



FEBRUARY 2024

## De-risking by promoting digital solutions for green tech: Going Dutch?

Against the backdrop of geopolitical tensions, the growing demand for technologies that will accelerate the green transition exposes European countries to risks. Most attention is devoted to strategic dependencies on China for critical raw materials (CRM) and components that are necessary for such technologies. However, the data-driven digital elements and applications used, for instance, to optimise energy use are also relevant, as they intensify cybersecurity and data privacy-related concerns. To de-risk Europe's strategic dependencies in this field, adopting a balanced approach between 'promoting', 'protecting' and 'partnering' is essential. This Clingendael Policy Brief focuses on the 'promote' angle by exploring the role of the Dutch government and private sector in fostering the Dutch digital green-tech industry. With its track record in innovation within the EU, the Netherlands is well placed to boost the commercialisation of digital green technologies through procurement. Moreover, the Netherlands could lead the discussions on defining cybersecurity standards and interoperability norms at EU and international forums.

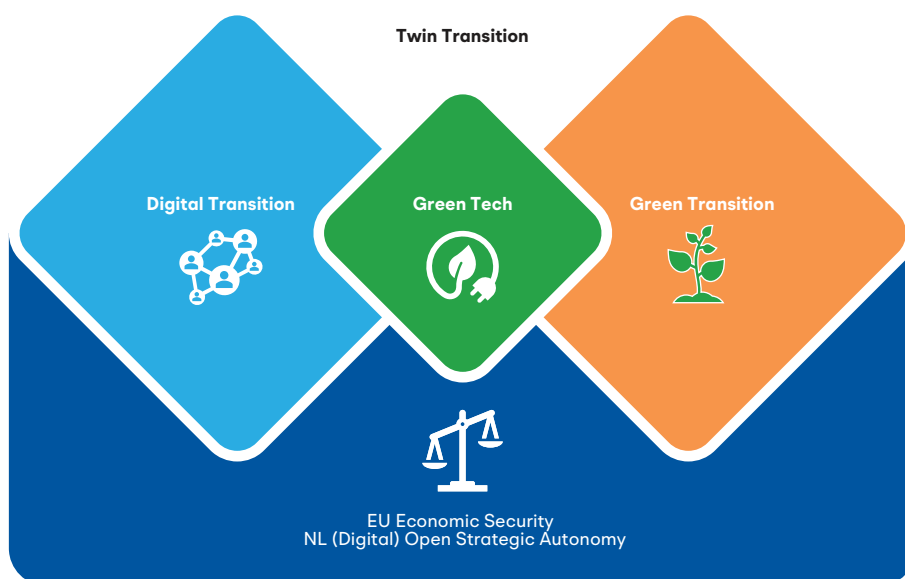
### Managing the geopolitics of the green and digital transitions

Geopolitical rivalry is shaping approaches to the so-called green and digital twin transitions towards environmentally sustainable societies and economies underpinned by ever more digital technologies. The interrelationship between the transitions is complex and can have opposite directions. Technology, digitalisation and data are enablers of decarbonisation and sustainability goals, such as mitigating the effects of climate change, while simultaneously pushing forward ever-growing electricity and water consumption. Figure 1 illustrates this schematically, with

reference to two key concepts that steer policymakers' actions in Europe today: Economic Security, the often-heard terminology in Brussels and beyond; and (Digital) Open Strategic Autonomy, the concept of choice in the Netherlands.<sup>1</sup>

<sup>1</sup> Government of the Netherlands, [Agenda Digitale Open Strategische Autonomie](#), 17 October 2023 (in Dutch). Discussed in more detail in the section on promoting Dutch digital green tech.

Figure 1 Managing the twin transition amid geopolitical tensions



Source: authors' compilation building on PA Consulting, *The Twin Transition*, 2023.

Green technologies, including their digital components, are key enablers of the twin transition, as they are developed to create environmentally viable solutions and support the global decarbonisation effort. Smart meters, for example, allow energy consumers to check the price of electricity in real time and do the laundry when energy is cheaper, allowing more-efficient energy usage. The global trend towards the electrification of the total energy consumed by end users is rapidly increasing, showcasing the need for digital technologies – such as artificial intelligence (AI), 5G, the Internet of Things (IoT) and cloud computing – to integrate renewables into the power system and improve energy efficiency.<sup>2</sup> As outlined in Figure 2, digital green technologies, if widely adopted, can have a prominent role in decarbonising the most emissions-intensive sectors, such as agriculture and energy.

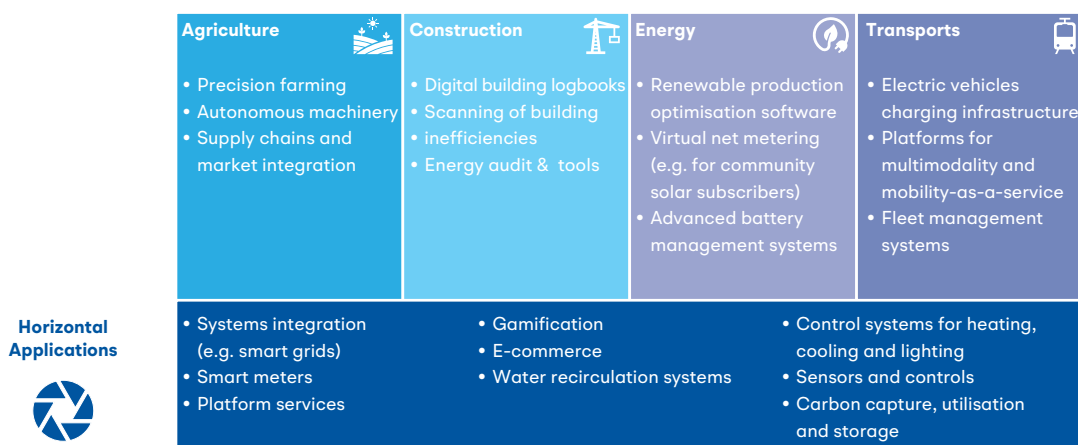
Alongside the opportunities, the increasing demand for green technologies exposes EU member states to several challenges. These include strategic dependencies and economic coercion, as well as cybersecurity risks and talent scarcity. Rising geopolitical tensions heighten the insecurity of supply chains of critical natural resources and components needed for green technologies. This is increasingly pushing governments to invest in economic security and industrial policies at home, as well as in cooperation with so-called 'trusted partners' that share interests and concerns.

In recent years, the EU and its member states devised a broad set of regulations to equip governments better to deal with these challenges. Key among these are the 2020 European Green Deal – designed to achieve climate neutrality by 2050 – and the 2023 European Economic Security Strategy, which aims for de-risking by reducing dependencies and diversifying supply chains, among others.

Today, the challenge is to match the demands of the twin transition with geopolitical realities. Green technologies are the key to increasing strategic autonomy and economic security, but

<sup>2</sup> International Energy Agency, *Digitalisation: Energy system overview*, September 2022.

Figure 2 Digital green technologies can positively impact the most emissions-intensive sectors



Source: authors' compilation.

Note: The selected sectors are among the highest greenhouse gas emitters.

See: European Commission, *Towards a green & digital future*, 2022.

European governments and companies still face critical dependencies and vulnerabilities in ensuring access to the resources and components required for the twin transition, as well as in the information technology (IT) infrastructure, such as data centres, that underpin their delivery.

To what extent do the European policy toolbox and initiatives that seek to protect and promote European digital green technologies suffice, and how can they be improved? How can EU member states, and the Netherlands in particular, contribute to this goal with its industries? Drawing on an analysis of relevant literature and policy documents, as well as interviews with relevant experts, this Policy Brief assesses EU dependencies on green tech from an economic security point of view, detailing key EU policies that seek to address critical vulnerabilities while promoting European strength in digital green technologies. Moreover, it zooms in on the geopolitical implications of the digital components of green tech. Finally, the Policy Brief explores how the Netherlands can contribute to the EU's economic security by promoting the digital components of green tech that are being developed and brought to the market in Europe, now or in the future.

## EU green tech policy framework: De-risking the transitions

To accelerate the green and digital transitions through green technologies, the EU needs to sharpen its policy tools to reflect current geopolitical realities and challenges. These include supply-chain and digital challenges such as ensuring data protection and cybersecurity, which demand a balanced approach among protection, promotion and partnering with like-minded partners, as outlined in the European economic security strategy (detailed below).

The increasing demand for green tech highlights the extent of supply-chain dependencies on critical raw materials and components, especially concerning China. China is also a critical supplier of renewable energy technologies such as solar panels and lithium batteries, and controls about 80 per cent of the global solar photovoltaic (PV) manufacturing capacity.<sup>3</sup> China's advantage lies in its robust manufacturing base, combined with government support, allowing companies to scale up fast and improve their cost competitiveness.<sup>4</sup>

3 'Solar power: Europe attempts to get out of China's shadow', *Financial Times*, 23 March 2023.

4 Yasuki Okamoto, 'Chinese manufacturers dominate wind power, taking 60% of global market', *Nikkei Asia*, 19 August 2023.

China's supremacy in solar panels became evident to the Netherlands in 2022, when the Dutch massively invested in solar panel installations – 89 per cent of which were imported from China – and the Netherlands became the European country with the highest percentage of electricity generated by solar in its energy mix.<sup>5</sup> Yet this green transition boost was enabled by Chinese state support for China's solar panel industry. Similar dependencies are common to other EU member states, because European competitiveness in this domain lags behind China.

As a consequence, the EU and its member states are exposed to two main types of risk. First, large dependencies on a single supplier make European countries vulnerable to supply-chain shocks. Supply disruptions could be the result of *force majeure* events such as climate-related disasters, pandemics or conflicts in mining countries. Other causes for disruption are political and include economic coercion, trade bans and sanctions. China's export controls in August 2023 of CRMs gallium and germanium, in response to the introduction of new semiconductor export controls by the Dutch government, are an example.<sup>6</sup>

The second risk accompanying the green and digital twin transitions lies in the fact that, as digital technologies become key enablers of green tech, new cyber risks and challenges come into play. As more devices and new networks are connected to the internet, there is greater exposure to cyber attacks. Cyber campaigns targeting critical infrastructure and the threats of hybrid war, such as the Russian cyberattacks on Ukrainian energy grids, justify the growing concerns regarding the protection of green-tech infrastructure. Besides, the management and governance of new data models are becoming more complex, which in turn further increases

the difficulty – and responsibility – to ensure data privacy.

The European Commission put forward its **Economic Security Strategy** in June 2023 to reduce risks across supply chains, critical infrastructure and digital technologies.<sup>7</sup> The EU aims to reduce the bloc's strategic dependencies on third countries, implicitly referring to China, by focusing on 'de-risking' – that is, reducing excessive dependencies by diversifying supply chains.<sup>8</sup> The underlying framework of the strategy is 'promoting, protecting and partnering' – that is, strengthening the EU's competitiveness and enhancing the EU's industrial base, capabilities and human capital; defending the bloc from identified economic security risks, such as economic coercion and undesirable foreign investment; and partnering with like-minded partners via, for instance, trade and sectoral agreements.<sup>9</sup> European policies of recent years have emphasised the 'protect' side, and only more recently have investments been made to push the 'promote' and 'partner' pillars.<sup>10</sup> Table 1 summarises the key instruments of the EU policy toolbox to 'promote, protect and partner' on green tech.

Looking specifically at the European Economic Security Strategy, four policies stand out for addressing green tech's specific challenges.<sup>11</sup> First, to reduce dependency on China for the critical raw materials needed to manufacture green technologies, the **Critical Raw Materials (CRM) Act** sets out to diversify supply chains, promoting domestic extraction and establishing

5 Centraal Bureau voor de Statistiek (Statistics Netherlands), [The Netherlands largest importer of Chinese solar panels](#), 8 September 2023.

6 Alicia Garcia-Herrero, Heather Grabbe and Axel Källenius, [De-risking and decarbonising: a green tech partnership to reduce reliance on China](#), Brugel, October 2023.

7 European Commission, [Joint communication to the European Parliament, the European Council and the Council on European economic security strategy](#), JOIN/2023/20 final, 20 June 2023.

8 European Commission, [Statement by President von der Leyen at the joint press conference with President Michel following the EU–China Summit](#), 7 December 2023.

9 European Commission, [Factsheet on an EU approach to enhance economic security](#), 20 June 2023.

10 Maaike Okano-Heijmans, [Open Strategic Autonomy: The digital dimension](#), January 2023.

11 Both the CRM Act and NZIA are still in the legislative process.

**Table 1 Main EU policy instruments to promote, protect and partner on green tech**

Promote	Protect	Partner
<b>Net-Zero Industry Act (NZIA)</b>	<b>Critical Raw Materials (CRM) Act</b>	Global Gateway and Team Europe Initiatives
Important projects of common European interest (IPCEI)	<b>Cyber Resilience Act (CRA)</b>	Digital for Development (D4D)
European Hydrogen Bank	<b>Radio Equipment Directive (RED), Article 3.3</b>	Free-trade agreements
NextGenerationEU	Outbound Investment Screening	Critical Raw Materials Club
Industrial alliances :	Export controls	Trade and Technology Councils (TTC) with US and India
– European Batteries Alliance	Interdependence inventory	
– European Raw Materials Alliance	Foreign direct investment (FDI) screening	
– European Clean Hydrogen Alliance	EU Anti-coercion Instrument	
– European Green Digital Coalition	Toolkit on Tackling Foreign R&I [research and innovation] Interference	
	EU Hybrid and Cyber Diplomacy Toolboxes	

Source: authors’ compilation (initiatives in bold are discussed in detail below).

partnerships with trusted partners.<sup>12</sup> In addition, to diversify away from China, the **Net-Zero Industry Act (NZIA)** seeks to scale up European green-tech production.<sup>13</sup> It supports private-sector investments in clean-tech manufacturing, focusing on the so-called net-zero technologies. These are part of the green-tech family designed to reduce greenhouse gas emissions.<sup>14</sup>

Third, to enhance the EU’s position on green tech, the **Economic Security Strategy** and the **EU Industrial Strategy** detail ongoing projects such as **Important Projects of Common European Interest (IPCEI)** and industrial alliances. The key challenge that the policies mentioned above seek to address is Europe’s limited volumes of green-tech production.

While catching up with China is almost impossible, European companies still need to lower their production costs to become more competitive.<sup>15</sup>

Fourth, to improve the cybersecurity of hardware and software, the Economic Security Strategy includes the European Commission’s proposal for a **Cyber Resilience Act (CRA)**, which is expected to enter into force in 2024 and to be applied by manufacturers in 2027.<sup>16</sup> The main objective is to ensure that manufacturers develop secure digital products by abiding by a coherent cybersecurity framework. This is essential to avoid exposing the public and private sectors to cybersecurity risks when importing green tech with digital elements from countries like China. Another important piece of EU legislation for cybersecurity is the Radio Equipment Directive (RED), Article 3.3, updated in 2021. RED 3.3. establishes a regulatory framework that requires protection of the network, the user and protection from fraud for wireless devices available on the EU market. This regulation will

12 European Commission, [Critical Raw Materials: ensuring secure and sustainable supply chains for EU’s green and digital future](#), 16 March 2023.

13 European Commission, [Net-Zero Industry Act: making the EU the home of clean technologies manufacturing and green jobs](#), 16 March 2023.

14 The European Commission has a list of eight strategic net-zero technologies. These include solar PV and thermal technologies, on- and offshore wind renewable technologies, battery and storage technologies, carbon capture and storage (CSS) and grid technologies.

15 WindEurope, [NZIA: act now or Europe’s wind turbines will be made in China](#), 14 June 2023.

16 European Commission, [EU Cyber Resilience Act](#), accessed on 18 December 2023.

become mandatory in August 2024 and should enhance the cybersecurity protection of green tech at the EU level.<sup>17</sup>

At the international level, there is the opportunity to define cybersecurity standards and interoperability norms for green tech, such as in the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA) and the Smart Grid Interoperability Panel (SGIP). The Netherlands has a prominent role to play in supporting the implementation of the Cyber Resilience Act and RED 3.3. Its strong cybersecurity sector<sup>18</sup> is an asset that can also benefit other EU member states seeking to protect digital green tech against cyberattacks. At the same time, keeping the approach to strategic autonomy 'open' will be necessary for Europe, and the Netherlands can play a role in promoting stronger trade relations with like-minded partners.

## Geopolitical implications of digital green technologies

Digital green technologies bring several opportunities, but are not politically neutral. After all, green tech's physical and digital components are inextricable from each other. Solar panels, for instance, have physical components like photovoltaic cells, inverters and controllers that are digitally monitored, managed and optimised. This means that even when using European software to operate Chinese hardware – or the other way round – EU member states may remain exposed to cybersecurity risks. Research conducted by the Dutch Authority for Digital Infrastructure shows that none of the nine inverters examined meet cybersecurity requirements. This makes solar panel installations vulnerable to being hacked,

switched off, or used for Distributed Denial-of-Service (DDoS) attacks.<sup>19</sup>

Other green technologies rely on digital components only, such as smart grids or energy management systems. These systems can play a key role as systems integrators and interoperability enablers. They can integrate information collected from multiple sources – including data on energy demand, consumption or availability – into a single platform, and analyse it without being connected to any hardware component. Smart grids, for example, are meant to connect micro-grids with the power grid to reduce energy losses to a minimum. However, because of their strategic importance, such systems can also be very appealing targets for cyberattacks.

Digital solutions can also enhance green-tech performance on different levels. They can, for instance, help to organise and digest massive amounts of data collected by sensors and drones, as happens with precision farming. Parameters related to the weather, soil or light conditions are gathered and organised in well-designed databases, setting the groundwork for all downstream benefits and optimisation possibilities. Digital platforms also enable continuous monitoring, offering (near) real-time management capabilities. When an offshore wind facility is running, digital solutions can detect when the facility can be shut down because of insufficient wind speed, or when it is likely to need repair or be replaced, thereby saving energy and operational costs.<sup>20</sup>

Finally, digital systems can enable greater traceability and transparency of supply chains – responding to increasing requirements from authorities and consumers, as well as greater engagement of end users in the twin transition, with applications such as smart homes and strategies like gamification. The

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17 European Commission, [Commission strengthens cybersecurity of wireless devices and products](#), 29 October 2021.

18 Alexandre Gomes and Maaïke Okano-Heijmans, [Dutch niches for Global Gateway in the digital domain](#), October 2023.

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19 Dutch National Digital Infrastructure Inspectorate (RDI), [Onderzoek storingsproblematiek en cyberveiligheid omvormers voor zonnepanelen](#), 30 May 2023 (in Dutch).

20 Nokia, [Digitalisation reshaping green energy](#), accessed on 18 December 2023.

latter applications make users vulnerable to the interception of personal and usage data, which explains the need for regulatory frameworks to protect users and networks, such as RED 3.3.

In short, digital green tech will play an instrumental role in enhancing the EU's position in the twin transition and ensuring its economic security. Nonetheless, European governments and companies face significant challenges in reducing supply-chain and digital risks and strengthening their strategic autonomy in this sector. As outlined in the Economic Security Strategy, along with protecting and partnering approaches, one option is to promote European companies to become more competitive, thus reducing the need to import Chinese green tech. How can the Netherlands contribute to this goal?

## De-risking by promoting Dutch digital green technologies

With a strong innovation capacity, the Netherlands is well placed to enhance the resilience of its green-tech sector. The country is well known for its water-management capabilities and strong AgriTech sector. Branding itself as the Digital Gateway to Europe, the Dutch government seeks to showcase the Netherlands' capacity in digital sectors.<sup>21</sup>

The Netherlands has active public-private communities working in the so-called 'Top Sectors' – nine sectors where the country excels globally. These include Agri & Food, Energy, High Tech and Water & Maritime. In the energy sector, wind power – both onshore and offshore – is an area where the Netherlands has significant growth potential, and digital sensors and remote controllers will play an important role in enhancing performance and efficiency. Linked to this is the sustainable use of ocean resources, known as the blue economy. The Dutch Marine Energy Centre (DMEC), an accelerator focused on projects regarding offshore energy, coordinates the Netherlands' efforts in the

sector, while Dutch companies are present across the supply chain.<sup>22</sup> To store energy, Energy Storage NL<sup>23</sup> represents the Dutch sector and has over 100 members. Smart batteries and larger-scale storage innovations respond to continuous fluctuations in market needs and prices.

The Netherlands has a strong track record in innovation, with robust research and development of green-tech solutions. The University of Wageningen, for instance, is a leading research organisation in AgriTech worldwide. However, there is still a large gap between research on green tech and commercialisation.

One of the biggest challenges that Dutch – and European – companies face is the ability to produce at scale. Experts identify two main limitations: (1) market fragmentation (regulatory, culture and language); and (2) access to funding. While technology and the twin transition become increasingly global in scope, culture and language, as well as the existence of different market-access rules across the EU, are still barriers for companies to move and grow beyond their countries of origin.<sup>24</sup>

Second, the Netherlands – similar to most countries on the European continent – lacks the appropriate funding mechanisms to grow, especially in scale. Access to venture capital is limited in Europe. The Dutch market is a good example: its relatively small size makes it difficult to find the appropriate funding and spaces to test new solutions and implement them at scale. From this point of view, the United States and China are virtually impossible to match, as their companies and initiatives do not face these barriers to the same extent. In fact, successful European companies are often confronted with the possibility of being acquired by non-EU investment banks or firms – either to survive, to have real prospects of growth, or both.<sup>25</sup>

21 Alexandre Gomes and Maaïke Okano-Heijmans, [Dutch niches for Global Gateway in the digital domain](#), October 2023.

22 An accelerator helps start-ups and scale-ups to grow, get funding and place their products in the market.

23 Energy Storage NL, [Who are we?](#), accessed on 18 December 2023.

24 Digital Europe, [Scaling in Europe](#), 3 February 2021.

25 Euractiv, [EU launches Tech Champions Initiative to keep European ownership of scale-ups](#), 14 February 2023.

This is a strategic concern for the EU, as those companies face the risk of losing ownership and decision-making power when that happens.

## Industrial and innovation policy

Against this backdrop, the traditional free-market approach is being replaced by more geostrategic thinking and renewed attention to industrial policy. Hesitantly, the Dutch government in recent years embarked on a new path of shielding and supporting certain strategic industries.<sup>26</sup> This new industrial policy is not about ‘picking winners’, but about improving the performance of existing industries and companies that contribute to public goals, such as addressing critical vulnerabilities or promoting the diversification of suppliers. Public procurement can be a valuable asset for governments for this purpose. Using this tool to stimulate the industry and the economy is a common approach in the US, but it is still very much lacking in Europe, other than in France.

Rather than subsidising companies in strategic sectors, the EU and member states could adopt public procurement to promote the use of products and applications in those same strategic areas. This strategy of co-investing and co-creating projects of strategic interest circumvents the fear of ‘betting on the wrong horses’. However, procurement is often a complex process, which sometimes rewards the most well-written and compliant proposals rather than the best ideas. A simplification of the process, making it less time-consuming for organisations that cannot allocate the resources to writing such offers but can still offer the best answers, would be a step in the right direction.

More prominent companies can also have an analogous role in building innovation ecosystems of trust and commercialisation of innovation. For example, the role of Dutch company ASML in the semiconductor industry provides a blueprint of how green tech can further be

developed in the Netherlands. ASML has around 5,000 suppliers with whom they co-create to improve their products. Such synergy creates an ecosystem that pushes all involved parties to learn with each other and jointly make progress. Finding the right incentives for businesses to be more strategically aligned is of paramount importance for the future of green tech in the Netherlands and in Europe. The Dutch Agenda for Digital Open Strategic Autonomy (Agenda DOSA, see below) highlights the importance of stimulating business ecosystems in high-tech and emerging technologies, but action should also be widely adopted in green tech.

On the policy side, the Netherlands has a comprehensive framework to promote Dutch green tech. The Dutch government recognises the need for a balanced industrial policy to realise the twin transition in its Agenda DOSA.<sup>27</sup> This includes being an active part of European industrial alliances and the so-called IPCEIs, to which the Netherlands has traditionally taken a critical approach. Unfortunately, Agenda DOSA makes no relevant reference to digital green tech. This is a missed opportunity to flag and operationalise the importance of digital green tech in the twin transition. At the EU level, the Netherlands is involved in the European Tech Champion Initiative (ETCI), an EU-wide funding initiative for high-tech companies in their late-stage growth phase.<sup>28</sup> Moreover, the European Institute for Innovation and Technology (EIT), part of Horizon Europe, is an opportunity to bring together private sector and research stakeholders to create marketable solutions responding to the challenge faced by the Dutch/European green-tech industry.

Financially, the Netherlands’ Recovery and Resilience Facility (RRF) package of 4.7 billion euros – developed with NextGenerationEU funding – is regarded as the most ambitious

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26 Advisory Council for International Affairs, [Advisory Report 120: Designing smart industrial policy](#), 1 April 2022.

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27 Government of the Netherlands, [Agenda Digitale Open Strategische Autonomie](#), 17 October 2023 (in Dutch).

28 European Investment Bank, [Launch of New Fund of Funds to support European tech champions](#), 13 February 2023; European Investment Fund, [Scale-up financing gap](#), 12 September 2023.



in the EU in tackling the twin transition, with 48 per cent of funds allocated to climate and 25 per cent to digital measures.<sup>29</sup> This represents a golden opportunity for the Netherlands to invest in its digital green tech. Another strategic tool at the disposal of Dutch companies is the National Growth Fund.<sup>30</sup> Estimated at 20 billion euros, the fund rewards large-scale investments in specific value chains and technologies that are promising for the Netherlands.<sup>31</sup> At the national level, InvestNL finances the business development of green-tech-related projects. Since 2020, InvestNL has invested around 820 million euros in 82 projects.<sup>32</sup>

### Stepping up the Dutch position in digital green technologies

The Netherlands and the EU have committed to accelerating the green and digital twin transition while reducing strategic dependencies and strengthening economic security. Green tech is at the forefront of the twin transition, with digital solutions playing an increasingly important role in enabling them. Since the physical and digital components of green tech are inextricable, de-risking from supply-chain and cyber risks is vital.

De-risking the digital components of the green-tech industry demands that the EU and its member states invest in the promoting, protecting and partnering lines of action, as outlined in the European Economic Security Strategy. Concrete steps on this path have been initiated, but more needs to be done. Leading in innovation, the Netherlands is well placed to promote its digital green-tech industry further, by tapping into national and EU funds, while facilitating interaction among research and private-sector actors across Europe.

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29 European Parliament, [The Netherlands' National Recovery and Resilience Plan: latest state of play](#), 20 December 2022.

30 Government of the Netherlands, [The National Growth Fund](#), accessed on 18 December 2023.

31 Government of the Netherlands, [Kamerbrief strategisch en groen industriebeleid](#), 8 July 2022 (in Dutch).

32 InvestNL, [About us](#), accessed on 18 December 2023.

This Policy Brief recommends the following actionable steps:

- **Conduct a mapping of Dutch industries** that are active in (digital) green tech to better understand the Netherlands' strengths. Today, information about companies and their digital green technologies is scattered and not exhaustive. A comprehensive overview of the sector would help the Dutch government with targeted policies and financial instruments aimed at promoting green technologies in the Netherlands, and thereby protect public interests.
- **Enhance smart industrial policy at the European level**, promoting **innovation ecosystems of trust** and commercialisation of innovation; engaging actively in **European-wide industrial alliances and innovation networks**; and **using public procurement as a tool** to accelerate the adoption and use of specific digital green technologies. A requirement for how companies address cybersecurity risks and vulnerabilities should be added to the government procurement process.
- **Deepen investments in fostering Dutch and European companies** that develop digital green-tech solutions through EU and national financial instruments (including IPCEIs, the Recovery and Resilience Facility, National Growth Fund and InvestNL). While delivering on public interests, this will foster an EU green-tech industry.
- To improve the cybersecurity of green technologies, the government can **promote greater cooperation between cybersecurity and green-tech companies and communities**. The Netherlands is well placed to be among the leaders in implementing the Cyber Resilience Act and RED 3.3 and enhancing the overall European ability to defend itself from cyberattacks on critical infrastructure.
- **Engage and lead the discussions on defining cybersecurity standards and interoperability norms** at EU and international forums, such as the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA) and the Smart Grid Interoperability Panel (SGIP).

### About the Clingendael Institute

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