Proofpoint stories

Demand for good healthcare is growing all over the world. One of the major challenges of our time is to give everyone everywhere a suitable solution.

Ageing is a growing trend in prosperous countries. Longer life expectancy goes hand in hand with a rise in chronic disorders and age-related diseases like Alzheimer and Parkinson. In addition, the number of Western diseases due to an unhealthy lifestyle, such as cardiovascular diseases, obesity and diabetes, is on the rise. In other parts of the world economic progress varies widely from stagnation to gradual and exponential growth while the population is increasing substantially. This is putting pressure on the availability of and accessibility to medicines, medical equipment and care. Thanks to multidisciplinary collaboration in open innovation, which focuses on the ‘quality of life’ and is geared to affordable care, the Netherlands offers solutions to the prevalent global challenges posed by health issues. The following pages contain examples of such solutions.
The Dutch are among the healthiest and happiest people in the world. That is partly attributable to our accessible and good healthcare, which constantly is ranked high internationally. Our Life Science & Health sector is one of the best in the world. On many fronts the Netherlands is a role model: in the field of pharmaceuticals, biotech and medical engineering and in respect of our public-private healthcare system. There are also many Dutch highlights that are known all over the world, including the excellent science that brought us the microscope, microbiology, the invention of the electrocardiogram, the artificial kidney, the heart-lung machine and the artificial heart. But oncology, medical equipment, the development of vaccines, hospital construction and the structure of our healthcare system – affordable and effective – are also examples of Dutch accomplishments.

At the foundation of these successes lies a typically Dutch quality: the willingness to share knowledge within a tight-knit cooperation between industry, research and government. It makes us a frontrunner in public-private research and open innovation partnerships.

We see healthcare as a chain: from science to patient. This is also the way we approach complex health issues: interdisciplinary. And this is evident in our solutions: complete, effective and coherent products and services geared to what people need. Affordable and tested by the Dutch themselves. The Netherlands regularly sets the standard along the path from knowledge to skill to new products for healthcare. This often leads to complete solutions. These are solutions we are happy to share with the rest of the world. This makes the Dutch Life Sciences and Health sector the ideal partner to consult for solutions to complex health issues.

Cooperating and doing business with the Dutch Life Sciences and Health sector means investing in a win-win situation for everyone involved: citizens, companies, research institutions, investors and government, anywhere in the world. Health is just as important for everyone. And where health is well organised, the quality of life is even better.
PHARMACEUTICALS AND BIOTECH

Leader in gene therapy

There are several leading biopharmaceutical players in the Netherlands, such as uniQure, which delivers on the promise of gene therapy through single treatments with potentially curative results. uniQure has developed a modular platform to rapidly bring new disease-modifying therapies to patients with severe disorders and among its core programmes are transformative product candidates to address Hemophilia B, Hemophilia A and Congestive Heart Failure. uniQure is engaged in multiple partnerships, in particular with academic leaders, to advance additional clinical programmes where uniQure has an exclusive option, for example for gene therapies to treat Sanfilippo B Syndrome and Parkinson’s disease. uniQure has obtained regulatory approval of its lead product, Glybera (alipogene tiparvovec), in the European Union for a subset of patients with lipoprotein lipase deficiency, or LPLD. Glybera is the first and currently the only gene therapy product to receive regulatory approval in the European Union and serves as validation for uniQure’s approach.

HEALTHCARE INFRASTRUCTURE

The rise of the Honliv Hospital Cancer Centre, with Dutch knowhow

When the Honliv Group planned to build a new oncology centre in the Chinese city of Changyuan, one thing was clear: the design had to be of the same quality that is evident in Dutch hospitals, with a focus on sustainability and innovation, the wellbeing of patients and a high-quality working environment supported by effective and efficient work processes. The design was commissioned to Dutch Health Architects (DHA), a collective of different architectural firms that markets Dutch expertise in building health assets on an international level. Royal HaskoningDHV executed the project management and engineering contract.

All over the world, the Netherlands is admired for its knowledge and experience in the field of hospital building, from concept and design to construction and layout. The Honliv Hospital Cancer Centre will have a floor area of 60,000 square metres and space for five hundred beds. It will be a centre for research, diagnosis and treatment for some 13,000 patients a year. The knowledge of DHA, 25 years of experience working in China and the multidisciplinary collaboration of the team of Royal HaskoningDHV will see the customer’s expectations fulfilled. The design of the centre, which combine the wealth of the Chinese culture and state-of-the-art sustainable hospital design, is already firmly under way, with delivery set for 2017.

MEDTECH

A comprehensive solution for prostate cancer

Prostate cancer is the most common form of cancer among men, with one in six men suffering from it during his lifetime. Each year more than a million men are diagnosed with prostate cancer, and for one in six it will be fatal. However, for the vast majority intervention is not needed and treatment may even have more disadvantages than benefits.

‘At Philips we are developing comprehensive healthcare solutions,’ Hans Hofstraat, vice president of the group’s
research division, says. ‘We are focused on the major challenges. But we aim to go further than developing and selling high-tech equipment. We think in terms of a continuum of health; our solutions enable effective and efficient treatment programmes with validated and optimum results, for the benefit of the patient. And that is how we approach our activities in respect of precision diagnostics for prostate cancer, for instance in the CTMM programme PCMM, together with different partners, like the Erasmus University of Rotterdam, the Radboud UMC and the Anthoni van Leeuwenhoek Hospital. But we also collaborate in PCMM with companies like the Nijmegen-based start-up NovioGendix and the Japanese pharmaceutical firm Astellas. The range of possible solutions Philips offers for customised prostate cancer treatment for patients is wide. An example is the MRI applications made by the company that enable precise diagnoses to be made for the optimum choice of treatment. Last year Philips brought UroNav on the market, a precision biopsy device that combines detailed MRI images with real-time echography images to enable much more accurate navigation to the potential tumour and a first-time-right, effective biopsy. Furthermore, Philips collaborated with a number of high-tech SMEs to develop a digital pathology solution that can automatically record, assess and share image data. Other Philips products being developed are targeted at gathering and analysing genetic data, using integrated, multimodal, diagnostic data for the right choice of therapy, and a solution to help support patient participation in the decision-making process prior to and during treatment, including home-based treatment support. Finally, Philips is working with partners like UMC Utrecht and Elekta, on very precise methods of treatment using focal, image-driven radiation tools.

Hofstraat: ‘The technology and solutions of Philips offer amazing possibilities. The bottom line, however, is that we cooperate with and throughout the care chain to ensure that individual patients get optimum treatment in well agreed and organised care programmes, with optimum, validated results.’

CARE

ParkinsonNet: a unique knowledge and care network

Parkinson is a complex brain disease. Since no patient has the same Parkinson symptoms as another, treatment has to be individually geared and requires a very high level of knowledge and experience from care providers. To ensure that every patient in the Netherlands can receive optimum care a unique national network of care providers has been established: ParkinsonNet.

ParkinsonNet comprises more than 2000 specialised care providers, including neurologists, physiotherapists, ergotherapists, speech therapists and nurses who do their utmost to provide the best possible supervision and treatment for Parkinson sufferers or those who have atypical Parkinson syndrome. This increasingly happens by boosting the expertise of care providers through training and education, research and knowledge-sharing. The network stimulates optimum cooperation among the care providers and makes the quality of the affiliated care providers transparent, thereby improving the quality of the care. This is an international example of the innovative organisation of specialised healthcare from the perspective of the patient.

Accessible care for everyone

Healthcare is improving worldwide but there are still large groups of people sidelined because they do not have, for example, easy access to medication or there is a lack of knowledge. Serge Heijnen, manager of the Health business unit of KIT (the Royal Tropical Institute) regards the need to tackle the lack of information and care in many parts of the world as one of today’s key challenges. He works with a team of thirty specialists in different social and medical disciplines
within international partnerships with regional and national governments to improve the quality of healthcare in low and mid-income countries.

KIT is a non-profit knowledge and expertise organisation for sustainable international intercultural cooperation. ‘We work in the field, acquire knowledge, apply it and share it,’ says Heijnen. ‘We undertake research and provide advice on themes such as access to healthcare for everyone, improving the deployment of health workers, sexual and reproductive healthcare and rights, and a broad approach to the control of specific diseases and health problems. Heijnen cites Mali as an example of the successful approach that features partnership and knowledge-sharing as central elements. There KIT introduced, with the funding assistance of the Dutch embassy and in cooperation with the Malinese government, result-based funding of care facilities in the province of Kolikoro. This led to a fivefold increase in child consultations, a doubling of pregnancy care and postnatal care along with a rise in the number of births supervised by qualified care personnel by 125 per cent.

As a consulting partner in cooperation with non-Western countries, the Netherlands also offers the opportunity to develop revenue models. This was the case when Delft Imaging Systems and Cordaid signed an agreement for the development of a mobile, affordable and easy-to-use ultrasound device for pregnancy checks, specifically designed for use by clinics and midwives in rural areas in developing countries.

PREVENTION

Intravacc exports vaccine production technology all over the world.

Intravacc, based in Bilthoven, the Netherlands, is part of the Dutch Ministry of Public Health, Welfare and Sports, and an R&D organisation with more than a hundred years of experience in vaccine development. Many of the vaccines that are globally used today have been produced using technology developed in Bilthoven.

Ronald Kompier, VP Business Development of Intravacc: ‘Intravacc aims to help improve vaccine development for both the biotech industry and public health care institutions. We are responsible for a broad range of R&D activities related to innovative products, services and facilities for partners worldwide. We develop technology for vaccines to prevent diseases like polio, influenza and whooping cough.’

To transfer technology for the production of a safe polio vaccine, the World Health Organization (WHO) selected Intravacc as the international hub for polio vaccine technology. This technology transfer also includes topics such as safety, cell culture, specifications for equipment and materials. Our customers may then build the production facilities themselves, perform clinical studies and make sure that the vaccines reach the local population.

Kompier: ‘Intravacc is able not only to count on the support of the Dutch Government but has also signed several large contracts with various local and foreign biotech companies. For a sustained, global improvement of public health, we aim to establish a lasting cooperation with both private and public companies that share the same goals.’
The Dutch model of open innovation throughout the Dutch healthcare system is expressed in all kinds of interdisciplinary partnerships between companies, knowledge institutions, care providers, patient organisations and the authorities. Our history as an international trading nation has given a global scope to this process. This is evident in the collaboration between DHA and Royal HaskoningDTV – dedicated health asset architects and an international construction company – that is helping Chinese companies and government to build high-quality hospitals. Or KIT, which is geared to international intercultural cooperation with governments in low to mid-income countries to help organise high-quality healthcare there. Intervacc is another example, a company that brings the technology for the production of vaccines to such countries and can rely on private and public organisations to assist in making it happen. Within the Netherlands cooperation permeates the entire care chain in order to realise optimum care for Parkinson sufferers. And Philips develops equipment for the diagnosis and treatment of prostate cancer in close collaboration with medical treatment centres. The Netherlands also has exchange programmes for research and excellent scientists at academic medical centres that work closely with foreign parties. In the Netherlands the sharing of knowledge between all the partners involved is the credo. Together you can always achieve more; a healthy economy and healthy, active citizens.