European technological sovereignty: a response to the Covid-19 crisis?

The issue of European technological sovereignty burst into the political debate in the wake of the Covid-19 crisis. In the face of the supply difficulties and threats to technology highlighted by the crisis, it obeys an instinctive reflex of willingness to regain control and the possibility of choice. This political statement, taken up by the Croatian Presidency of the European Union (EU), opens new perspectives but also raises a series of problematic questions.

This concept has recently been mobilized by many actors, and we should recall the speech by French President Emmanuel Macron, on 7 February 2020, at the Ecole de Guerre (War College), when he stressed the need to regain at European level a policy of sovereignty for critical infrastructures and called for a common policy of economic and digital sovereignty. In this speech, a parallel demand emerged for the affirmation of national sovereignty and the reaffirmation of European forms of sovereignty, an association which also illustrates the fluidity

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1 See for example André Loesekrug-Pietri, « Contact tracing : une opportunité unique pour l’Europe de faire preuve d’ambition et d’innovation », L’Opinion, 26 April 2020 (« The capitals must not only talk about Europe but implement it, otherwise they risk even more the digital fragmentation that is the real cause of our technological downgrading »).


of the contours of these concepts. This expression may appear, in some ways, to be an overall philosophy, but the nature of the various announcements seems to lay the foundations for future political mechanisms, particularly within the framework of the European Commission.

We need to briefly go back to the origin of this debate in order to better understand the current issues at stake.

**European technological sovereignty: a French invention?**

European technological sovereignty appeared in the French and European debate in the early 2000s. In 2000, the President of the Belgian Senate, Armand De Decker, proposed a common European defence strategy with a commission that could be the driving force behind technological and industrial policies. But these visions do not develop a concept of sovereignty that remains confined to the national level.

Since 2001, however, there have been reflections on the Galileo satellite positioning system which express a vision of European sovereignty associated with technology, and some intellectuals are calling for a form of European sovereignty, even though the question of the relationship between national and European sovereignty is far from being settled. In 2002, European Commissioner Loyola de Palacio commented on the launch of the Galileo program by insisting on the fact that this system would allow Europe to “maintain its autonomy, sovereignty, technological capacity and control of its knowledge.” This element confirms the extent to which Galileo represents a key moment for the expression of European policies combining sovereignty and technology, an aspect that will be confirmed later by the growth in the political importance of the system as it is set up.

The theme of European technological sovereignty came up forcefully at the conference organized in Paris in April 2004 on this subject by the Pan-European Union of France, in the presence of the Prime Minister and several members of the government. The same organization promoted a conference in Toulouse on 17 November 2006 on the theme of space policy and European sovereignty.

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4 President Emmanuel Macron’s speech at the Ecole de Guerre is also indicative of the variations in definitions that can be seen in the various calls for European technological sovereignty. This speech evokes networks and digital technologies, refers to European regulation but also to competition policy and industrial policy. It offers a broad spectrum, but it should be noted that the question of the extent of “European technological sovereignty” is far from being settled, as we observe varying definitions in the different documents. For example, we can cite an intervention by the Italian Minister for European Affairs, Vincenzo Amendola, who calls for European technological sovereignty with reference to digital technology (“Amendola, rivedere regole mercato interno alla UE », ANSA, 6 December 2019).


This vision takes up another theme promoted by French leaders at the time, foremost among them President Jacques Chirac, that of “Europe-power” (Europe-puissance), and combines it with a demand for technological sovereignty in the context of competition with other major groups, Asia and the United States. France has an acute perception of the attention needed with regard to the continuity and control of technologies, a vision that derives from the priority given by Paris to strategic autonomy. That said, France also seeks to Europeanize this project, firstly turning to its German partner.

However, it must be noted that the other Member States of the European Union remained rather circumspect about this French vision. The vision of Europe-power that justifies such a concept does not attract support, as Europeans express little or no desire for power. Moreover, this type of policy can be quite easily perceived as a simple extension to Europe of a French concept, which also represents an obstacle given the sometime difficult perception of France within Europe. We are therefore witnessing a series of derivative proposals that participate in the themes of European technological sovereignty without taking up the overall statement.

For example, French officials are bringing together their European counterparts to demand sovereignty at the European level, particularly in the aerospace and defence industries.\(^{12}\)

At the same time, Paris is considering the need to strengthen the instruments for protecting so-called “sensitive” industries, with a focus on the technological spectrum in the broadest sense.

In 2004, the French system for controlling foreign investment in strategic sectors was reviewed and expanded.\(^{13}\) Here again, France appears to be a pioneer, alongside the United Kingdom, while the sensitivity of other countries is gradually increasing.\(^{14}\) Europe’s technological and industrial countries, Germany, but also Italy and Spain, are gradually integrating these visions and set up protective measures.

On the European side, the issue of consolidating the defence technological and industrial base (DTIB) has also become more prominent, underpinning the various attempts to put this priority on the European agenda.

For a long time, this increase in power did not really take place. The beginning of the decade marked a rapprochement with the United Kingdom in the wake of the joint intervention in Libya. Strategic cooperation between Paris and London was strengthened, but remained limited to bilateral cooperation and had no knock-on effect on the rest of the Union.\(^{15}\) Here again, one can see the limits of an approach based on the defence industries, which has the twofold defect of arousing the reticence of those who are guilty of national strategic sovereignty and those who are more pacifist and reserved with regard to common defence.

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The digital shift and the broadening of the concept

Digital issues have led to a remarkable increase in interest about technological sovereignty. In recent years, there has been a growing awareness of this issue in the European context, with an extension of the concept of strategic industry to networks and digital. This is of course the case in France, which demilitarizes the Paris approach, but it is also true of the main partners, who are moving towards the idea of the need for greater control of digital instruments. The Snowden affair in 2013 contributed to a change in the German position: the revelation of systematic American electronic espionage activities focusing on members of the German government raised awareness of the entire political class. These revelations struck a sensitive chord, that of freedom of expression and control by political power, a subject that rekindled German historical fears. It is also from this moment that we witnessed in Germany a growth of the theme of “digital sovereignty”, a trend that allowed a convergence with the traditional French position. The recent European GAIA-X cloud project led by Germany illustrates this evolution of a Member State towards greater sensitivity to data sovereignty issues.

Emmanuel Macron’s presidency took the issue of extended technological sovereignty a step further and marked the return to the forefront of the issue of European technological sovereignty.

European sovereignty but also technology and digital policy were important issues in Emmanuel Macron’s campaign for the 2017 presidential election. We saw this agenda move forward at the French level in 2018, with the Villani Report on Artificial Intelligence, a series of government initiatives aimed at speeding up policies in this area and implementing the Franco-German and European J.E.D.I. initiative, designed to create a European-style DARPA. These various initiatives, which combine declaratory aspects with concrete steps, nevertheless illustrate the fusion that is taking place in France between the historical approach of technological sovereignty synonymous with strategic autonomy and oversight of the defence industries and a modern approach to positioning in the context of digital and data industries. This synthesis between the requirements of a modern technology, eager to compete in a context of strong international competition with the United States or China, and those of the heavyweights in the aerospace, security and defence industries, groups often controlled by the state, represents not only a compromise at the French national level but also the possibility of European convergence, given the growing importance of the issue of digital sovereignty in the member states.

The debate on the deployment of 5G technology in Europe and the positions taken by the American administration on Chinese suppliers contributed to this awareness. Suspicions related with Huawei or ZTE confirms an important conceptual shift, that of concern both for

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18 It should be noted that Cédric Villani has made himself the bearer of a defence of European sovereignty in the context of international technological competition (Cédric Villani, « Rebâtir l’Europe sur le projet scientifique », Le Figaro, 14 April 2017).
19 For example, Bruno Le Maire, Minister for the Economy, invokes “European technological sovereignty” in a vision of defending Europe’s technological and industrial capacities against international competitors, from digital technology to space (Sylvain Rolland, « Bruno Le Maire : ‘Les politiciens qui ont peur des Gafa et des Batx doivent changer de métier’ », La Tribune, 25 September 2018).
technological infrastructure and for the data it collects. The debate on 5G thus reinforces the perception of the need for dual sovereignty, both over infrastructure and data, and marks the convergence between the vision of technological sovereignty, which we can attribute to the French approach, and that of data sovereignty, which comes from a broader universe, with countries and institutions that are wary of defending individual rights in a digital context. To sum up, we are witnessing the meeting of two worlds, that of the defence of a national security technological perimeter and that of the defence of individual rights, a real key moment that makes it possible to count on a broad consensus with regard not only to the Member States of the European Union but also to the different political sensitivities within the European Parliament.

**Convergences at work in the Von Der Leyen Commission and the acceleration due to the Covid-19 crisis**

The arrival of the new European Commission illustrates the growing importance of these convergences. We note several particularly significant trends. On the one hand, the vision of a “geopolitical” role for the Commission, expressed by its President Ursula Von Der Leyen\(^22\), which makes explicit the desire for greater weight at the global level and requires recognition of competition with the United States and China. This vision was translated into technical terms by Commissioner Thierry Breton, who quickly announced the implementation of this agenda in terms of technological sovereignty\(^23\). It should be remembered here that the European Commissioner is continuing to pursue a vision of global technological competition that he already expressed when he was head of the Atos company\(^24\). However, we are also seeing the ambitious data policy initiated by Commissioner Vestager.

These two trends are also reflected in the priorities of the new Commission, which emphasise strengthening Europe's role in the world and adapting Europe to the digital age.

The Covid-19 crisis has brought about an acceleration. It began as a “Chinese epidemic” and quickly called into question the continuity of supply relationships with China. First of all, there was an interruption in production due to the epidemic, then an awareness of the dependence on China for a series of productions that now appear to be strategic. The health sector in the broad sense is part of this industrial and technological vision of “sovereignty” and confirms the broad definition of protected sectors that we had already seen when the various foreign investment protection mechanisms were set up. This cyclical problem of sourcing from China reinforces suspicion not only of Chinese technologies but also of the structural conditions of trade with China, while Chinese producers are often accused of having duplicated Western technologies by not respecting the rules of intellectual property, a form of unfair competition\(^25\). Thus, the Covid-19 epidemic appears to be a catalyst for these critical perceptions.

At the end of March, the European Commission published a communication to promote the regulation of takeovers by foreign groups in the form of direct investment\(^26\). The Commission's


\(^{26}\) *Guidance to the Member States concerning foreign direct investment and free movement of capital from third countries, and the protection of Europe’s strategic assets*, ahead of the application of Regulation (EU) 2019/452 (FDI Screening Regulation).
aim is to draw the attention of all the Member States to the need to preserve technological and industrial facilities in the face of operations which might appear hostile. We have seen how Spain, Germany, Italy and France are strengthening their powers of control and authorization for foreign investment, in parallel with the injunction issued by the European Commission. It should also be noted that this reaction is not just theoretical, since Germany has dissuaded the United States from taking control of Curevac, a laboratory working on the development of a vaccine against Covid19. On the Italian side, the government has recently extended the scope of the so-called golden power protection system, while Spain is concerned about the defence of its major groups, which are weakened on the stock market.

The Commission’s communication is interesting in many respects. First of all, it presents a broad definition of what is to be considered strategic, including, as is now the case, the pharmaceutical and health sectors. Secondly, this desire to restrict possible movements of capital classified as predatory indicates a remarkable development in competition policy, which has hitherto been reluctant to take account of strategic geopolitical visions. In recent cases, such as the Alstom-Siemens merger project, it is the defence of the interests of the European consumer within the market that has prevailed in the face of considerations of competition on a global scale. The Covid-19 crisis seems to mark a turning point in this area, opening the door to the introduction of a "sovereign" logic as an element of competition policy, an instrument that has long been the spearhead of the European Commission’s action. Due to current threats, we are witnessing a desire to defend European technological and industrial capabilities, which could lead to European consolidation and the creation of "European industrial champions", a concept that had hitherto been rejected by the European and national authorities.

Possible consequences of adopting the concept of European technological sovereignty

This Europeanisation of the issue of technological sovereignty opens prospects but also raises a series of questions. The Commission, in taking up the issue, is bound to europeanise it, which means that it cannot be satisfied with the juxtaposition of a series of national sovereignties presented as European sovereignty. The current definition of a hybrid concept of European technological sovereignty, but also of related instruments, will lead to the definition of pan-European mechanisms. This development could give some heartburn to those who would defend European technological sovereignty as a fundamental justification for national technological sovereignty - a dream of autarchy in short. For if Europe encourages protection against foreign investment, it can only do so in line with a decisive consideration of the importance and sustainability of cross-investment by European players, which could give rise to new problems. It would appear to be consensual to block American or Chinese investments in the fields that fall within the now broad scope of sovereign technologies and industries. But what will happen when, for example, a company from another Member State wishes to invest in the EU? And let us imagine the case of a state-owned company from one Member State investing in a sector that is considered strategic in another Member State. If we follow our new logic of “European technological sovereignty”, this should not pose a problem, and it seems likely that the Commission will have a favourable judgement on this type of approach. However, this was not

29 « L’industrie ferroviaire après le véto européen », La vie du rail, June 2019, pp. 64-72.
the case until recently, as illustrated in 2017 by France’s outright refusal of the takeover of shipyard STX by Italian shipbuilding company Fincantieri, a company which is itself controlled by the Italian Ministry of the Treasury30. The implementation of a policy of European technological sovereignty cannot therefore be reduced to a simple closure of the internal borders of the Union, because it carries with it the paradoxical but concrete requirement of further integration within the Union where it seems neither conceivable nor desirable to justify national retreats by this means.

This more open conception of cross strategic investments between the different Member States is the counterpart of a preference for European purchase, a European Buy Act invoked by many officials as a necessary response to the Covid-19 crisis, but which cannot do without reciprocity in the opening up of investments31.

The question of the organisation of intra-European openness in terms of investment in so-called sovereignty technologies raises the issue of the ability to organise and control the sectors, with the problem of subcontracting. Here again, the Covid-19 crisis has shown that, despite some initial difficulties, including the tension in certain sectors, the internal market has functioned by ensuring the continuity of supplies. Thus, it would be advisable to give priority to European sectors in the face of the dangers and uncertainties posed by supplies from abroad, particularly from China. This principle may meet with a broad consensus at first glance, but it poses a series of problems when it comes to translating it into practice.

In particular, the question arises as to which institution can decide to set up this strategic distribution of sectors in the various Member States; or on what basis to determine that the suppliers selected as necessary for sovereignty ensure the continuity of their production and supplies in the European context. It would certainly be conceivable to bring together the main European groups that are brought within the scope of sovereignty to enable them to set up cross-labelling and cross-checking mechanisms regarding the technological supply chain. The "heavyweights" of the European economy and industry, from energy to telecoms, including banking, petrochemicals, pharmaceuticals, automotive, electronics and aerospace, account for a high proportion of stock market capital and are often directly or indirectly controlled by states and therefore linked to their governance. Moreover, they very often act both as technology incubators and as reference points for a series of SMEs, whose production chain they structure. Thus, an extended regulation of these European economic champions in the direction of an improvement of technological and industrial sovereignty could have an important knock-on effect. Remarkably, this concept of extended technological sovereignty renders the old category of so-called defence industries obsolete, even more so as the civil sector is the driving force behind technological development. If specific protection of sovereign technologies is implemented, this will lead to the dilution of the old category of aerospace and defence into a larger whole, which seems desirable in many respects and is also justified by the centrality of digital data and its processing. This also corresponds to a hybridization in which large groups are becoming aware of sovereignty and security, an operation that has already been observed with the growth of the theme of cyber security.

30 Jean-Pierre Darnis, « France, Italie et Europe, une relation fragile ? », Le Grand Continent, 12 April 2018. It should be noted that national technological sovereignty has sometimes been put forward as a reason for rejecting this type of agreement. (Nicolas Dupont-Aignan, « Alstom-STX, Cessons le pillage de l’industrie française ! », Marianne, 29 September 2017).
For example, we can observe how Italy has deployed a “national cyber perimeter” which includes not only the organisation of infrastructure defence but also a series of supervisory bodies coordinated with industry and research structures. This exercise of plural national technological sovereignty can be a good example if it is coordinated and designed in correspondence with the European level.

The development of a policy for the major sovereignty groups, which seems more feasible than intergovernmental negotiations, nevertheless has the drawback of leaving SMEs and SMIIs in the shadows. This may not be a problem if one considers cooperation between third party prime contractors and SMEs and SMIIs, but it is much more difficult when one considers the Member States which do not have real European champions in their economies and which would therefore not be able to assert their positions. The risk could be that of a concentration among Member States such as Germany, France, Spain or Italy, while others would have little or no representation in this concert of big players. This aspect already exists at various European levels but must be taken into account in order to cultivate the terms of a political consensus among the 27.

For this reason, the “neo-Colbertist” vision of a policy of “technological sovereignty” cannot move forward alone, and must also be complementary to market opening and regulation mechanisms that take into account all European societies and economies.

The potential conflict between technological sovereignty and open innovation

It should be pointed out here that technological development is often defended through a logic of openness, described as open science, open innovation or open data. Moreover, the European Commission has made open science a programmatic priority. The logic of open scientific and technological development holds the promise of a free flow of information, exchanged on a reciprocal basis, which allows the development of models and products, a philosophy inspired by that of free software. This free flow of data should also be a guarantee of transparency and thus of democracy. In particular, open data should allow both a transformation of civic life and a renewal of the economy, since open data is sometimes described as the oil for the economy of the 21st century. It should also be noted that the digital strategy presented by the European Commission defines clusters of public digital data as the foundations of a European data economy, an operation that would enable Europe to regain a form of autonomy and economic power in the face of the American platforms that capture most of the data. This vision represents the crossroads between a public policy, the willingness and ability to organise European sectoral data linked to public policies, such as health, and an economic perspective that involves the development of products and services linked to these data organisation formats on a European scale.

The idea of using public digital data to influence the course of policies and drive economic development is not new. We can recall the example of the European Earth observation

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32 Raffaele Marchetti, « Piu sinergie tra stato e imprese sul fronte della cybersecurity », Il Sole 23 ore, 8 October 2019.
33 [https://ec.europa.eu/research/opencourse/index.cfm](https://ec.europa.eu/research/opencourse/index.cfm)
programme Copernicus. This programme, which benefits from an infrastructure of dedicated satellites, the Sentinel satellites, makes almost all the data produced available openly and free of charge to the whole world. The philosophy of this European programme was that the production of accurate earth observation data increases knowledge of environmental change - information that can influence policy choices across the planet\textsuperscript{36}. However, alongside this leverage effect, we also see that the interferometric data produced free of charge by Copernicus feeds non-European industrial ecosystems which then compete with EU players. Furthermore, there is the problem of the massive use by American platforms of free EU data - information that can be considered sovereign\textsuperscript{37}.

The example of Copernicus is a striking illustration of the advantages but also the risks of an open data model. Many problems arise, such as the guarantee of reciprocity.

This example also illustrates the need to take into account the correspondence between science and technology. Technological sovereignty cannot be thought of without the promotion of scientific research, which in turn obeys the rules of international openness and transparency. Here again we are faced with two logics that deserve to be explored in greater depth.

**A declaratory concept that should be limited to ensure its application**

We therefore see how European technological sovereignty can mark a step forward for Europe, particularly as an important political response to the Covid-19 crisis, but that it is not without further questions and adjustments. The blurred contours of this concept certainly make it possible to give rise to different types of projections, and thus to bring about convergence between the various European players, which can be seen as positive in a moment of crisis that requires new common political responses.

It should not be forgotten that for a long time and for many member states, sovereignty could only be national, which poses a series of new perspectives for the search of complementarities between the different sovereignties.

In a recent declaration, Commissioner Margrethe Vestager expressed her desire for an “open strategic autonomy” for Europe\textsuperscript{38}. This concept, which may seem contradictory, contains elements of mediation between the project of increased sovereignty and the vision of openness, two strong trends within the Union. This proposal also illustrates the ongoing reorientation of European policies, which indicates that beyond the affirmation of the theme, the political agenda is evolving and “European technological sovereignty”, could appear as the basis for a series of concrete instruments, particularly in the future multiannual budget.

The Covid-19 crisis is prompting a search for solutions that is likely to ensure Europe’s economic and social rebound. The necessary compromise between control and openness of technologies and data offers an opportunity for European recovery which must also be conceived as political progress, taking into account all requirements and sensitivities.

\textsuperscript{36} « Informazioni e tecnologia. E il paradigma per l’Open Science », corrierecomunicazioni.it, 14 December 2015.

\textsuperscript{37} « Comment Google tue la concurrence européenne en se servant d’un programme spatial financé par l’UE », Euractiv.fr, 8 July 2016.

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