DEPLOYING THE EUROSTACK:

WHAT'S NEEDED NOW.

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Contents

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Executive Summary

In the brief space of just over 6 months, the EuroStack Initiative has gone from a futuristic event at the European Parliament, when the expression was first used,[2] to a call for action, to a movement directly supported by an expanding group of 200 digital businesses all over Europe - from large flagship European enterprises, to some of our most promising SMEs (as well as think tanks, academics and civil society)[3]. The common denominator is urgency: we are at an inflection point, and Europe's status as a "digital colony" needs rolling back now.

This follow-up paper[4] puts forward a set of initial proposals (to be further developed) around three main dimensions where progress can be made rapidly - provided that effective cooperation can be put in place between industry, the European Commission and national governments. The focus is on fast-track amendments of existing EU instruments. We are not asking for new laws, nor seeking to just shape the next "Multiannual Financial Framework" - both of which entail timelines which Europe simply cannot wait for. The "ask" is for the European institutions to focus immediately on a set of achievable priorities that have the potential for bringing major change to the European landscape in the near term:

"Buy European": if we can strategically deploy public procurement to create adequate demand for capabilities supplied by the European digital industry, this will bolster European supply which is at present unable to "get a foot in the door" and reach scale to compete. The proposal sets out what "European" could mean for these purposes, and how a "Buy European" mandate could be in practice articulated. As European procurement rules are in the process of being revised, and the Cloud and AI Development Act is being developed, this is the right time for making this strategic call. The proposal also considers what specific inducements and incentives would help steer private demand for services across the digital stack also towards European suppliers, and with what conditionalities.

"Sell European": The proposal considers specific ways in which the visibility of European supply can be improved, and interoperability and openness of European services enhanced, to allow for buyers to identify and adopt competitive alternatives to the current prevailing integrated US offerings.

"Fund European": A shift to a greater role for European industry in supplying our Continent's digital needs will create opportunities for private funding to flow much more into the sector. We also see scope, however, for targeted use of public funds to support Europe's autonomy and security where there are frictions in funding mechanisms - or where "sovereignty" is an explicit benefit that we may want funding instruments to factor explicitly into portfolio decisions. This paper makes specific proposals for a potential EuroStack Fund, with facilities possibly reallocated from some of the current programmes in view of the urgency and importance of deploying the EuroStack.

1. Motivation and Strategic Objectives

A very recent study (the Asterès report[5]`) sets out in stark terms its estimates of the economic impact of European businesses' reliance on US-based cloud and software services. Annual purchases of cloud/software services by EU businesses are estimated to benefit the US economy to the tune of €264 billion (comparable in scale to Europe's total energy import bill (€360bn in 2024) and equivalent to 1.5% of European GDP. This translates to an estimated 83% of European large enterprise spending on cloud/software going to US providers.

Just as Europe has come to realise it is almost completely dependent on non-European (overwhelmingly American) actors for its digital technology at all levels of the supply chain, the geopolitical environment has changed dramatically with the new US administration's shift away from supporting Europe in several critical areas.

In the wake of the Draghi Report on EU Competitiveness[6], which highlighted the perils of Europe's persistent fragmentation, failure to realise the Internal Market and unsustainable economic model, the wake-up call has been heard loud and clear across Europe. This has created major urgency at all levels (including industry and citizens) for an accelerated strategy to pursue strategic autonomy based on European industrial policy initiatives to power up and leverage our own resources in key sectors: from defence to energy, to clean transition, to digital. The uncertainty created in global markets by the US Administration's effort to transform the trade and security system, and pursue "America First", are acting as a further accelerator - as is the shifting of US defence priorities across the globe.

Yet everything exists in Europe. As an early tech pioneer, Europe developed substantial technological capabilities which can enable us to address undesirable dependencies. The World Wide Web was invented in Switzerland at CERN. The world's No. 1 programming language, Python, comes from the Netherlands. The No. 1 AI library, scikit-learn, comes from INRIA in France. Promise theory, devised by Mark Burgess in 1993, is at the heart of Facebook's cloud. Collaborative workspaces date back to 2004 with the Jamespot SaaS, just as edge computing dates back to 2009 with Nexedi in France. Platform as a Service was born in 2005 with Zimki in the UK. There is also Linbit in Austria, whose storage virtualisation software is at the heart of several Amazon cloud services. 50% of technology acquisitions by hyperscalers come from Europe. Governments' sensitive data need sovereign infrastructure that is ready to be provided by thriving European companies and technologies. In the cloud sector only, several European organisations have demonstrated that 300 successful cloud technologies backed by 100 European providers were already available on the market.

Europe's best weapon in the quest for its own sovereign digital capabilities is our own potential Internal Market (450 million consumers with disposable incomes and comparatively high levels of education), our universities, our primacy in key sectors like steel, cars, aerospace and defence, machinery, and our technical capabilities distributed across a large number of businesses of all sizes, including a vibrant ecosystem of tech developers and funders, communities, and innovative SMEs. Critically, all the required technology exists in Europe already. Building a sovereign, expanding European digital infrastructure requires leveraging these existing strengths, and creating the conditions for our digital needs to be served not just by US gatekeepers and hyperscalers - but by a digital sector that uses our assets, fosters transparency, breaks vendor lock-in, and enables collaborative innovation. This is essential for our resilience, security, and strategic autonomy.

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Germany has recognised the importance of a driven effort by explicitly introducing the concept of "EuroStack" in the final coalition agreement for the incoming Government. France has also indicated on several occasions its commitment to such a strategy. The Dutch Parliament has approved multiple motions to halt migration to US cloud services and realise a Dutch sovereign cloud, as well as to procure software from European sources. There is uniform support from industry across Europe for the need to push a "EuroStack" vision – from Scandinavia to Eastern Europe to Spain and Portugal, from startup associations to SMEs to large firms, support is shared by numerous providers and users. The shared vision is not for a giant public agency, nor for state-owned infrastructure designed and operated by a public body, showering money on disparate initiatives based on non-commercial criteria – but an **industrial policy to create conditions for the European digital industry to succeed through market demand and customer revenue.** Again, this is about enabling Europe to cultivate its own digital ecosystem, build strategic autonomy, and transition from the role of "digital colony" to that of an independent, globally competitive player.

The EuroStack initiative invites the Commission and Member States to engage with industry in a constructive dialogue – and reconsider a number of initiatives which do not appear to have commercial potential, or which inadvertently strengthen non-European actors, in the current plans. The strategic resurgence of the European digital sector cannot come about just as a result of well-intentioned principles set forth by academics, civil society and think tanks. Only if industry is committed and involved, and at the same time politicians actively address systemic barriers including mindsets, excessive bureaucracy and procurement practices, does the plan stand a chance of moving off the blocks. With that, a European digital industry can emerge and scale, capable of supplying at least in part our own demand.

2. Key principles

Even as European regulators continue to hold the view that "digital regulation will work – eventually", it is now clear our multi-year focus on regulating the "upper layer" of our digital world - apps and services – simply could not be enough to free up the entrepreneurial efforts of European digital companies. That "deregulation" is now part of the current mission of European digital policy is indeed a clear sign that regulation leading to inertia and bureaucracy now needs to be rolled back. Most critically, for several components of the stack we do not own the "kill switch" and are vulnerable to various forms of vendor lock-ins. Europe must focus instead on investing in and procuring its own digital infrastructure - both to benefit our digital sector and critically provide security, transparency, control and reliability to European citizens and businesses,

The key principles reflected in this proposal are as follows:

1. **All stages of the European tech supply chain (the "Stack") should be supported.** The concept of "Stack" is intended to capture the multiplicity of layers and components that contribute to our digital capabilities, which lies below the world of apps and services we engage with every day: from chips, to cloud, to software, to network infrastructure, to connectivity, to AI inference. We recognise the supply chain is complex, and emancipation of European industry requires a holistic view – not a siloed focus on one component or other of the stack. There are also important linkages across "layers", which means they are increasingly non-separable: for instance "going to the cloud" increasingly involves not just choosing a server supplier, but critically also making a commitment to integrating a supplier's intellectual property into one's solutions - which may involve getting locked in and having to rent those services forever.[7]

2. **Support should come first in the form of procurement, while subsidies could provide catalytic finance when the market fails.** Public support for the European digital industry has so far mainly come in the form of project-related subsidies. While this is useful in early stages of R&D, it is insufficient to promote a digital industrial policy. Going forward, the EU needs to provide the private digital sector with the right incentives to create a durable European digital industry driven by customer revenue. We articulate in more detail what interventions could be considered - strategic public procurement being the primary lever.

3. **EU preference in procurement should be promoted, not fragmented national preferences.** To leverage the Single Market, key rules need to be established at European level, and designed to avoid fragmentation along national lines ("Buy European" cannot be "Buy German" or "Buy French") - although national level efforts are key to complement this and get the initiative off the ground (and there may be exceptions on grounds of national security).

4. **There is a role for subsidies to deal with circumstances where private investment would not be forthcoming, e.g. to stimulate digital commons.** Digital commons, as part of an "openness as policy" framework will accelerate adoption of technology by the ecosystem. "Openness" comprises open science, open standards, open data, open source, open weights and open hardware. Stimulating digital commons and favouring the adoption of open technologies on the demand side will allow Europe to leapfrog its current laggard position.

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5. **Competition rules should be applied in a pragmatic way, in light of economic and geopolitical conditions.** In order to support a rapid turnaround and capacity building, several policy instruments must be used together and in a coordinated manner: from dynamic regulation that adapts to market realities, to industrial policy initiatives addressing systemic barriers, to making sure that competition policy allows appropriate cooperation and consolidation. This is not a plea for showering money "helicopter style" on industry, nor for the suspension of competition rules. However it is a plea for applying a common political lens: in a world where we are at an inflection point geopolitically, we need to factor in scale, resilience and sovereignty considerations and muscle up our capabilities. European industry is small and sufficiently fragmented that no serious market power can be created in the short-medium term - unless industry positions were majorly solidified.

6. **Similarly, international trade rules should be applied in a pragmatic way, ensuring they are based on reciprocity and do not interfere with Europe's strategic objectives.** While remaining attached to the rule-based order, the EU must take into account that not all countries act in a similar way. Europe also needs to proactively wield WTO national security derogations. In practice both the US and China have long adopted policies which strongly preference their own tech industries. Europe can no longer adhere alone to free trade and non discrimination principles. We cannot do without European defence and supply chains, and defending our sovereignty and democracy must be of paramount importance. Today, Europe's tech sovereignty is a matter of national security and actual sovereignty.

This paper sets out ideas and suggestions to fuel the discussion, in a constructive dialogue.

3. Core proposals

3.1 "Buy European": Driving Demand by Transforming Strategic Procurement

The public sector in Europe is a key driver of the demand for digital services. Yet paradoxically, in the space of less than two decades the European public sector has been entirely conquered by US hyperscalers – the very actors we define in regulatory contexts as "gatekeepers" with outsized power to extract rents and hoard our data. Many of them now claim that they can offer European governments "sovereign" services. This is nothing more than "sovereignty washing", and we should not fall for it. It is plainly absurd that European citizens speak to the EC and many national governments on a Microsoft Teams application.

Our **top recommendation is therefore to mandate "Buy European" rules by appropriately amending the EU Procurement Directive (or through the Cloud and AI Development Act), to require that procurement of digital technology, infrastructure and services is based on objective and verifiable "Buy European" criteria that deliberately create space for European industry to compete and grow**. These criteria must cover absence of lock-in (which can be achieved for example with Open Source Software), jurisdictional control (immunity from extraterritorial laws), data/infrastructure location, transparent security, and contribution to the European ecosystem. **Using the procurement lever is of paramount importance, and where industry needs to see urgent supportive action by the Commission.** Reform of the European Procurement directive (and the Cloud and AI Development Act) come exactly at the right time.

Complementing this recommendation must be **strategically prioritizing Openness as a guiding principle:** from Open Source Software, one of Europe's most potent strategic levers and an antidote to lock-in, to enforceable interoperability and genuinely open standards (as defined in the European Interoperability Framework 1.0).

3.1.1. What is "European" for these purposes?

> The definition of what qualifies as a "European" supplier will need to be properly articulated, based on multiple criteria. Whatever these criteria may end up being, the test should apply to the entity that has ultimate control and management of a digital offering (i.e. it does not apply to subsidiaries) and should also apply to the core technology being provisioned (which means it is not sufficient to rebrand and resell American or Chinese tech via a European reseller or partner - these would remain subject to non-EU authorisations or restrictions).

From a geographic perspective, we would define "Europe" as a broad space that includes European Union Member States and EU candidate states, plus members of the European Free Trade Association (EFTA). The UK should also be included, provided it was willing to enter into a dedicated reciprocal agreement for its own procurement rules.

The potential components of a multi-part test could include all or some of the following:

First, ***the company must have its legal headquarters in Europe*** (where "Europe" is broadly defined as above).

Second, ***the majority of R&D activity (measured in either headcount or spending) must take place in Europe.***

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Third, ***a majority of the ultimate voting control must collectively be held by European entities or individuals;*** or alternatively, ***there must be "absence of non-EU control"*** in the legal sense. In the case of publicly listed businesses, the primary listing must be in Europe, and shares that are floated in Europe can count towards the majority requirement if they are reasonably believed to be held by Europeans. The intention here is clearly that minority foreign investment should not disqualify a company from being "European" provided that operational control, R&D leadership, and strategic governance remain predominantly based in Europe.

Fourth, ***there should not be any extra-EU restrictions (export control, IP licence) over the technology solution,*** which could create potential service disruptions.

More generally, the company could be ***subject to European law and not to international laws.***

A further criterion could be that the company has its ***primary tax domicile in Europe, paying the majority of its corporate income tax in Europe.***

3.1.2 How to formulate "Buy European"?

There are in principle multiple relevant dimensions to articulating a public procurement mandate: (1) should a "Buy European" obligation be formulated at the level of individual tender, or in terms of global spend for the public sector entity over a period of time? (2) should it be formulated as an obligation to "dual source" ("European must be one of the choices")? (3) Or should it be formulated in terms of share of "value" of new contract spend? (4) What should be the target in terms of time profile? (5) What to do about legacy (existing) contracts? (6) Which types of data could be targeted by such provisions, with respect notably to the sensitivity or strategic importance of the information?

While again there can be several possible formulations of the rules, we believe that the proposals below have desirable properties in terms of setting the right incentives:

1. **Establish a measurable target of European purchases by 2030.** Public bodies tendering for contracts could be required to meet a given **target for the "European quota" in their purchases, expressed either in terms of target share of total spend over a period, or share of value of new contracts assigned over a period.** There could be a **time profile,** in the sense that the **share could be growing over time.** For instance: "at least 25 % of spend in new procurement contracts assigned needs to be allocated to suppliers meeting "Buy European" criteria, growing to 50% in 2030".

   The target share or growth rate should be expressed in terms of particular levels of the stack (e.g. cloud, software), as alternative formulations would risk neglecting levels of the stack. Different spend profiles might be appropriate for different categories of EuroStack components. Conversely, we are not in favour of a formulation in terms of target overall spend (i.e. "target 50 % of European share in total spend by 2030") as this can give too much leeway to direct spend in ways that would neglect certain components of the stack altogether.

2. **Start with the purchase of digital solutions that can be used immediately.** The public sector should prioritize **existing European SaaS solutions** that can meet immediate operational needs, leveraging their readiness to accelerate strategic autonomy without delay.

3. **Introduce a multisourcing obligation.** A "Buy European" rule could be also formulated in terms of an obligation to dual source, with at least one European supplier being part of the obligatory choice set. For instance, "can contract with a preferred non-EU supplier, but must ALSO contract with a European supplier". To solidify this, one could introduce a minimum share for the second (European) supplier, e.g. as a share of global spend (e.g. "at least 30% of spend must be allocated to a EU supplier", and this could grow over time). The mandate could even be flipped around, with a requirement that the primary source must be "European", and then there can be a second source of choice. This involves complications depending again on level of the stack (e.g. allocation of loads, training) and would have to be designed carefully not to circumvent the objective.

4. **Invest in pre-commercial procurement to create new capabilities.** Public bodies should be able to formulate their contracts and tenders to include a commitment to potentially funding so-called "pre-commercial procurement" investments in new capabilities. Thus for instance, a tender can be formulated broadly for a set of existing capabilities, but it could also include a commitment to fund additional capabilities that are not currently part of the European suppliers' offering and could be provided with an appropriate investment.

   The tenders can be broad such that respondents can put together consortia that bid to offer the capabilities, or build them - on the back of guaranteed demand. This is a model widely followed already, for instance in defence procurement - similarly, public bodies and institutions (governments) could commit to invest a certain sum on developing the EuroStack through procurement and R&D contracts. This would be essentially a way of using "reformed public procurement" as the primary financial lever to generate direct revenue for European companies and fund R&D&I. Note that this tool is already being used by some national funding agencies (see SPRIN-D in Germany) and has been backed by the European Innovation Council.

5. **Complement existing multiyear contracts.** While existing contracts cannot be rescinded, one possibility to be considered could be to mandate that existing multiyear contracts issue an additional tender to introduce a second "European" supplier. To the extent this involved an additional cost (penalties, loss of discounts) it could be taken care of through some dedicated subsidy/compensation (see Section 3.4).

6. **Consider sensitivity of the data:** the sensitivity or strategic importance of the data concerned would need to be factored in.

7. **Prevent circumvention and facilitate access to public procurement for SMEs:** We want to proactively include SMEs because currently inclusion criteria are too complex for them to participate. It is necessary to de facto deregulate market access to SMEs, or make it generally easier. Conversely, we do not want to give buyers optionalities which give them a "way out" not to comply, e.g. no "buy European or justify". Everyone will then formulate excuses and bogus justifications.

8. **Mandate interoperability / "no lock-in" in all public sector contracts:** Any solution procured with public money should be easy to migrate or change in case of need.

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While there is flexibility across these various levers, we have no doubt that targets need to be ambitious. While the current share of European supply in procurement is very modest, there are available products today to meet most needs - we should be ambitious in moving forward towards more autonomy, and aim to meet a significant share of European demand with European supplies by 2030. We shouldn't also "reinvent the wheel" and create new products that already exist by using public funding. Public money is often used by government bodies to re-create offers that already exist in the private sector, and this should not happen. Moreover, these "solutions" are not subject to the same rules and regulations that must be met instead by competing private offers - thereby creating a competitive disadvantage for European SMEs.

Finally, deterrence for non-compliance should also be "baked into the rules". In practice, there should be consequences for not meeting targets: for instance public exposure of the agency failing to meet targets, lowering its performance score, requirement for a corrective action plan and a ratcheting up of the following year's obligations.

3.2. "Buy European": Steering Private Sector Demand

Procurement policies that succeeded in driving a significant share of digital demand from the public sector to European suppliers would have useful spillovers also for the private sector - as greater revenues and scale will create oxygen for new investments and richer/more competitive products and services, more attractive also to the private sector - in a positive feedback loop.

Yet, while the private sector cannot be mandated to "Buy European" in the same way as the public sector, appropriate **incentives and inducements** can be designed for the private sector to also steer their demand towards European suppliers – particularly at a time when private sector buyers themselves are expressing "discomfort" at having their choices limited to hyperscalers.

In general, private sector adoption is driven by a combination of perceived value (performance, features, total-cost-of-ownership), risk mitigation (security, resilience, compliance), and potentially strategic goals (ESG, European identity, ecosystem benefits). Incentives that target these drivers could include:

- **Deploying targeted financial incentives:** Encourage the design and implementation of well-defined financial mechanisms (e.g., tax credits, contribution to costs) specifically aimed at offsetting the costs for businesses migrating critical systems to European providers or undertaking initial adoption of strategic European technologies. For example, compensation of egress fees incurred when migrating from non-EU hyperscalers to European providers.

- **Making EuroStack suppliers visible and accessible**

    - **Develop clear criteria for qualification as "EuroStack Provider":** Define transparent, objective criteria for being recognised as a "EuroStack Trusted Provider", building on the core "European" definition and essential security and interoperability principles. Establish a mechanism allowing providers, importantly including SMEs, in the short run to either self-declare their adherence to these baseline criteria, or provide a recognised certification via a defined scheme. This can provide initial visibility and market signalling with minimal upfront burden. On the data protection front, pursue compliance simplification based on verifiable attributes.

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- Over time, **establish a formal EuroStack / EU Sovereignty certification:** Create and promote a voluntary certification framework for providers to demonstrably validate their adherence to high standards of "European content", security, data sovereignty (including resilience against extra-territorial laws), and interoperability. This (voluntary) scheme would aim to build market trust and ensure that buyers using certified providers can simplify their own due diligence and compliance (for example, along the lines of the High+ requirements being discussed in the context of the EU Cybersecurity Scheme for Cloud Services (EUCS)).

- **Incentivizing European advisory services leading European customers to European solutions.** The world of advisory on IT strategies is dominated today by a handful of American consultancy firms with enormous power in steering the strategic paths of European companies. Ensuring that European solutions receive fair consideration, support should be given to the visibility and credibility of independent European advisory services, potentially through accreditation or by ensuring the Market Intelligence Hub (see 3.3) provides robust, benchmarkable data that allows companies to make informed decisions beyond the narratives of incumbent advisors. Encourage industry associations to foster peer-to-peer knowledge sharing on successful European implementations.

- **Leveraging "ESG" alignment & recognition:** Actively frame the use of trusted European digital providers as a positive contribution to corporate ESG goals (Governance, Social impact), where the "S" here can stand for "Sovereign" (in the sense of meeting the "European" definition) as well as "Social". Work systematically with auditors, insurers, and ESG rating agencies to ensure that digital supply chain risk (including geographical concentration and data sovereignty aspects) is appropriately factored into corporate risk assessments, insurance premiums, and ESG evaluations.

- **Implementing public funding conditionality:** Introduce incentives for recipients of public funds associated with digital products and services to "Buy European" - e.g. by providing preference points in grant applications for demonstrable commitment to European digital suppliers. Over time, this can include mandating a minimum percentage of European digital spend for significant publicly funded projects at least in defined sectors, making European sourcing a tangible requirement for accessing public support.

- **Leveraging regulatory frameworks for resilience guidance:** Direct regulators (under existing EU frameworks like DORA for finance, NIS2/CER for critical infrastructure) to issue proposals and guidance for regulated entities (buyers). This guidance should be cognizant of cybersecurity risks, as well as explicitly address ICT supplier concentration risk particularly for non-European providers subject to extra-territorial laws. It should recommend supplier diversification strategies, including the consideration of trusted European alternatives, as a key method for fulfilling their digital operational resilience obligations.

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3.3 "Sell European": Visibility, Cohesion, Enforceable Openness

To complement the demand-side push ("Buy European"), Europe must strategically organize its digital supply side to enhance visibility, foster cohesion through interoperability, and ensure genuine openness to prevent lock-in. Proposed initiatives here would include:

- **Establishing a European Digital Market Intelligence Hub and mandate its consultation to public buyers:** Move beyond static catalogues. The Commission, together with and supported by industry intelligence, should establish and maintain a dynamic **hub providing visibility into validated European digital capabilities across the stack.** This hub must include **ongoing strategic gap analysis** to identify critical areas where European offerings are lacking or insufficient, informing both procurement strategies and targeted "Fund European" initiatives. Knowledge and insights produced by this hub would be available as open data in order to provide buyers, policymakers, and industry analysts and other stakeholders with the evidence needed to make informed strategic decisions regarding procurement, investment, and capability development.

- **Championing Open Source as a strategic asset:** Formally recognize and leverage Europe's strength in Open Source Software[8] (OSS). This involves **prioritizing OSS solutions in public procurement** where appropriate, **supporting the security auditing and maintenance of critical OSS components** underpinning the EuroStack (potentially via "Fund European"), and encouraging public sector contributions back to relevant OSS communities.

- **Mandating enforceable Openness & Interoperability: Embed strict requirements for openness, interoperability based on recognized open standards (EIF 1.0 principles as a baseline), and demonstrable data portability** as core, non-negotiable criteria within the reformed "Buy European" public procurement rules (Section 3.1). This is the primary lever to combat vendor lock-in and enable flexible integration of European solutions.

- **Financing and stimulating adoption of digital commons** that fall in other categories of openness, in particular: **open science** in emerging or dynamic fields (public or private, leading to published papers), and **open models or weights** such as Large and Small Language Models (in the spirit of DeepSeek, Llama series or even Mistral) to destroy moats established by non-EU lock-in vendors. This is especially important in the field of **Artificial Intelligence** at the moment and as a matter of urgency.

- **Fostering ecosystem collaboration for integrated solutions:** Recognize that businesses mostly seek comprehensive solutions, not just individual components. Encourage and potentially incentivize operational partnerships between different European digital stakeholders (e.g., software vendors, cloud providers, systems integrators and other service companies, Open Source communities...). This aims to move beyond simple recommendations towards the creation of cohesive, integrated European technology stacks and service offerings. Facilitating interoperability (see 3.3), supporting joint go-to-market initiatives, and showcasing successful European consortia can help overcome fragmentation and provide businesses with more compelling, easier-to-adopt alternatives to monolithic non-European platforms.

- **Addressing the skills gap to enable adoption:** A critical barrier to adopting any technology, including European alternatives, is the availability of skilled personnel. Support targeted initiatives to bridge this gap, including leveraging EU and national funds for training programs focused on key vendor-neutral technologies, promoting certifications recognized across the EU, and encouraging alignment between educational curricula and the needs of the evolving European digital ecosystem.

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- **Facilitating industry-led definition and adoption of key APIs/standards:** Where critical interoperability gaps hinder the creation of cohesive European solutions (e.g., cloud portability, identity, collaboration), the Commission should **facilitate and accelerate industry-led initiatives** to rapidly define and promote the adoption of essential open APIs and standards, ensuring European providers can effectively compete and collaborate.[9] Of particular importance is expediting the adoption of uniform cloud security standards, rather than 27 different certifications (including possibly reconsideration of the adoption of EUCS High+ criteria).

3.4 "Fund European"

3.4.1 EuroStack support, private funding and EU funding

The European Commission is replete with funding initiatives aimed at the digital sector, and specifically at funding digital technology research and innovation. From Horizon Europe (with a budget of €95.5bn, of which €15 for the "Digital Industry") to the Digital Europe Programme (with a budget of €7.6 bn), to the Connecting Europe Facility (budget €2bn), vast sums have been spent or committed to an extraordinary array of projects, programmes, initiatives in all flavours and sizes (from large scale consortia to highly fragmented grants to academic and civil society institutions) to emancipate Europe's position in digital technologies. New commitments have been made in recent months, in the wake of the Draghi report to "plug the competitiveness gap" by making a special effort to push Europe forward in what is described as the "next internet revolution" (AI).

An assessment of the return to these funding initiatives and their effectiveness is beyond the scope of this paper, although we share the analysis in multiple reports[10] that spending has been spread across a vast number of projects without clear coordination and overall vision, focusing on research much more than on commercial potential, and recently embracing the hype on "disruptive technologies" as our sole path to sovereignty. However, little appears to have been achieved in terms of increasing the adoption of European digital technologies and, with it, the jobs and market share of Europe's digital sector, translating in poor returns for taxpayers' money.

And while there are multiple funding initiatives with evocative names (e.g. "Next Generation Internet") and funding formats (IPCEIs, EDICs) these are not sufficiently focused on fostering commercial initiatives with viable business models, or are cumbersome in design (e.g. relying on participation from multiple Member States which creates complications in participation and administration). The Digital Decade Programme does aim in principle to bridge the gap between digital technology research and market deployment, but results have not been appreciable. The Commission has been recently mentioning the "Open Internet Stack Project" as a new initiative which it would like to argue is its own version of EuroStack. Yet it is nothing of the sort – unless reformed, it is currently only a proposal for a very small €10 million project starting in 2026, with purpose unclear.

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The EuroStack initiative that we support has a bias towards industry logic and commercial criteria driving investment – provided demand is suitably steered towards European suppliers. As explained in the previous sections, if procurement policies are appropriately designed to create demand for European products and services, we believe that much private investment will fall into place and suitable products will be made available. That said, at this particular inflection point and given urgency for accelerating the creation of a more sovereign infrastructure, Europe will also benefit from dedicated financial strategies and instruments specifically designed to support the development, adoption, and scaling of European digital technologies and infrastructures. This includes both optimizing public spending and stimulating private investment. As mentioned, our view is that current EU funding instruments, while numerous, are largely inadequate or misaligned for the specific goals of EuroStack: projects are too slow to evaluate and assign, funds are misdirected, captured by special interests, or both - as well as insufficient to the scale of the challenge.

We can see multiple initiatives that can encourage more private investment to come forward (3.4.2 and 3.4.3). We can also see multiple circumstances where "market failures" – or more generally, frictions in the ability to generate private investments – can justify a role for the Commission and Member States explicitly supporting the EuroStack initiative with dedicated funding (3.4.4).

Again, given the urgency, in the short term it would appear to us that funds can be redirected from some of the existing initiatives – the Commission routinely re-labels and re-purposes funding lines. We describe where we see the opportunity for a "Fund European" effort which would be specifically geared to support a EuroStack. Another potential source of innovation development funding could come from the sizeable fines received by the Commission as penalties for DMA or DSA violations.

3.4.2 Encouraging private sector investments

One of the most impressive features of the US Inflation Reduction Act was the speed with which it unlocked massive private investment in the US. As **private companies were given clear and simple incentives to invest in developing new technologies, there was no need to create extra structures or slow-moving mechanisms. That is why we believe that private investments are still the most effective, efficient, and scalable means of funding the development of large portions of the EuroStack.** Policy initiatives around funding should thus be primarily geared towards encouraging more private investment. This marks a departure between this initiative and the vast array of projects in the digital space, the essence of which has been typically to create vast disbursement schemes for public funds (in the billions of Euros) with very limited returns in terms of building up capabilities and supporting commercial activity.

Private funding for European startups and scale-ups working on EuroStack components have traditionally lagged because of the higher perceived risks of competing with Big Tech, and the prevailing view that the maximum addressable market size is limited in Europe. As such, the risk-adjusted return is generally viewed as lower, making such investments less attractive. The Commission could encourage private investment by supporting Europe's digital players federating their services and making them more interoperable. An example of a private effort along these lines is the SECA initiative (Single European Cloud API), developed as a pro-bono project by 3 European cloud providers. Europe needs a massive ramp up of such initiatives, and dedicated support could enable much more speed and scale.

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Another way of improving risk-adjusted returns to encourage more direct investment in EuroStack providers could be through reduced capital gains taxation on returns generated from investments in EuroStack certified companies. By foregoing this tax revenue, European member states would indirectly steer private money towards the private companies building the EuroStack, without having to directly take stakes in such businesses, provide subsidies or grants, or alter the way in which private capital market participants self-select companies with the highest likelihood of commercial success. While the EU cannot mandate such measures itself, it can encourage Member States to enact them.

Another aspect of private funding that deserves mention is the **exit market** - a crucial piece of the financing flywheel for startups and scaleups everywhere. Most tech companies' trade sales in Europe are not "killer acquisitions", and the Commission must take a nuanced view of tech M&A. Many European founders "exit too early," selling to a larger player, often because of lack of sufficient growth capital options. But such exits drive the virtuous circle of tech investment, even fostering more investment as founders reinvest. Until we have more growth capital in Europe for our tech companies, the EU should be doing what it can to encourage its own EU-based champions (not US tech giants) to invest – via trade sales – in European tech startups.

There is also a case for considering funding to other pieces of the Stack that are also central to tech sovereignty. The **connectivity** sector is transforming at a fast pace through network virtualization, begging the question: which global players will lead fully virtualised networks 10 years from now? Encouraging private investment in this field will be crucial, as capital expenditure per capita in European telecoms is currently "less than half the levels of the US' and Japan's" [11]. This could include support to European edge cloud and open RAN ecosystems, LLMs for telecoms and boosting R&I for 6G and quantum communications.

Non-dilutive grants, financial guarantees and other investment incentives for private capital can pave the way for a self-reliant funding environment for sovereign tech. We encourage the Commission to make them a cornerstone of a EuroStack strategy.

3.4.3 Mobilising European capital & savings towards private equity and venture capital

While Europe's burgeoning tech sector is already developing or offering elements of the EuroStack, our digital players are comparatively undercapitalized, especially in the growth stage, and thus less able to compete at scale. While that gap includes our underdeveloped capital markets – no "European NASDAQ" – it starts with our structural misallocation of capital at the top of the financing funnel.

Europe is essentially a wealthy continent with an allocation problem. EU pension funds alone hold assets of about EUR 3 trillion[12], while the European insurance sector with pension-like plans manages assets of about EUR 9 trillion. While pension funds are already investing billions in VC each year, this allocation represents less than 1% of their assets. A 20x increase in pension funds' well-diversified investments across a well-performing European technology sector would roughly triple the total annual contribution to VC in the EU and still only represent less than 0.2% of pension funds' assets. While these potential benefits have already been acknowledged by the Draghi Report and the Commission's Competitiveness Compass, regulatory changes to offer greater flexibility and to revise overly conservative reserve requirements need to happen as soon as possible with a special focus on **steering institutional European capital into the emergence of sovereign European technology that is currently becoming a highly attractive investment target.** For too long, European institutional money has fuelled the VC ecosystem in the US.

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One potential means of driving more institutional investment into the VC asset class in Europe is for these investors to be able to access guarantee mechanisms, either through national state investment banks (eg. BPI, KfW) or the EIF/EIB. As the risk on a fund-of-fund structure is essentially zero, such guarantees of fixed returns can attract massive amounts of capital into the system while also generating attractive returns both for the guarantor as well as the institutional investors.

This shortfall in large-scale investments means European startups raise considerably less capital than global competitors, often prompting top talent to relocate abroad and losing their future champions. Bridging this funding gap requires a more proactive role from institutional investors to support startups and scale-ups, helping Europe to cultivate its own technology leaders and retain control over its innovations. Closing this gap is a clearly defined goal in the Commission's current mandate, and we look forward to specific remedies that are to be unveiled in the coming months.

Possible initiatives that can help bolster development of EuroStack solutions include:

1. **The creation of a European VC Initiative (EVCI),** to foster exchanges between institutional investors and VCs in Europe, therefore de-siloing the funding chain of Europe. Comparatively to national initiatives, the EVCI would create a label and a fund-of-fund structure at the European level, promoted by a political summit, to enhance institutional investors' investments into VCs. This initiative would not solve the lack of liquidity in the European Union, however, which is why we advocate for three complementary measures to be taken. The EIC has already launched a trusted investor network to bring together VC funds with its EIC-funded projects, so the EU is already taking steps to build networks via "labeling" and clustering of investors. Replicating this concept at the institutional investor / LP level could help drive further investment.

2. **The development of new types of assets,** such as **EU Long-Term Saving Products,** will help to mobilise European's savings to fund innovation.

3. An update of **Capital requirements for institutional investors,** to ease their involvement in VC funds that are crucial to startups' financing.

3.4.4 A "EuroStack Fund"

All of this said, we also see circumstances where the availability of private early-stage funding for startups, as well as later-stage growth capital, may well remain insufficient to build key components of EuroStack quickly and at scale. Public investment instruments will then be needed to support the ramp-up of private dedicated funding vehicles and strategies - just like the European Investment Bank (EIB) and national development banks across Europe played an important role in the emergence of a competitive European VC ecosystem around clean tech and defence tech in past years, we should now prioritize investments in VC and PE funds that support the creation of sovereign technological capabilities along our digital value chains: ventures contributing to the EuroStack, including ones delivering long term societal dividends through openness, projects with fastest time-to-market and highest commercial impact and success likelihood.

We thus see the **potential for creating a "EuroStack" funding** vehicle (in the short term, most likely by re-assigning funds e.g. from the Digital Europe Programme, whose €1.3 bn 2025-27 Plan has just been circulated) in selected areas of deployment where private sector funding might be more difficult to generate. Another potential source of additional capital could come from funds received as part of fines for DMA or DSA violations.

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This could take a form equivalent to a Sovereign Fund-of-Funds (SWF), administered/ managed for instance by the EIB/EIF. Such a fund could embrace the logic already established by funds integrating defence or "social" considerations into their investment processes ("the S pillar of ESG" [13]). For over a decade, SWFs with a financial return mandate have increasingly included an "S pillar" (S for "sustainability") into their strategies, and developed metrics to gauge the impact of social issues on performance. For EuroStack projects that help pursue greater autonomy, security and resilience of the European digital ecosystem, one could think of a "sovereignty dividend" which can be explicitly baked into the fund: that is, the fund would be tasked to pursue investments which were expected to provide a "sovereignty return" and would compensate for lower financial returns, or returns limited or constrained by an exit confined within Europe.

Having an ecosystem of private funds (supported by a European fund-of-funds mechanism) could be much more effective. Private fund managers would be pooling capital and therefore only investing in truly promising products or services.

In addition to pooling or allocating capital, some member states have already begun validating the idea of an operational agency dedicated to tech sovereignty projects, such as Germany's Sovereign Tech Fund. However, that relatively new public agency – which aims to mainly focus on Open Source projects, has not been able to disburse funds at the speed the private sector needs, due in part to Germany's recent snap election. The model shows the way however, since it could potentially be a vehicle by which private companies and even consortia could apply for grants or public investments to develop and deploy solutions that fulfill any missing and critical elements of the EuroStack, including open source components and their CRA (Cyber Resilience Act) obligations. A similar agency – perhaps a part of the European Innovation Council – could create a rolling, non-bureacratic funding mechanism for EuroStack projects.

A number of possible projects that could be funded selectively through such a EuroStack Fund include:

Plugging "gaps" in the EuroStack offering

One of the first aims of the EuroStack Initiative will be to provide an indication of where product and services gaps might lie (through a "gap analysis" to be carried out by the Commission and industry together, see above 3.2). There may also be circumstances where a product/service gap cannot be filled rapidly through existing private funding instruments.

One such example could be the application layer, and in particular "Software as a Service" (SaaS), where investments in certain applications may not be commercially pursued (for example, office and collaboration suite). This would not be about attracting venture capital, but helping existing companies grow their offering (with an instrument half-way between growth capital and PE).

Another example could be cloud and its middleware components (IaaS and PaaS), where investment can accelerate catch up with hyperscalers' catalogue. This could be the case in particular in situations which provide "gap" solutions which perhaps break even but do not quite have escape velocity yet (and therefore do not attract VC capital looking for new ideas, disruption and hype, and are not yet attractive for PEs looking for solid growth).

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We also recognise the importance of the semiconductor layer as a key input into the European cloud offering - and therefore as part of the stack. Dependence on non-European suppliers in this layer is absolute. While this is a distinct major issue which should be taken care of through a dedicated vehicle, and indeed chips are receiving attention through other industrial policies (European Chips Act 2), there could be a role for the Fund in supporting the transition of European Cloud Providers to European-based chips (e.g. DPUs). This would align with the broader goal of enhancing European technological sovereignty. Mature and performing solutions already exist in Europe. The Eurostack fund could help European cloud providers to transition to these technologies by covering for instance operational costs.

Pre-commercial procurement investments in specific circumstances

As discussed in Section 3.1, we would expect pre-commercial procurement investments (e.g. for a functionality the buyer wants, but needs some development effort) to be covered in a number of circumstances by the public body issuing the tender.

There may be circumstances in which this is not possible, or the public body is not in a position to assist with pre-funding the investment. In this case, the Fund would be in a position to intervene by supplementing public procurement budgets to enable funding for the development of specific capabilities in addition to final procurement of services.

Funding EuroStack-dependent innovation, including AI

Another aspect would be to try and finance companies on the edge of innovation, including of course artificial intelligence (either as middleware or application), but do so in a way that is massively leveraging EuroStack instead of defaulting to infrastructure provided by extra-territorial technology. Such self-imposed constraints increase short term costs and perhaps limit early developments, but can go a long way to stimulate demand with explosive potential.

Funding scale up

A oft repeated refrain is that while start-up capital exists in Europe, European VC investment funds do not have deep enough pockets to fund the capital intensive scale up phase of successful tech companies. The end result is the increasing dependence on foreign investors to fill the gaps in later stage funding rounds, leading to the migration and eventual listing of European tech champions in the United States.

Even the adoption of preferential capital gains treatment for such investments will likely not be sufficient to cover the existing funding gap. Here we can see the role for a EuroStack funding vehicle that can leverage public funding to provide a **1 or 1.5 to 1 match for private European funds.** This would immediately double the “dry powder” available on the Continent to fund the tech scaleups which would be essential for building EuroStack. Such a scheme still allows market forces to pick winners and losers, and from a total return perspective, should massively outperform private investment decisions being made at the EU level, and result in a better return on taxpayer money.[14]

Migration costs to European suppliers

Hyperscalers routinely absorb the cost to clients of moving their demand to them. This is a routine commercial strategy. If steering demand to European suppliers is recognised as a strategic priority (which it should be), and this entails switching costs (egress fees, loss of discounts, training costs) there could be explicit public assistance to the migration. Where the intention is to accelerate migration from non-EU suppliers to EU suppliers. Alternatively, tax credit could be granted by governments to support the initiative.

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Funding for early-stage firms and SMEs

Once the strategic procurement shift starts taking effect across layers of the EuroStack, early-stage firms and SMEs that set out to build key EuroStack components should be able to raise funds through the established private financing mechanisms. However, it will take some time for this new local demand to become significant enough for VCs and other private funding structures to build dedicated vehicles and strategies. Additionally, the availability of more patient capital to meet 15-20 year funding needs critical for deep tech and capex-heavy startups will likely remain scarce with only a few specialized VC and PE funds across Europe - this will even be more significant for late-stage growth funding (Series B-D).

Overall, the purpose of the EuroStack initiative remains to create opportunities for the European digital sector to grow and thrive autonomously, not to seek public handouts. We do not see the initiative as dependent on public funding, but as capable of attracting private funds as the commercial opportunities created by a larger share of European procurement directed to European suppliers become clearer. This said, we also see there will be instances where the creation of a EuroStack venture fund, administered for instance by the EIB, and capitalized with reallocated funds, would be desirable for ensuring that even the most commercially challenging components of EuroStack are able to secure financing.

4. Conclusion

The “call to arms” from European industry on deploying the EuroStack is a concrete offer to cooperate with the Commission and national governments in identifying the most effective initiatives that can accelerate Europe’s digital autonomy and resilience in the near term.

We have reached an inflection point where our dependencies are no longer acceptable and sustainable - even US hyperscalers are beginning to understand that major shifts in the priorities of the current US administration are multiplying Europe’s perception of its own precariousness, and are making implausible pledges to protect their business. This is the time for Europe to leverage its capabilities and resources, and make a major push to create a more secure and autonomous footing for its digital infrastructure.

This paper has made a number of proposals to articulate in greater detail what combination of public and private initiatives would support appreciable deployment of EuroStack assets in the next 5 years. First priority should be given to **updating procurement rules to direct a portion of public sector demand towards European suppliers;** and to **measures that could also steer private sector demand.** At the same time, a number of initiatives (many industry-led) should be **supporting the European digital industry’s own ability to offer and deploy adequate European alternatives** to the dominant non-European offerings. We also discuss various ways in which **private funding to support EuroStack initiatives** could be improved, and how a **“EuroStack Fund”** could play a complementary role in plugging gaps in the EuroStack offering that are not immediately attracting private capital for multiple reasons.

Much needs to be done, but progress can only be made if the Commission and national governments see the benefit of working in close cooperation with European industry. The proposals in this paper are intended as a basis for discussion.

References:

[2] Toward European Digital Independence: Building the EuroStack – EuroStack

[3] EuroStack-Signatures-30.4-1.pdf

[4] The paper has been drafted by a working subgroup of the 200 CEOs and industry participants who originally signed the 14 March letter. While there is broad support among the wider group for the proposals in the paper, not every sentence is attributable to every signatory of the original letter.

[5] https://www.cigref.fr/la-dependance-technologique-aux-softwares-cloud-services-americains-une-estimation-des-consequences-economiques-en-europe.

[6] The Draghi report on EU competitiveness

[7] See Bert Hubert, https://berthub.eu/articles/posts/beware-cloud-is-part-of-the-software/

[8] Cf. reference licenses defined by the Open Source Initiative (OSI)

[9] See for example the Data Act's art. 35, that foresees the publication of open specifications and harmonised standards for the interoperability of data processing services ("the Commission shall publish the references of harmonised standards and common specifications for the interoperability of data processing services in a central Union standards repository"). https://eur-lex.europa.eu/eli/reg/2023/2854/oj/eng

[10] See for instance 250423_PuttingMoneyWhereYourMouthIs.pdf, and 241108_copy with layout_landscape_maping.pptx.

[11] The Future of European Competitiveness – Part B, Mario Draghi, 2024

[12] https://www.ecb.europa.eu/stats/financial_corporations/pension_funds/html/index.en.html

https://media.francedigitale.org/app/uploads/prod/2024/12/05151558/France-Digitale-Unlocking-investments-for-competitiveness.pdf

[13] See Environmental Social Governance

[14] Of note: France has created a mechanism called French Tech Souveraineté (aka FTS), not quite a fund, but a reserve dedicated to strategic projects that need emergency funding (during COVID and beyond). This system should be institutionalized at the European level.