, acceptance and implementation.
- Dedicated, qualified and competent employees ensure ethical, well-considered and high-quality animal testing.
- TNO communicates clearly and transparently about animal testing.

Results

- TNO collaborates with domestic and international partners on developing innovations that do not require animal testing. We published a white paper on organ-on-a-chip (OC) technology in 2016.
- A consortium was established in 2016 with partners including the Erasmus Medical Center, University Medical Center Groningen (UMCG) and Sanquin. The initiation of a national human tissue supply facilitates research which can be directly applied to human beings for all researchers in the Netherlands.
- The evaluation of the Institute for Animal Welfare (Instantie voor Dierenwelzijn) established in 2015 resulted in 2016 in more effective and closer collaboration with the employees concerned, who ensure the wellbeing of individual laboratory animals.

 TNO conducts audits together with other parties concerned among critical suppliers in order to test quality across the entire value chain.

Specific information about the animal tests conducted under TNO's supervision is available on TNO.nl. The information is reported annually to the Ministry of Economic Affairs before being published.















Objective

Fostering an environment where TNO employees feel a great sense of engagement with their jobs, colleagues and the TNO organisation.

Strategy

- The Employees Commitment Survey is conducted annually and reveals how employees view the organisation and where improvements might be made.
- The Employees Commitment Survey is a link in the cyclical process of measuring, drafting improvement plans, implementing changes, and conducting new measurements.
- The questions for 2016 are largely similar to those of previous years. This makes it possible to identify trends and see whether the improvement measures have produced any results.
- The results are disclosed using a dashboard developed by TNO experts.

Results

- The average score for general employees engagement was 7.0 (2015: 6.7).
- The scores have improved in virtually all areas surveyed.
 There are noteworthy increases in confidence in the future, pride in TNO and TNO's image.
- The main focus areas continue to be the high workload and burnout-related complaints. See the topic on <u>Vitality</u>.

The <u>key data on Employees</u> provide an overview of the results of the Healthy Employees area.

Further information about this subject.





Objective

Vital and healthy employees.

Strategy

- A Vitality working group has been established, and TNO is working closely with the Arbo Unie (health and safety organisation) on reducing work-related stress and sickness absence.
- All managers are attending the internal workshop 'Sickness absence, reintegration and work-related stress'.
- Encouraging and facilitating shared sporting activities.

Results

- The percentage of burnout-related complaints among employees remained virtually level at 16.4% (2015: 16.6%) and is above the national average of 13.4% (2015). The differences between the various TNO divisions are substantial.
- A project group consisting of TNO experts of the Work Health Technology research group has investigated the causes of work-related stress at TNO and has made a number of recommendations regarding this issue to the Board of Management. The organisational problems detailed in the report will be addressed methodically in 2017.
- The sickness absence rate in 2016 was 3.7% (2015: 3.4%), with a reporting frequency of 1.4 (2015: 1.3).



Further information about this subject.







Objective

Creating a diverse workforce where people can be themselves in a safe learning and working environment, taking advantage of the strength of diversity. We have set the following specific targets:

- 30% women executives at TNO by the end of 2018.
- 25% new hires from outside the Netherlands by the end of 2020.

Strategy

- Annual plan aimed at strategy, management agreements, instruments, interventions and communication.
- Committed to the Charter Talent to the Top, whose target is 30% women in executive positions at TNO by the end of 2018.
- A target has been set for the new TNO strategy for the percentage of new hires from outside the Netherlands.

Results

- The policy has been updated and expanded with growing support and focus from the management. The awareness of the importance of diversity is shared and disseminated at increasingly wider sections of the organisation.
- The percentage of women in executive positions at TNO has remained virtually unchanged at 18%. A number of successful measures have been continued and are set to be extended in 2017. Examples of these measures include the Women in Leadership Programme, the International Diversity Group and the women's network Women at TNO (W@T). In the coming vear we will increase our focus on the importance of diversity in recruitment and selection.

Further information about this subject.





TRAINING AND DEVELOPMENT

Objective

Building a working and learning environment for all TNO employees where they can develop their talents to their full potential and on an ongoing basis and can contribute to improving their performance and impact in their current work and in order to remain employable in the long term (Keep exploring your career!) both at TNO and elsewhere.

Strategy

- TNO encourages its employees to take charge of their own careers. They can find the necessary support and tools in their social work environment (i.e. among managers, co-workers, customers, etc.) and in TNO's corporate development offer.
- Targets for development and training and education are set out in the annual 'Performance & Development' cycle.
- TNO began building the foundation of the Corporate Talent Center (CTC) in 2016, which will incorporate a large number of programmes (training, workshops, coaching and peer review) in 2017.

Results

- Development and training & education at TNO (formal training) and education programmes) scores an average of 8.1 (8.2 for satisfaction and 8.0 for applicability).
- The focus in 2016 was on the continued development of the commercial programme (Selling Innovation) and the management programme (launch of research manager programme Twister).
- In addition, a number of new programmes were developed and implemented.

Further information about this subject.



CO2 CARBON FOOTPRINT

Objective

Long-term trend to reduce the relative carbon footprint. In terms of emissions through mobility, we aim for a reduction of 20% in emissions in 2018 from 2013.

Strategy

- Our carbon footprint is calculated and published annually.
- Reduction of our carbon emissions is achieved mainly through measures relating to real-estate properties and mobility.
- TNO is actively working on achieving energy savings in the buildings, and an Energy Efficiency Strategy (EED Directive) was launched in 2016 which will result in an action plan in 2017.
- Measures relating to mobility entail the promotion of public transport usage, promoting more sustainable car usage, and promoting the use of teleconferencing. We received the Lean and Green Personal Mobility Award for our efforts in 2014.
- TNO offsets the carbon emissions of the energy purchased through the purchase of energy certificates.



Results

- TNO's overall carbon footprint increased by 4% from 2015 in 2016. This increase was driven mainly by expenses for buildings, IT and contract employees (scope 3).
- Our relative carbon footprint increased slightly, despite the higher revenue.
- TNO continued to close a number of sites in 2016; this
 has reduced the energy demand of TNO buildings by 5%
 from 2015.
- Carbon emissions as a result of mobility fell again by 6% from 2015, due in part to the improved calculation method.
- The leasing policy contains a restriction for the maximum carbon emissions of diesel and petrol cars. Mileage from electric vehicles doubled in 2016 from 2015.
- The draft policy on mobility was adopted in 2016; the new mobility policy will be adopted in 2017. This policy focuses on flexible and sustainable transport and will support the achievement of our Lean and Green objective.

The Key data for the environment provide an overview of the results of the carbon footprint.

Further information about this subject.







SAFETY IN THE WORKPLACE

Objective

Creating a safe and healthy work environment for all TNO employees.

Strategy

- The Workplace Health and Safety (environment), Permits and Contingency Management Steering Committee drafts an action plan every year including ways of improving safety, workplace safety and the environment.
- Training and educating managers, prevention officers and other key players relating to health and safety.
- The risk assessment of all research facilities serves as the basis for areas such as the briefing and instruction of employees and the organisation-wide Company Emergency Response Plan.

Results

- 99% of the measures set out in the Action Plan from the basic risk assessment have been completed.
- The assessment of the exposure to CMR substances and the registration of employees who use these substances was conducted in 2016 in fourteen of the nineteen relevant groups.
 A large number of CMR substances were remediated and replaced with less hazardous substances.
- In 2016 the management of both the primary process and the support employees received information for the purpose of creating awareness and elucidating their role and responsibility relating to health, safety and the environment (HSE), and permits.

Further information about this subject.



A SAFETY

Objective

Learning about incidents relating to safety and the environment.

Strategy

- Incidents relating to safety and the environment are reported, with the objective of learning more about root causes, preventive measures and learning lessons from the incidents.
- A Key Performance Indicator (KPI) has been set for the monitoring of the number of incidents reported.

Results

- The percentage of successfully handled incidents was measured for the first time in 2016. The 87% score achieved is above the standard (85%).
- The frequency of the number of accidents where the employee was forced to take a leave of absence from work (Lost Time Injury) for 2016 was 1.9 (2015: 2.1). The LTI frequency represents the number of accidents where the employees was forced to take a leave of absence from work for every 100,000 hours worked. This concerns the accidents which must be reported to the SZW Inspectorate plus the accidents which need not be reported but where the employee(s) concerned is/are forced to take a leave of absence.
- The organisation-wide company emergency plan and the training courses for the Company Emergency Response organisation have been aligned across the organisation through an external procurement process (tender).

2016 1.9%

Lost Time Injury 2015 2.1%

Further information about this subject.















SOCIAL ENGAGEMENT



INNOVATION FOR DEVELOPMENT

Objective

- TNO will improve the health, wellbeing and income of economically deprived people in developing countries and emerging economies.
- We inspire and activate Dutch and international companies and aid organisations to start shared, inclusive innovations.

Strategy

- We define <u>innovative projects</u> with public and private partners and arrange the funding.
- We manage the projects and achieve the desired impact.
- We adapt successful innovations by scaling them up for other countries.
- We communicate our objectives, activities and results achieved.

Results

- We created an impact in 2016 on 12 ongoing projects:
- Hundreds of farmers took to breeding crickets in Kenya and Uganda, assuring them of revenues and healthy nutrition.
- A total of 30 obstetricians received training in Ghana, and the medical care for 400 women was improved.
- Our 'First 1000 Days' programme was successfully implemented at three Surinamese hospitals.
- In Belize we improved people's knowledge of, and the application of, biogas from waste.
- We created fully biodegradable feminine hygiene pads in our lab for use in Bangladesh.

- We managed to launch ten new projects in 2016 for a total amount of 8.5 million euros. A total of 1.4 million euros of this amount is drawn from TNO revenue.
- Additional information about this subject is available on TNO.nl

Further information about this subject.



SOCIAL ENGAGEMENT



Objective

Allowing people estranged from the labour market to participate in the labour process at TNO.

Strategy

- Close cooperation between HR, Recruitment, the CSR Steering Committee and trainees.
- Affiliated with Stichting Studeren and Werken op Maat, De Normaalste Zaak and Werkgevers Gaan Inclusief by AWVN.
- We liaise with various organisations concerned outside TNO, including employer service points set up by local authorities, the Employee Insurance Administration Agency (UWV) and the Ministry of Economic Affairs.
- We work with recruiters specifically for graduates.

Results

- The Board of Management signed a Letter of Intent to hire a total of 12 people estranged from the labour market; unfortunately, this goal was not achieved as it proved impossible to attract this number. Four employees falling into this category were placed at TNO and interviews were conducted with potential candidates. It is difficult to find suitable candidates of this type, both because of the requirements TNO must set for specific positions in terms of qualifications and experience and because some candidates were restricted in terms of some aspects relating to the role, such as commuting distance.
- The Employee Insurance Administration Agency (UWV) is currently preparing an Inclusive Employment analysis.

Further information about this subject.











APPENDIX

	2013		2013 2014		2015	2016		
	Number		Number		Number		Number	
Workforce	3,276		3,009		2,926		2,843	
Permanent contracts	2,978	90.9	2,776	92.3	2,691	92.0	2,562	90.1
Fixed-term contracts	298	9.1	233	7.7	235	8.0	281	9.9
Part-time (< 100) (< 100)	946	28.9	918	30.5	949	32.4	930	32.7
Part-time (< 90) (< 90)	673	20.5	653	21.7	654	22.4	630	22.2
Sickness absence		3.9		2.9		3.4		3.8
Reporting frequency				1.3		1.3		1.4

GRI INDEX

In compiling this report, we drew on the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI). We report in accordance with the 'Core' option.

GRI indicator	Description	Notes or location in report	Notes on partial or no reporting
Strategy and	analysis		
G4-1	CEO's statement	Preface Report of the Board of Management	
G4-3	Organisation's name	Profile, mission and impact	
G4-4	Brands, products and/or services	Innovation for life	
G4-5	Location of head office	TNO has its registered office in Delft, the Netherlands. The head office is located in The Hague.	
G4-6	Number of countries where the organisation operates	TNO is located in the Netherlands and invests in a number of companies the countries of which are listed in the general details of the companies. A full list is available on	

GRI indicat	tor Description	Notes or location in report	Notes on partial or no reporting
Materiality	and scope		
G4-17	Operational structure of the organisation	Organisational chart of TNO Corporate Governance	
G4-18	Process to determine the contents of the report	Sustainable business operations; Strategy Five key sustainability elements The structure of the report was established in conjunction with the Board of Management.	
G4-19	List of material aspects relating to the process of determining the contents of the report	Sustainable business operations; Strategy Materiality Matrix Five key sustainability elements	
G4-20	Scope	This Annual Report applies to TNO, where we make a distinction between the TNO organisation and its participations. Notes on our carbon footprint	
G4-21	Limitations of the scope or demarcation	Details on sustainable business operations This information is available, broken down by topic, at the link 'Further information about this subject' in the Annual Report.	
G4-22	Redefinitions	There were no redefinitions in 2016.	
G4-23	Redefinitions in reporting	No significant changes occurred during the period under review which were relevant to this report.	
Stakeholde	er engagement		
G4-24	The following stakeholders are involved in the organisation	Stakeholders Profile, mission and impact Organisation and environment	
G4-25	Basis for selecting stakeholders	Corporate Governance Sustainable business operations, Customer satisfaction, Sustainable business operations; Employees engagement	
G4-26	Strategy for involving stakeholders	Corporate Governance Run-up to strategic period 2018-2021 Sustainable business operations; Customer satisfaction Sustainable business operations; Employees engagement	
G4-27	Organisation's response to issues arising in interaction with stakeholders	Report of the Board of Management Sustainable business operations; Customer satisfaction Sustainable business operations; Employees engagement Profile, mission and impact	

GRI indicato	or Description	Notes or location in report	Notes on partial or no reporting
Reporting in	nformation		
G4-28	Reporting period	Notes to the consolidated financial statements	
G4-29	Date of previous report	Publication of Annual Report 2015	
G4-30	Reporting cycle	Notes to the consolidated financial statements	
G4-31	Contact details	Publication details	
G4-32	GRI reference table	GRI Content Index	
G4-33	External validation	Audit statement issued by external auditor	
Governance			
G4-34	Organisation's governance structure	Corporate Governance Organisational chart of TNO	
Ethics and in	ntegrity		
G4-56	Organisation's values, principles, standards and Code of Conduct	TNO Code TNO Statement of CSR policy Sustainable business operations; Integrity	
Material top	ics		
Topic Econon	nic performance		
G4-DMA		Report of the Board of Management	
G4-EC1	Direct economic values generated and disseminated	<u>Financial statements</u>	
Topic Impact	on society		
G4-DMA		Value Creation Sustainable business operations; Strategy Run-up to strategic period 2018-2021	
G4-EC8	Indirect economic impact	Showcases TNO.TIME	
Topic High-qu	uality research		
G4-DMA		Sustainable business operations; Strategy	
	Ethics	Sustainable business operations; Integrity	
G4-PR5	Results of Customer Commitment Survey	<u>Sustainable business operations; Customer satisfaction</u> See further information on this subject at the link contained in the Annual Repor	t.
G4-S011	Number of formal complaints	Sustainable business operations; Customer satisfaction	

GRI indicat	tor Description	Notes or location in report	Notes on partial or no reporting
Topic Healtl	hy Employees		
G4-DMA	Social engagement	Sustainable business operations; Diversity See further information on this topic at the link contained in the Annual Report.	
G4-LA12	Diversity and equal pay	Sustainable business operations; Diversity See further information on this subject at the link contained in the Annual Report.	The report contains no information about age cohorts or ethnic and other minorities, as no distinction is made in our remuneration policy.
G4-LA10	Training and education	Sustainable business operations; Personal development & training and education Sustainable business operations; Safety and security See further information on this subject at the link contained in the Annual Report.	
Topic Reduc	cing our energy impact		
G4-DMA	Environment	Key data on employees and the environment Sustainable business operations; Reducing our energy impact	
G4-EN3	Energy consumption within the organisation	Key data on employees and the environment Sustainable business operations; Reducing our energy impact Reducing our energy impact	
G4-EN15	Direct greenhouse gas emissions (scope 1)	Key data on employees and the environment Sustainable business operations; Reducing our energy impact Reducing our energy impact	
G4-EN16	Indirect greenhouse gas emissions (scope 2)	Key data on employees and the environment Sustainable business operations; Reducing our energy impact Reducing our energy impact	
G4-EN17	Indirect greenhouse gas emissions (scope 3)	Key data on employees and the environment Sustainable business operations; Reducing our energy impact Reducing our energy impact	
Topic Safety	y and Security		
G4-DMA		Safety can be divided into preventive measures and learning from incidents <u>Sustainable business operations; Safety and security</u> See further information on this topic at the link contained in the Annual Report.	
	Learning from incidents	Sustainable business operations; Safety and security See further information on this topic at the link contained in the Annual Report.	
Topic Socia	l engagement		
DMA		Sustainable business operations; Social engagement See further information on this topic at the link contained in the Annual Report.	
G4-EC8	Indirect economic impact	We interpret this as an economic improvement of people estranged from the labour market. <u>Sustainable business operations; Social Return</u> See further information on this topic at the link contained in the Annual Report.	

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For further information about TNO, or if you have any questions or suggestions further to this report, please contact infodesk@tno.nl. EDITING AND PRODUCTION:
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