European Drone Clubs Stall Strategic Autonomy

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European armed forces continue to depend on the imports of advanced drones from the United States and Israel. To contribute to their strategic autonomy, Europeans need to first align their strategic requirements to deliver a joint European drone solution.

By Dominika Kunertova

Large unmanned aerial vehicles (UAV) with unprecedented endurance and sensor packages that enhance military performance in intelligence, surveillance, and reconnaissance (ISR) operations have been operational for more than three decades. But where are European-made advanced drones? In 2021, European countries continue to depend on the imports of American MQ-9s and Israeli Herons and Hermes 900. Missing advanced drones perpetuate Europe's technological dependence and limit its autonomy of action.

Despite the large amount of resources invested into research and development projects over the past 20 years, European countries have been struggling to move from the experimental development of demonstrators and prototypes into the operational stage. This is because of "drone clubs" that epitomize oligopolistic rivalries in the European aerospace defence sector. These competing clusters of major European industrial players able to participate in the production of advanced drones significantly delayed the development of unmanned military technology in Europe.

While the American MQ-9 Reaper surpassed 6 million flight hours in 2019, the ongoing European flagship drone project will develop a first equivalent of the Reaper only by 2025, more than 30 years after the first deployment of American Predators in Bosnia in 1994. Although Eurodrone is considered central to achieving the EU's ambition of strategic autonomy, its competitiveness vis-à-vis the popular MQ-9s and Herons is questionable. Eurodrone is already suffering from cost overruns and delays, mainly caused by the "to arm or not to arm" dilemma. While at the EU level the focus is on the importance of keeping unmanned platforms remotely piloted, rather than fully autonomous, the question of weaponization remains hotly discussed at the national level. The German drone debate has proven especially consequential for the European joint armament projects, in which Germany is one of the leading players.

Drones Securing Europe

Drones come in different shapes and sizes. Most military UAVs are small drones that provide tactical ground sur-

Key Points

- European-made advanced drones would make an important contribution to achieving EU strategic autonomy.
- In 2021, only five European countries operate advanced drones, all of which are either American or Israeli unmanned systems. Europeans lack their own operational advanced drone capability due to divergent requirements and industrial rivalries.
- The long-term solution is to break the competing "drone clubs" that have turned efficient multinational cooperation into an oxymoron.
- Due to delays and the dubious competitiveness of the Eurodrone (still in development), Europeans should channel their efforts into next-generation drone capability.

veillance and transmit real time information for troops to "see beyond the hill." These drones are used to enable artillery targeting or detecting and disabling explosive devices. Europe's problem is related to UAVs labelled as Class III, which come in two variants: the medium-altitude, long-endurance (MALE) and high-altitude, long endurance (HALE). In contrast to small (Class I) and tactical (Class II) drones, Class III advanced drones are as large as a conventional fighter jet and operated through satellite communication links. They have a wider operational range, fly longer, and carry a heavier payload, either sensors (ISR drones) or weapons (strike-capable drones). The American MQ-9 series developed by General Atomics is the drone of choice in most transatlantic countries.

Advanced Drones in Europe

	UAV Platform (Quantity)	Operational Status
United Kingdom*	MQ-9 Reaper (9–10)	Since 2007
	Protector (up to 26)	To enter service in 2024
France*	MQ-9A Reaper (12)	Since 2014; new batch delivered in 2020
	Harfang (2)	Since 2008; today used only for training
Germany	Heron 1 (8)	Leased in 2010
	Heron TP (5)	Leased in 2019
Italy	MQ-1/ RQ-1B Predator (6)	Since 2004
	MQ-9A Reaper (6)	Since 2011
Spain	MQ-9A Reaper (4)	Delivered in 2019
Greece	Heron 1	To be leased from Israel
Switzerland	Hermes 900	Delivered in 2019
Belgium	MQ-9B SkyGuardian (4)	To be delivered in 2023
Netherlands	MQ-9 Reaper (4)	To be delivered in 2021
NATO	AGS Fleet of 5 Global Hawks	Initial operational capability reached in February 2021

* Armed drones Origin: United States Israel

The performance of advanced drones has been constantly improving. While the first Reapers in the 2000s had an endurance of 24 hours, the latest SkyGuardian stays aloft for 40 hours without refuelling and is certified to NATO's airworthiness standards. The only operational military HALE platform, Global Hawk, developed by the American company Northrop Grumman, is a remarkable ISR asset flying for 34 hours at an altitude of up to 18 km (commercial airliners fly at 10-13 km) with a 22,000 km range. Although Global Hawks do not carry weapons, their strength lies with highly capable ground-surveillance radars and cameras.

MALE drones in the European landscape remain scarce. In 2021, only five European states operate MALE drones and four others are at various procurement stages (see table). Their rather small UAV fleets contain either a version of the American MQ-9 or Israeli drones. Moreover, Italy, Poland, Greece, and Romania host the US Air Force's Reapers for missions in the Middle East and Africa. No European country plans to acquire a national HALE drone capability. Only Germany put some serious yet unsuccessful efforts into its acquisition, which resulted in two cancelled programs: EuroHawk in 2013 and Pegasus in 2020.

The absence of European-made advanced drones is problematic for four reasons. First, having their own MALE platform would enable European countries to collect data and conduct operations autonomously, hence reducing their dependence on foreign technology. Strong political-strategic reasons lead European countries to pursue technological sovereignty. Whereas NATO will continue to be the centerpiece of transatlantic security, Europeans are well advised to develop their own capacities, particularly if Washington, for instance, is busy with Sino-American competition contingencies in Asia.

Second, with their own competitive platform, Europeans could counterbalance Chinese exports. As the international proliferation of MALE drones intensifies, Europeans should be able to embark on their own "drone diplomacy" to create an informal network of allies using western UAVs and compete with Chinese drones flooding the markets in the Middle East and Africa, and even in Europe (Serbia).

Third, advanced drones are important force multipliers in remote warfare. Under the condition of air superiority, they provide better-performing and cheaper ISR capability than a manned alternative. Europe does face security threats that can be addressed remotely, evidenced by rich operational experience over the past decade. While the British Reapers have conducted extensive ISR and strike operations in the Middle East, France's Reapers are operating in the Sahel, or have provided domestic surveillance during high-profile events. Italy has deployed its Reapers, among other places, over the Mediterranean Sea. German Heron drones have supported the United Nations mission in Mali.

Fourth, developing Europe's own advanced drone can provide job opportunities for local subsidiaries, advances in technological know-how, and interoperability through a single European drone system.

Where are European Advanced Drones?

Advanced drones are neither cheap nor easy to operate, let alone to develop. This creates different layers of proliferation: small UAVs are omnipresent, but advanced drones are still rare. European countries have various strategies to acquire the latter. They can either adopt foreign platforms off

the shelf or adapt foreign platforms to national requirements, such as the Franco-Israeli Harfang or the British-American Protector. Countries can also access this capability through international organizations. The most prominent example is the Alliance Ground Surveillance. NATO members are provided with the HALE drones by a commonly owned and operated fleet of five Global Hawks, just like NATO's air surveillance capability AWACS.

For the advanced drone capability to make a lasting contribution to the EU's strategic autonomy, Europeans must develop their own advanced UAVs. This is the only viable long-term solution to fixing Europe's capability gap. European leaders' relative lack of interest in UAV projects, the 2008 financial crisis, and the critical failure to appreciate the technological complexities of these systems have all led to a late adoption of foreign platforms in the mid-2000s.

Today, the main causes of delays are divergent national strategic needs and defence industry strictures. Most major development efforts have stalled due to the structural condition of the European aerospace defence sector, which fuels exclusion-inclusion dynamics. "Drone clubs," formed out of the rivalries among the major industrial players (Dassault, Airbus, BAE Systems, and Leonardo), launched several parallel competing projects in the late 1990s and 2000s, resulting in inefficient spending, technical problems, and without delivering an operational drone. Most were abandoned. For instance, while the United Kingdom and France were developing Telemos, Germany and Italy teamed up to launch a European UAV. France joined later, though it was already working with the Netherlands on EuroMALE. France, Germany, and Spain started to work on Talarion to counter the British Mantis. Not to mention combat drone demonstrators: the BAE System's Taranis, the Spanish-German Barracuda, and the French-led nEUROn.

The main ongoing MALE drone project Eurodrone promises the ability to operate independently of foreign technology. For example, it would be supported by Galileo, the EU satellite navigation system, and would fly in non-segregated airspace. It was launched by the European Council in 2013, also thanks to intensive industry lobbying on the part of Airbus (with Germany in the lead, along with Spain), Dassault (France), and Leonardo (Italy).

Yet, Eurodrone's competitiveness is uncertain due to potential cost overruns. Differing technical requirements of the four participating countries also caused delays and resulted in designing two Eurodrone versions. Because the issue of weaponization remains politically sensitive in Germany, Eurodrone is mainly an ISR capability. Only its second configuration can be armed.

The project is now in the advanced development phase with the contracts for 63 Eurodrones to be signed this spring. Regardless of the time lapse, a push for Eurodrone continues at the EU-level: It has become an EU Permanent Structured Cooperation project and qualifies for financial support from the European Defence Fund.

Disentangling Drone Clubs

Developing advanced drones is a costly endeavour that no European country can afford on its own. Teaming up with others is a reasonable way to achieve cost efficiency. Yet, the competing "drone clubs" have turned efficient multinational cooperation into an oxymoron, with multiple projects running at the same time, and working on the same capability. Europeans need to transform the competitive nature of drone clubbing. Alas, incentivizing collaboration at the European level is not enough when national politics and self-interest are prevalent. The maxims of effectiveness in terms of military performance and costs, rather than parochial national interests, should be the guiding criteria for getting the cooperative arrangements right.

Any major capability development project needs political capital and financial security. However, launching one does not automatically lead to better and cheaper capabilities. Divergent strategic needs and industrial nationalism are currently the main obstacles to a successful joint armament project. First, the strategic dissonance leads to nation-specific technical requirements. France's geopolitical ambitions in terms of long-range power projection and strike capability clash with Germany's preference for defence-only operations and multinationalizing military ca-

Further Reading

Andrea Gilli / Mauro Gilli, **"Emerging Technologies: Unmanned Aerial Vehicles,"** in: Hugo Meijer / Marco Wyss (eds.), *The Handbook of European Defence Policies and Armed Forces* (Oxford: Oxford University Press, 2018), pp. 743–59.
Details the progress and setbacks in the development of UAVs in Europe.

Marc R. DeVore / Nora Kristine Stai, **"When Collaboration Works,"** *European Review of International Studies* 6:2 (2019), pp. 18–42.
Explains the factors that contribute to a successful multinational armaments collaboration among European industries.

Dominic Vogel, **"Future Combat Air System: Too Big to Fail,"** *German Institute for international and Security Affairs,* 2021.
Explores how differing French and German perceptions and the high technological complexities jeopardise success of the major strategic armament project.

pabilities. This dissonance can raise the project's overall costs, such as testing two prototype demonstrators instead of one. Indeed, while France has already armed its Reapers and conducts strike missions, in Germany the co-governing Social Democratic Party is not ready to support armed drones. The new federal government after the September 2021 elections can further shuffle the drone debate, adding political ambiguity to future German armed drones.

Second, it makes a difference how tight of a grip the government maintains on the national defence industry. In contrast to the French centralised approach, in Germany state-firm relations are more diffused among the four actors (government, parliament, armed forces, and industry). National industrial autonomy and unfavorable relative gains outlooks can stand in the way of a European-wide solution. This can complicate the regulation of intellectual property rights and the subsequent use of co-developed technologies and clog technology transfers across the borders and from manufacturers to maintenance.

Europe's current MALE drone ship has already sailed due to counterproductive competition and the legacy of American drones. Three countries participating in the Eurodrone endeavour already use Reapers, making Germany the largest client for Eurodrone. Meanwhile, the French Air Force has formed a second Reaper squadron and even the EU's agency Frontex is buying Israeli advanced drones.

Europeans should channel their efforts into the next-generation drone capability. Transcending deeply entrenched patterns is not an easy task, as the development of future combat air systems confirms. The déjà-vu of club dynamics that fracture collaborative efforts is conspicuous: The Tempest (United Kingdom, Sweden, Italy) and the FCAS/SCAF (France, Germany, Spain) are two parallel projects that include developing loyal wingman UAVs. Without leadership, power politics and competing interests put financial sustainability and technological cooperation into question, endangering a new major capability development cycle in Europe. How many European-made air combat systems can Europeans afford?

If two or more countries want to jointly develop high-end drone capability, they need to work out a whole range of details to address the root causes of the past failures. The remedies should include aligning the strategic needs into one set of requirements; dividing industrial ownership and equitable workshares by squaring fairness with effectiveness; making the know-how sharing transparent; creating a Europe-wide market of contractors; and agreeing on export rules for the participating countries. This can smooth out arrangements so that multinational armament projects deliver. Otherwise, European leaders may give the impression that a flow of joint armament initiatives is a convenient political PR-move to cover a rather lackadaisical attitude towards developing European capabilities, while dependencies on American manufacturers remain.

Looking for Ambition

The quest for technological edge in the global drone market has become a source of political prestige. Europeans need to bundle their efforts to develop a next-generation drone capability and apply the lessons learned from the past two decades: that diverging strategic needs and industrial rivalries lead to competing "drone clubs," duplication of efforts, and ultimately project cancellations. European armed forces will remain locked in foreign advanced unmanned platforms in the short to mid-term, as the future European MALE drone alternative will struggle in a well-established infrastructure network of American MQ-9 and Israeli Heron/Hermes 900 users.

The puzzling drone capability gap hinders Europe's military emancipation. Technological autonomy is important. Although a new EU industrial policy aims to shape the European defence market, the latter is in fact 27 national markets. Pouring more EU funding into defence, which the COVID-19 pandemic slashed from 11.5 billion to 7 billion EUR, does not automatically overcome the EU's inability to agree on a common grand strategy – one that would generate the political ends to guide the decision to use these drones. Strategic autonomy must come hand in hand with strategic maturity.

Dominika Kunertova is a Senior Researcher in the Global Security Team at the Center for Security Studies (CSS) at ETH Zurich.

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Editor: Brian G. Carlson
Assistant Editor: Boas Lieberherr
Layout: Miriam Dahinden-Ganzoni

Feedback welcome: PolicyPerspectives@sipo.gess.ethz.ch
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