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in collaboration with

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Technology Fast-Tracking A Multifaceted European Integration

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1. Introduction: Facing Existential Threats, The EU Reacted By Attempting To Push Integration Further

The European integration process has been characterized by a series of setbacks, which have then been followed by important advances. The latest setbacks were represented by the migrant crisis of 2015, the Brexit referendum in 2016, resurfacing euro re-denomination risks in 2018-19 and finally the Covid-induced crisis in 2020. All these events occurred while internationalism was deteriorating, amid the victory of an isolationist US president, mounting trade and geopolitical tensions between major economies, the ongoing balkanisation of global supply and value chains and an underlying technological conflict between the US and China (in which Russia and the EU were inevitably engaged). The resulting polarisation of the world into spheres of influence dominated by the US and China amounts to what has been labelled Cold War 2.

Given this context, the EU – while implementing Brexit – has been confronted with yet another existential crisis, reinforced and brought forward by the Covid-induced crisis. EU leaders had to decide in just a few months whether to give up the project imagined by the founding fathers, or else re-launch it, and so pass it to the next generation of leaders, who will eventually decide its fate.

The decision to react to the Covid-induced crisis by launching a comprehensive pan-European plan, based on the EU's *Multiannual Financial Framework* – significantly dubbed the Next Generation EU – means that current EU leaders have chosen the latter course, making the decision to push integration to new levels.

The novelty represented by a US president who was not just simply isolationist and lukewarm regarding the European integration process, but openly hostile to it and in favour of further exits from the EU, as well as in favour of diminishing the presence of NATO in the region (with the US decision to withdraw many of its troops from Germany) has induced even the most prudent politician of her generation, the German Chancellor Angela Merkel, to declare that the Europeans are on their own and need to grasp their destiny with their own hands, without relying any longer on the external influence, pressures and financial and military subsidies from the US. As we discuss further in this report, the election of Joe Biden is not likely to change this state of affairs. Across Europe, the congratulation messages to Joe Biden started to flow in a coordinated manner within minutes of one another, in a clear message to the newly-elected US President to count on a united front within the EU.

In parallel, the Covid-19 pandemic has hit the EU, showing the essential role played by the **technology sector** in ensuring the continuity of social life, businesses and government activities, and accelerating the need for sovereign digital technologies. Technology ranging from AI and 5G to Cloud computing – the new battlefields for China and US to assert their global supremacy - has already started to transform every industry, and within a generation will have done so completely. This New Paradigm represents a huge additional threat to each EU country separately, but also represents a once-in-a-lifetime opportunity for the EU if it manages to position itself well in the new global chessboard. We will discuss further in this document the initiatives which have been launched in the field of technology and innovation.

In short, the Europeans have realised that they need to remain cohesive if they want to have a role in the bi-polar world that is about to emerge.

In the following pages we discuss the main areas of European integration: Financial, Defence and Technological.

2. Completing The Economic and Financial Integration Process: Some Crucial Steps Still To Make

To its critics, the decision by the European founding fathers to begin any form of collaboration from the economic and financial domain is the existential flaw in the entire European integration process. In reality, this was a very precise design choice: the generation of the founding fathers still remembered how futile political agreements were in the absence of shared economic interests. The memory of the Munich conference in 1938 was still vivid in their minds, when they decided that the first step of European cooperation had to be centred on the basic economic needs of post-war countries: *coal and steel*. *The European Coal and Steel Community* (the precursor to all subsequent *European Communities*) was formally established in 1951 by the Treaty of Paris, signed by Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany.

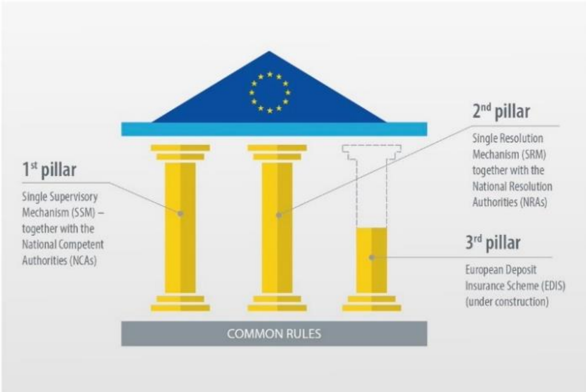
Fast forward a few decades, after the *European Economic Community* and, eventually, the *European Union* were created, the principle underlying any further integration process remained the same: founding any agreement on shared economic interests, because doing so will, eventually, lead to the political union that, for Europhiles, represents the ultimate goal of the process.

After the single currency was launched in 1999 and became common currency in January 2001, the design flaws of the project became apparent with the Global Financial Crisis of 2007-09 and, even more so, with the Greek/euro/sovereign crisis of 2010-2012. The lack of resolution and solidarity mechanism beyond the antiquate Growth and Stability Pact (GSP) meant the euro was on the verge of collapse in 2012, until Mario Draghi's celebrated "whatever it takes" speech in London in July of that year. Since then, the euro-area (a large portion of the EU), has launched a series of communitarian and inter-governmental initiatives that have stabilised the monetary union (EMU) and re-launched the economic and financial integration process.

Among the inter-governmental initiatives, the most notable is the creation of the European Stability Mechanism (ESM), an institution based on private-sector law, based in Luxembourg, which was endowed with a massive financial firepower by the adhering governments in order to stave off any future sovereign crisis. It has been allowed to extend loans with stringent conditionality to troubled countries (a sort of *European IMF*, in that respect). The ESM has been tasked with the fast-response mechanism during the pandemic, by establishing a new enhanced credit line, called Pandemic Crisis Support. The ESM is currently undergoing a reform process that will make it more integrated in the EU official mechanisms and treaties.

Among the communitarian responses it is worth citing the launch of the banking union and of the Capital Markets Union (CMU). The banking union has three pillars: 1) the establishment of a single supervisory authority for large financial institution (this is the so-called Single Supervisory Mechanisms, SSM, an independent body within the European Central Bank); 2) the creation of a Single Resolution Fund (SRF), in case of distress in the banking system (which will use the ESM as a backstop); 3) the creation of an European Deposit Insurance Scheme (EDIS), which will substitute – or at the very least complement – existing national schemes (**Figure 1**).

Figure 1: Three pillars of banking union



Source: Single Resolution Board

The first two steps towards the banking union have been completed, and the third is in the process of being discussed, but the successful conclusion of this process should not be taken for granted. As any deposit-insurance scheme inevitably entails the use of taxpayer money (directly or indirectly, sooner or later in the process), the stronger, creditor countries, such as Germany and the Netherlands, are trying to slow down the creation of EDIS until the weaker, debtor countries, such as Italy and Spain, have completed a process of risk reduction. In the minds of Northern European countries, this process of risk reduction, in which banks better provision against non-performing loans (NPLs) or reduce their exposure to sovereign debt, must precede that of risk sharing, considering that taxpayer money is at stake. While debtor countries seem committed to some form of risk *control*, if not necessarily risk reduction, for example through the mechanism of the so-called “calendar provisioning” for NPLs, the Covid-induced crisis has largely stopped the derisking process, which has become unfeasible at a time when all countries will be facing multiple bankruptcies in coming months. In the latest developments, it seems that creditor and debtor countries have agreed that the two processes of risk reduction and risk sharing should proceed in parallel. This might allow the EDIS project to advance further, however slowly, in coming years.

The final step in financial integration (together with the Monetary Union and the Banking Union) is the so-called Capital Markets Union (CMU). This project aims at creating a single capital market framework, for example for the issuance of equities, or corporate bonds, the same way the US has done, as an instrument to enable private-sector risk sharing. More intertwined European banks within a CMU – imagine, for example, a Dutch bank based in France, packaging Spanish mortgage loans in products sold mostly to Italians – would make the European integration process *de-facto* irreversible, like the euro currently is, at least *de-jure*.

Even if it is strategically important, the process towards the creation of a CMU seems to be stalling, partially as a result of Brexit. Prior to Brexit, any CMU project could not be conceived of without considering the special role of London as one of the key global financial centres. For this reason, the commissioner in charge was British (Lord Hill). Now, before making any further progress, it is likely that the EU will have to wait for the eventual outcome of the Covid-induced crisis, which will leave plenty of scars in the continent.

The completion of the three pillars of the economic and financial integration is considered a pre-requisite for the two additional steps Europhile are aiming at: a fiscal union and a political union. In a fiscal union, some or all fiscal resources would be shared. The extreme version of a fiscal union would be a transfer union, in which the “stronger and richer” components of the union would subsidise the “weaker and poorer” ones, at least for a time. Germany’s reluctance to form a fiscal union can be read in part as its fear of it becoming a transfer union.

But some timid steps towards a fiscal union have nevertheless been made. There is now a coordination of the budget process during the so-called European Semester of the year, with all EU countries sending their Draft Budgetary Plans (DBPs) to Brussels by 15 October, for comments and revision by the EU Commission. This is part of a larger fiscal surveillance process the EU undertakes every year, a process which creditor countries consider to be too politicised, and for this reason would like to see it undertaken by a more technocratic body instead, such as the ESM.

In spite of this, the process of a fiscal union seems to be proceeding very slowly. At the EU level, some movement is taking place, however. France has finally managed to introduce a Euro-budget (however small), as part of the regular MFF. It is France's ambition that this should have some function as a stabilisation mechanism and counter-cyclical stimulus. Germany has agreed to the creation of the fund, as long as it remains endowed with resources in the "low, double-digit figure" of less than EUR 20bn, and remains without a stabilisation and counter-cyclical function. The pessimists would say that, with such a limited remit and endowment, this Euro Budget is effectively useless. The optimists would say that once the legal entity has been created, scaling it up and enlarging its role (for example to respond to another future crisis) will be much easier.

Finally, the implementation of the Next Generation EU plan requires the increase of the so-called "own resources" of the EU Commission. These are not just the "membership fees" that each EU country pays to be "part of the club", but also the creation of new, European taxes, levied and managed by directly by the EU Commission, creating a supra-national taxing power that so far has been considered exclusive to nation states. These new taxes (on carbon emissions, financial transactions, and digital business) might well constitute the core of any future fiscal union, which might in fact progress top-down (from Brussels to the European capitals) rather than bottom up, or at least run in parallel to one another.

Additionally, another top down way of pushing for a fiscal union has been enhancing the borrowing abilities of the EU Commission, which will finance the NextGenerationEU plan by issuing its own bonds (which however will not enjoy a "joint and several guarantee"), in what some could see an embryonic form of future Eurobonds. The re-insurance schemes introduced by the Support to mitigate Unemployment Risks in an Emergency (SURE) plan (for unemployment) and by the European Investment Bank (EIB) could also be read as a step in the same direction.

Once trade and competition rules, currency, banks, capital markets and fiscal resources will be integrated, the need for a political union to emerge should come naturally, the architects of Europe would argue. How could these existential decisions, involving several aspects of national sovereignty, be made without a common political authority in place? For the time being, these decisions are made as a result of long negotiations between various European institutional actors (Council, Commission, Parliament, Eurogroup, etc.) and national capitals. In future a more federal governance system might emerge, perhaps including the direct election of the EU president.

3. Military And Security Integration: The "New Frontier" Of The European Project

The defence of Europe today is provided basically by NATO, and in particular by the US. The situation is evolving, however. Here is why:

Despite US President Donald Trump' statements on the lack of adequate financing by European countries, the United States does not provide "90%" of the NATO budget, but "only" 22%. The other two main contributors are Germany (14.7%) and France (10.5%). In 2020 the United States dedicated 3.5% of its GDP to defence, i.e. $676 billion, which is equal to two-thirds of the military expenditure of all NATO countries combined, and about one-third of the worldwide total for all military budgets. Recent US increases in defence spending (+$44 billion) were equivalent to Germany's entire defence budget. Within this budget, US spending specifically dedicated to the defence of Europe is estimated at $35.8 billion in 2018, or 6% of the total, which is almost as much as the entire defence budget of France (€35.9 billion in 2019).

The "strategic pivot" to Asia first defined by President Barack Obama and subsequently pushed forward by President Donald Trump, represents a permanent change to the European defence paradigm. China is the US' main strategic competitor, and Southeast Asia is the new area of focus. Europe is not the strategic priority anymore. The election of Joe Biden will likely not change this.

Contextually, new threats for the continent have emerged for the EU:

1) **The increasingly interventionist attitude of Russia**. It became apparent with the war in Georgia in 2008, then came closer to Europe with the intervention in Ukraine and the annexation of Crimea in 2014. But the use of Russian force has also been apparent in Syria, with the rescue of Bashar al Assad's regime. Such behaviour, together with a continuous show of force on European borders and the use of **disinformation, cyber-attack and espionage activities**, are reinforcing the conviction of many European countries that the threat on Europe's Eastern flank remains a reality.
2) **The development of threats on the Southern front**. European countries have experienced and are still experiencing a series of jihadist attacks. The civil war in Iraq and Syria, accelerated by the emergence of the caliphate of the Islamic State (IS), generated a considerable flow of migrants towards Europe. Likewise, the collapse of the Libyan State following the Western intervention has facilitated the establishment of criminal networks. Finally, the weakening of the states in the Sahel-Saharan strip has made that area a base for jihadist networks and organised crime. The situation in the Near and Middle East and in Africa has direct consequences for the security of European countries. From this perspective, the issue of European defence is a short-term practical matter with a concrete impact.

As a result of all these events and factors, EU countries have also reached a conclusion that they need to start building their destiny with their own hands from a military and security perspective, without relying too much on the help of their American ally, which has meanwhile become quite unreliable. So, after Brexit, a lot of emphasis has been put on further military and security integration between European countries. This has progressed along two possible paths: a communitarian approach and inter-governmental agreements.

Regarding a communitarian approach, the former EU Vice President and High Representative of the Union for Foreign Affairs and Security Policy, Federica Mogherini, launched the EU Global Strategy for Foreign and Security Policy in 2016, the first attempt to redefine the EU's strategic position since Javier Solana's plan of 2004. Additionally, a new [Permanent Structured Cooperation]() (PESCO) among EU countries on security and military issues has been launched (**Figure 2**), to enhance coordination, increase investment and foster cooperation in developing defence capabilities among EU countries.

Figure 2: How PESCO, NATO and the EU Memberships Compare

Source: Valentin Kreilinger, Jacques Delors Institut, Berlin, November 2017. Note: PESCO – EU member states that signed the joint notification. It is possible for EU member states to join at a later stage.

Regarding inter-governmental agreements, as mentioned above, France has offered to share its nuclear umbrella with all European countries. The future of this proposal will depend crucially on Germany's position. Meanwhile, Germany has agreed with the Netherlands to effectively create unified commands for some of its military regiments, in a clear sign of inter-governmental military integration. As is typical of Europe, most likely the communitarian and inter-governmental approaches will be pushed forward in parallel, rather than one type of approach outpacing the other.

The second half of 2020 will be crucial for a range of European defence initiatives. Below is the list of developments in the European defence policy agenda since the start of this year, and a list of the most important areas to monitor in the coming months.

The EU's defence initiatives that will soon to enter a decisive phase of evaluation:

Space

Budget of €13.3 billion for the period 2021-2027: €8 billion of the space budget will be devoted to the modernization of the European satellite navigation system Galileo, and €4.8 billion to the Earth observation program Copernicus, leaving little room to finance new projects, such as a European constellation of satellites in low orbit. The initiative is meant to allow Europe to have a constellation of satellites by 2027 based on quantum technology, capable of both connecting all of Europe to broadband, and of offering secure essential communications to member states' police, army, emergency services, etc.

Coordinated Annual Review on Defence (CARD)

CARD gives an overview of where the bloc stands and identifies next steps. The European Defence Fund (EDF) was set up to provide the funds to support the implementation of cooperative defence projects in general. It has a budget of €7 billion, but with a bonus if in PESCO. The first full-cycle CARD report is due to be presented to EU defence ministers and European Defence Agency officials in November; however, the report will not be public.

European military task force to fight COVID-19

A dedicated EU military task force was set up to support the coordination of the national armed forces in the fight against the coronavirus pandemic. Ministers agreed to reinforce modalities for the use of military assets to support civilian authorities in response to the pandemic.

EU Cyber Defence Policy Framework

The EU and its Member States have decided to strengthen cyber resilience and to develop robust cyber security and defence capabilities. The EU Cyber Defence Policy Framework (CDPF) supports the development of cyber defence capabilities of EU Member States as well as the strengthening of the cyber protection of the EU security and defence infrastructure, without prejudice to national legislation of Member States and EU legislation. Cyberspace is the fifth domain of operations, alongside the domains of land, sea, air, and space: the successful implementation of EU missions and operations is increasingly dependent on uninterrupted access to a secure cyberspace, and thus requires robust and resilient cyber operational capabilities.

4. Technology integration: An Increasingly Easier Environment for decision-making

“Faced with the "technological war" between United States and China, Europe is laying the foundations of its sovereignty for the next 20 years. *It is not a question of giving in to the temptation of isolation or withdrawal into oneself, which is contrary to our interests, our values and our culture. It is a question of making choices that will be decisive for the future of our fellow citizens by developing European technologies and alternatives, without which there can be neither autonomy nor sovereignty. Mobilised around major projects developed in partnership, Europe has demonstrated in the past that it has the capacity to play a leading role on the world stage. The time has come to take back the common initiative.”* ***Thierry Breton, 11 September 2020***

Both the US and China have key tech “superstar” companies, the FAANG (Facebook, Apple, Amazon, Netflix, Google) in the US, also including Microsoft, and the BAT (Baidu, Alibaba and Tencent) in China. There are no equivalent of such big tech companies in Europe. This is seen as a core weakness as these tech giants are the basis of innovation in many other IT sectors. In order to have leadership in Big Data you need first to canvass those large swaths of data. Cloud computing and the storage and use of such data and applications also requires leadership in Big Tech, something that US and China do but Europe does not.

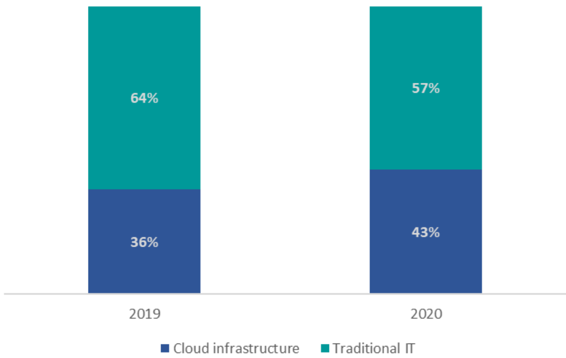
But Europe is also the world's #1 industrial continent

Europe has every asset needed to win the Big Data race. When it comes to industrial data, the rules of the game are different. Most of the current platforms, mainly built for B2C, are not ready to meet the technical, security and service requirements required by industry or public authorities. Europe is not lagging behind technologically in the field of industrial data. However, in order to capture the value of the European industrial market, a European infrastructure has to be built allowing the storage, the use, and the creation of data-based applications or Artificial Intelligence services.

In this context the Commission plans to launch a European Alliance for Industrial Data and Clouds in order to develop European alternatives and put Europe in good position in the race for the data economy.

Such an alliance would be a natural evolution of the Franco-German initiative, the Gaia-X project (France and Germany announced Gaia-X, a federated data infrastructure at the European level, the objective being to build an EU data framework to facilitate data collection, data processing and sharing, especially in the B2B and B2G domains), with a public pillar for common platforms for services of general interest, and a European industrial alliance around cloud-to-edge platforms.

Figure 3: EMEA cloud market versus traditional IT spending (2019-2020)



Source: Klecha & Co. "The rise of the European sovereign cloud" (Insights Report, July 2020)

Asserting the European technology sector’s identity (and distinguishing features) as compared to US and Chinese companies

Despite being the place where global technology leaders were born (such as those of Skype and Spotify), Europe lags behind the US and China in terms of the number of technology giants it has produced. The European market is more fragmented, and capital flows at a different speed in the US or China. The coronavirus crisis has accelerated some major trends. It has uncovered some of Europe's overreliance on critical areas – both geopolitically and economically. The European data economy is a pillar of EU's industrial strategy. Yet what may be the most fundamental difference between the US and Chinese digital spaces (sometimes described as **"Technology for Money"** or **"Technology for Social Control"**, respectively) and Europe's digital space may not be capital, market positioning, but rather ethics.

One of the key 2019-2024 priorities which have been defined by the European Commission is to empower PEOPLE, rather than just companies or governments, with a new generation of technologies.

The objectives stated by the European Commission for Europe's Digital Future are the following:

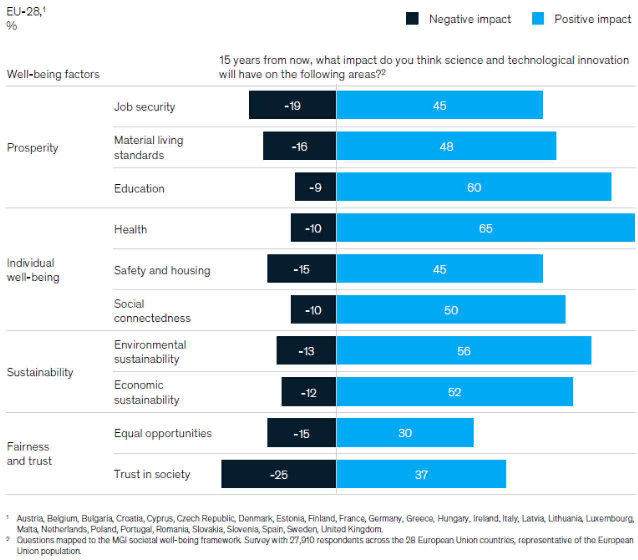
"**The digital transition should work for all, putting people first** and opening new opportunities for business. Digital solutions are also key to fighting climate change and achieving the green transition.

The European Commission is working on a digital transformation that will benefit everyone. Digital solutions that put people first will:

- open up new opportunities for businesses;
- encourage the development of trustworthy technology;
- foster an open and democratic society;
- enable a vibrant and sustainable economy; and
- help fight climate change and achieve the green transition."

Europe has its own history, is attached to human rights, has a more regulated structure than the US, has a specific political culture, a specific way citizens live their citizenship including in their interaction with social services. EU institutions are working toward developing a **competitive, secure, inclusive and ethical digital economy, which is coherent to its principles**, sometimes described as **"Technology for Good"**. In Klecha & Co.'s view the definition of such objectives can be a critical success factor for the industry development and sustainability.

Figure 4: People's expectations of the future impact of technology



Source: McKinsey Global Institute "Tech for Good - Smoothing disruption, improving well-being" (Discussion paper, May 2019)

Focus on Security

The EU Security Union Strategy for 2020 to 2025, succeeding the European Agenda on Security (2015-2020), focuses on priority areas where the EU can bring value to support Member States in fostering security for all those living in Europe, notably including cybersecurity. By the end of 2020, the Commission plans among other things to complete the review of the **Network and Information Systems Directive**, propose ideas for a **Joint Cyber Unit, and** adopt a new **Cybersecurity Strategy**. Cybersecurity, together with data control and online platforms' behaviour, represent the major concerns at the EU level. In particular:

- The overreliance on foreign equipment suppliers for 5G deployment has been identified as a critical weakness;
- The lack of control over data (in a market that is largely dominated by US and Chinese companies), which is subject to extra-territorial laws (such as 2018 US Cloud Act); and
- The dominance of non-EU online platforms is representing a significant threat to EU members' sovereignty, in

areas such as taxation, data protection and copyright.

In this context a number of initiatives have been launched and instruments adopted:

- The 2016 Network and Information Security Directive improves Member's States cybersecurity capabilities and cooperation, and imposes measures to prevent and report cyber attacks in key sectors (financial markets, banking, energy, transport, etc.);
- The 2018 European Cybersecurity Act strengthened the ENISA by granting to the agency a permanent mandate, reinforcing its financial and human resources and enhancing its role in supporting the EU to achieve a common and high level cybersecurity. It also establishes the first EU-wide cybersecurity certification framework to ensure a common cybersecurity certification approach in the European internal market and ultimately improve cybersecurity in a broad range of digital products (e.g. the Internet of Things) and services;
- In March 2019, the EU Member States approved a common toolbox on 5G cybersecurity;
- The upcoming Digital Europe Programme, for the period 2021-2027, is an ambitious programme that is planned to invest €1.9 billion into cybersecurity capacity and the wide deployment of cybersecurity infrastructure and tools across the EU, for public administration, businesses, and individuals;
- Cybersecurity is also a part of InvestEU. InvestEU is a general programme that brings together many financial instruments and uses public investment to leverage further investment from the private sector. Its Strategic Investment Facility will support strategic 'value chains' in cybersecurity. It is an important part of the recovery package in response to the Coronavirus crisis.

Private sector leverage

Private initiatives at the EU level are crucial to the development of such an eco-system. In this context we would like to highlight the initiative launched by the **European Cyber Security Organisation (ECSO),** for the creation of a €1bn cybersecurity investment platform. Such initiatives – which Klecha & Co. is proud to support – will, if successful, have a significant impact on the eco-system and as a result on the cyber capabilities of the Union.

Figure 5: Members of ECSO (Large Companies)

Source: ECSO website

Setting EU standards – a global business opportunity

Standardisation has played a leading role in creating the EU Single Market. Standards support market-based competition and help ensure the interoperability of complementary products and services. They reduce costs, improve safety, and enhance competition. Due to their role in protecting health, safety, security, and the environment, standards are important to the public. The EU has an active standardisation policy that promotes standards as a way to better regulation and enhance the competitiveness of European industry.

In the digital markets, where non-EU companies have acquired a leading market position, the setting of standards has multiple benefits. Here below are some examples of virtuous standard setting which have become (or are in the process of becoming) global standards:

GDPR

The EU has adopted a very stringent framework for privacy and data protection, which has introduced a “right to be forgotten” and a “data portability right” to enhance individuals’ control of their own data. The EU is seen as a standard-setter for privacy and data protection, resulting in numerous countries having incorporated GDPR provisions in their national legislation. Some multinationals have also adopted GDPR as their internal global standard.

Digital Identity

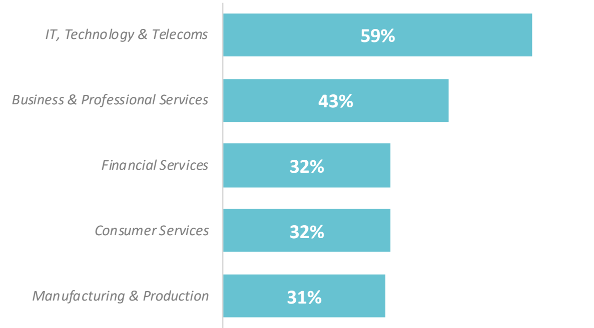
The digital identity scheme launched in 2018 by the EU enables Europeans to open a bank account and access e-health records across the Union. The market opportunity deriving from this in terms of authentication and authorisation will be worth >€2bn by 2022, according to the EU. Many countries outside of the EU are adopting the electronic identification and trust services eIDAS scheme in their national legislation.

AI

The EU has adopted an approach for developing AI technologies that adhere to high ethical standards, with the aim of becoming global leader in **responsible and trustworthy AI**. In doing so, European developers and manufacturers will have a competitive advantage, as consumers and users will favour EU-compliant products.

Taking leadership on setting global standards in the digital space is certainly (as described above) a global public good that Europe can increasingly provide.

Figure 6: Top five sectors positively impacted by AI adoption



Source: Klecha & Co. "AI - Transformational opportunities" (Industry Research, November 2018)

Other Complementary Strategies for Ensuring Technological Leadership In the EU

On top of providing global standards in the technological and digital space, the EU can also adopt a wide range of policies that ensure that it will remain a key global player – together with the US and China – in the technological/digital frontier.

Specifically, combining in a smart way new pan-European industrial policies, innovative competition policies, more robust and assertive approaches to fair trade and market access, and proper anti-trust actions against non-EU big tech firms that try to monopolize markets, will ensure that Europe remains a key global technological leader.

First of all, as argued by many in Europe, the EU should change its competition policies to foster the creation of large European global players in technology and industry. Some however worry about the oligopolistic power of such companies. Certainly, strengthening trade policy to address the unfair trade, investment, technological, IP practices of foreign powers is a useful approach to take. The consensus seems to be shifting in the EU to the former approach – change competition policy – but one can combine the two – trade policy and competition policies – as they are complementary rather than opposite to each other.

The EU may also need and want to change state aid rules to allow subsidies and the development of EU-wide global champions.

There are some interesting national approaches, like the German Industry 4.0 aimed at keeping Germany's lead in manufacturing intact, and some pan-European ones, such as EU plans to develop an European AI eco-system, the "New Industrial Strategy For Europe", and the "Digital Single Market" plan.

The EU can also take a more robust approach regarding anti-trust laws, in order to crack down on anti-competitive practices of big tech firms. Finally, some greater degree of cooperation between the EU and the US (which will soon have a new, more transatlantic-friendly administration) may be feasible on some matters.

All these approaches can be complementary with each other. For example, in cooperation with EU Commission VP Margarethe Vestager, the Commissioner for the Internal Market Thierry Breton has been working on a new comprehensive legislative package: the Digital Market Act, which will merge provisions concerning the digital market in the new Digital Services Act (DSA), the New Competition Tool (NCT), aimed at strengthening competition enforcement. Under the Digital Market Act, the Commission will have the necessary legislative resources to fight anti-trust violations, impose new content moderation requirements to online platforms (regarding hate speech, for example) and restrict other anti-competitive behavior.

Conclusions

This paper discussed how European integration has progressed in the last few years, in spite of Brexit, on various fronts: economic, military/security and technological. European countries have started to understand that the distinction between national and European interests is becoming increasingly blurred, especially in the area of public goods, such as external border defence.

In the traditional *economic and financial* field, the completion of the banking union and the implementation of the capital markets union are the key milestones. But short-term crisis solutions might have opened the gate to a much wider-ranging perspective: the bonds that the EU Commission will issue to finance the Next Generation EU scheme could eventually lead to the creation of a permanent, pan-European debt instrument that could serve as the long-waited EU/Eurozone safe asset. At the same time, plenty of scepticism remains in core-Eurozone countries around the idea of risk sharing before any risk reduction has occurred in Eurozone-peripheral countries. Case in point is the European Deposit Insurance Scheme (EDIS), without which the banking union cannot be completed.

In the field of *defence*, the historical retreat of NATO has meant a greater sense of responsibility being taken by the Europeans regarding their own defence. In this respect, the relationship with the UK after leaving the EU will be key, considering that Britain is the only nuclear country in Europe besides France. For Europe, it will be crucial to maintain a solid engagement with the UK on defence and security matters. PESCO will be the cornerstone of what we may call the Defence Union, and the key next steps will be the Coordinated Annual Review on Defence, the launch of the 2021-27 Space budget and the EU Cyber and Defence security framework. Covid may provide the chance for a coordinated EU response via a dedicated military task force.

In a related field, the EU is ready to launch the new *EU Security Union Strategy 2020-25*, with a specific focus on cyber-security. European partners will have to find a path to rely less on US (and, *a fortiori*, Chinese) technology, and take increased control over their data. In this respect, the launch of the Gaia-X project for the European cloud represents a breakthrough for the EU to start asserting its digital sovereignty. Data Sovereignty (availability, quality, governance, and security) and AI are central to this new paradigm.

In the tech sphere, the European eco-system, although unequally distributed across the continent, is increasingly sparkling, with EU tech companies ready to affirm their identity in the global arena. European tech companies have to compete with the US and Chinese giants, which have been promoting "Technology for Money" and "Technology for Social Control", respectively. The attempt of the Europeans could be to develop an eco-system aimed instead at fostering "Technology for Good". The EU Commission has made the digital transformation one of the key priorities for the EU in the next five to seven years. The Covid pandemic may have provided a further boost to this attempt, given the widespread use of digital products during the repeated lockdown episodes.

Countries are realising that in the new world, national and supranational institutions, and public and private sector providers of public goods will have to work together to make a difference. European institutions are working toward enabling the emergence of technological leaders on a global scale. There is still a long way ahead, but the direction of travel seems to be the right one. The scale of investments required together with the pervasiveness of technology means that European countries cannot manage their interests on a stand-alone basis anymore.

In this respect, technology is the issue and the solution at the same time. It is the issue because Europe still needs to catch up with US and China in terms of the size of its digital giants and the presence of a unified regulatory and technological landscape that is able to harmonise its various national standards. It is the solution because technology can help break the physical barriers that prevent a complete unification of the continent and the establishment of a proper European sovereignty. Data sovereignty is the first building block towards establishing a well-rounded European digital sovereignty, as a stepping stone towards a complete integration of the continent.

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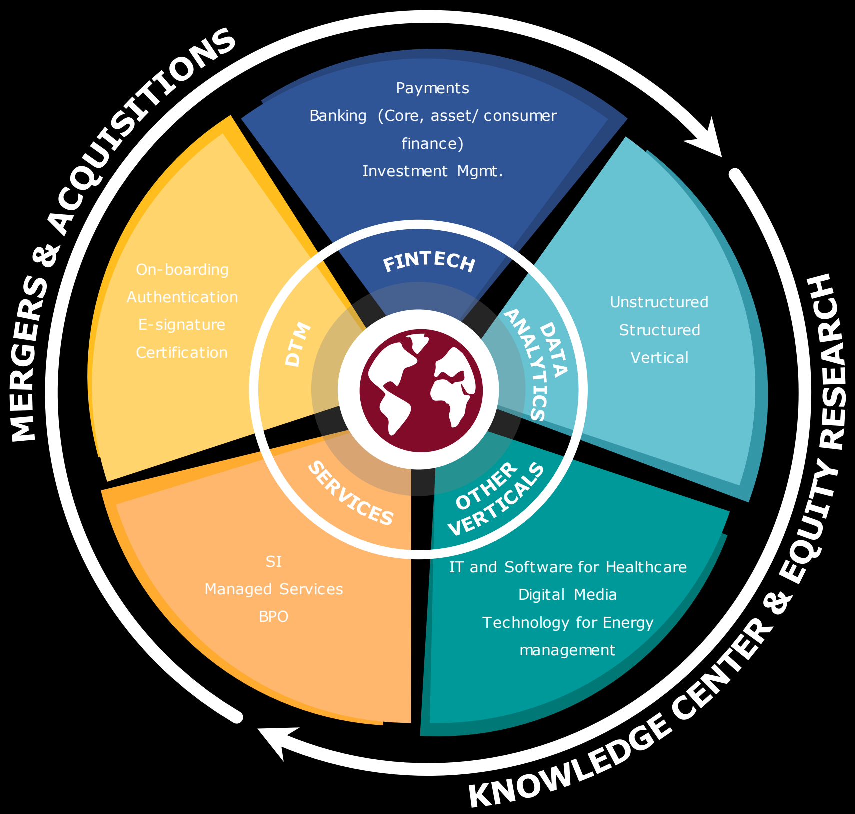

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