

**Accelerating the
energy transition**

The power of offshore wind

Van Oord creates a societal value of EUR 877 million
by its activities for Gemini, one of the world's largest
offshore wind projects.

About

Van Oord

Van Oord is a leading international contractor specialising in dredging, marine engineering and offshore projects (oil, gas and wind). We are at the forefront of work that contributes to global, European and Dutch goals to combat climate change and reduce carbon emissions. As such, Van Oord acts as an agent of change to accelerate energy transition while also creating economic benefits and societal value.

Gemini

It's one of the largest offshore wind projects in the world: the Gemini Offshore Wind Park. Van Oord was both co-investor and contractor. This challenging project consisted of the installation of 150 x 4 megawatt Siemens wind turbines. This will supply a total of 600 megawatt of renewable energy to 785,000 households by 2017. With a value of more than EUR 1.3 billion, it's one of the largest EPC contracts in Van Oord's history.

True Value: demonstrating societal value

Given its key role in the Gemini project, Van Oord has set out to understand and measure the value its work on Gemini creates for the environment and for society. For this purpose Van Oord and KPMG applied KPMG's True Value methodology.

Reducing fossil fuel dependence and combatting climate change are critical for the future of our planet.

The technology already exists to build a cleaner energy system that mitigates the worst impacts of climate change, while generating enough energy to power economies in years to come. The energy transition has the potential to bring great benefits from both an environmental and economic perspective.

The potential of offshore wind

The development of sustainable alternatives such as solar and wind power is forging ahead. The use of wind energy is increasing rapidly, particularly in North-Western Europe, driven by concerns about global warming, recently highlighted by the climate agreements in Paris, together with the long-term aim of reducing our consumption of fossil fuels.

The approach: How to calculate societal value

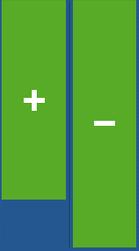
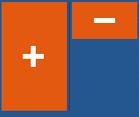
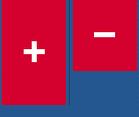
Van Oord and KPMG carried out an impact analysis which identified the environmental, social and economic externalities to be quantified in financial terms. This analysis focuses on the externalities created by Van Oord and its suppliers.

Scope

Van Oord's role in the construction of the Gemini Offshore Wind Park includes the design and installation of turbine foundations, monopiles, substations and laying of cables. As well as the procurement of foundations, cables and substations together with the installation of turbines. Externalities linked to these activities are included in this analysis. The analysis also includes impacts related to Van Oord's procurement spend. Where possible, the analysis includes upstream externalities such as those created in the production of the raw materials used in the project.



The following externalities are identified as material and suitable for analysis for Van Oord and its suppliers in relation to Gemini:

 	<p>+ Environmental externalities</p> <p>Avoided Greenhouse Gas Emissions, Air Pollution & Fossil Resource Depletion: the result of avoiding emissions from the Dutch electricity grid by generating renewable wind energy with zero emissions during operating phase.</p> <p>Biodiversity: positive impact as a result of refuge function for fish and decreased fishery.</p>	<p>-</p>	<p>Greenhouse Gas Emissions, Resource and Energy Use, Air Pollution, Water Pollution: impact of the production and installation of foundation, monopiles, substations and cables.</p>
 	<p>+ Economic value-add</p> <p>Taxes and social contributions</p> <p>Economic impact: indirect and induced economic multiplier effects (inside and outside the Netherlands) resulting from tax, salary and procurement spend</p> <p>Innovations: reduced steel usage, earlier electricity production, more efficient way of cable laying, reduced fossil fuel usage, and more.</p>	<p>-</p>	<p>Subsidies</p>
 	<p>+ Social externalities</p> <p>Knowledge development and training: received by employees</p>	<p>-</p>	<p>Health & safety: incidents experienced by employees</p>

Looking closer

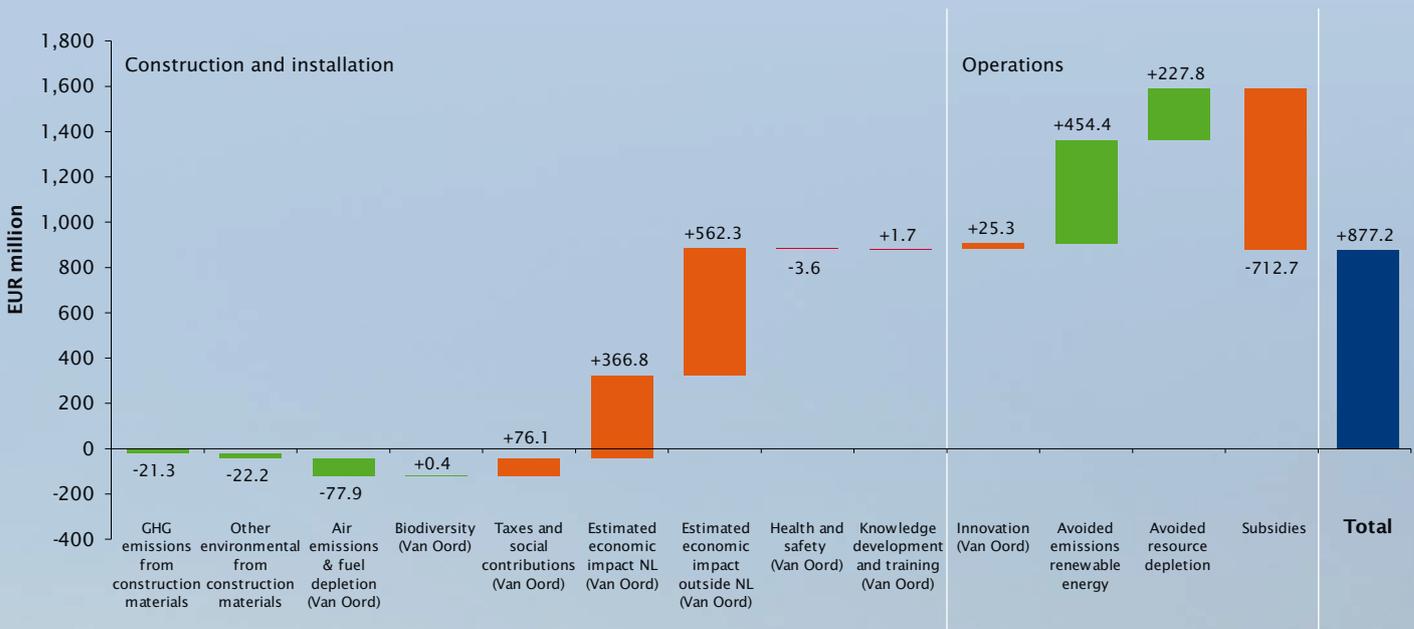
FaunaGuard leads to positive impact

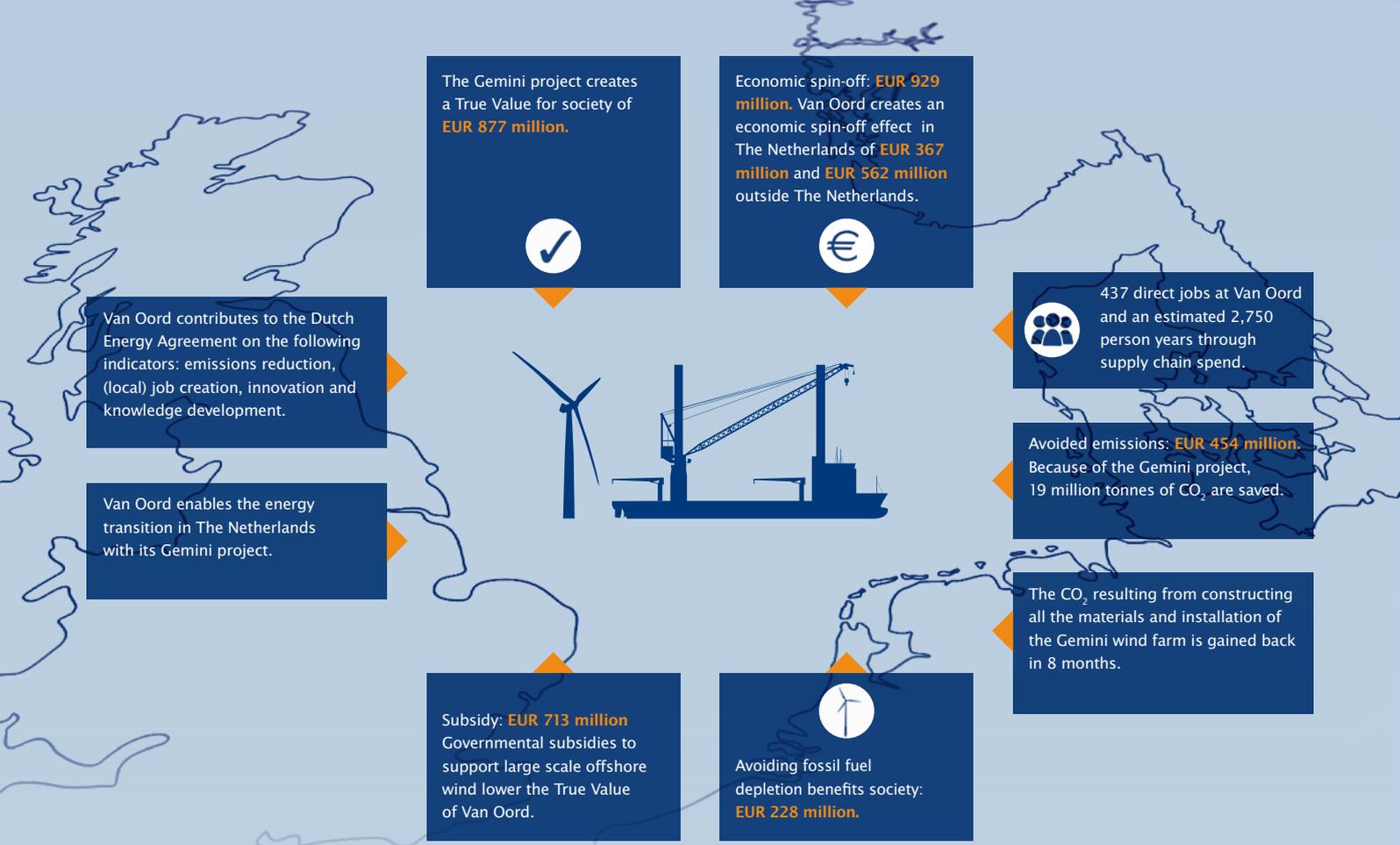
Van Oord's Environmental Engineers developed the FaunaGuard: an acoustic device that safely and temporarily deters various marine fauna species using specialised underwater acoustics. During pile-driving operations, we proactively used this device to prevent potential hearing loss to porpoises. The result is positive environmental impact on biodiversity of EUR 0.4 million.

Economic spin-off effect

Van Oord creates an economic spin-off effect in the Netherlands and surrounding North Sea countries through the significant amount spent by Van Oord on suppliers and equipment purchase. The positive economic impact is EUR 929 million, of which EUR 367 million is created inside the Netherlands, and EUR 562 million outside the Netherlands.

The result: EUR 877 million of societal value





How will Van Oord build upon this analysis?

What's next?

The analysis has highlighted opportunities for Van Oord to substantiate societal value created by offshore wind to its stakeholders. Offshore wind becomes an even stronger story to tell; not only in the public debate around bringing renewables to scale, but also in materialising business opportunities in a promising market.

Current developments boost confidence in offshore wind and transforming it into a strong and mature market in which key players such as Van Oord dare to invest. The results in place will be shared widely to provide fact based insights to stakeholders on the societal benefits of offshore wind in order to enhance and accelerate the offshore wind sector to reach scale.

More information on this True Value analysis is to be found on our website vanoord.com/news/publications. Or contact Sander Dekker, Manager Sustainability of Van Oord, sander.dekker@vanoord.com. Information about the True Value methodology is to be found on kpmg.com/truevalue.

Building a cleaner energy system brings environmental and economic benefits

Accelerating the energy transition

The power of Van Oord

In more than ten years, we have completed several prominent projects as an EPC contractor, being responsible for the engineering, procurement and construction. Our innovative solutions contribute significantly to making this form of sustainable energy more competitive. It's our ambition to add value and to act as an agent of change to accelerate the energy transition while also creating economic benefits and societal value.

Our track record consist of several impressive offshore wind projects, such as:

- Gemini Offshore Wind Park
- Wind Park Westermeerwind
- Eneco Luchterduinen wind farm
- Teesside Offshore Wind Farm
- Belwind Phase 1 Offshore Wind Farm
- Prinses Amalia Wind Park

In-house expertise and state-of-the-art equipment

Van Oord is proud to have over 300 experts working on offshore wind projects. By sharing knowledge, we ensure expertise will be passed on to future generations. We are eager to tackle our clients' marine challenges. We can only do this by having the best people working with the latest technology. We operate the world's most advanced equipment with state-of-the-art vessels. The advanced offshore installation vessel Aeolus is an excellent example of our innovative strength. The Nexus is Van Oord's cable-laying vessel and one of the latest editions of it fleet.

Learn more about our track record, our partnerships and more on how we create value for society and stakeholders: vanoord.com.

