



INSPIRATIONAL BUSINESS STORIES
FROM THE NETHERLANDS

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IMAGE: ARENDA OOMEN

A wise man once said, ‘The mechanics of industry is easy. The real engine is the people: their motivation and direction.’ As prime minister it’s my privilege to have regular contact with the ‘engine’ of Dutch industry. I visit companies and speak with entrepreneurs, and together we go on foreign trade missions. Time and again I’m struck by their innovative and creative mindset and their focus on cooperation, continuity and sustainability. It’s an approach that goes back decades in the Netherlands. This book showcases Dutch entrepreneurs, their companies and how they have developed over the past decades and centuries. It also describes the way they continue to operate at the forefront of the global market today, each in their own sector or niche.

Dutch businesses are popular with partners all over the globe, and no wonder. Their innovative nature and focus on continuity make them reliable. They deliver high-quality products and services. They value their knowledge base and expand it year after year by building on their own R&D activities and the input received from the first-class universities and institutes with which they form networks. Partnership between businesses, research institutes and government bodies is firmly anchored in Dutch culture, and it’s crucial to our success.

Wherever I go in the world, I find Dutch businesses active there, often helping to tackle the major challenges of our time. Challenges like producing enough food to feed the planet’s growing population, or anticipating the impact of climate change on water management, reducing greenhouse gas emissions and halt global warming. The Netherlands aims to be a world leader in smart, clean and energy-efficient technologies. Dutch industry fulfils its role as a partner by sharing its knowledge on how to increase crop yields, combat flooding or optimise communications, safety and infrastructure, to name but a few examples.

This book offers a wide-angle perspective of Dutch industry. The individuals featured talk about the competition abroad, about innovation and about the challenges they encounter in their day-to-day business. I am confident this book will give you a clearer picture of how Dutch companies operate and work towards a better, more sustainable world, as well as a better understanding of the engine behind our unique and thriving industry.

Mark Rutte
Prime Minister of the Netherlands



*Dutch Industry underwrites
the international positioning
strategy of the Netherlands
and endorses its key
philosophy of solving
global challenges together.
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INTRODUCTION	06	Hunter Douglas	132	Royal NLR	224
A NEW ERA	12	Janssen	138	Royal Smit & Zoon	230
TOP SECTORS IN		JBT	144	Royal Van der Most	236
THE NETHERLANDS	18	Kaak	150	Terberg	242
		Lely	156	Vion	248
Admesy	76	LioniX International	162	Vos Logistics	254
Aeronamic	82	Mammoet	168	Vostermans	260
APH Group	88	Menken Orlando	174	Water Alliance	266
Bosch	94	MTD	180		
Buccaneer Delft	100	OMA	186	INVESTING IN THE	
Delft IMP	104	Organon	192	NETHERLANDS	274
Demcon	108	Port of Rotterdam	198	PUBLICATIONS	286
Dutch Flower Group	114	Priva	206	ABOUT THE AUTHOR	287
Hizkia	120	Rijk Zwaan	212	COLOPHON	288
Huisman	126	Royal IHC	218		



A NEW MISSION DRIVEN ERA FOR THE TOP SECTORS

Since 2011, entrepreneurs, scientists and the government have joined forces in nine top sectors as described in this book: agri & food, chemistry, creative industry, energy, life sciences & health, high tech systems & materials, water & maritime industry, horticulture and logistics. Already for a decade their efforts have been aimed at strengthening the economy through innovations, capitalizing on international opportunities, improving human capital and investing into scientific research.

Dutch policy makers, together with these industries agreed that these successful partnerships need be continued. Before entering a new era for the top sectors, the Dutch government has formulated 25 missions to tackle social challenges. These missions focus on ensuring a greater and healthy life expectancy, sufficient clean

water and safe food, lower greenhouse gas emissions, affordable sustainable energy and a safe environment to live and work in. These are ambitious goals that challenge entrepreneurs and scientists to develop pioneering solutions and contribute to the global competitiveness of the Netherlands.

The formulated missions are helping the top sectors to join forces, even more than before. Among the new features of this policy is also the creation of new markets. To ensure that innovations can be widely applied and made available for purchase. If necessary, the government may also act as a launch customer. By including market challengers, innovative entrepreneurs and different regions, the mission-driven policy will be applied more widely with a greater chance of success.

Focus on social challenges and key technologies

Even more extensively than before, the innovative strength of the top sectors is linked to solving social challenges. The world needs large and small solutions for a climate-proof, water-resilient, sustainable, healthy and safe environment. Ranging from the latest scientific insights and key enabling technologies to practical solutions in design and use. By combining the strengths of entrepreneurs, scientists and the government, a joint effort is created to address these challenges, even when the road to the best solution isn't established yet. However, key enabling technologies, like quantum, nano, photonics, digital technology, will play an important role in achieving pioneering solutions. Take quantum computing for instance. It can calculate all possible options in a fraction of the time and machinery.

Or special sensors that are used to determine the exact amount of water, nutrients and light needed for optimal growth. Laser techniques, which enable surgeons to perform precise operations with fewer complications and a faster recovery time. Or production robots that can customize any product for the best price with great precision and without waste.

A co-creation between entrepreneurs, scientists and government

The missions state a clear need for specific research and innovation. Scientists can extensively research diseases, natural resources and data, so we learn how to better treat and use them. With little waste or error. Subsequently, entrepreneurs play a key role in converting innovation to concrete applications and products. They also provide employment and economic opportunities in the Netherlands as well as abroad.

The role of the government is to promote groundbreaking innovations: by investing in research, amending laws and regulations, entering public-private partnerships, socially responsible procurement, providing financial arrangements and creating new markets. The Netherlands have a long history of successful cooperation between entrepreneurs, scientists and the government. For instance, Dutch water management, illustrated by the famous Delta Works, emerged due to national necessity and high water. How the government played a leading role in search

of inventive and pragmatic solutions. How it was developed through research and made lucrative by entrepreneurs far beyond our national borders.

This collaboration between entrepreneurs, scientists and the government generates smart solutions for global challenges. So that we don't just grow older, but also enjoy a longer and healthier quality of life. So that we don't just keep our feet dry, eat tasty and reliable food and produce durably, so that we still have a habitable planet in 30 years. In addition, these innovations and solutions are also potential export products for a worldwide market. After all, other countries face many of the same challenges as we do. The Netherlands aspires to play a leading role in tackling social challenges and developing key technologies. These missions for the future should also be seen as an investment in overall progress and reinforcing economic opportunities.

From theory to practice

The missions which were drafted in close cooperation with eight Ministries and all top sectors, focus on four social themes:

- Energy transition and sustainability
- Agriculture, water, food
- Health and healthcare
- Security

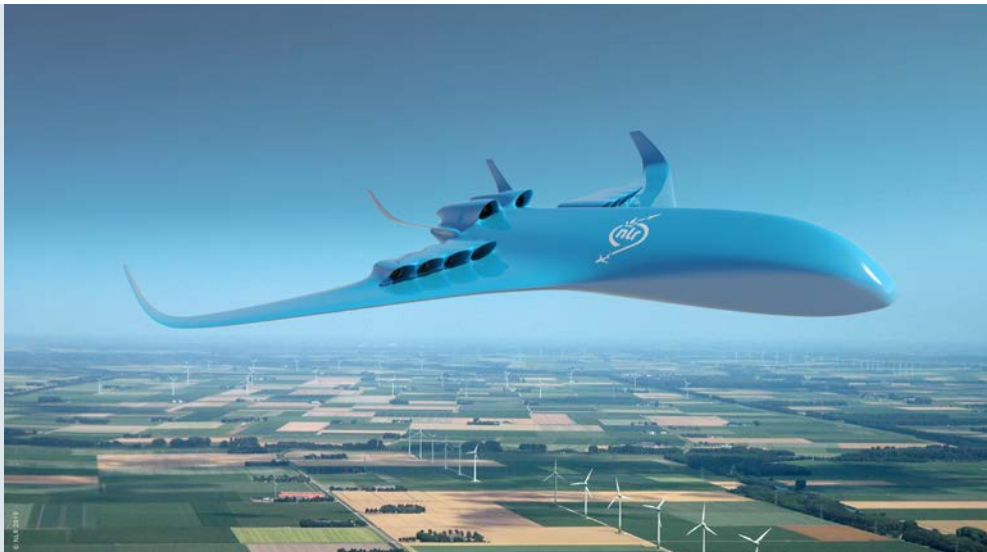
A Knowledge & Innovation Agenda is drawn up for each of the themes. Two separate agendas are drawn up for key enabling

technologies and projects that contribute to the earning capacity of the Netherlands.

PROMISING INNOVATIONS FROM THE NETHERLANDS

The Netherlands is an innovative and entrepreneurial country, known for many successful innovations worldwide. Consider the invention of the microscope (1595), the dialysis machine (1943) and Wi-Fi (1997). The future also looks promising, thanks to the development of smart greenhouse materials that can adapt to light, climate and crops. Cars that can run on sun and rainwater. An irrigation system that anticipates weather conditions and can store water for dry periods. Sunblinds made up of solar cells. A coral nursery which helps repair damaged reefs. New types of fuel. Environment-friendly alternatives that protect ships, roads and machines from the elements. Infinite recycling of plastic. An artificial pancreas for people with diabetes. These are all innovations from recent years or are currently under development.

The financial resources and research capacity are specified in a so-called Knowledge & Innovation Covenant. Subsequently entrepreneurs and researchers can begin developing new products, technologies and solutions for each challenge and successfully market them all over the world.



4 themes and 25 challenges

Energy transition and sustainability

- 49% reduction of national greenhouse gas emissions by 2030, aiming for 95% lower emissions by 2050 compared to 1990.
- An entirely carbon-free electricity system by 2050.
- A carbon-free built environment by 2050.
- Carbon-neutral industry with reuse of raw materials and products by 2050.
- Zero-emission mobility of people and goods by 2050.
- A sustainable and completely circular economy by 2050, with resource use halved by 2030.

Agriculture, water and food

- Reduction of the use of raw and auxiliary materials in agriculture and horticulture by 2030 and creating the maximum possible value from all end products and residuals by utilizing them as fully as possible (circular agriculture).
- By 2050, the agricultural and nature system will be net carbon-neutral (Joint mission with energy transition and sustainability).
- The Netherlands will be climate-proof and water-resilient by 2050.
- By 2030, we will produce and consume healthy, safe and sustainable food, while supply chain partners and farmers get a fair price for their produce.
- A sustainable balance between ecological capacity and water management vs. renewable energy, food, fishing and other economic activities, where this balance must be achieved by 2030 for marine waters and by 2050 for rivers, lakes and estuaries.
- The Netherlands is and will remain the best-protected and most viable delta in the world, with timely future-proof measures implemented at a manageable cost.

Health and healthcare

- By 2040, all Dutch citizens will live at least five years longer in good health, while the health inequalities between



- the lowest and highest socio-economic groups will have decreased by 30%.
- By 2040, the burden of disease resulting from an unhealthy lifestyle and living environment will have decreased by 30%.
- By 2030, the extent of care provided to people within their own living environment (rather than in health-care institutions) will be 50% more than today or such care will be provided 50% more frequently than at present.
- By 2030, the proportion of people with a chronic disease or lifelong disability who can play an active role in society according to their wishes and capabilities will have increased by 25%.
- By 2030, quality of life for people with dementia will have improved by 25%.

Security

- By 2030, organized crime in the Netherlands will have become an excessively high-risk and low-return enterprise, thanks to a better insight into illegal activities and cash flows.
- By 2035, the Netherlands will have a navy fit for the future, which will be able to respond flexibly to unpredictable and unforeseen developments.
- By 2030, the Netherlands will have operationally deployable space-based capabilities for defense and security.
- Cyber security: the Netherlands will be in a position to capitalize, in a secure manner, on the economic and social opportunities offered by digitization.
- By 2030, the armed forces will be fully networked with other services and through the integration of new technologies, so that they can act faster and more effectively than the opponent.
- Supply and demand will come together more quickly to implement successful short-cycle innovations.
- By 2030, security organizations will be capable of collecting new and better data, so that they are always one step ahead of the threat.
- By 2030, the role of security professional will be among the 10 most attractive professions in the Netherlands.



DUTCH INDUSTRY PUBLICATIONS

Dutch Industry books give Dutch entrepreneurs a platform, describing how their various companies operate at the forefront of the modern global market, each company in its own sector or niche.

"[These] book[s] offer a wide-angle perspective of Dutch industry. The individuals featured talk about the competition abroad, about innovation and about the challenges they encounter in their day-to-day business.

I am confident [these] book[s] will give you a clearer picture of how Dutch companies operate and work towards a better, more sustainable world, as well as a better understanding of the engine behind our unique and thriving industry."

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Dutch Industry underwrites the international positioning strategy of the Netherlands and endorses its key philosophy of solving global challenges together. To join the conversation, visit NLplatform.com.

ABOUT THE AUTHOR



Giedo van der Zwan (1967) studied business economics at the Erasmus University, Rotterdam. He worked for several PR consultancy firms and specialized in corporate communications, building the reputations of companies and sectors. One of Giedo's main strengths is to give 'consultancy' language a journalistic twist and being a keen photographer he is able to capture the 'soul' of a company with his camera.