Unpacking open strategic autonomy
From concept to practice

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Abbreviations and acronyms

AI artificial intelligence
CBAM Carbon Border Adjustment Mechanism
CDP Capability Development Plan
CSDP Common Security and Defence Policy
DTIB Defence Technological and Industrial Base
EDA European Defence Agency
EDEM European Defence Equipment Market
EDF European Defence Fund
EDIDP European Defence Industrial Development Programme
EDT Emerging and disruptive technology
EDTIB European Defence Technological and Industrial Base
EPC European Patrol Corvette
ESA European strategic autonomy
FCAS Future Combat Air Systems
FDI Foreign Direct Investment
GDPR General Data Protection Regulation
IPCEI Important Projects of Common European Interest
MGCS Main Ground Combat System
NGF Next Generation Fighter
PESCO Permanent Structured Cooperation
pMS participating Member States
R&D research and development
SMEs small and medium-sized enterprises
TEU Treaty on the European Union
TFEU Treaty on the Functioning of the EU
TTC Trade and Technology Council
WTO World Trade Organization
Executive summary

This report examines the implications of the EU’s open strategic autonomy agenda for its industrial and trade policy from a Dutch perspective, with one section dedicated to the defence industrial sector. The EU’s desire for more autonomy in the trade and industrial domain has been given a boost by the Covid-19 pandemic, which crucially exposed the vulnerabilities in the global production and supply chains. However, ambitions for European strategic autonomy have been accompanied by a number of concerns and the fear of a more interventionist industrial and protectionist trade policy. Some member states, including the Netherlands, have expressed the concern that ambitions for strategic autonomy could fuel protectionism, provide German and French ‘industry champions’ with an unfair advantage, disrupt free trade flows, and erode the interdependence that has brought Europe so many benefits. To assuage such concerns, the European Commission insists that its goal is ‘open strategic autonomy’, and that strategic autonomy can be achieved without resorting to protectionism and while preserving the open economy and the benefits of interdependence. This new open strategic autonomy agenda seems to have appealed to even the most sceptical member states, including the Netherlands.

But what does this agenda look like in practice? What are the implications for the EU’s industrial and trade policy and for some of the EU’s strategic industrial ecosystems? To what extent are the twin aims of achieving strategic autonomy and preserving an open economy actually compatible with one another? Is the EU not trying to have its cake and eat it too? And how can a member state such as the Netherlands play a proactive role in shaping and taking ownership of this agenda? This report addresses these questions.

The report is divided into two separate, but linked, parts. Part I examines the implications of the EU’s open strategic autonomy agenda for its industrial and trade policy in general terms. Part II takes a closer look at the ambitions for open strategic autonomy in one of the EU’s key industrial ecosystems, namely the defence industrial sector. Although the European defence industry has its own specific characteristics and is rather distinct from other industrial sectors in the EU, this case offers some important lessons about the effective strengthening of Europe’s industrial base, about protecting the EU’s critical infrastructure and technologies, and about the consequences of the agenda for countries such as the Netherlands.
The key findings of the report are the following:

Part I: Open strategic autonomy in trade and industrial policy

• A review of some of the most recent initiatives and proposals in industrial and trade policy indicates that the twin aims of achieving strategic autonomy and preserving an open economy are not necessarily incompatible and may even be complementary to one another. There is little indication, at least on paper, of a turn towards an overly activist or interventionist industrial or trade policy – although this may evolve over time. Moreover, the Commission is taking conscious steps to improve the framework of interdependence, which, if successful, would not only better protect the EU and its firms against unfair trade practices, but would also help strengthen the liberal international order.

• However, there is also an inherent tension between strategic autonomy on the one hand and openness on the other, and there are some (potential) trade-offs between the two aims that ought to be acknowledged. For one thing, the EU’s open strategic autonomy agenda could potentially trigger an escalation of defensive and/or protectionist responses. In addition, and most importantly, some of the EU’s proposals and initiatives – such as its plans for revised state aid rules, its proposal for an export credit facility, and its Carbon Border Adjustment Mechanism – have a direct impact on the openness of the EU’s economy.

• In order to ensure that the two aims do not unnecessarily contradict each other, the report recommends that the EU (Commission) consistently apply the principle of proportionality to its industrial and trade policy, makes the ‘strengthening of the international framework of interdependence’ the core component of its open strategic autonomy agenda, and prepares measures to prevent and protect the EU against potential retaliation.

• Although the Netherlands only cautiously backed the EU’s open strategic autonomy agenda, it too stands to gain from it. In order to make optimal use of the EU’s efforts to achieve open strategic autonomy, the Dutch government is advised to regularly conduct its own review of its strategic dependencies, to become proactive in facilitating, where beneficial, cross-border industrial cooperation, and to play an active role in shaping the instruments that are being developed to counter economic coercion and unfair trade practices.

Part II: Open strategic autonomy in defence industrial policy

• Contrary to the industrial sector at large, the European Defence Technological and Industrial Base (EDTIB) is protected nationally by Article 346 of the Treaty on the Functioning of the EU. Thus, the main discussion point related to the European defence industry sector is how strategic autonomy can be strengthened by consolidating intra-European cooperation. The major challenge in this regard is still to overcome the intra-European fragmentation as national governments continue to use Article 346 to exempt defence procurement from the EU’s common market rules.
• The European Defence Fund offers potential for breaking the national chains of demand to supply by providing financial incentives for cross-border defence industrial cooperation.

• There is a need to reinforce the EDTIB through strengthening resilience and reducing reliance on external suppliers. Very important is the close coordination in civil, defence and space technology research, the European Commission’s ‘Technology Roadmap’, and the EU’s foreign investment screening regulation.

• Countries with a national defence industrial base predominantly composed of small and medium-sized enterprises (SMEs) – such as the Netherlands – continue to face serious problems entering the markets of the larger EU member states as they operate with supply chain companies, including SMEs, on national territory. Although the European Defence Fund (EDF) provides special financial assistance for SMEs, co-funding by governments is essential for follow-through of EDF projects towards the development and production phases.
Introduction

Amidst the weakening of the multilateral system, the rise of multipolarity, and the Covid-19 pandemic, the concept of European strategic autonomy (ESA) has gained considerable traction. In fact, according to European Council President Charles Michel, the strategic independence of Europe is ‘our new common project for this century’ and ‘goal number one for our generation’.¹ Long seen as a French pipedream,² and first applied in 2013 to Europe’s defence and security policy, the ambition of strategic autonomy is now backed by a growing number of member states and is increasingly applied to a broad range of policy areas, including industrial and trade policy.

The EU’s desire for more autonomy in the trade and industrial domain has been given a boost by the Covid-19 pandemic, which crucially exposed the vulnerabilities in the global production and supply chains. Even the Netherlands, which was long sceptical of previous (French) proposals for strategic autonomy, acknowledges the risks of asymmetric dependencies in strategic sectors and the growing need for the EU to protect its economies against economic coercion and unfair trade practices.³ Until recently, the Netherlands, along with some other member states, was concerned that the ambitions for strategic autonomy would lead to an interventionist industrial policy, would fuel protectionism, would provide German and French ‘industry champions’ with an unfair advantage, and would erode the interdependence that has brought Europe so many benefits. To assuage such concerns, the European Commission insisted that its goal is ‘open strategic autonomy’, and that strategic autonomy can be achieved without resorting to protectionism and while preserving the open economy and the benefits of interdependence. In a recently published joint non-paper with Spain⁴ and another recently published joint statement with France, the Netherlands gave its cautious backing to this new open strategic autonomy agenda.⁵

But what does this agenda look like in practice? What are the implications for the EU’s industrial and trade policy and for some of the EU’s key industrial ecosystems? To what extent are the twin aims of achieving strategic autonomy and preserving an open

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¹ European Council, Recovery Plan: powering Europe’s strategic autonomy – Speech by President Charles Michel at the Brussels Economic Forum, 8 September 2020.
² Paola Tamma, Europe wants ‘strategic autonomy’ – it just has to decide what that means, POLITICO, 15 October 2020.
³ The Netherlands at International Organisations, Spain-Netherlands non-paper on strategic autonomy while preserving an open economy, 24 March 2021, 1; 6.
⁴ The Netherlands at International Organisations, Spain-Netherlands Non-Paper on Strategic Autonomy.
⁵ Government of the Netherlands, Joint statement of France and the Netherlands, 31 August 2021.
economy actually compatible with one another? And how can a member state such as the Netherlands both contribute to and benefit from the EU’s open strategic autonomy agenda? This report will address these questions.

For this report, we made use of desk research consisting of a literature review and a policy document analysis, and semi-structured interviews with Dutch and EU officials and academic experts.

The report is divided into two separate but linked parts. Part I examines the implications of the EU’s open strategic autonomy agenda for its industrial and trade policy in general terms. It starts off with a reflection on the current debate surrounding the goal of open strategic autonomy, reflecting on the concept’s origins, its definition, the reasons for its traction, and some of the most prominent concerns. It then goes on to explain what the EU’s open strategic autonomy agenda means for its industrial and trade policy, by reflecting on some of the recent initiatives and proposals in these policy domains. It explores the extent to which the different proposals and initiatives are compatible, complementary and/or in conflict with one another, and discusses how the EU (Commission) can ensure that the twin aims of achieving strategic autonomy and preserving an open economy do not unnecessarily contradict each other. Finally, Part I reflects on the implications for the Netherlands and explains how the Dutch government should position itself towards, contribute to, and reap the benefits of the EU’s open strategic autonomy agenda in industrial and trade policy.

Part II takes a closer look at the ambitions for open strategic autonomy in one of the EU’s key industrial ecosystems, namely the defence industrial sector. Although the European defence industry has its own specific characteristics and is rather distinct from other industrial sectors in the EU, this case offers some important lessons about the effective strengthening of Europe’s industrial base, protecting the EU’s critical infrastructure and technologies, and about the consequences of the agenda for countries such as the Netherlands. Part II starts off with an analysis of the implications of the open strategic autonomy agenda for the European Defence Technological and Industrial Base (EDTIB). What are the key defence technological and industrial capacities for which the EU should aim to be non-dependent on outside suppliers? What is already ongoing to define and select key technological and industrial capacities for strategic autonomy? In which cases is dependency on (and cooperation with) non-EU defence industries even useful? Next, the current configuration and the development of the EDTIB is analysed, followed by a description of the main features of the Dutch Defence Technological and Industrial Base (DTIB). It then goes on to review the ongoing major European armaments programmes. Part II also pays specific attention to the European Defence Fund (EDF) and its contribution to strengthening the EDTIB. Finally, Part II zooms in on the opportunities offered by the major ongoing European procurement programmes and the EDF projects for the Dutch DTIB.
The final chapter summarises the main conclusions from Parts I and II. It outlines some recommendations for the EU (Commission) as it puts into practice its open strategic autonomy agenda and offers some recommendations for the Dutch government to play a proactive role in shaping and taking ownership of this agenda.
Part I  Open strategic autonomy in trade and industrial policy

1  (Open) strategic autonomy: a contested concept

In this section we present the current debate surrounding the concept of open strategic autonomy, reflecting on its origins, the context in which it became relevant, its contested meaning as well as the main (initial) concerns raised by some EU member such as the Netherlands.

Origin of the concept

The concept of open strategic autonomy gained particular traction in the EU after the Covid-19 crisis brought to light the vulnerabilities in global production and supply chains. But the concept is not new. ‘Strategic autonomy’ was first used in 2013 by the Council of the European Union, in the context of security and defence policy, when it called for a strengthened European defence industry. A first definition was provided in the 2016 Implementation Plan on Security and Defence, which defined European strategic autonomy as ‘the ability to act and cooperate with international and regional partners wherever possible, while being able to operate autonomously when and where necessary’.

Over time, the concept came to be increasingly applied to other policy areas as well, including economic, digital, industrial and trade policy. In fact, in its 2021 Strategic Foresight Report, the European Commission identified 10 areas in which the EU could strengthen its open strategic autonomy, including in the areas of ‘ensuring sustainable and resilient health and food systems’, ‘securing and diversifying supply of critical raw materials’ and ‘strengthening security and defence capacities’. Meanwhile, the Von der Leyen Commission made the aim of increasing the EU’s capacity to ‘act autonomously

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6  Nathalie Tocci, European Strategic Autonomy: What It Is, Why We Need It, How to Achieve It, Istituto Affari Internazionali, 26 February 2021, 7.
8  Nathalie Tocci, European Strategic Autonomy: What It Is..., 7.
to safeguard its interests, uphold its values and way of life, and help shape the global future’ one of the central tenets of its agenda.\textsuperscript{10} But what has made the pursuit of European strategic autonomy so urgent?

A changing strategic context

The context in which the EU operates has undergone deep transformations over the past few years. The EU is facing new challenges, such as Covid–19 and climate change, which have put more emphasis on the need to access health, digital and green technologies. At the same time, it has become apparent that EU industry is falling behind China and the US in some key sectors, such as artificial intelligence (AI), and is dependent on them for materials and products which will form the dependencies of tomorrow and, thus, potentially pose a security risk.\textsuperscript{11} For instance, the European data system is not as developed as those of the US or China, thus creating a competitive disadvantage for EU companies.\textsuperscript{12} The Covid-19 pandemic amplified this perception as it brought to light vulnerabilities that result from global supply chains while showing how asymmetric economic interdependences can become politically conflictual.\textsuperscript{13} The EU, a champion of free trade, dramatically witnessed the shortage of basic health products, including ventilators and protective masks, in the middle of the Covid-19 crisis.\textsuperscript{14} This happened on top of the domestic pressure EU governments are increasingly facing to better protect their citizens and industries against the negative effects of globalisation.\textsuperscript{15}

Meanwhile, the liberal international order in which the EU was founded is continuously challenged by the rise of unilateralism and protectionism, and repeated political and economic tensions, especially between the US and China.\textsuperscript{16} The emergence of China as a world power has contributed to the relative decline of US global hegemony and the shrinking of the EU’s global weight. With its distorting subsidies for national companies and forced transfers of technology, China is posing a challenge to the liberal economic governance system based on the rules of free trade and fair competition.\textsuperscript{17}

\textsuperscript{14} Nathalie Tocci, \textit{European Strategic Autonomy: What It Is …}, 32.
\textsuperscript{15} Giovanni Grevi, \textit{Strategic autonomy for European choices: The key to Europe’s shaping power}, \textit{European Policy Centre}, 17 July 2019, 6.
\textsuperscript{17} Giovanni Grevi, \textit{Strategic autonomy for European choices}, 7.
In addition, the US isolationist turn under President Trump led to the realisation that the EU could not always count on the US as it had in the past, spurring a rethinking of the transatlantic relationship and prompting increasing calls for more autonomous capabilities. Although the election of President Biden has somewhat dampened European concerns about US reliability, the EU is still looking to reduce its reliance on its transatlantic partner.

This changed context has changed EU member states’ perception of (in)security and has elevated (industrial) strategic autonomy as a priority. It should be noted that the EU is not the only actor in pursuit of strategic autonomy. Many actors across the world, including China and the US, are currently looking to reduce their strategic dependencies and strengthen their industries. Indeed, the US recently conducted a supply chain review and came with a proposal for strengthening the Buy American Act. The concern about these developments is of course that, with all these actors striving for strategic autonomy, multilateralism will deteriorate even further.

**A contested concept and its dilemmas**

The increased awareness of the security risks posed by the EU’s competitive disadvantages in strategic sectors has been paramount in the turn towards European strategic autonomy. In fact, within the EU, there is a growing consensus that the strengthening of Europe’s strategic autonomy is a strategic priority. The goal of making Europe more resilient and ‘future-proof’ is widely accepted. However, member states are still divided over what that means exactly. Across the EU member states, there is significant disagreement over the appropriate level of ambition and the degree of autonomy the EU should aspire to achieve. In particular, there is a division between the ‘sovereignty advocates’ headed by the Internal Market Commissioner Thierry Breton together with France and Germany, and the ‘free trade defenders’ including the Nordic countries, the Netherlands and Spain. France, for instance, is advocating for the beefing up of state aid for EU industries to become more competitive globally, while the

20 Joint Research Centre, *Shaping and securing the EU’s open strategic autonomy*, 2021, 1.
21 Paola Tamma, *Europe wants ‘strategic autonomy’ — it just has to decide…*, 25 February 2021.
Netherlands is more hesitant and is urging the EU to keep its (internal) economy open and competitive and reduce its strategic dependencies in a proportionate manner.24

The ambitions for European strategic autonomy have been accompanied by a number of internal concerns and the fear of a more interventionist industrial and protectionist trade policy. For example, Henrik Isakson, director for trade policy at the Confederation of Swedish Enterprise, voiced the concern that the pursuit of a level playing field would come to prevail over the pursuit of an open economy.25 Some smaller member states also fear the emergence of French and German so-called European champions and the corresponding concentration of power in the hands of a small group of companies and/or member states.26 Finally, there is concern that the pursuit of strategic autonomy will further undermine multilateralism and the interdependence that has brought Europe so many benefits.27

Open strategic autonomy

In answer to these internal (as well external) concerns, the European Commission says it is striving for ‘open’ strategic autonomy, reflecting the EU’s desire to strengthen its resilience and keep its industries competitive, while remaining open and globally engaged. In other words, the EU aims to ‘assume greater responsibility for its own security, reduce one-sided dependencies in critical areas and strengthen its capacity to set and implement its own priorities’,28 while continuing to support multilateralism and an open global economy.29 This concept seems to have appealed even to some of the most sceptical member states. For instance, in a recently published joint non-paper with Spain and another recently published joint statement with France, the Netherlands gave its cautious backing to this new open strategic autonomy agenda, urging the EU to build its strategic autonomy on the basis of multilateralism, cooperation and rules-based free trade.30

Yet some scholars, such as Richard Youngs, are worried that the EU may be wanting to have its cake and eat it too.31 Youngs deems it highly unlikely that the EU’s efforts

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24 Paola Tamma, *EU’s industrial policy stalls before takeoff.*
28 Joint Research Centre, *Shaping and securing the EU’s open strategic autonomy,* iii.
31 Richard Youngs, *The EU’s Strategic Autonomy Trap.*
to strengthen its strategic autonomy would not entail some important trade-offs. Can the EU protect and promote its industries without resorting to interventionism and protectionism? Or are the twin aims of strengthening strategic autonomy and preserving the open economy at odds with one another? These questions are addressed in the next section.

2 The open strategic autonomy agenda in EU industrial and trade policy

In this section, we take a closer look at what the EU’s open strategic autonomy agenda means for its industrial and trade policy, by reflecting on some of the recent initiatives and proposals in these policy domains. Broadly speaking, we could identify six main aims that underpin the EU’s open strategic autonomy agenda in industrial and trade policy, as outlined in Table 1.32

Table 1 The six aims underpinning the EU’s open strategic autonomy agenda in its industrial and trade policy

<table>
<thead>
<tr>
<th>Goal</th>
<th>Initiatives and proposals</th>
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</table>
| (1) Strengthening resilience and reducing strategic dependencies in key sectors | - Periodic review and monitoring of the EU’s strategic dependencies through the EU Observatory of Critical Technologies  
- Diversify EU international supply chains and pursue new international partnerships  
- Invest in industrial alliances  
- Mobilise public and private investments through Important Projects of Common European Interest (IPCEI) to boost EU capacity in critical industries  
- Revise EU guidelines on state aid  
- Increase EU and member state investments in strategic sectors and in research and development (R&D)  
- Stockpiling |
| (2) Protecting against economic coercion and unfair trade practices | - Draft an anti-coercion instrument  
- Propose a legal instrument to address distortions caused by foreign subsidies on the EU’s internal market  
- Advance the International Procurement Instrument  
- Reform the Word Trade Organization (WTO): restore a fully functional dispute settlement mechanism, improve the monitoring of members’ trade policies and establish new rules on industrial subsidies |

32 Based on the following: Tobias Gehrke, Threading the trade needle on Open Strategic Autonomy, in Strategic autonomy and the transformation of the EU new agendas for security, diplomacy, trade and technology, ed. Niklas Helwig, Finnish Institute of International Affairs, April 2021; The Netherlands at International Organisations, Spain-Netherlands Non-Paper on Strategic Autonomy…; European Commission, Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe’s recovery, Communication COM(2021) 350 final, 5 May 2021; European Commission, European industrial strategy, 10 March 2021; European Commission, Trade Policy Review…
### Initiatives and proposals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Initiatives and proposals</th>
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| 3. Protecting critical infrastructure and technology | - Regular monitoring and analysis of critical technologies through the EU Observatory of Critical Technologies  
- Recommend that all member states set up and enforce a fully fledged Foreign Direct Investment (FDI) screening mechanism |
| 4. Protecting and advancing the EU's values and standards | - Advance EU values through EU trade agreements and internal regulations  
- Modernise EU Export Control Regulation  
- Engage like-minded partners  
- Launch (sustainability) initiatives in the WTO |
| 5. Protecting the EU's internal playing field | - Apply a proportional, inclusive and case-by-case approach  
- Keep EU investment initiatives, industrial alliances and IPCEI open to all member states  
- Pay attention to inclusiveness for start-ups and SMEs |
| 6. Fostering and protecting an open global economy | - Engage like-minded partners  
- Develop new partnerships  
- Reform the WTO |

Aims 1, 2, 3 and 4 reflect the EU’s desire to become more strategically autonomous, while 5 and 6 reflect the EU’s commitment to remain open. In this section, we discuss how the EU (Commission) intends to achieve these six aims, to what extent the different proposals and initiatives are compatible, complementary and/or in conflict with one another, and how the EU (Commission) can best protect and strengthen its critical industries without (unnecessarily) resorting to protectionism or interventionism.

#### (1) Strengthening resilience and reducing strategic dependencies in key sectors

In May 2021, the European Commission updated its 2020 New Industrial Strategy, to account for the new circumstances prevailing after the Covid-19 pandemic. According to the Commission, the pandemic has crucially exposed the vulnerabilities in global supply chains and has underlined the necessity of identifying, reducing and preventing strategic dependencies. At the invitation of the European Council to ‘identify strategic dependencies, particularly in the most sensitive industrial ecosystems such as for health’, the Commission conducted a preliminary mapping of EU strategic dependencies. Out of 5,200 products imported into the EU, the Commission identified 137 ‘sensitive’ products on which the EU is highly dependent (representing 6% of the EU’s total import value of goods). These dependencies were mainly found in the energy intensive industries (e.g. raw materials), health industries (e.g. active pharmaceutical ingredients) and for certain products necessary for the green and digital transition.

35 European Commission, Updating the 2020 New Industrial Strategy, 11.
More than half of these products originate from China.\textsuperscript{36} Of the 137 identified dependent products, 34 products (representing 0.6% of the EU’s total import value of goods) were deemed to be potentially more vulnerable, due to the relatively low potential for (further) diversification or substitution through EU production.\textsuperscript{37} These vulnerable products include some raw materials and intermediate goods (e.g. some APIs (Active Pharmaceutical Ingredients) including alkaloids or heterocyclic compounds and some ferro-alloys including ferro-tungsten and ferro-niobium) as well as some final goods (e.g. Turbo-propellers, Covid-19 related products such as parts of protective garments, types of radio-broadcast receivers and some types of medicines).\textsuperscript{38} In addition, the Commission also found challenges and dependencies in the area of advanced technologies, such as for cloud and microelectronics.\textsuperscript{39}

The Commission comes with several proposals for addressing and reducing the identified strategic dependencies and for preventing future vulnerabilities in its critical supply chains. First of all, it wants to conduct a periodic review and monitoring of the EU’s strategic dependencies in the most sensitive industrial ecosystems.\textsuperscript{40} In this context, the Commission will, for instance, set up an EU Observatory of Critical Technologies. Second, in line with its Trade Policy Review,\textsuperscript{41} the Commission will work towards diversifying its international supply chains and pursuing new international partnerships.\textsuperscript{42} For example, when it comes to critical raw materials, the EU is aiming to build strategic partnerships with resource-rich third countries, such as in the Western Balkans, which are rich in rare earth elements, including borates (in Serbia) and platinum (in Albania).\textsuperscript{43} In this way, the EU can diversify its supply chain; it currently imports 98% of borates from Turkey and 71% of platinum from South Africa.\textsuperscript{44}

For the most vulnerable products, which will form the dependencies of tomorrow, the EU is aiming to strengthen and build autonomous capacities in critical sectors. To do so, the Commission aims to invest in industrial alliances ‘in strategic areas where such alliances are identified as the best tool to accelerate activities that would not develop

\textsuperscript{36} European Commission, Strategic dependencies and capacities, 1
\textsuperscript{37} European Commission, Updating the 2020 New Industrial Strategy, 11.
\textsuperscript{38} European Commission, Strategic dependencies and capacities, 28.
\textsuperscript{39} European Commission, Updating the 2020 New Industrial Strategy, 12.
\textsuperscript{40} European Commission, Strategic dependencies and capacities, 7.
\textsuperscript{41} European Commission, Trade Policy Review, 7.
\textsuperscript{42} European Commission, Updating the 2020 New Industrial Strategy, 13.
\textsuperscript{44} European Commission, Critical Raw Materials Resilience, 4.
otherwise’. The Commission has already launched industrial alliances on raw materials, batteries and hydrogen. It is also preparing alliances in the digital field (the ‘Alliance on processors and semiconductor technologies’ and the ‘Alliance for Industrial Data, Edge and Cloud’) and space sector (‘Alliance on Space Launchers’). In this context, the Commission will continue to support the pooling of public resources under the Important Projects of Common European Interest (IPCEI), facilitating large-scale cross-border projects that address market failures in strategic value chains.

An example of a critical product for which the Commission is aiming to build up autonomous capacities is the Lithium (Li-ion) battery, essential for producing electric vehicles and thereby a key technology for the EU green transition. Currently, the EU’s production capacity of battery raw materials and Li-ion battery cells lies at respectively 1% and 3% of global production. With the launch of the European Battery Alliance, the EU aims to support the development of an innovative, competitive and sustainable battery value chain in Europe. This includes the mobilisation of public and private investments through IPCEI to boost EU battery manufacturing capacity, from the extraction of raw materials to the cell production.

Fourth, the Commission is aiming to increase EU and member state investments in strategic sectors and in R&D, for instance through the Horizon Europe Programme, the Innovation Fund, the Digital Europe Programme, the European Defence Fund, InvestEU, and the European Structural and Investments Funds.

Finally, in some cases, it may consider stockpiling. For example, during the Covid-19 pandemic the Commission set up a ‘rescEU stockpile’ of medical equipment such as ventilators and protective masks.

(2) Protecting against economic coercion and unfair trade practices

In order to better defend the EU against economic coercion, the Commission is currently drawing up an anti-coercion instrument. The instrument would be designed to ‘empower
the Commission to apply trade, investment or other restrictions towards any non-EU country unduly interfering in the policy choices of the EU or its Member States. The hope is that the instrument would work as a deterrent. When faced with coercive practices, such as when Germany was faced with the threat of car tariffs by China in an effort to get Germany to accept Huawei’s bid to build 5G infrastructures in the country, the EU would be able to respond, in theory, with countermeasures that restrict trade and investment, control export in specific sectors and restrict access to EU public procurement markets.

The Commission’s Trade Policy Review also outlines a number of measures, in addition to its conventional trade defence instruments, to counter unfair trade practices and to level the international playing field. First of all, the Commission intends to propose a new instrument to address distortions caused by foreign subsidies on the EU’s internal market. Through two notification-based tools and a general market investigation tool, the Commission aims to investigate and fix the distortive effects caused by public financial aid granted to non-EU companies engaged in economic activities in the EU. Second, in order to advance an ‘open international public procurement market’, with reciprocal access for EU companies, the Commission is seeking to advance the ‘International Procurement Instrument’. The instrument was first proposed in 2012, but only recently did the European Council reach agreement on it. Third, in order to ‘ensure a better level playing field for EU businesses on third country markets, in which they increasingly have to compete with the financial support foreign competitors receive from their governments’, the Commission is exploring options for an EU strategy for export credits (including for an EU export credit facility and enhanced coordination of EU financial tools). On top of these measures, the Commission is also seeking to reform the WTO ‘across all of its functions’ with the (partial) aim of tackling unfair trade practices. In particular, it is hoping to restore a fully functional dispute settlement mechanism to improve the monitoring of members’ trade policies and to establish new rules on industrial subsidies.

52 European Commission, Strengthening the EU’s autonomy – Commission seeks input on a new anti-coercion instrument, 23 March 2021.
55 See European Commission, Commission proposes new Regulation to address distortions caused by foreign subsidies in the Single Market *, 5 May 2021.
56 Jorge Valero, EU member states overcome nine-year blockade on procurement instrument, 2 June 2021.
(3) Protecting critical infrastructure and technology

In order to better protect its (capacity in) critical infrastructure and technology, the Commission is setting up the previously mentioned EU Observatory of Critical Technologies. The Observatory will ‘provide regular monitoring and analysis of critical technologies, their potential applications, value chains, needed research and testing infrastructure, desired level of EU control over them, and existing gaps and dependencies’. The Commission is also urging all member states to set up and enforce a fully fledged foreign direct investment (FDI) screening mechanism, ‘to address cases where the acquisition or control of a particular business, infrastructure or technology would create a risk to security or public order in the EU’. In this way, the EU is aiming to maintain its openness to FDI while safeguarding its interests should foreign investors try to acquire or control critical assets and pose a security threat.

(4) Protecting and advancing the EU’s values and standards

As part of its open strategic autonomy agenda, the EU is also looking to more assertively advance its (social, digital, labour, human rights and environmental) values and standards. It has already begun advancing these values through its trade agreements. Currently, the Commission is preparing legislation to ‘introduce a mandatory due diligence duty requiring EU companies to identify, prevent, mitigate and account for sustainability impacts in their operations and supply chains’. It is also modernising its Export Control Regulation on dual-use goods and technologies ‘to support secured value chains, promote international security, protect human rights, and ensure a level playing field for EU exporters’. In addition, the Commission is looking to export its values and standards through engaging like-minded partners and through launching (sustainability) initiatives in the WTO (e.g. its trade and climate initiative). The most pronounced example, however, of the EU’s efforts to protect and advance its sustainability standards is the Carbon Border Adjustment Mechanism (CBAM). With this measure, EU importers will buy carbon certificates on the basis of the carbon
price paid in the EU, had the good been produced there. CBAM applies only to imports from countries without or with a lower carbon price, or in other words, less ambitious climate mitigation policy, than is applicable within the EU. In this way, the EU wants to encourage the greenification of the production processes in third countries.\(^\text{67}\) But in order to be successful the EU needs to bring on board like-minded partners such as the US and the UK and persuade them to adopt similar measures. In this way, exporters would be more likely to comply with the CBAM, as their alternatives would be reduced.\(^\text{68}\)

Shaping and exporting EU rules is a form of ‘soft geopolitics’ that boosts the autonomy of the EU without necessarily undermining its openness.\(^\text{69}\) A good example is the Artificial Intelligence (AI) Act, a regulatory proposal presented in April 2021 by the Commission. It attempts to build on the success of the General Data Protection Regulation (GDPR) by establishing harmonised rules regarding AI in the EU single market while influencing AI regulation globally. The overreaching goal is to ensure that new technologies are developed and function in a human-centred way, according to EU values.\(^\text{70}\) Another example is the connectivity agenda. As approved by the Council under ‘A Globally Connected Europe’,\(^\text{71}\) the EU wants to ‘advance its economic, foreign and development policy and security interests’ in Asia, among other places. For example, the Digital Service Act – currently under discussion – could potentially bolster the diffusion of EU values in privacy and transparency by improving the accountability of online spaces\(^\text{72}\) within a human-centred paradigm.\(^\text{73}\)

\(5\) Protecting the EU’s internal playing field

As mentioned previously, some member states have been concerned that the EU’s efforts to increase its strategic autonomy will go hand in hand with a more interventionist industrial policy and with competition distortions. In this case, it is the proposed industrial alliances and the Important Projects of Common European Interest (IPCEI) that raise the biggest concerns. As Tocci predicts, moving in this direction will

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\(^{69}\) Klaudia Majcher, \textit{Open strategic autonomy}, towards the geopoliticisation…

\(^{70}\) European Commission, \textit{Laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) and amending certain union legislative acts}, proposal for a regulation COM/2021/206 final, 21 April 2021, 1.

\(^{71}\) Council of the European Union, \textit{A globally connected Europe: Council approves conclusions}, 12 July 2021.


likely require a second look at antitrust and state aid rules.\textsuperscript{74} Indeed, the Commission is already looking to revise its guidelines on state aid to ‘make it easier for Member States to give access to finance when the market doesn’t deliver’.\textsuperscript{75} France and Germany have also been calling for the adaptation of European and competition state aid law.\textsuperscript{76} Yet the Commission asserts that it will keep competition distortions to a minimum\textsuperscript{77} and that it will rely only on “facts-based, proportionate, and targeted policy measures”.\textsuperscript{78} Generally speaking, the Commission does have a track record for safeguarding competition – as evidenced, for instance, by its prohibition of the Alstom–Siemens merger.\textsuperscript{79} The Commission also aims to ensure that its investment initiatives, its industrial alliances, and its IPCEI are open to all member states. Finally, it is paying extra attention to the inclusiveness of its initiatives for start-ups and SMEs.\textsuperscript{80} The European Defence Fund, for example, provides specific financial incentives for SMEs (for more details see Part II of the report).

\textbf{(6) Fostering and protecting an open global economy}

The Commission insists that its initiatives and proposals for strengthening Europe’s strategic autonomy are not only compatible with the preservation of an open economy and international interdependence, but are in fact essential to it. By engaging like-minded partners, developing new partnerships, reforming the WTO and taking steps to level the international playing field, the EU is making a strategic choice for openness and engagement, so the argument goes.\textsuperscript{81} As an example of such engagement one could point to the recent launch of the EU-US Trade and Technology Council (TTC), a forum to steer cooperation on key global trade, economic and technology issues. This forum includes a working group on securing supply chains, representing an opportunity for the EU to build a partnership on, for instance, semiconductors.\textsuperscript{82} The Commission is also seeking to reinforce the liberal international order by developing alliances in support of effective multilateral institutions. Finally, it is keen to point out that its open strategic

\begin{flushleft}
\textsuperscript{74} Nathalie Tocci, \textit{European Strategic Autonomy: What It Is…}, 21.
\textsuperscript{75} European Commission, \textit{State aid: Commission invites stakeholders to provide comments…}.
\textsuperscript{77} European Commission, \textit{State aid: Commission invites interested parties to provide comments on proposed draft Climate, Energy and Environmental State aid Guidelines}, 7 June 2021.
\textsuperscript{78} European Commission, \textit{Updating the 2020 New Industrial Strategy…}.
\textsuperscript{80} European Commission, \textit{Updating the 2020 New Industrial Strategy…}.
\textsuperscript{81} European Commission, \textit{Trade Policy Review…}.
\textsuperscript{82} European Commission, \textit{EU-US launch Trade and Technology Council to lead values-based global digital transformation}, 15 June 2021.
\end{flushleft}
The autonomy agenda does not entail increased protectionist measures – although some of its initiatives, such as CBAM and the export credit facility, could certainly be interpreted as such.

The next section discusses the extent to which these six aims are mutually compatible – particularly the extent to which aims 1 to 4 are compatible with aims 5 to 6.

3 On the compatibility of strategic autonomy and openness

Reviewing the proposals and initiatives discussed above, there is some legitimacy to the Commission’s claim that the aims of strategic autonomy and openness are not only compatible but are in fact complementary to one another. First of all, there is little indication, at least on paper, of a turn towards an overly activist or interventionist industrial or trade policy – though this may evolve over time.\(^{83}\) Interventionist and protectionist measures are generally reserved for ‘last resort purposes’ and the Commission appears committed to a proportional, inclusive and case-by-case approach. Second, and more importantly, the Commission is taking conscious steps to improve the framework of interdependence, which, if successful, would not only better protect the EU and its firms against unfair trade practices, but would also help strengthen the liberal international order.

However, while the Commission may reserve some of the discussed instruments for last resort purposes, their adoption may of course set a precedent for their wider utilisation – particularly as some member states seem to be pushing for this, e.g. France is pushing for reshoring or near-shoring\(^ {84}\) – with important implications for the EU’s (internal) openness. Moreover, it is important to acknowledge the fact that while the two aims of strategic autonomy and openness are in many ways compatible and even complementary, there is also an inherent tension and some (potential) trade-offs between the two aims that ought to be acknowledged.\(^ {85}\) For one thing, the EU’s open strategic autonomy agenda could potentially trigger an escalation of defensive and/or protectionist responses from the EU’s trading partners, such as in the form of new tariffs. Some of the proposed steps, such as the call on all member states to set up and enforce a fully fledged FDI screening mechanism and the Commission’s intention to diversify the EU’s international supply chains (meaning a drop in business for some countries), may well trigger retaliatory and protectionist actions by third countries – even if these measures are necessary or legitimate. Finally, and most importantly, some of the EU’s measures directly impact the (internal) open economy. For instance, as

\(^{83}\) Tobias Gehrke, Threading the trade needle on Open Strategic Autonomy.

\(^{84}\) Paola Tamma, EU’s industrial policy stalls before takeoff.

\(^{85}\) Richard Youngs, The EU’s Strategic Autonomy Trap.
discussed, the successful use of industrial alliances would likely require a second look at state aid and antitrust rules, directly impacting the EU’s internal level playing field. Similarly, while some instruments, such as the CBAM or the export credit facility, may not be designed to be protectionist in nature, they may well have that effect or may well be so understood.

In other words, while the two aims of strategic autonomy and openness do not necessarily need to contradict each other, and may even be complementary, there is an inherent tension that needs to be acknowledged.

4 An integral application of the open strategic autonomy agenda

So how can the EU (Commission) guarantee that the two aims of increased strategic autonomy and the preservation of an open economy do not unnecessarily contradict each other? How can it best protect and strengthen its critical industries without (unnecessarily) resorting to protectionism or interventionism?

First of all, the EU is advised to consistently apply the principle of proportionality to its industrial and trade policy, using its current evidence-based approach and a clear formulation of the aims and non-aims of open strategic autonomy. A clear example of this evidence-based approach is the Commission's analysis of the EU’s strategic dependencies. The analysis revealed that the identified problem – i.e. vulnerabilities in the EU’s critical supply chains – is smaller than expected. ‘Only’ 6% of the EU’s total import value of goods was deemed to require attention, while ‘only’ 0.6% of the EU’s total import value of goods was deemed to be highly vulnerable. The analysis showed that while targeted public measures are indeed necessary to strengthen the EU’s strategic autonomy in specific sensitive sectors, the situation does not require extensive reshoring of production facilities, for example. Not only would the latter require substantive intervention, it would also be incredibly cost intensive. The Commission would therefore do well to continue applying this evidence-based approach consistently to its trade and industrial policy, to ensure that if public interventions are in fact needed, they remain proportional.

In addition, the Commission could try to more concretely formulate the aims and non-aims of open strategic autonomy. It could do so by clearly specifying, for instance, that the open strategic autonomy agenda is about reducing specific strategic dependencies, advancing the EU’s sustainability standards, and countering unfair trade practices, not about the extensive reshoring of production, protecting European companies against external competition or giving European industries an extra advantage. At the moment, ‘open strategic autonomy’ is still a rather catch-all term, leaving uncertainty about the agenda’s ultimate ambitions and corresponding (future) initiatives. Clearly formulating
the aims and non-aims of open strategic autonomy would not only help to reassure partners, but also help the Commission hold itself accountable to its proportionate commitments.

Second, although the Commission has announced steps to shape and improve the international framework of interdependence, it may well want to make this the core component of its open strategic autonomy agenda. Currently, the Commission and member states appear primarily concerned with strengthening EU resilience in the face of a decline of the liberal international order and the increase in protectionism, economic coercion and unfair trade practices. While it is certainly important to strengthen EU resilience, a focus on tackling the symptoms, rather than the root causes of the EU’s predicament, could easily lead to a spiralling of protectionism. The most sustainable solution to these challenges, and hence the most effective path towards greater strategic autonomy, is to strengthen the framework that underpins the global open economy.

Third, the Commission may want to take extra care that its investment initiatives, its industrial alliances and its IPCEI do not lead to competition distortions and/or the concentration of power in the hands of a few companies and/or member states. This means that it would be modest in revising its state aid rules, would apply strict inclusive criteria to its investment initiatives and industrial alliances, and would not only ensure that its initiatives are open to all member states but also actively encourage and safeguard the diversity of its alliances, carefully monitoring over- and underrepresentation.

Fourth, and finally, the Commission is advised to have in place measures to prevent and protect the EU against retaliation. Even if the Commission’s efforts to strengthen the EU’s strategic autonomy remain proportional, there is still a chance that its economic partners may respond with retaliatory measures. The Commission should prepare for this eventuality. Although the economic coercion instrument could be a step in this direction, the utilisation of the instruments could itself provoke retaliation. To minimise the risk of retaliation, the Commission would do well to engage in a transparent dialogue and work together with like-minded partners who share similar challenges. It is important that the Commission engages with third countries in bilateral and multilateral consultations involving public authorities but also business associations, private companies and non-governmental organisations to clearly outline its goals and demonstrate its intention to remain open. For instance, in the case of the Commission’s proposal for a CBAM, it could have done more to engage in prior dialogue with EU partners to prevent the impression – as expressed by, for example, Australian prime

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87 European Commission, *Carbon Border Adjustment Mechanism: Questions and Answers.*
minister Scott Morrison – that CBAM amounted to ‘trade protectionism by another name’.\(^8\) On the other hand, an example of good practice was the exchange of supply chain review drafts between the EU and the US, indicating a desire to be on the same page in addressing a common challenge.\(^9\)

5 The Netherlands and the EU’s open strategic autonomy agenda

Until very recently, the Netherlands was primarily sceptical of demands for more European strategic autonomy. It was concerned that the ambitions for strategic autonomy would lead to an interventionist industrial policy, would fuel protectionism, would provide German and French ‘industry champions’ with an unfair advantage, and would erode the interdependence that has brought Europe so many benefits. These concerns are very much rooted in the country’s liberal, market-oriented culture and the make-up of its economy – characterised by a reliance on exports and SMEs. The concerns are also tied to the Netherlands’ general scepticism of industrial policy, which can, in part, be traced back to past experiences – such as the so-called RSV affair, in which more than 2 billion guilders in state subsidies were invested in Dutch shipbuilding company Rijn-Schelde-Verolme, all for the company to go bankrupt regardless.\(^9\)

Although the abovementioned Dutch concerns surrounding ambitions for greater strategic autonomy have not disappeared, more recently the Netherlands has cautiously backed the Commission’s open strategic autonomy agenda. There are three main reasons for this shift in position. First of all, the Dutch government has increasingly come to acknowledge the fact that recent geopolitical and technological developments have left the Netherlands and the EU increasingly vulnerable and necessitate a more active role for the government and EU institutions.\(^9\) Second, the Covid-19 pandemic proved to be an important marker, laying bare the vulnerabilities in production and supply chains and accelerating a rethinking in the Netherlands – as well as in other member states – on industrial and trade policy. Third, and finally, the concerns surrounding the strategic autonomy agenda have not fallen on deaf ears. The European Commission has made an effort to address member states’ concerns by adopting a (mostly) proportional and evidence-based approach and by expressing its commitment to open strategic economy – an agenda which the Netherlands could embrace, albeit cautiously.

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89 Peter Harrell, in *Buy America Meets Strategic Autonomy*, Center for Strategic & International Studies, 28 June 2021.
But now that the Netherlands has come to cautiously back the Commission’s open strategic autonomy agenda, how can it play a proactive role in shaping and taking ownership of this agenda? How can it reap the benefits? And how can it ensure that its concerns remain addressed?

First of all, in order to make optimal use of EU efforts to achieve open strategic autonomy, it is critical that the Netherlands undertakes its own regular monitoring of its strategic dependencies – as also encouraged by the Commission – to identify vulnerabilities in its own supply chains as well as areas where the country could benefit from diversification, partial reshoring, investments and cross-border projects.

Second, the Dutch government would do well to proactively facilitate, where beneficial, the participation of its industries and SMEs in the EU’s investment projects (such as Horizon and EDF), in its industrial alliances, and in its IPCEI. Although the Dutch government has backed the European Commission’s intention to launch an increasing number of industrial alliances in strategic sectors, the government has been somewhat cautious in joining such alliances or launching initiatives of its own – for instance missing the boat on the European Battery Alliance. But more recently it has become more proactive, for example: launching a bilateral initiative with France on quantum technology; exploring participation in the European Clean Hydrogen Alliance; and reserving funding for participation in the IPCEI on Microelectronics and Cloud Infrastructure and Services. This is a welcome development. While a careful analysis of the costs and benefits of (participation in) cross-border alliances is essential, and participation should certainly not be pursued for its own sake, the Netherlands can also not afford to simply stand on the sideline – which would put it at a significant disadvantage in the long run.

Third, the Netherlands may want to (continue to) play an active role in shaping the instruments that are now being developed to counter economic coercion and unfair trade practices, ensuring that the corresponding tools not only remain proportional, but also provide the appropriate response to the increase in protectionism, distortions in the level playing field and coercive dynamics. Dutch firms, too, suffer from unfair trade

92 Rijksoverheid, Speelbal of spelverdeler. . 83; Ministerie van Economische Zaken en Klimaat, Kamerbrief over de visie op de toekomst van de industrie in Nederland, 30 October 2020, 16.
93 Gerben van der Marel, Brussel geeft groen licht voor staatssteun aan productie autobatterijen (Id.nl), Het Financieele Dagblad, 27 January 2021.
94 Mathieu Pollet, France, Netherlands join forces in quantum technology race, Euractiv, 2 September 2021; Ministerie van Economische Zaken en Klimaat, Kamerbrief over de visie op de toekomst…, 16.
95 Ministerie van Economische Zaken en Klimaat, Kamerbrief over de visie op de toekomst…, 16.
96 Ministerie van Economische Zaken en Klimaat, Antwoording vragen over de IPCEI’s Micro-elektronica 2 en Cloud Infrastructuur en Services, 12 October 2021.
practices and are occasionally the victim of geopolitical dynamics – such as in the case of the chip manufacturer ASML, which was caught between the US and China. And while the first aim should be to improve the international framework of interdependence, other measures may well be necessary in the meantime. The Dutch proposal for a Level Playing Field Instrument, which was at least partly picked up by the Commission in its proposal for a new instrument to address the potential distortive effects of foreign subsidies in the Single Market, is a good example of such proactiveness.

Fourth, the Netherlands would do well to continue to play an active role in further defining the concept of open strategic autonomy and its aims and non-aims – for instance through such contributions as the ‘Spain-Netherlands non-paper on strategic autonomy while preserving an open economy’. In fact, the current conception of open strategic autonomy as put forward by the Commission – for instance in its updated industrial strategy and in its trade policy review – does seem to be in line with the one put forward by the Netherlands – in the abovementioned non-paper for example. However, the concept is still rather vague, and its specific aims and non-aims still somewhat unclear. The Netherlands still has a stake in further shaping this debate. It could, for instance, play an active role in pushing the Commission to make the reform of the framework of interdependence the core component of its open strategic autonomy agenda. Illustrative in this regard has been the attempt of the Netherlands to promote the EU connectivity agenda, arguing for better networks between European connectivity hubs and international partners, all while upholding a strong focus on EU values such as privacy and security.

Fifth, and finally, the Netherlands would be advised to continue to engage like-minded actors to ensure that the EU’s open strategic autonomy agenda pays equal attention to the aim of strategic autonomy and the aim of the preservation of an open economy. The Commission, especially its trade and competition departments, could be an important ally in this regard considering its own stated commitment to openness, proportionality and inclusiveness. Moreover, there many member states, including Spain, Sweden and Finland, that share(d) the Netherlands’ initial concerns about the EU’s ambitions for strategic autonomy. It may want to continue to work closely with these countries in trying to establish the aims and non-aims of the open strategic autonomy agenda as well as in holding the Commission accountable to its own commitments.

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98 Government of the Netherlands, Dutch input reflected in EU-proposal to safeguard a level playing field between companies, 5 May 2021; European Commission, Commission proposes new Regulation to address distortions caused by foreign subsidies in the Single Market*, 5 May 2021.
99 The Netherlands at International Organisations, Spain-Netherlands Non-Paper on Strategic Autonomy…, 4.
100 Paola Tamma, EU’s industrial policy stalls before takeoff.
Part II Open strategic autonomy in defence industrial policy

Compared to other industrial sectors in the EU, the European defence industry has its own specific characteristics. First, governments are its only customers. Tanks, fighter aircraft and frigates are not sold to private businesses or individuals. Research and development (R&D) and production of military equipment is carried out in close coordination between users and suppliers. Second, since the European Communities were established, member states have had the option to exempt defence acquisition from common market rules, based on the Treaties. The sector can be protected nationally, but there are no rules for protecting the EU market from outside supplies. Also, in contrast to the United States there is in the EU no ‘Buy European Act’ to give preferential treatment to European defence companies. Third, exporting military equipment is different from selling tulips or wine to markets outside the EU. Member states are bound by an EU Code of Conduct, but this is non-binding in legal terms. In essence, national armaments export policies and restrictions are decisive.\(^\text{101}\)

Thus, the key questions posed in this report must be treated in a context that is different from the rest of European industry. The main discussion point related to the European defence industry sector is how strategic autonomy can be strengthened by consolidating intra-European cooperation, such as by mergers and other models to create a true European Defence Technological and Industrial Base (EDTIB). The issue of intra-EU fragmentation is the key question when discussing how to strengthen the EDTIB. Nevertheless, topics such as reducing reliance on external suppliers and improving resilience in the defence sector – also labelled as ensuring non-dependency in key defence technological and industrial capacities – are also fundamental for strengthening the EDTIB. Finally, the issue of the interests of countries such as the Netherlands comes into play. Smaller countries with a national DTIB consisting predominantly of small and medium-sized enterprises (SMEs), face serious difficulties for entering the supply chains of larger defence companies in other EU member states without an intra-European level playing field. They find it 'particularly difficult to access cross-border defence contracts due to a lack of information, administrative burdens, language barriers, cultural, legal

\(^{101}\) It should be noted that an EU legal system is in place for dual-use. There are other regimes, such as the 'The Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies', a multilateral export control regime (MECR) with 42 participating states.
and administrative differences between EU countries, and costs related to distance. They also have to deal with nationally classified information and data, security of supply requirements, national standardisation and certification, and national export control regulations.\(^{102}\) Concentrating and channelling investment into such larger companies could be detrimental to the interests of SMEs located elsewhere in the EU.

This case study provides an analysis of what can be learned from the defence industrial sector in Europe for the concept of ‘open strategic autonomy’ as far as applicable. First, the implications of this concept for the EDTIB are assessed. What are the key defence technological and industrial capacities for which the EU should aim to be non-dependent from outside suppliers? What is already being done to define and select key technological and industrial capacities for strategic autonomy? In what circumstances is dependency on (and cooperation with) non-EU defence industries even useful? Next, the current configuration and the development of the EDTIB is analysed, followed by a description of the main features of the Dutch DTIB. Ongoing major European armaments programmes are reviewed in the following section. The case study also pays specific attention to the European Defence Fund (EDF) and its contribution to strengthening the EDTIB while at the same time investing money in capability-driven projects. Finally, the case study zooms in on opportunities for the Dutch DTIB offered by major ongoing European procurement programmes and EDF projects. The case study is completed by a set of conclusions.

1 Strategic autonomy in the defence industrial sector

The EU has an Industrial Strategy but lacks a specific Defence Industrial Policy. Defence cooperation in the EU takes place in the context of the intergovernmental Common Security and Defence Policy (CSDP) as defined in the Treaty on the European Union (TEU). In 2009, the European Commission tried to stimulate the convergence of national DTIBs into an EDTIB by launching two Directives aimed at creating a more open European Defence Equipment Market (EDEM).\(^{102}\) So far, the outcome of the two

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102 European Commission, Improving the access of SMEs to cross-border defence procurement, 30 November 2016.

Directives has been disappointing.\textsuperscript{104} Article 346 of the Treaty on the Functioning of the EU (TFEU) continues to hamper the application of internal market rules to the defence sector. Article 346 TFEU allows member states to exempt defence procurement from the internal open market rules by invoking its paragraph 1.b, which states:

\begin{quote}
\textit{any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material (…).}
\end{quote}

As ‘national security interests’ are open to wide interpretation, member states invoke this Article regularly in order to grant defence procurement contracts to companies based in their national territory and, thus, closing off cross-border competition.\textsuperscript{105} As the Directives have little impact on opening the EDEM so far, the Juncker Commission (2014-2019) changed habits by exploring the limits of the Treaty. Article 173 TFEU, which provides the legal basis for industrial policy, and Article 182 TFEU, which aims to improve the EU’s scientific and technological base, were declared applicable to launch the EDF and its two pilot programmes.\textsuperscript{106} With this new approach the Commission itself has become a defence actor by investing money from the Union budget to strengthen the EDTIB. Financial incentives are offered to technology institutes and defence industries, although on certain conditions – of which the most important are that at least three entities in three member states must be involved in the project. Additional financial incentives apply, among others, to the involvement of SMEs across the EU. The experience of the pilot programmes shows that the Commission’s approach has positive results, although the ultimate success of the industrial capability development under the EDF will very much depend on co-financing by member states.\textsuperscript{107}

Open strategic autonomy in the European defence sector

With the Commission’s involvement in the defence industrial sector, the question arose ‘in what to invest’? In selecting programmes and projects, the EU applies ‘the capability-driven approach’, that takes into account the capability requirements as defined in the relevant documents of the European Defence Agency (EDA) and as agreed by

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\textsuperscript{105} If they actually invoke it is not clear as there is no reporting obligation. Practice shows that the overwhelming majority of defence procurement contracts are not open to cross-border competition.

\textsuperscript{106} The Preparatory Action on Defence Research (PADR, 2017-2019) and the European Defence Industrial Development Programme (EDIDP, 2018-2020). The EDF started in 2021 and runs till 2027.

\textsuperscript{107} Dick Zandee, \textit{European Defence Fund – The real test is yet to come}, Clingendael, 17 February 2021.
\end{footnotesize}
the member states. Generally, the selection of EDF pilot programmes and projects is in line with these defence requirements. However, EU military capability needs do not automatically drive strategic autonomy of defence technological and industrial capacities for several reasons.

- First, member states can procure defence equipment from outside suppliers. Contrary to the ‘Buy American Act’ in the US, there is no ‘Buy European Act’ in the EU. The US remains a very important supplier of military equipment, in particular of fighter aircraft (such as the F35) and heavy lift helicopters, but also for missiles and precision-guided munitions. Eastern European countries regard the acquisition of US military equipment as a political signal to ensure US guarantees for their security and defence. It is mainly with regard to munitions supply that dependency on the US can be hampered when US Armed Forces themselves are involved in conflict and deliveries to outside customers have to be delayed. This almost happened during the Kosovo war and in the anti-ISIS air campaign. Another area of concern is space, which is well recognised in the EU Strategic Compass exercise. For example, the EU is lacking up-to-date space surveillance and tracking capabilities. Thus, EU space assets are vulnerable to the increasing amount of space debris and potential malicious activities of great powers such as China or Russia.

- Second, high-tech military equipment is composed of many systems and subsystems, delivered by companies not only inside but also outside the EU. Defence firms in the UK are connected to defence industries in the EU by multinational procurement programmes as well as through industrial footprints inside the EU. A platform (ship, vehicle, aircraft) assembled and constructed in the EU might very well contain technologies originated from outside the EU. This generates the question ‘how non-dependent’ the EU should be, in other words what are the key technologies which the EU should be able to deliver or develop itself, and not be subject to outside influence or extra-territorial measures?

- Third, technologies cannot easily be separated into ‘military’ and ‘civil’: customers make the difference, not the technologies – which are predominantly of a dual-use character. In the space sector this is even 80% or more. EU programmes such as  

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108 The Capability Development Plan (CDP), the Coordinated Annual Review on Defence (CARD), the list of projects in the context of Permanent Structured Cooperation (PESCO) and several others.

109 Dick Zandee, European Defence Fund – The real test is yet to come, 3.


111 See: Dick Zandee, Adája Stoetman, Bob Deen, The EU Strategic Compass for security and defence, Clingendael, 31 May 2021, 39–40; Daniel Fiott, Securing the heavens – How can space support the EU’s Strategic Compass, EUISS, 9 April 2021.
Galileo (global navigation) and Copernicus (earth observation) were created based on the needs of civilian customers, but are already used for military purposes. Emerging and disruptive technologies (EDTs) – such as unmanned systems, robotics, quantum computing and artificial intelligence (AI) – are driven by commercial markets, while also having military applications. In other words, strategic autonomy for the EU defence industrial sector is closely linked to broader industry in the Union, even if the Treaty’s legal provisions make a clear distinction between ‘defence’ and ‘other’ industries. In order to better coordinate civilian and defence technology research, the Commission has launched the ‘Action plan on synergies and cross-fertilisation between the civil, defence and space sectors’ with three flagships: drone technology, space-based secure communications and space traffic management.\footnote{European Commission, \textit{Action Plan on synergies between civil, defence and space industries}, Communication COM(2021) 70 final, 22 February 2021.} It lists examples of critical technologies relevant to all three sectors (see Table 2). The Commission will establish the Observatory of Critical Technologies to collaborate with the EDA and the European Space Agency (ESA). The next step will be the development of a ‘Technology Roadmap’, to be presented in 2022, which should help to steer the selection of coordinated investment under the EU research programmes in the three mentioned sectors.

### Table 2  List of examples of critical technologies relevant to the defence, space and civil sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Technologies</th>
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<tbody>
<tr>
<td><strong>Electronics &amp; Digital</strong></td>
<td>- Artificial Intelligence, advanced analytics and big data</td>
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<td>- Cybersecurity and cyber defence technologies</td>
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<td>- Digital forensic technologies</td>
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<td>- High-performance computing, cloud and data spaces</td>
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<td>- Photonics</td>
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<td>- Ultra-low power microprocessors, lightweight printed or flexible electronics</td>
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<td></td>
<td>- Quantum technologies</td>
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<td></td>
<td>- Secure communications and networking</td>
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<tr>
<td></td>
<td>- Sensors (including electro-optical, radar, chemical, biological radiation, etc.)</td>
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<tr>
<td><strong>Manufacturing</strong></td>
<td>- Advanced and additive manufacturing</td>
</tr>
<tr>
<td></td>
<td>- Advanced materials technologies and sustainable materials by design</td>
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<tr>
<td></td>
<td>- Nanotechnologies</td>
</tr>
<tr>
<td></td>
<td>- Robotics</td>
</tr>
<tr>
<td></td>
<td>- Semiconductors and microelectronics</td>
</tr>
<tr>
<td><strong>Space &amp; Aeronautics</strong></td>
<td>- Space technologies (including design and manufacturing of launchers and satellites)</td>
</tr>
<tr>
<td></td>
<td>- Secure precision timing, positioning and navigation technologies</td>
</tr>
<tr>
<td></td>
<td>- High-definition Earth Observation technologies</td>
</tr>
<tr>
<td></td>
<td>- Satellite-based secure communication and connectivity</td>
</tr>
</tbody>
</table>
Cooperation with the US

The EU-US Summit on 15 June 2021 in Brussels marked a turn in the EU-US relationship after the years of crises during the Trump presidency. A broad programme of cooperation has been launched by the Summit and among them is the establishment of an EU-US Trade and Technology Council (TTC). Its general purpose is to increase cooperation in technology development and deployment. A number of working groups will be established, for example to deal with technology standards. Although the TTC is not aimed specifically at the defence technological and industrial sectors in the EU and the US, this new cooperation format certainly offers scope for working towards ‘shared’ transatlantic strategic autonomy.

Defence technology priorities

With regard to key technological priorities related to the defence sector specifically, a lot of work has been done already. The EDA has produced ‘Overarching Strategic Research Cases’ (OSRA), the last review of which was in December 2018. Taking into account the defence capability needs identified by member states in the Capability Plan (CDP), 139 Technology Building Blocks (TBB) have been selected as the research and technologies (R&T) priorities. They cover a wide range of different technology areas, taking into account the emerging and disruptive technologies (EDTs). Examples include ‘Information Process management by using AI and Big Data’, ‘Multi-robot control and cooperation’ and ‘Defence Satellite Reconnaissance Systems’. The TBBs cover the common ground among the member states, taking into account different capability needs. Individual EU member states might have defined additional key technologies. For example, France as a nuclear power will most likely have a list of related essential technologies – and thus autonomous industrial capacities – which are essential for maintaining and modernising the country’s nuclear arsenal. This raises the question of what EU strategic autonomy in the defence industry sector should cover. If it is restricted to the existing rather limited military level of ambition of the EU Common Security and Defence

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Policy (CSDP), then the list of (autonomously available) key technologies will be relatively short. The Strategic Compass could change the EU military level of ambition and the importance of EDTs is recognised in the Compass. More importantly, the CDP and related documents – such as the Strategic Context Cases – go beyond CSDP requirements and, equally, OSRAs and TBBs have a broader defence requirements basis. However, the exercise of defining more precisely which technologies and defence industrial capacities are needed for EU strategic autonomy in the defence sector is yet to take place. The announcement of establishing a Defence Innovation Hub at EDA may be a step in that direction.

Ownership and intellectual property rights

Key technological and industrial capacities for non-dependency in the EU raises more issues. First, ownership of defence companies is important when it comes to sharing or protecting intellectual property. The growing awareness of foreign investment – in particular by China – in economic infrastructure in Europe has been a driving factor for the EU’s new framework for the screening of foreign direct investments. The related EU legislation entered into force in March 2019 and member states, including the Netherlands, are in the process of adopting the Regulation into national law. As security is a major concern when considering foreign investments, the defence industry sector is of particular importance in this regard.

Second, intellectual property rights (IPR) are an important stimulus for economic performance. A study of the EU Intellectual Property Office has revealed that patents, trademarks and designs result in better economic-financial results: ‘the positive relationship between IPR ownership and revenue per employee is particularly strong for SMEs’. This can result in up to 68% higher revenue per employee. However, only 9% of SMEs in the EU make use of IPR, thus missing opportunities for raising their performance. The European Commission has launched an IPR action plan to promote a unitary patent system with a range of measures, including vouchers for SMEs and other
assistance tools to increase the use of patents. SMEs in the defence sector could also profit from such measures. The average price of an EU patent would be reduced by a unitary patent system to an estimated amount of €10,000.\textsuperscript{119}

2 The characteristics of the EDTIB

Defence industries in Europe have an annual turnover of approximately €116 billion (2019) and employ around 440,000 highly skilled workers. The sector is characterised by a high rate of research and development (R&D). Government investment in defence R&D is estimated to be €10 billion annually.\textsuperscript{120} Table 3 depicts the top ten major European defence industries, based on turnover.

Table 3 Top 10 defence industries in Europe\textsuperscript{121} (in US dollars x 1,000,000)

<table>
<thead>
<tr>
<th>Ranking worldwide</th>
<th>Defence percentage</th>
<th>Defence revenue</th>
<th>Total revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 BAE Systems</td>
<td>90%</td>
<td>$21,033.27</td>
<td>$23,370.3</td>
</tr>
<tr>
<td>#2 Airbus</td>
<td>14%</td>
<td>$11,266.57</td>
<td>$78,916.36</td>
</tr>
<tr>
<td>#3 Leonardo</td>
<td>72%</td>
<td>$11,109.27</td>
<td>$15,429.55</td>
</tr>
<tr>
<td>#4 Thales</td>
<td>45%</td>
<td>$9,251.68</td>
<td>$20,596.61</td>
</tr>
<tr>
<td>#5 Dassault</td>
<td>70%</td>
<td>$5,708.84</td>
<td>$8,171.48</td>
</tr>
<tr>
<td>#6 Rolls Royce</td>
<td>24%</td>
<td>$4,260.53</td>
<td>$4,260.53</td>
</tr>
<tr>
<td>#7 Safran</td>
<td>16%</td>
<td>$4,413.05</td>
<td>$27,581.55</td>
</tr>
<tr>
<td>#8 Naval Group</td>
<td>100%</td>
<td>$4,155.14</td>
<td>$4,155.14</td>
</tr>
<tr>
<td>#9 Rheinmetall AG</td>
<td>56%</td>
<td>$3,942.46</td>
<td>$7,001.73</td>
</tr>
<tr>
<td>#10 Babcock</td>
<td>52%</td>
<td>$3,233.92</td>
<td>$6,220.17</td>
</tr>
</tbody>
</table>

Source: Defense News

Consolidation of major defence industries

Due to member states invoking Article 346, an intra-EU level playing field in the defence industrial sector is absent. A true European Defence Technological and Industrial Base is non-existent. On the other hand, the current EDTIB is more than just the sum of

\textsuperscript{119} European Commission, \textit{Making the most of the EU’s innovative potential – An intellectual property action plan to support the EU’s recovery and resilience}, Communication COM(2020) 760 final, 25 November 2020.

\textsuperscript{120} ASD, \textit{The Aerospace and Defence Industries Association of Europe – Facts & Figures}, 2020.

\textsuperscript{121} ASD, \textit{The Aerospace and Defence Industries, Facts & Figures}. 

33
the national DTIBs in the member states. In MBDA Missile Systems, British, German, French, Italian and Spanish missile industries have been consolidated (additionally, there is a factory in the US). MBDA is the European company for producing missiles for air, land and maritime forces.\(^{122}\) Although it is ‘the most advanced example of industrial integration and cross-border specialisation’, MBDA also constitutes an exception in the EDTIB.\(^{123}\) Often, holdings have been created – consisting of two or more legs with a combined top management structure – or other forms of coordination rather than integration and specialisation. In the aerospace sector, major defence companies – such as Airbus, BAE Systems and Leonardo – have a European cross-border footprint in terms of ownership and factories. There are also examples in the land sector, for example Rheinmetall with subsidiaries in Belgium, France, Italy, the Netherlands, Spain and several other European countries.

The Franco-German-Spanish Future Combat Air Systems (FCAS) programme is the key to further consolidation, both for manned fighter aircraft and unmanned air systems. Dassault Aviation has the lead in the development of the Next Generation Fighter (NGF) while Airbus Defence & Space leads the work on Remote Carriers (with MBDA as the main partner) and on System-of-Systems/Air Combat Cloud (with Thales).\(^{124}\) Last year Spain joined the FCAS programme, with Indra participating as a contributing defence industry. The NGF project receives the most attention in the three countries. A Joint Concept Study will be completed in 2021. Despite problems related to operational requirements and industrial shares,\(^{125}\) the NGF development is underway with a prototype demonstration planned for 2027 while at the same time the design of the unmanned ‘loyal wing’ capacity is also being taken forward.\(^{126}\) The UK, with Italy and Sweden as partners, has its own next generation fighter aircraft programme, called Tempest, which is also reaching the design phase.\(^{127}\) It is yet unclear if and how these two major FCAS programmes will be combined. Two separate programmes seems almost unavoidable, but there is scope for combining efforts in systems and subsystems, as FCAS is more than just a new combat aircraft: ‘(...) this new technological ecosystem can keep programmes open for eventual contributions from countries that

\(^{122}\) See: MBDA Missile Systems.


\(^{124}\) See: FCAS - Defence - Airbus

\(^{125}\) Justin Brock, FCAS: Is the Franco-German-Spanish Combat Air Programme Really in Trouble?, RUSI, 23 April 2021.

\(^{126}\) Vivienne Marchi, FCAS develops chasing sweet spot in a mix of fighter, drones design, DefenseNews, 21 May 2021.

\(^{127}\) Andrew Chuter, British ‘Team Tempest’ is itching to enter new fighter design phase this summer, DefenseNews, 25 May 2021.
do not position themselves as system integrators, such as Belgium, the Netherlands and Poland.\textsuperscript{128}

Although the naval and land sectors are still dominated by national defence industries, the first steps towards cooperation between major companies are taking place. The French Naval Group and the Italian Fincantieri have formed a combination called Naviris. It is channelling R&D investment for both mother companies. Furthermore, together with the Spanish Navantia, Naviris has launched the European Patrol Corvette (EPC) programme, which is also a project in the context of the Permanent Structured Cooperation (PESCO). An important factor driving the need for further consolidation in the naval sector is the increasing competition on the world market, in particular by China, Russia and South Korea. Naval shipbuilding in Europe is dependent on exports for about half of its turnover, but is losing its position on the world market. In the last decade, two Chinese shipyards, now merged into CSSC-CSIC, have built 136 warships, while in Europe 12 different companies built 80 warships in the same period.\textsuperscript{129}

In the land sector the industrial landscape is comparable: too much industrial fragmentation based on national protection. Germany and France are aiming to change the situation by the creation of a strategic alliance: KNDS, the acronym of Krauss (Maffei Wegman) + Nexter Defence Systems.\textsuperscript{130} KNDS aims to become the leading European company developing and producing vehicles for land forces. The Main Ground Combat System (MGCS) project for replacing both the Leopard and Leclerc tanks by a future generation main battle tank is the flagship of KNDS. Italy, Spain and the UK have expressed their interest in joining MGCS.\textsuperscript{131} Other countries, including the Netherlands, have done the same.\textsuperscript{132}

**Small and medium-sized enterprises**

According to the European Commission, there are about 2,500 SMEs operating in the defence sector. They are key enablers for innovation and growth, conducting ‘essential research, technology and innovation activities’.\textsuperscript{133} Many SMEs produce technologies, parts or complete products used by civilian and military customers, for example sensors,
electronic equipment, command and control systems, or even small arms used by both police and armed forces. Under the Horizon Research Programme (2014-2020) some 7,500 dual-use SMEs received innovation funding. The exact number of dual-use SMEs in the EU is not known, but might run in the tens of thousands.

While large defence companies are spreading their wings across national borders, SMEs remain nationally based. Over the years, major defence industries have created vertical supply chains of second- and third-tier companies based in the same country. In such cases it is extremely difficult for SMEs in other member states to access the supply chains of those large defence firms, as they lack the financial and administrative means as well as other skills and experience for accessing first-tier companies in other countries. Different export regimes also come into play. First-tier companies or integrators (platform builders) are used to work with the same national suppliers as preferred partners, in particular for export markets. As these national supply chains are used from the start of the R&D and production phases (sole sourcing), there are higher costs when suppliers from abroad (second sourcing) are taken on board.

Smaller countries have used the opportunity of the discussions on the EDF to argue that specific attention should be paid to SMEs located outside the main defence equipment-producing member states. The European Commission has responded by inserting dedicated incentives – that is, additional funding percentages – for the inclusion of SMEs in projects to be funded by the EDF. However, mid-caps and SMEs will profit most from ambitious projects due to the production volume and the delivery of supplies over a longer period. European programmes that are no longer based on a single platform but on a networked of systems offer even better scope for participation of different companies based on their specific knowledge and competences. FCAS and MGCS could be such programmes. Connecting SMEs to large defence companies will, nevertheless, remain a challenge. It demands proactive policies of national governments and defence industrial associations (the push factor) as well as an open attitude on

134 European Commission, Dual Use Technology in the EU – Helping SMEs bring innovation to the market, 2017.
135 A first-tier company sells a product (in the defence sector often platform: aircraft, ships, vehicles).
   A second-tier company delivers ‘systems’ to a first-tier company, for example the communications system built into the platform. A third-tier company delivers mainly subsystems to the second (or first tier) company, for example soft-ware for a communications system.
136 Dr (Hab) Renaud Bellais, The European Defence Fund: an integrative factor of the EU defence industry, Annex 3 to: Dick Zandee, e.a., The EU Strategic Compass for security and defence - Squaring ambition with realism.
137 Based on definitions of the European Commission a mid-cap (middle-capitalisation company) has up to 3,000 employees and a SME has a maximum of 250 employees.
138 Renaud Bellais, ‘The European Defence Fund: an integrative factor of the EU defence industry’.
the part of large defence industries (the pull factor). An EU Governments-Industries Forum\textsuperscript{139} with participation of the European Commission could be helpful in this respect, assuming that SMEs would be adequately represented.

3 The characteristics of the Dutch DTIB

The DTIB of the Netherlands employs approximately 25,000 people, consists of about 350 companies and excels in high-technology products (radar and sensors, command and control systems, network infrastructure, cyber security, etc). The annual turnover is about €5 billion. R&D forms a substantial part (almost 40%) of the work load. Dual-use production is the dominant characteristic of the SMEs, which constitute the backbone of the Dutch DTIB. If limited to producing for defence purposes only, the Dutch DTIB contributes 0.7% of GDP.\textsuperscript{140} Various defence companies produce systems such as radars (Thales Netherlands) or even complete platforms, for example drones and small vehicles for Special Forces. The only large platform constructing defence company is Damen Schelde Naval Shipbuilding in Vlissingen, producing most of the vessels for the Royal Netherlands Navy. The Dutch defence industry depends for approximately two-thirds of their turnover on export.\textsuperscript{141}

Traditionally, the Dutch position is to extend the open market rules in the EU to the defence sector in order to create a level playing field for the national DTIB. In 2018, the Dutch government published its new Defence Industrial Strategy (DIS).\textsuperscript{142} Contrary to earlier versions, the 2018 DIS defined a number of strategic areas in which the Netherlands should be self-sufficient, meaning that industrial capacities need to be protected. This changed approach revealed ‘the paradox of trying to be a proponent of a level playing field in a European defence market without protectionism on the one hand and protecting industries on the other hand (…)’.\textsuperscript{143} The DIS defines the knowledge and technology areas in which the Netherlands wants to continue developing. For eight of the 11 defined technology areas the desired level of involvement is predominantly

\textsuperscript{139} As proposed in: Dick Zandee, Adája Stoetman, Bob Deen, \textit{The EU Strategic Compass for security}, \textit{Memo Defence Industry Strategy}, 30 November 2018, 11.


\textsuperscript{142} Netherlands Ministry of Defence and Netherlands Ministry of Economic Affairs, \textit{Memo Defence Industry Strategy}.

\textsuperscript{143} Robert Wester, Ronald Vuijk and Bram Pennekamp, \textit{Working towards successful European defence cooperation}, Berenschot.
defined as ‘joint development’.\textsuperscript{144} artificial intelligence; cyber, electromagnetic analysis and quantum computing; sensors (including quantum sensors and nano-sensors); human-system integration; space/satellites; 3D printing and new equipment; simulation and virtualisation; and robotics and autonomous systems. Furthermore, the DIS lists nine industrial capabilities, seven of which must be ‘national’: naval platforms; observation and intelligence-gathering systems and services (including small UAVs and satellites); information-/intelligence-processing systems, decision-making support systems and command and control systems (including sensor systems such as advanced radar systems and acoustic sensors); communication systems and sensors; training and instruction; materiel logistic support; combat service support.\textsuperscript{145}

The 2018 DIS reinforced the cooperation between the Dutch government, the knowledge/technology institutes and the defence industry – also known as the ‘triple helix’. However, Berenschot Consultants note that ‘it appears that the Dutch government has no clear picture of which future procurements detailed in its Defence Industry Strategy (DIS) memorandum will lend themselves to European or multilateral procurement’. This also raises the question of whether the Netherlands defence planning system is sufficiently prepared to participate in EDF programmes, based on European capability needs, for which national co-funding will be critical in order to guarantee success. The same expression of doubt is valid for large multinational procurement projects, in particular those carried forward by Germany and France.

4 Major European defence procurement programmes

In recent years, large European countries have launched several multinational defence procurement programmes. Most of these programmes are in their initial phase: that is, the at the drawing board for defining requirements, feasibility and architecture. For an overview, see Table 4.

\textsuperscript{144} Joint development is defined as: ‘Defence, knowledge institutes and companies will actively participate in the (further) development of the field in order to help determine the direction and timing of the development.’ The other two levels of involvement are: ‘active monitoring’ and ‘passive monitoring’. Netherlands Ministry of Defence and Netherlands Ministry of Economic Affairs, \textit{Memo Defence Industry Strategy}, 3.

\textsuperscript{145} ‘National’ means ‘to design and manufacture certain military capabilities itself’. It should be noted that the maritime sector – compared to land and air – dominates in terms of the ‘national’ label. Netherlands Ministry of Defence and Netherlands Ministry of Economic Affairs, \textit{Memo Defence Industry Strategy}, 4.
Table 4  Major European defence procurement programmes

<table>
<thead>
<tr>
<th>Programme</th>
<th>Aim</th>
<th>Participating countries</th>
<th>Participating industries</th>
<th>EU/NATO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eurodrone-Remotely Piloted Aircraft Systems (RPAS)</strong></td>
<td>Medium-Altitude Long-Endurance Remotely Piloted Aircraft Systems (MALE-RPAS) for long-range intelligence, reconnaissance and surveillance, to be operational by 2029</td>
<td>France, Germany, Italy, Spain</td>
<td>Airbus, Dassault Aviation, Leonardo</td>
<td>EU: EDF/EDIDP (European Defence Industrial Development Programme) funded; PESCO project (coordination: Germany)</td>
</tr>
<tr>
<td><strong>Future Combat Air Systems (FCAS)</strong></td>
<td>A ‘system of systems’: in addition to the Next Generation Weapons System (NGWS) or Next Generation Fighter (NGF) includes other air combat-related initiatives such as drones, sensors and remote carriers to build a true aerial defence interconnected network, to be operational by 2040</td>
<td>France, Germany, Spain</td>
<td>Airbus, Dassault Aviation, Indra Systems with involvement of Thales, MBDA, SAERAN and MTU Aero Engines</td>
<td>-</td>
</tr>
<tr>
<td><strong>Main Ground Combat Systems (MGCS)</strong></td>
<td>Future land warfare system to replace the German army’s Leopard 2s and the French army’s Leclerc main battle tanks. A multiplatform concept is favoured, and the MGCS may involve both manned and unmanned ground vehicles as well as unmanned aerial vehicles (UAVs). Deliveries are expected to commence by 2035, with initial operational capability expected in 2040.</td>
<td>France, Germany</td>
<td>KNDS (Krauss Maffei Wegmann + Nexter Defence Systems); Rheinmetall AG</td>
<td>-</td>
</tr>
</tbody>
</table>

146 The Eurodrone will also be capable of conducting close air support and interdiction (armed) missions. The German Parliament (Bundestag) has decided that Germany will procure the Eurodrone for unarmed missions only.
### European Next Generation Rotorcraft (ENGR)

**Aim:** Medium lift helicopter to potentially replace about 1,000 current generation helicopters of non-US NATO countries from 2035 onwards

**Participating countries:** France, Germany, Greece, Italy, UK (Spain and the US considering)

**Participating industries:** -

**EU/NATO:** NATO

### Timely Warning and Interception with Space-based Theatre Surveillance (TWISTER)

**Aim:** Space-based early warning sensor network and interceptor for air defence against hypersonic missiles

**Participating countries:** France, Germany, Finland, Italy, Netherlands, Spain

**Participating industries:** MBDA

**EU/NATO:** EDF/EDIDP funded; PESCO project (coordinator: France)

### European Patrol Corvette (EPC)

**Aim:** Vessel of maximum 110 metres length and maximum 3,000 tonnes to replace several classes of ships from patrol vessels to light frigates; prototype planned for 2026-27

**Participating countries:** France, Greece, Italy, Spain

**Participating industries:** Naviris (Naval Group + Fincantieri) + Navantia

**EU/NATO:** PESCO project (coordination: Italy)

All these major programmes are in line with European capability needs as defined in the Capability Development Plan (CDP) and related documents. However, it may not come as a surprise. The CDP lists 38 priorities. They are defined in such a general way that almost all national defence and procurement plans can be connected to these priorities. For example, ‘surface superiority’ and ‘power projection’ are two priorities for ‘naval manoeuvrability’, but what that means in terms of priorities in platforms and weapon systems remains unclear. Furthermore, the first Coordinated Annual Review on Defence (CARD) Report notes that ‘Allocations made to already launched national programmes leave limited margins for manoeuvre for collaborative spending until the mid-twenties.’ Consequently, the CARD Report argues for a ‘focus on capability development efforts on next generation capabilities, including at system and subsystem level, in an open and inclusive manner for all pMS, and prepare for the future together within six focus areas: Main Battle Tank, Soldier Systems, European Patrol Class Surface Ship, Counter-UAS – Anti-Access/Area-Denial, Defence in Space, Enhanced Military Mobility.’

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148 European Defence Agency, *2020 Card Report. Executive Summary*; pMS stands for ‘participating Member States’ – a distinct term for EDA use as EU member state Denmark is not participating in the EDA due to its EU defence opt-out.
In other words, major collaborative programmes either relate to the CDP priorities and/or are the result of the CARD exercise, which indicates potential for multinational procurement programmes based on national defence plans.

5 European Defence Fund

The implementation of the two pilot programmes preparing the EDF\textsuperscript{149} is still ongoing, but in the meantime the EDF 2021-2027 has started. On 30 June 2021 the European Commission launched 23 calls for proposals with a total budget of €1.2 billion (out of the €8 bn budget for the whole timeframe).\textsuperscript{150} The 23 calls are grouped in 15 categories. See Table 5 listing the 15 categories.

Table 5 The 15 categories of the EDF calls 2021

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defence medical response, chemical biological radiological nuclear (CBRN) biotech and human factors</td>
</tr>
<tr>
<td>Information superiority</td>
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<tr>
<td>Advanced passive and active sensors</td>
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<tr>
<td>Cyber</td>
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<tr>
<td>Space</td>
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<tr>
<td>Digital transformation</td>
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<tr>
<td>Energy resilience and environmental transition</td>
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<tr>
<td>Materials and components</td>
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<tr>
<td>Air combat</td>
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<tr>
<td>Air and missile defence</td>
</tr>
<tr>
<td>Ground combat</td>
</tr>
<tr>
<td>Force protection and mobility</td>
</tr>
<tr>
<td>Naval combat</td>
</tr>
<tr>
<td>Disruptive technologies</td>
</tr>
<tr>
<td>Open calls for innovative defence technologies.</td>
</tr>
</tbody>
</table>

\textsuperscript{149} The Preparatory Action on Defence Research (PADR) and the European Defence Industrial Development Programme (EDIDP).

The largest amounts of money are allocated to combat systems: air combat (€190 million), air and missile defence (€100 million), ground combat (€160m) and naval combat (€103.5m) – all together €553.5m, or 46%. The calls in the air and ground combat categories seem to be related to the FCAS and MGCS programmes. Thus, they could offer opportunities to other EU member states and defence industries in other European countries – including SMEs – to join the technological and industrial development of both programmes. Of the total budget, 5.76% (€53.5m) is dedicated to cross-border participation by SMEs.

6 Opportunities for Dutch defence industry

Major European procurement programmes

From a defence-industrial perspective, size and volume are key considerations for creating European collaborative procurement programmes. Scale counts from an economic point of view. Programme leadership by one or more industries from larger countries also enhances potential for exports outside the EU. France and Germany are participating in all six procurement programmes except one (EPC), listed in Table 4. Italy is present in four out of six programmes. For Spain the same number applies while Madrid is considering joining another programme. Three smaller countries are already participating in one programme (Finland and the Netherlands in TWISTER) or in two (Greece in TWISTER and ENGR). Early involvement – during the design phase – will create better opportunities for future involvement of the defence industries of smaller countries in large European procurement programmes. Joining later increases the risk of missing the boat, both for influencing the definition of operational and technical requirements as well as realising industrial contributions.

Taking into account the characteristics and areas of excellence of the Dutch defence industry, as well as the requirements of the Netherlands Armed Forces, the following major European procurement programmes could be considered for participation:

1. FCAS: The knowledge and industrial capacities in the aerospace sector offer potential for the Dutch DTIB to contribute in areas such as aircraft components, observation and intelligence-gathering systems and services, information-/intelligence-processing systems, and communication systems and sensors. The Royal Dutch Air Force has no need for a Next Generation Fighter – as the F35 will fulfil the requirements until the middle of the 21st century – but participating in the unmanned systems development and the FCAS network would certainly serve the Dutch interests to collaborate with the larger European countries in view of standardisation and improving interoperability.
2. **MGCS**: The Dutch defence industry has relevant niche capacities in the land sector, for example communication systems, sensors and simulation equipment, protection materials and digital/IT systems. Dutch land forces work closely with their German counterpart, and the 414th German tank battalion has a fully integrated Dutch tank company operating the same Leopard 2 version. From that perspective, for the Royal Dutch Army the Franco-German next generation tank (as well as the potential development of future generation armoured vehicles) is of primary interest to guarantee 100% interoperability with the German army.

3. **ENGR**: The aerospace industrial capacities (see FCAS) make the Dutch DTIB another candidate for participation in ENGR. Currently, the Dutch army has the Cougar helicopter (flown by Air Force personnel) available as a medium-sized helicopter. Assuming that the requirement for a replacement helicopter is to be planned, ENGR could fulfil this need while standardising with important European partners on the same type of medium-sized helicopter.

Air defence is a capability area for which the Netherlands could look for industrial cooperation with European partners, in particular by contributing to radar systems. The Netherlands and Germany already cooperate extensively in the air defence sector. Recently, decisions were taken in Berlin on several air defence investment programmes, including radar systems. Other investment decisions have been made: for example regarding small vehicles for Special Forces, for which the Dutch defence industry could be an interesting supplier.151

**EDF**

The Netherlands has participated in the two EDF pilot programmes and the Ministry of Defence has co-financed one of the EDIDP projects (SEA DEFENCE). In total six Dutch entities are participating in EDIDP-2019 projects and the government expects larger industrial participation in the EDF. Dutch interest is primarily focused on: research and development of sensors for ballistic missile defence; quantum technologies; and technologies related to simulation, human factors, future naval platforms, artificial intelligence and cyber.152 At the end of June 2021 the European Commission released the list of awarded projects under the EDIDP 2020 budget. Eight Dutch entities will participate in projects with a total financial volume of €50 million in areas such as


counter-UAS, space situational awareness (SSA) and sensor networks for maritime surveillance.\textsuperscript{153}

It seems that the EDF-2021 calls offer good potential for the Dutch DTIB to tender for programme participation (grants decisions will be made before the end of 2021). Many of the categories and calls of EDF-2021 connect with Dutch interests. Thus, the question will be how the government, knowledge institutes and industry – cooperating in the triple helix – will prioritise and select the best opportunities for combining governmental and industrial investment.

\textsuperscript{153} List of awarded projects 2020, European Commission, \textit{European Defence Industrial Development Programme (EDIDP)}. See also: Ron Nulkes, \textit{Het EDF is nu echt van start gegaan}, MIDV, July 2021.
Conclusions and recommendations

As highlighted by the recently published 2021 Strategic Foresight Report, strengthening the EU’s open strategic autonomy and making the EU more resilient and ‘future proof’ is one of the EU’s main objectives for the coming years. In this report, we looked at the implications of this open strategic autonomy agenda for the EU’s industrial and trade policy, with a dedicated part on the defence industrial sector. We examined the compatibility of the different aims that underpin this agenda and explored how the EU could best protect and strengthen its critical industries while simultaneously preserving an open economy. We also examined how a member state such as the Netherlands could contribute to and benefit from the agenda. The report was divided into two separate but linked parts. Part I examined the implications of the EU’s open strategic autonomy agenda for its industrial and trade policy in general terms. Part II, meanwhile, took a closer look at the ambitions for open strategic autonomy in one of the EU’s key industrial ecosystems, namely the defence industrial sector. From the two parts, we derive the following conclusions and recommendations.

Part I

Part I of the report reviewed the EU’s open strategic autonomy agenda in the context of its industrial and trade policy. We identified six main goals that underpin the EU’s open strategic autonomy agenda in these policy areas: first, to strengthen the EU’s resilience and reduce its dependencies in its strategic industrial sectors; second, to protect the EU against economic coercion and unfair trade practices; third, to protect the EU’s critical infrastructures and technology; fourth, to protect and advance the EU’s (sustainability, digital, labour and human rights) values and standards; fifth, to foster and protect the EU’s internal level playing field; and sixth, to foster and protect an open global economy. For each of these aims, we looked at how the EU intends to achieve them, by reviewing some of its recent initiatives and proposals.

Our analysis showed that the twin aims of strategic autonomy and the preservation of an open economy are not necessarily incompatible, and may even be complementary. There is little indication, at least on paper, of a turn towards an overly activist or interventionist

155 Joint Research Centre, Shaping and securing the EU’s open strategic autonomy, 1.
industrial or trade policy and the Commission appears committed to a proportional, inclusive and case-by-case approach. Moreover, by taking steps to engage like-minded partners, develop new partnerships, reform the WTO, and level the international playing field, the EU is not only improving its autonomy, but is also making a conscious choice for openness and engagement.

That being said, there remains an inherent tension between the two aims, and the pursuit of strategic autonomy does come with certain trade-offs that ought to be acknowledged – especially as these trade-offs may be well be necessary. Internally, such measures as the revision of state aid and antitrust rules could have a direct impact on the EU’s internal open economy and could risk distortions in the internal level playing field. Externally, measures such as the CBAM and the export credit facility could well be perceived as ‘disguised protectionism’ by the EU’s trading partners and could potentially trigger retaliatory and/or protectionist responses.

In order to ensure that the two aims do not unnecessarily contradict each other, the EU (Commission) would be advised to:

- Consistently apply the principle of proportionality to its industrial and trade policy, using its current evidence-based approach to ensure that any public interventions made are, in fact, necessary and proportional.
- More clearly formulate the aims and non-aims of open strategic autonomy, not only to reassure partners, but also to hold itself accountable to its commitments.
- Make the ‘strengthening of the international framework of interdependence’ the core component of its open strategic autonomy agenda. While it is certainly important to strengthen EU resilience, a focus on tackling the symptoms rather than the root causes of the rise in protectionism, economic coercion and unfair trade practices could easily lead to a spiralling of protectionism. The most sustainable solution to these challenges, and hence the most effective path towards increased strategic autonomy, is to strengthen the framework that underpins the global open economy.
- Take extra care that its investment initiatives, its industrial alliances and its IPCEI do not lead to competition distortions and/or the concentration of power in the hands of a few companies and/or member states. This means being modest in revising the EU’s state aid rules, applying strict inclusive criteria to investment initiatives and industrial alliances, and actively encouraging and safeguarding the diversity of the alliances.
- Have in place measures to prevent and protect the EU against retaliation. To minimise the risk of retaliation, the Commission would do well to engage in a transparent dialogue and work with like-minded partners who share similar challenges.

It should be acknowledged that the Commission seems to have taken seriously member states’ concerns over the fuelling of protectionism and competition distortions.
The Netherlands can play an active role in holding the Commission to account on its commitments. Although the Netherlands only cautiously backed the EU’s open strategic autonomy agenda, it too stands to gain from it. However, in order to make optimal use of EU efforts to achieve open strategic autonomy, the Netherlands would have to be proactive in identifying its own (supply chain) vulnerabilities, in shaping the instruments that are being developed to counter economic coercion and unfair trade practices, and in facilitating cross-border industrial cooperation. In particular, the Dutch government would be advised to:

- Conduct its own regular monitoring of its strategic dependencies – as also encouraged by the Commission – identifying vulnerabilities in its own supply chains and identifying areas where the Netherlands would benefit from diversification, partial reshoring, investments and cross-border projects.
- Proactively facilitate, where beneficial, the participation of Dutch industries and SMEs in EU investment projects (such as Horizon and EDF), industrial alliances and IPCEI, through active guidance and/or funds to guarantee successful participation.
- Play an active role in shaping the instruments now being developed to counter economic coercion and unfair trade practices, ensuring that the corresponding tools not only remain proportional, but also provide the appropriate response to the increase in protectionism, distortions in the level playing field, and coercive dynamics.
- Continue to play an active role in further defining the concept of open strategic autonomy and its aims and non-aims – for instance through such contributions as the Spain-Netherlands non-paper on strategic autonomy while preserving an open economy.
- Continue to engage like-minded actors to ensure that the EU’s open strategic autonomy agenda pays equal attention to the aim of strategic autonomy and the aim of the preservation of an open economy. The Commission – especially its trade and competition departments – could be an important ally in this regard, considering its own stated commitment to openness, proportionality and inclusiveness. Moreover, there are several member states, including Spain, Sweden and Finland, that share(d) the Netherlands’ initial concerns about the EU’s ambitions for strategic autonomy.

**Part II**

Part II reviewed the open strategic autonomy agenda in the context of the EU’s defence industrial policy. It was shown that the main discussion point related to the European defence industry sector is how strategic autonomy could be strengthened inside the EU – how it could be consolidated by strengthening intra-European cooperation through mergers and other models to create a true European Defence Technological and Industrial Base (EDTIB). The major challenge in this regard is still to overcome the intra-European fragmentation as national governments continue to use Article 346 of the
Treaty on the Functioning of the European Union to exempt defence procurement from the common market rules. Given this challenge, the following points are of note:

- Strengthening the European Defence Technological and Industrial Base would require increasing cross-border defence cooperation, including between governments (the user side) and defence industries (the supply side).
- Cooperation between major European defence companies is growing in all three sectors (air, naval, land), but in most cases the principle is ‘sharing the cake’ rather than real consolidation. The only exception is MBDA Missile Systems with integrated and specialised industrial branches in France, Germany, Italy, Spain and the United Kingdom.
- The European Defence Fund offers potential for breaking the national chains of demand to supply by providing financial incentives for cross-border defence industrial cooperation.

It was further shown that strengthening the EDTIB also requires improving resilience and reducing reliance on external suppliers – also labelled as ensuring non-dependency in key defence technological and industrial capacities. In this context, the following points are of note:

- The risk of endangering security of supply from outside Europe exists mainly in circumstances in which US armed forces had preferential treatment in the delivery of munitions compared to European partners. In cases of large-scale conflict, this could lead to serious consequences, limiting the operations of European armed forces.
- Overall dependency on non-European suppliers with regard to emerging and disruptive technologies (artificial intelligence, robotics, unarmed systems, etc) also affects the defence sector. Due to the dual-use character of such technologies (including in the space sector), it is essential to closely coordinate civil, defence and space technology research as recognised in the European Commission’s agenda.
- The European Defence Agency has conducted important work on defining key technological priorities for military application which can provide the defence sector’s input for the ‘Technology Roadmap’ that the European Commission will present in 2022. The capability-driven approach remains essential, but cannot be limited to the relatively low level of ambition that has characterised the EU’s Common Security and Defence Policy so far.
- The EU foreign investment screening regulation is important to prevent take-overs of industrial companies, which could endanger non-dependency in security and defence. Hence, it is essential that member states incorporate the regulation as soon as possible in national legislation. Promotion of intellectual property rights as a catalyst for better economic performance is an area of increased attention of the European Commission, which is particularly meaningful for small and medium-sized enterprises – also in the defence sector.
Part II of this report also reviewed the implications of the open strategic autonomy agenda for the Dutch defence industry. It came to the following conclusions:

- Countries with a national defence industrial base predominantly composed of small and medium-sized enterprises – such as the Netherlands – continue to face serious problems entering the markets of the larger EU member states, as they operate with supply chain companies, including SMEs, on national territory.
- As the EDF provides specific financial incentives for SMEs, Dutch defence companies have a major interest in optimal use of the fund. Co-funding by governments is essential for follow-through of EDF projects towards the development and production phases. It requires that the Dutch Ministry of Defence not only use the triple helix with knowledge institutes and defence industries for that purpose, but also integrate EDF programming with its own defence planning.
- Three major European procurement programmes that could be considered for Dutch participation, from both defence planning and industrial contribution sides are: the Franco-German-Spanish Future Combat Air Systems (FCAS); the Franco-German Main Ground Combat Systems (MGCS; Dutch interests has already been announced); and the European Next Generation Rotorcraft (ENGR). Air defence is an area for which German-Netherlands cooperation could be extended to the defence industrial sector, for example with regard to radars.