EuroStack

EuroStack: Organizing "Demand Pull", Not Just "Supply Push"

BUYERS' ALLIANCES - A DISCUSSION

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01

Framing and Overview

Europe is realizing with acute discomfort that our industrial and commercial activities (as well as our institutions, cultural references and recreational pastimes) are deeply enmeshed and overwhelmingly dependent on mainly US-owned technological infrastructure.

The role of European suppliers in serving European tech demand has shrivelled – and the dependence is not "just" in cloud and software, but extends to the control points of industrial productivity at all levels of the "stack": compute, data environments, AI tooling, software layers, and the physical and digital infrastructures on which nearly all sectors rely.

A broad consensus has emerged that Europe must "do something" to reduce these dependencies, which carry risks for security, undermine resilience, hold back investment in European assets, slow down productivity growth and impose on us a direction of innovation on which we have no agency. There is growing consensus that both private companies and the public sector need to reduce their exposure to risk by proactively empowering European solutions. For over a decade Europe treated digital infrastructures as neutral utilities, and our dependencies as manageable trade-offs (in exchange for convenience, scale and short-term efficiency), but this is no longer an option. Procurement choices, investment patterns and political incentives need to adjust. In the current geopolitical environment, with Europe's economic predicament, this needs to be understood as priority **industrial strategy** - no longer as just a harmless default decision.

Initial analyses of "what to do about sovereignty" focused almost exclusively on *how much new money would be required to build an alternative European "stack"*.[2] That was the wrong question, one that treated the problem as one of budgetary expansion. The right question would have been to ask instead *how can existing demand be reorganised to motivate supply.*

For its part, the supply side of the European tech industry has been engaged in a "push" effort for some time - showcasing European-made alternatives to current offerings by hyperscalers, and creating "integrated solutions" that pull together best-in-class European components. As the EuroStack Industry Initiative, we strongly advocated for Europe to pivot from tech regulation to assertive industrial construction, aggressively building out our portions of the "stack". Our ongoing initiatives include **increasing the visibility of European offerings,** through **"Solution Finders" that match demand-side user cases with promising European supply alternatives;** and creating **"bundles" that integrate products technically and commercially in ways that meet customers' requirements.**

However, **supply-side efforts alone will not be enough to drive the shift we need:** a turnaround will not be triggered by a cute visual of European companies on a map, nor by the flurry of social media posts clamouring "there are alternatives!". The emphasis needs to move **urgently and explicitly to the demand side. Without demand moving forward and placing orders, there can be no investment and no real movement.**

[2] See the Bertelsmann's EuroStack report which put an estimated "€300bn" price tag on "how much money will be required to create an equivalent European stack" - a distraction in the debate as it was latched upon by sceptics (including budget-constrained governments) to argue that EuroStack was attempting to "replace hyperscalers", and as such it was a pipe dream with an exorbitant price tag, not worth engaging with.

"Demand" refers both to the public and the private sector. For **public sector demand** there are in principle strong institutional powers that can be deployed to direct a portion of procurement towards European solutions. EuroStack strongly advocated in favour of a "Buy European" effort in an earlier paper. We are awaiting the European Commission's forthcoming "Digital Sovereignty Package" and revised Procurement Directive (which will deal with "European preferences"). Meantime we are seeing some movement at Member State level with the activation of preferential mechanisms (France, Germany, Netherlands).

We do not discuss public sector procurement further in this paper, other than to reiterate that directing some portion of European public sector demand towards European solutions to create scale and incentives for investment is an entirely legitimate industrial policy tool - not "protectionism" nor "in conflict with WTO".[3] We should not interpret trade rules restrictively to unduly limit Europe's strategic options.

This paper focuses instead on the essential need for **European private demand to re-organize and help create viable markets for infrastructure assets - owned and controlled locally.**[4] There can be no mandates or direct legal obligations for private demand. Can we create the right business incentives for a shift? As we identify, dependencies are persistent not just because of two decades of hyperscalers' infrastructure becoming deeply embedded into the fabric of our industry and commerce; but also because of a **"collective action problem", whereby the collective benefit of reducing structural dependency is offset by the perception that whomever "moves first" to European solutions may be facing a "first-mover disadvantage"** - where the first to "move" fears bearing in full the cost and friction of the migration.

Yet if no one is moving, there will be no progress. Designing and operationalizing a response to this impasse is an ambitious effort: what are the mechanisms, what are the incentives, what would be the most attractive "entry point" for such a strategy?

This paper aims to contribute to the discussion with some initial ideas for how to practically operationalize possible solutions.

First, this issue is not new. Multiple past successful experiences of transformational tech initiatives addressed perceived "first mover disadvantages"[5] and "coordination problems" by **aggregating demand** across buyers to coordinate some of their procurement. The same hyperscalers that Europe is so dependent on today have a proven track record of using demand aggregation mechanisms to take power away from suppliers they were previously overly dependent on. This played an important role in helping them achieve hyperscaler status in the first place. These experiences succeeded in shifting power from critical suppliers to end customers (in this case European private demand for digital infrastructure and services).

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[3] WTO rules in fact give considerable room for governments to shape procurement in strategic sectors, and other WTO members use these flexibilities extensively. The United States structures entire technology ecosystems through defence procurement and federal certification regimes. China systematically aligns public demand with national industrial priorities. Further, EU primary law already recognises that essential security interests may justify differentiated treatment, for example under Article 346 TFEU, and such security-based procurement approaches are routinely applied in sectors like defence. In multiple strategic sectors sensitive information flows through collaboration tools, email, identity systems and analytics. In practice, almost every layer of the stack can become security-relevant, so there is much more room for action within the existing framework than is often assumed.

[4] We made the case first in Tech Sovereignty needs demand - to get supply right, and expand in this paper.

Second, and based on these precedents, we see a role for (EuroStack) **Buyers' Alliance mechanisms:** without being prescriptive, it is clear from our engagements with the demand side (from OEMs to banks to financial institutions, as well as industry associations) that there could be appetite for dealing with the "collective action" problem by **pooling together potential buyers - possibly within a given "vertical", or in a given country - and exploring whether portions of their IT procurement could be organized as a collective endeavour.** This initial idea would need to be considerably refined and developed, but we see scope for initial informal exploration and several low-risk and low-commitment pilots.

The EuroStack Foundation could play a role as a neutral mission-oriented party to catalyse initiatives, identify mission-consistent technical supporters and attract funders' interest. We plan to "workshop" the idea across Europe to highlight the considerable upside and limited downside of the approach (with persistent inaction being the real price of failure; and no antitrust risks arising). We suggest experimenting with something like a *"Risk Recovery Preparedness Package"* as a potential first user-case which could have significant appeal. We can also see the need to refine the approach depending on whether one is addressing more "mature" portions of the stack (cloud, IaaS, PaaS, Saas) or more innovative emerging markets (physical AI, startups). We wish to kick off the discussion, and welcome comments and suggestions.

[5] In a procurement context, first mover disadvantage refers to the drawbacks that a company may face if it is the first to use a new product or service that has not yet been widely adopted by industry. The first customer to adopt the new technology (e.g., "green" steel, an electric truck, or a cloud solution that is independent of the hyperscalers) often pays a premium and/or incurs significantly higher operational risks and learning costs (the "Green Premium" or "Innovation Premium" or the soon-to-be "EuroStack Premium"). Meanwhile, competitors who wait for the solution to mature and costs to fall, gain a competitive advantage by free-riding on the early adopter's learning curve.

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02

The challenges of "activating European demand"

Surveys increasingly show that most European enterprises are concerned about their tech dependencies[6] and want to reduce reliance on US hyperscalers (especially for critical workloads, and particularly where sensitive data, competitive advantage and long term resilience are at stake).[7]

[6] See the recent study by Lünendonk & Hossenfelder showing that companies in the DACH region increasingly view their dependence on large cloud providers as a strategic risk. The study shows that 83 percent of companies surveyed consider a "kill switch" scenario realistic (the possibility that a cloud provider unilaterally restricts or completely shuts down access to critical IT services). At the same time, only 57 percent have an exit strategy for changing providers. Nearly half, therefore, have no contingency plan for such an eventuality. Cloud dependency: Almost half of companies have no plan B | heise online

[7] "National security and autonomy concerns will mean that by 2027, 70% of organizations in EMEA will only choose sovereign cloud platforms from local providers for their AI workloads." Rahiel Nasir, Research Director European Cloud and Lead Analyst Worldwide Digital Sovereignty, IDC. Futurescape Webcast, 29 January 2025. Gartner (2025): 61% of Western European CIOs expect geopolitics to increase reliance on local cloud providers. BearingPoint (2025): 84% of European organisations are utilising or planning sovereign cloud solutions. Capgemini Research Institute (2024): 46% have formally embedded cloud sovereignty into their strategy. See: gartner.com/en/newsroom/press-releases/2025-11-12-gartner-survey-reveals-geopolitics-will-drive-61-percent-of-cios-and-it-leaders-in-western-europe-to-increase-reliance-on-local-cloud-providers; bearingpoint.com/en-ie/insights-events/insights/data-sovereignty-the-driving-force-behind-europes-sovereign-cloud-strategy; capgemini.com/insights/research-library/cloud-sovereignty/

The conditions for a pro-European shift are beginning to catalyze into place: uncertainty on geopolitics is mounting, defence is taking centrestage, awareness of European solutions is improving, private capital is waking up. There is increasing discomfort about the way that hyperscalers have been pushing deeper into the core markets of the very industries whose infrastructure they host. On the other hand, there are powerful factors locking the status quo in place, and we need to operationalize initiatives that can dissolve them.

A key hurdle is what we describe in this paper as the "collective action problem": a perceived "first-mover disadvantage" for businesses making the decision to migrate. Buyer inertia arises because as long as the supply side appears somewhat immature, rational enterprises fear "going first". If competitors stay put, moving alone involves the perceived risk of bearing transition costs, with few immediate competitive benefits. And if nobody moves, demand remains fragmented and the supply side under-invested. The supply side looks increasingly immature; the market stays frozen. No individual actor has the incentive to move, or the leverage to break the cycle alone.

Lock-in adds a further layer. For the last two decades, Europe thought of digital infrastructure as equivalent to neutral utilities – water, electricity – while hyperscalers built their position methodically. Open interfaces towards developers to attract them into the ecosystem. Proprietary standards and closed interfaces between providers make leaving expensive. A generation of engineers, architects and enterprise employees were trained on a single stack. Development pipelines anchored to hyperscaler toolchains. Enterprise data stored in formats that make migration technically complex and costly. These investments do not disappear when an enterprise decides to move, they become sunk costs: non-recoverable, and powerful enough to make staying feel rational even when it no longer is.

Service providers like system integrators, who could help enterprises move, are caught in the same logic. Partner programmes and revenue sharing agreements penalise them commercially for sending business elsewhere. Their teams trained overwhelmingly on a single stack. Moving a client means dismantling the commercial relationships that keep their own business running. So they stay. And in staying, they make it harder for everyone else to move.

Additional factors militating to preserve the status quo include:

Biased cost-benefit calculations: Bundled products were sold as indispensable,[8] and the associated competitive risks were ignored (including hyperscalers now competing directly with the industries whose infrastructure they host). Short-term convenience wins procurement decisions. In addition, the fact that the true performance and associated risks of infrastructure procurement are difficult to evaluate at time of purchase created a systematic bias in favour of confirming past decisions and sticking with perceived efficiency – against longer-term dependency risks. Procurement decisions were not seen as strategic, but landed with IT teams. Over time this created board-level consequences and strategic liabilities: legal exposure, competitive positioning, operational resilience, geopolitical risk.

[8] Hyperscalers created the impression that the full suite was necessary when in reality most enterprises use only a fraction of the features on offer. The bundling strategy was deliberate: by integrating services so tightly that individual components cannot be extracted without significant disruption, hyperscalers ensured that every additional service adopted deepened the dependency and raised the cost of switching further.

Governments are also trapped: Hyperscalers arrive bearing gifts: data centre announcements, job creation numbers, regional development programmes. Governments inevitably welcome them, and thus commit themselves. Switching costs are high, and a large share is immediately sunk. Political capital is spent, programmes launched, and jobs promised in public. Reversing course is not just economically costly but becomes politically untenable. Public investment narratives lock governments in, just as proprietary architectures lock enterprises in.

Fragmentation: Europe's fragmentation problem runs on the supply and demand side simultaneously. On the supply side, individual governments intermittently and belatedly attempted some of their own solutions. Home champions (sometimes even public administration departments) have been promoted, national standards pushed, national agendas defended. Attempts at supply-side coordination by initiatives like Gaia-X spent years at the table, debating architecture and governance with every participant representing a different interest (including the hyperscalers themselves who sat at the same table and shaped the very standards meant to reduce the dependency on them). On the demand side, European businesses want to move but do not seem to appreciate the collective weight of their combined purchasing power. They stick to the status quo arguing that European providers do not offer scale and pan-EU coverage across IaaS, PaaS and SaaS; that they cannot be expected to stitch together multiple providers. Many do not seem to be able to translate their sovereignty requirements into procurement language: they know what they need but not how to buy it. The articulation gap is real.

Regulation blind spot: As Europe, we have chosen to put blinders on all of this. We have been majoring instead on the language of market power and antitrust/regulation for years, to address the growing "imbalance in bargaining power with Big Tech". But we did not confront the true impact of their infrastructure expansion on our decision space and, ultimately, our resilience, security, innovation and growth potential. As antitrust and regulation have shown to be unequal to the task, we have been left with a strategic hole.

To break the impasse, **we need *demand to move*.** If European demand moves, the flywheel starts turning much faster. This requires translating what businesses actually need into market signals, and giving buyers the collective weight to shape what gets built. Individual customers will struggle to overcome the hurdle alone, as everyone is waiting for everyone else. And the longer they wait, the more the cycle tightens. The answer we propose in this paper is to **design ways to organise at least some of the demand side cooperatively, so the individual cost of moving is shared across the pool.**

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03

Leveraging the new risk/ benefit tradeoffs to motivate demand

How can the private motivation to re-architect our digital infrastructure, at least in part, be activated? How can the collective benefit for Europe be pursued while preserving economic self-interest? For individual business decisions, the key differentiator relative to the past must be a profoundly different appraisal of risks and benefits.

In the current geopolitical environment, sovereignty has risen to the top of European sentiment because we cannot rely indefinitely on benign collaboration from external actors. Digital infrastructure is understood as a strategic layer of economic and political power, and dependencies need to be evaluated through the lens of resilience, sovereignty and security.[9] US tech giants have been extractive and exploitative for some time (high prices, vendor lock in, egress fees), while telling customers "no one is as good as we are". With the geopolitical context deteriorating sharply, Europe has been told repeatedly that it must invest in its own defense capabilities and infrastructure.

The concept of "efficient procurement strategies" as understood until now (lowest cost, "value for money") is a thing of the past. As more European solutions have become available, it is not true US solutions are better "value for money" anyway; but critically, the overall calculus has shifted. Enterprises that have not yet updated their procurement logic are accumulating risk without knowing it. **Strategy and resolve need enlightened leadership at C-suite level. This not only about decision authority, but about the ability to understand and challenge existing procurement and IT logics that are often presented as given. Procurement and IT middle-management will not make these choices without direction from above. Moreover, most enterprises are mid-contract, mid-migration, or mid-incident; they do not know where to move next and how to do it without bearing the cost *alone*.** We discuss potential ways of thinking about a solution in the next section.

[9] "Given ongoing geopolitical turmoil, 60% in Europe are now more likely to adopt digital sovereignty solutions — such as enhanced tools for governance, risk and compliance — for their AI workloads. Indeed, 88% of those using sovereign cloud for such workloads say this is the most important IT area for data sovereignty. That means there's a perfect storm developing, as the desire to show measurable business impacts from AI collides with the increased need for governance." Rahiel Nasir, Research Director European Cloud and Lead Analyst Worldwide Digital Sovereignty, IDC. IDC EMEA FutureScape Webcast, "Three Major Trends Shaping the European Cloud Market", 29 January 2025. Published on LinkedIn, December 2024.

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04

Operationalizing EuroStack with a "demand-side pull"

As the EuroStack Initiative, we encountered two common concerns when engaging in discussions with private European demand-side stakeholders (from enterprise to SMEs) that are interested in supporting the movement.

The first is around the **"readiness and maturity" of European suppliers** available to compete with current solutions (this also includes timing, switching and transaction costs). The second is **exposure to the "first mover disadvantage"** (as discussed, the perception that moving forward with repositioning one's own procurement entails disruptions and real costs which translate in a competitive disadvantage). They are in some sense two sides of the same coin, and both become manageable at scale. Moving "collectively" shares the burden, gains the negotiating power and coordinated support that makes the switch viable, while at the same time improving the maturity of the supply.

4.1 Overcoming the "collective action problem" with demand coordination

Concerns about "first mover disadvantage" are almost a textbook "collective action problem" for which solutions exist. Instead of hand-wringing and inaction, we can draw from historical precedents for inspiration. An effective way to spark a "shift" in comparable circumstances has been to develop **mechanisms of demand aggregation**. These have proven particularly effective when transitioning to new technological paradigms – which is exactly the situation we find ourselves in today thanks also to the emerging AI economy.

The conceptual benefits of "pooling demand through collective action" are obvious. **Consolidating the purchasing power of multiple end-customers can send a unified, credible "pull" signal** (in this case, for European digital infrastructure offerings that are "good enough" and meet detailed customer requirements). This also serves to **de-risk investment for suppliers and their backers, and accelerates commercialization** (in this case, this is how the European suppliers would become more "ready for primetime" and ensure that they're building the right products and feature sets that the demand side actually wants).

The perceived "first-mover disadvantage risk" is managed, individual reluctance is attenuated, and previously fragmented demand can transform into bankable market signals that justify industrial investments from newly interested private funders (or a market concentration of smaller players seeking critical mass). If done well, demand aggregation initiatives should also accelerate learning, moving entire industries down the learning and cost curves faster. When added to complementary "supply-push" initiatives (which in this case look to attract demand by increasing the visibility of new, integrated European products), **"demand-pull" initiatives can create a real market that private finance can jump into and treat as bankable and insurable.**

Is this just simplified utopian economic theory? Or is there reason to think that it can actually work in practice and meaningfully contribute to achieving the EuroStack mission? To begin with, there are numerous analogous successful recent precedents, including in digital infrastructure. Initiatives from which we can draw some inspiration with a proven track record of deliberately transforming digital infrastructure include (see Annex for details):

- **Open Compute Project (OCP) and the O-RAN Alliance:** both initiatives leveraged the buying power of hyperscalers to break the lock-in of hardware incumbents that previously seemed impenetrable;

- **Smart Freight Centre (SFC):** currently overcoming the high barriers of fleet electrification in logistics where the middle layers of the market had misaligned incentives that blocked development of what the end-demand wanted;

- **Group Purchasing Organizations (GPOs):** reshaping the biopharmaceutical landscape, and also have a proven track record in changing tech services procurement in various sectors;

- **NASA's COTS program:** transformed aerospace by acting as an anchor tenant rather than a manager or traditional government buyer; and

- **Frontier's Advance Market Commitment:** big tech itself is currently pushing to create a viable market for a climate "product" that, like "digital sovereignty," doesn't immediately have tangible intrinsic value.

These are all variations on the same theme: coordinate demand i**n order to shift the feasibility frontier for supply.** Demand aggregation initiatives have taken on various forms (Buyers Alliances coordinating on joint RFPs, Standards Consortia creating demand for a specific design, even Double Auction where an intermediary buys long-term (high price) and sells short-term (market price), absorbing the premium). They can also involve elements of an Advance Market Commitment or an Anchor Tenant to create volume certainty.

While the exact form (or forms) that demand aggregation mechanisms should take in the EuroStack context is not something we can map out alone, **we offer some initial thoughts below. We welcome contributions and discussion.** The initial test is whether a call for some collective action initiatives to achieve the EuroStack mission will resonate with European businesses in a few sectors. Can we incentivize companies and organizations to heed the call to action?

4.2 Creating EuroStack "Buyers' Alliances" and Incentivizing Participation

The experiment we wish to attempt is motivating a set of **(EuroStack-inspired) Buyers' Alliances (or consortia) structured around groups of demand-side actors –likely companies in the same sector or sharing similar needs – pooling requirements with help from a neutral intermediary and jointly pursuing structured demand aggregation for at least some component of their IT procurement needs.**

The benefits should be clear, as **participation requires only modest commitment but potentially unlocks significant upside:** access to collectively negotiated solutions optimized for long-term security and legal resilience. Critically, buyers don't need to struggle individually but would delegate to an intermediary (EuroStack and/or aligned credible organisations) the work of aligning needs, evaluating suppliers and testing approaches. Individual participants would be also shielded from backlash over supplier choices, since decisions would be made collectively through the intermediary. In short, participation in a Buyers' Alliance gives European buyers a **low-cost "call option" on digital sovereignty** – meaningful upside, negligible downside, and no distraction from running their business.

This is not utopia. The task of trying to move European demand is huge but the alternative is piecemeal tentative efforts hobbled by hesitation, or inaction. That said, we are also front-loading potential objections:

- **We are not suggesting just "importing" demand aggregation templates that have succeeded in other contexts.** There is great heterogeneity in user cases across the European private sector and related digital dependencies. We can think of different demand aggregation initiatives focused on different industries, verticals, and layers of the tech stack. We cannot tackle them all at once, but we can see a few candidates that could lead the charge (see below). Feedback on this paper and the discussion we hope it triggers will help identify pioneer groups or subgroups of demand-side actors, most likely in the same verticals and likely in the same country to begin with (e.g. Dutch banks, pension funds, utilities) that are willing to pool together at least some aspect of their procurement for at least certain portions of the "stack". The priority is to launch one or two focused pilots in high-sensitivity verticals to prove the model works. EuroStack can serve as a neutral intermediary, representing buyers' interests and evaluating suppliers on their behalf - ensuring consistency with the mission. Private initiatives are much more likely to succeed if they remain in the private sector, and do not fall back on the European default of "expecting the government to do something".

- Demand aggregation initiatives are most successful when they **pool buyers motivated to create a market because they view it in their best economic self-interest.** How do we define "economic self interest" here? As mentioned in above, current circumstances place it beyond the old short-term "efficiency and continuity" calculus. Companies must now also factor in and quantify the risk of their digital dependencies, elevating those legal and financial risks to the attention of CLOs (chief legal officers), CFOs and CEOs. We expect participation where the C-suite is onboard with these as pressing risks. This is increasingly the case: business leaders are recognising that individual private buyers, including the organizations they lead, systematically underweigh security and sovereignty risks and overweight feature breadth and apparent short term efficiency. The systematic bias against European solutions is because individual demand functions are driven by convenience and bundled completeness. If they want to "do something about it", a EuroStack Buyers Alliance gives them that opportunity.

- There is **no conceivable antitrust risk involved.** Businesses may fear the legal risk of being caught into a "buyers' cartel" investigation by zealous antitrust regulators. In reality, the risk would have been limited even in ordinary times – before the recent geopolitical upheaval which created a different environment. Buyers' cartel concerns can arise in markets where buyers represent collectively such a significant portion of supply that they can inefficiently push down prices and thereby undermine investments by sellers. No group of businesses in a given vertical (banks, energy companies, any other) would account even together for a share of supply that is large enough to create monopsony concerns. Additional concerns about collective buying as a forum for prohibited information exchanges between competitors are also not an issue. There is a proven track record of neutral intermediaries shielding the mechanisms from antitrust concerns.

And finally, we live in extraordinary times when antitrust itself has come under pressure for not being "helpful" enough to the Draghi mission and Europe's predicament. There is no realistic scenario in which this will be a concern.[10]

Conversely, we anticipate there will be **multiple incentives for participation:**

First, ***executives who are aware of these risks can explore a path to address them.***

Second, ***decisions to act are thus somewhat derisked.*** A one-sided bet on promoting digital sovereignty can be perceived as risky for one's career, but trying out other opportunities (like demand aggregation mechanisms) effectively buys a low-cost call option on digital sovereignty. If the mechanism works, individual companies capture the upside (and executives making the decision participate in the benefit too). If the mechanism fails, the downside falls on the intermediary (while executives can always argue the failed initiative was responsible corporate philanthropy well worth attempting with some useful lessons learned).

Third, demand aggregation allows for ***specialisation on the mission by a neutral intermediary*** – while individual company leaders, no matter how skilled and motivated to support digital sovereignty and tech infrastructure security, cannot make it their primary focus.

Fourth, while there are in principle multiple paths that could be tried, any individual private company could only afford a limited number of "false starts" before an in-house digital sovereignty initiative was written off as unsuccessful. A neutral intermediary managing a demand aggregation alliance could and should **experiment with different approaches before settling for the one that optimizes for the digital risks faced by the members.**

Fifth, any aggregation path needs to confront the perennial European constraints of fragmentation and lobbying capture. Any form of Buyers' Alliance needs to guard against becoming too slow to act, too easy to split, or too easy to influence. But it is also **in a better position to confront these risks than government-sponsored, top-down procurement initiatives** that have a history of underwhelming results despite best intentions.

Overall we see demand aggregation as a promising path for various companies (from finance to banking, insurance, pension funds, OEMs, telecoms, energy, utilities, transportation and pharmaceuticals) facing material sovereignty risks. One way to give the approach quicker traction could be to focus initially on a specific "user case" that is deserving and uncontroversial, and where the benefits of agreeing on a common path clearly outweigh perceived cautions. This could be the idea of a **Sovereignty Recovery Package.** Businesses across Europe are concerned about being at the receiving end of service interruptions or degradation by hyperscalers at times of heightened geopolitical tensions; yet many have no "plan B". One natural task for a Buyers' Alliance could thus be to work with companies to identify an a**lternative package of services (and suppliers) that could be activated in the event of an emergency restricting their access to cloud services or data.**

[10] This was explicitly confirmed also by Martijn Snoep, Chair of the Dutch Competition Authority (ACM), at an event in April 2025: Designing "Buy European" Policies for Strategic Autonomy | CEPR.

This could include components from hardware, to storage, to network, to compute, to management to application. Scoping the "package" now (before any actual interruption) would have the advantage that the package can be assembled and tested, and potential users can become comfortable and familiar with it, without the pressure of an emergency underway. It can involve multiple components that can be "stitched together" during "peace time" (rather than scrambled together in an emergency). And experimentation with the effectiveness of the package could also encourage shift and migration not just in the event of emergencies, but for other workloads, and sooner.

4.3 "Horses for Courses": Mature vs. Emerging Tech Markets

The proposal to establish (EuroStack-inspired) Buyers' Alliances needs to be refined and developed along various dimensions. To begin with, **more established technologies will have a different "need set" relative to emerging technologies.**

Thus for technologies that are broadly mature (like cloud) and where hyperscaler dominance is entrenched, the goal should be to offer acceptably comparable products (at least for well-defined user cases that are not all tied up into hyperscalers' bundles) and lower switching costs. Here, Buyers' Groups and consortia should seek to leverage the collective purchasing power of Europe's industrial base. Even redirecting a small share of purchases to European providers could make a major difference to scaling and innovation by European suppliers, while also "keeping the hyperscalers honest" with respect to their practices for all of their customers.

Where markets are still forming, a demand pooling strategy can utilize more advanced financial mechanisms – for instance adapting Advance Market Commitments and potentially leveraging government support to bridge the cost gap for sovereign technologies and create guaranteed initial markets for European innovators. This will help Europe avoid repeating the mistakes of past technological waves. We briefly expand on each below in turn.

A. More mature markets (IaaS, PaaS & Saas): share redirection/rebalance

For these markets, a Buyers' Alliance would start by engaging with interested participants to formulate a collective "wishlist" for what user cases should be "in scope", and from there what components of the stack, or services, could be candidates for collective procurement/demand pooling. This could then shape collective procurement frameworks. In some cases, it may make sense for the neutral intermediary itself to issue a joint RFP on behalf of all members. Under any scenario, members acting collectively would represent **potential demand "precommitment" that could justify appropriate product development by European suppliers** (as well as be useful as bargaining chips to demand more favorable terms from hyperscalers). For instance, collective RFP could request:

- **Stronger rules supporting provider switching,** including ***zero egress fees*** (free movement of data out of the cloud), ***workload portability*** (ensuring that equivalent workloads can be migrated across providers without substantial re-engineering, ***mandatory access and migration assistance*** (requiring providers to actively support migration through documented export tools, technical assistance and defined transition periods to enable switching without service disruptions).

- **Standardised APIs and service:** requiring transparent APIs for core infrastructure services to enable multi-provider architectures and reduce functional lock-in.

- **Hardware agnosticism:** requiring all software solutions to be hardware-agnostic and interoperable across infrastructure environments, including support for Open Compute Project (OCP) hardware standards and emerging AI compute infrastructures (e.g. GPU clusters), as applicable.

- **Legal sovereignty standards:** buyers can mandate that infrastructure is operated by providers not subject to extraterritorial data access obligations under foreign law.

- **Open Source first:** Some alliances may prefer open-source based solutions, as these improve auditability and reduce vendor lock-in while supporting portability across providers.

If such requirements were made out explicitly as conditions for alternative supply they would directly help address also some of the lock-in. The cloud market is largely organised around vertically integrated proprietary stacks operated by hyperscalers, whose commercial incentives point away from standardisation and customer portability. A Buyers' Alliance could materially improve the situation by aggregating demand and at the same time embedding interoperability and portability requirements directly into procurement. It can also organize centralized integration support services that can be shared across the member organizations to further improve effectiveness of the alliance.

B. Emerging Tech and Sensitive Sectors: "playing offense"

Emerging demand is likely to come from distinct groups whose requirements differ but whose participation in a Buyers' Alliance could jointly anchor new workloads within European digital infrastructure environments for the longer term.

B1. Industries with process-critical data

Sectors such as manufacturing, energy systems, automotive, healthcare and chemicals manage data that is directly embedded in physical processes and safety-critical systems. **A disruption is not a compliance failure. It is a factory that stops, a grid that destabilises, or a patient at risk. That is a different quality of exposure, which is why these sectors approach cloud migration cautiously.** As a result, many continue to operate substantial physical infrastructure on their premises and approach migration to the cloud cautiously. They focus on hybrid infrastructure and put a premium on "trusted" computing environments that allow them to scale while retaining control over sensitive data and operational processes[11]

[11] AI solutions require specialised infrastructure. Specialised AI cloud providers are key to supporting customers in deploying these solutions." Luis Fernandes, Senior Research Manager IT Infrastructure, IDC. IDC EMEA FutureScape Webcast, "Three Major Trends Shaping the European Cloud Market", 29 January 2025.

These sectors also hold a structural AI advantage that is not yet being materialised. There is a growing view that the future of AI lies not in ever-larger generic foundation models trained on internet data, but in specialised models trained on high-quality domain data. These sectors possess exactly that: years of sensor data, process logs, production parameters and maintenance records. This high-quality domain data is already a competitive advantage for these companies. What is missing is the infrastructure to use it without surrendering control.

A Buyers' Alliance can negotiate on behalf of members conditions that no single company could demand alone: sovereignty guarantees, interoperability requirements, switching rights, and minimum coverage across European markets. It could create shared development environments scoped by vertical and by specific use case. Automotive suppliers working on predictive maintenance together. Energy operators on grid optimisation together. Chemical companies on process automation together. Members access compute capacity for specific workloads while their operational data stays on their own infrastructure, under their own control. Nothing leaves the member. The shared element is the contractual framework, the development tooling, and the cost of moving, spread across the pool instead of carried alone. What was previously too expensive and too risky for any single company becomes straightforward when twenty do it together. **The immediate opportunity is a limited number of shared industrial development environments where participating organisations jointly access external compute capacity while maintaining control over their own datasets.** Such pilots could support applications in predictive maintenance, advanced manufacturing and energy optimisation, all while generating early workloads and a growing customer base for European AI infrastructure providers.

By concentrating early development activity and compute demand within such environments, a Buyers' Alliance can anchor emerging industrial workloads within European infrastructure ecosystems. This creates predictable utilisation for compute infrastructure providers while generating a pipeline of real industrial applications and building Europe's digital infrastructure base through actual usage rather than programmes that never generate a customer.[12]

B2. Sovereignty-conscious startups

Sovereignty-conscious startups require flexible development environments, rapid access to compute capacity and open technology stacks in order to build and scale new digital products. Today, hyperscalers tend to provide most compute resources to these players. Infrastructure credits frequently capture early-stage startups and embed them within proprietary platform ecosystems. This model appears to lower startups' initial barriers to entry, but also creates long-term technological dependency – which the hyperscalers have exploited in shaping developer ecosystems and locking emerging companies into technology stacks from the earliest stages.

[12] This approach does not assume full technological self-sufficiency in the short term. The objective is instead to progressively anchor emerging digital workloads within European infrastructure environments while global supply chains continue to evolve.

Startups that are conscious of technological independence, governance stability or long term control over their technology stack would find the availability of interoperable infrastructure environments attractive. Unlike large industrial organisations, startups most likely do not require dedicated infrastructure environments: their primary need is rapid access to scalable cloud resources and development tools. **A dedicated Buyers' Alliance for them can facilitate this by coordinating a startup access programme (a "startup kit"), providing access to interoperable compute environments, development platforms and compute credits.** By anchoring early developer activity and startup workloads within such environments, a Buyers' Alliance can help build developer ecosystems around European infrastructure while preserving the flexibility required by fast moving technology firms.

As these ecosystems mature and a critical mass of compute demand emerges, market-based coordination models could be introduced. One option could be something like the double-auction model for AI compute. This allows industrial users and infrastructure providers to dynamically match supply and demand for AI compute resources. This would leverage Europe's experience and leadership in carbon credits and other green markets that have, on balance, been relatively successful in mobilizing private industry to meet their intended objectives (despite obvious drawbacks and mistakes).

4.4 Potential candidates for proof of concept?

We see multiple potential candidates, but two verticals seem to offer the right combination of regulatory pressure, data sensitivity, procurement scale, and executive readiness to act as proof-of-concept pilots.

Vertical	Why now	First step
Financial sector (banks, pension funds, insurance)	Digital Operations Resilience Act (DORA), fully applicable since January 2025. Mandatory third-party ICT risk management. Concentration risk documentation required. C-suite already engaged. This is no longer an IT department question.	Explore Dutch-German-Nordic financial sector Buyers' Alliances. These could be at national level to begin with. Joint RFP for non-core workloads (data analytics, secondary storage, compliance archiving). Embed DORA-compliant sovereignty clauses as minimum standard.
Industrial AI / manufacturing (energy, automotive, chemicals)	Companies sit on high-value operational datasets they refuse to put on US hyperscalers. Domain-specific AI models outperform generic models for industrial applications. The compute need is growing; the sovereignty concern is acute.	Establish 2–3 shared industrial development environments. Participants access European compute (possibly EuroHPC-linked) while retaining full data sovereignty. Generates real workloads and a reference architecture for the broader ecosystem.

A third track, sovereignty-minded startups, can run in parallel, redirecting infrastructure credits and early-stage compute demand toward European providers via a startup access programme.

EuroStack

05

The role of EuroStack and how to engage

Unlike an individual consultancy, government body or industry association, the Eurostack Foundation is unique as a mission-driven, neutral stakeholder with no commercial interest in play. While to date we have more visibly "championed the cause" of European supply, it is clear we need to operate also from a demand-side posture – working with European tech buyers to ensure that European suppliers are building best-in-class products and features.

The goal of this discussion paper is not to provide a prescription and artificially place the EuroStack Foundation at the center. We want to explore the **desirability and practical viability of aggregating demand.** We invite all comments and input on how to better tackle the problem. Because this idea was borne out of our initial engagements with multiple demand-side actors (and their organizations) across multiple countries over the last few months, we now plan to "roadshow" this call for collective action with those same stakeholders. We will return to the OEMs, telcos, banks, pension funds, defence contractors, and startups and gauge whether they think forming Buyers Alliances is desirable and, if so, practically feasible.

Depending on appetite and responses, which we anticipate will vary (potentially widely) across sectors and geographies, we can form strategies for practical next steps. We anticipate that the theory of what we propose will broadly resonate, but there will be scepticism about whether it can actually be operationalized. Just as they did not want to "jump first" with migration decisions, demand-side players may be hesitant to be the first to join a Buyers' Alliance. But that would be a much lower risk and lower cost problem, because it would be virtually costless for entities to support the vision by giving a soft, non-binding commitment that they would join the Buyers' Alliance if enough other members also joined. It would then be up to the Initiative to secure enough soft commitments, collect detailed stakeholder input and then formulate a "pitch" on the budget, team, operations and structure of the proposed alliance.

Alliances of different types could ultimately be formed. The role that the EuroStack Initiative could play in them would vary – from virtually none to more involved as the formal neutral intermediary of an alliance, as the sounding board for ideas and advice or a practical resource. Private capital has a direct stake in making this market move. Without credible demand, there is no investible opportunity. A Buyers' Alliance provides what investors need to commit at scale: predictable demand, real workloads, and a market that private finance can treat as bankable. Early investors who back the pilots do not just fund an initiative. They shape the architecture of what comes next. We hope the takeaway here is that there are multiple, achievable paths to success that are not as daunting as they may initially seem. We do not yet need to decide exactly what the next steps will be. But we do need to decide to do something on the demand side and, for now, we need input on whether this is a promising approach.

Finally, to avoid misaligned incentives, EuroStack intends to operate in catalyzing the Buyers' Alliances, or in otherwise attempting to spark private European demand engagement, with a 3-5 year mandate and clear milestones. Once the collective action problem is addressed and the market is forming, a convener is no longer needed. In other words, the definition of success will be for EuroStack to put itself out of the business of organizing demand. To achieve that, all willing industry stakeholders are welcome to join the initiative to aggregate demand, support industrial efforts, and set a clear target for the supply side to rise to the challenge.

EuroStack

Annex: Background on Buyers' Alliances and Other Demand Aggregation Mechanisms

Demand aggregation initiatives consolidate the fragmented purchasing power of influential end customers to send a unified, credible “pull” signal to the market. This de-risks investment for suppliers and their backers, and accelerates commercialization. Unlike “supply-push” industrial policies (e.g., R&D grants, tax credits, public procurement mandates), demand aggregation focuses on the “demand-pull,” creating and helping to guarantee a market that private finance can jump into.

Successful demand aggregation should not be viewed merely as an efficient procurement strategy thanks to bulk purchasing. It is instead a market-shaping industrial policy tool. The organized demand of influential end-user customers constructs the market they want through collective demand commitments.

Foundational pillars for success include:

- **Harmonization of Standards:** reducing product variation and avoiding bespoke solutions;
- **Credibility of Commitment:** creating contractual certainty that private, for-profit capital can back and bank; and
- **Intermediation:** a neutral convener to manage antitrust and coordination risks.

There is an opportunity for EuroStack to learn from prior demand aggregation initiatives and catalyze private sector demand for European tech offerings to create the market conditions that regulation and public sector procurement alone cannot achieve. Demand aggregation can take on various forms, as summarized in the table below, and as further detailed in the remainder of this Annex. The most promising precedents for EuroStack to further explore and learn from are the Buyers Alliances, Standards Consortia, and GPO models. If significant government backing can be assured, then other mechanisms can also be incorporated.

Typology of Demand Aggregation Mechanisms

Mechanism Type	Description	Primary Economic Lever	Examples
Buyers Alliance	Multiple private buyers coordinate to issue joint Requests for Proposals (RFPs) or volume guarantees.	Market Signaling & Risk Sharing Volume certainty	**Transport:** Smart Freight Centre (FEC) **Shipping:** ZEMBA **Aviation:** SABA
Standards Consortium	Buyers agree on a technical standard, commoditizing the hardware and aggregating demand for a specific design.	Harmonization / Commoditization	**Tech:** Open Compute Project (OCP) **Telecom:** O-RAN Alliance **Semiconductors:** SEMATECH
Group Purchasing Organization (GPO)	An entity that aggregates purchasing volume to negotiate discounts and steer market share.	Market Power / Steering	**Pharma:** Hospital GPOs (Biosimilars) **Education:** MHEC; E&I
Government backing required			
Advance Market Commitment (AMC)	Donors or governments guarantee a price/ volume for a product if it is developed to spec.	Price Floor / Subsidy (Usually requires large scale government support)	**Climate:** Frontier (Carbon Removal) **Healthcare:** Gavi (Vaccines)
Anchor Tenant	A single massive buyer (almost always a government) guarantees sufficient volume to launch an entire industry.	Mostly combined with a broader government industrial project that is mostly “push” rather than “pull”	**Defense:** US Air Force (3D Printing)
Double Auction	An intermediary buys long-term (high price) and sells short-term (market price), absorbing the premium.	Price Bridging (Requires large scale government support, at least initially)	**Energy:** H2Global (Hydrogen/Ammonia)

Ten Precedents of Successful Demand Aggregation

In the remainder of this Annex, we broadly summarize ten Buyers Alliances and other demand aggregation precedents from which we believe the proposed EuroStack Buyers Alliances can draw inspiration and, perhaps even direct support and talent, to operationalize.

The Smart Freight Centre (SFC) and the Fleet Electrification Coalition (FEC): Forcing OEMs to Manufacture Electric Trucks

The SFC is a global non-profit that has successfully operationalized demand aggregation to foster the electric truck industry. It aggregates the demand of the shippers that use logistics services to influence the buyers of trucks, and in turn, the truck OEMs (who are the ones that develop the technology).

The FEC is a partnership of shippers (companies that need goods moved, like IKEA and Unilever) and logistics service providers. But logistics is a low-margin business and trucking companies cannot afford electric trucks, which have high upfront costs (plus charging infrastructure is often absent). The FEC aggregates the demand of influential shippers. Even though they do not own the trucks, they control the contracts through RFPs. By committing to green transport, they provide the revenue certainty that the trucking companies need to invest in acquiring and operating electric trucks.

Open Compute Project (OCP): Hyperscalers' Hardware Rebellion

In tech, demand aggregation often takes the form of standardization. Buyers agree on a common specification, aggregate their demand for a specific architecture, and wrest power from vendors. The OCP, founded in 2011 by Facebook, was basically a rebellion of buyers against sellers. Before OCP, data centers relied on servers from traditional OEMs like HP, Dell, and IBM that were "black boxes" with high margins, unnecessary features, and restrictive/ expensive maintenance contracts. The hyperscalers (Facebook, Google, Microsoft) needed mass volumes of efficient, stripped-down hardware but they lacked a standardized alternative.

OCP created an open-source hardware ecosystem. By creating a standard, OCP aggregated the demand of not just Meta, but also Microsoft, Google, and eventually telecom providers and Tier 2 cloud companies. This allowed buyers to go directly to Original Design Manufacturers (ODMs) like Quanta, Wiwynn, and Foxconn, which could now sell directly to the OCP community, bypassing traditional OEMs. The initiative successfully fostered a new industry of white box server manufacturing that operates on thin margins and high volumes.

Recently, OCP launched the Open Systems for AI strategic initiative to address the chaotic market for AI infrastructure. OCP is convening workshops with hyperscalers to define common physical infrastructure standards for AI. By aggregating the requirements of the world's largest AI buyers (Meta, Microsoft, Google), they are forcing standardization on the supply chain (e.g., standardizing Coolant Distribution Units and Quick Disconnects). The goal is to ensure that the hundreds of billions flowing into AI builds a standardized, interoperable industry.

O-RAN Alliance: Telecom Operators Ganging up on Vendors

Similar to OCP, the O-RAN Alliance aggregates the demand of global telecom operators (Deutsche Telekom, AT&T, China Mobile) to break the oligopoly of Radio Access Network (RAN) vendors (Ericsson, Nokia, Huawei). By defining and demanding an open interface between radio units and baseband units, operators can mix and match vendors to keep their pricing honest. The alliance publishes “Technical Priority” documents, which is an aggregated wish-list from major operators that tells the market exactly what hardware to build.

This has fostered a new ecosystem of smaller, innovative hardware and software vendors (e.g., Mavenir, Altiostar) who can now compete for slices of the network. This demand aggregation is critical, for example, for 5G Private Networks, where enterprise customers need flexible, low-cost solutions that traditional vendors struggle to provide.

SEMATECH: Saving the US Semiconductor Industry

Demand aggregation is not new - back in the late 1980s, the US semiconductor industry was losing to Japan. The response was SEMATECH (Semiconductor Manufacturing Technology), a consortium of 14 US chipmakers (including Intel, IBM, TI) matched by government funding. Rather than buying chips, SEMATECH aggregated the R&D demand for chip-making equipment.

Individual companies could not afford to develop the next generation of lithography tools alone. By pooling R&D budgets and agreeing on common roadmaps (e.g., the transition to larger wafer sizes), they provided a unified demand signal to US equipment manufacturers like Applied Materials. SEMATECH forced competitors to collaborate on the pre-competitive manufacturing processes. This allowed equipment suppliers to build tools that served the whole industry, creating economies of scale that restored US competitiveness.

US Hospitals using Group Purchasing Organizations (GPOs): Creating the Biosimilars Market

In the US, Group Purchasing Organizations (GPOs) like Vizient, Premier, and HealthTrust aggregate the purchasing volume of thousands of hospitals. While GPOs are standard for bandages and gloves, they are now playing a pivotal role in creating the biosimilars industry.

When patents for expensive, complex drugs expire, “biosimilars” (generic versions of the drug) should theoretically enter and lower prices. However, the originator companies use patent thickets and rebates to block them, maintaining monopolies long after exclusivity should theoretically end. GPOs utilize committed contracting to fight back. They ask member hospitals to commit to moving a high percentage (e.g., 90%) of their volume to a specific biosimilar/generic in exchange for deep discounts. By aggregating this volume, GPOs can guarantee a new biosimilar manufacturer (like Sandoz or Amgen) instant market share. This guarantee makes it worth the generic manufacturer’s while to battle the originator’s legal teams and launch the drug. Without aggregated GPO demand, the risk of launching a biosimilar into a hostile market is often too high.

Sustainable Aviation Buyers Alliance (SABA) and Zero Emission Maritime Buyers Alliance (ZEMBA): Fostering Demand for Long-Term Fuel

Aviation and maritime face a steeper climb than trucking for improving fuel supplies and moving to sustainable options. For example, sustainable aviation fuel costs 2-4x more than jet fuel.

SABA, convened by RMI and EDF, uses a "book and claim" system to aggregate demand. Corporate buyers (Meta, Deloitte, McKinsey) purchase SAF Certificates (SAFc). They pay the "green premium" for sustainable aviation fuel, which is then injected into a flight somewhere in the world (not necessarily their own flight). In April 2024, SABA announced an agreement channeling nearly $200 million into a procurement of 50 million gallons over 5 years. It acts as an offtake guarantee for fuel producers, helping them secure project finance to build new refineries. The aggregation of nearly 20 corporate buyers was necessary to reach a volume that mattered to producers.

Maritime shipping follows a similar model via ZEMBA, an initiative of the Aspen Institute and Cargo Owners for Zero Emission Vessels (coZEV). ZEMBA issued a collective RFP for zero-emission shipping services. The ZEMBA members collectively committed to paying a premium for shipping their containers on Hapag-Lloyd's methane-powered vessels.

Tech & Mission-Oriented Purchasing Consortia in Education

While not "industrial" in the manufacturing sense, the higher education sector in the US demonstrates how non-profits or foundations can aggregate demand to shape the technology services market. The Midwestern Higher Education Compact (MHEC) aggregates the purchasing power of colleges and universities across 12 US states. By negotiating master contracts for computers (Dell, Apple) and software, they not only lower prices but foster a market for standardized EdTech configurations. This signals to vendors which technologies are preferred by the education sector, shaping product roadmaps and including sustainable requirements for instance ("green campus").

Frontier: Aggregating Demand for Carbon Removal from Big Tech

Frontier is an Advance Market Commitment (AMC) for Carbon Dioxide Removal (CDR) founded by Stripe, Alphabet, Shopify, Meta, and McKinsey. It's notable because it is a rare AMC not spearheaded by governments and because it is headed by tech companies who are committing to change their current practices even if the near-term benefits are not immediately obvious in their quarterly bottom line.

CDR technologies (Direct Air Capture, Enhanced Weathering) are in their infancy and prohibitively expensive ($600+/ton). They need to scale to get to <$100/ton, but there are no buyers at the initial high price points. Frontier aggregates a $1 billion+ fund from its members. It acts as a sophisticated buyer, vetting technologies and signing Offtake Agreements with CDR startups. Frontier allows these startups to show bankable demand to investors, unlocking the capital needed to build their first commercial plants. It essentially acts as a private-sector version of NASA COTS (see below) for the climate industry, creating a market for a product (removed CO2) that has no intrinsic value other than its climate benefit.

H2Global and Hintco: A Complex Double Auction Mechanism

Heavy industries (steel, cement, hydrogen) transact in commodities where margins are thin and product differentiation is difficult. Demand aggregation here focuses on creating a "Green Tier" of commodities that command a premium price. H2Global is a German government-backed instrument designed to create a global market for green hydrogen and ammonia. It is a financial mechanism that tries to solve for the fact that buyers won't sign long-term contracts for green hydrogen at high prices and producers won't produce such hydrogen without them, leaving the market frozen.

H2Global created an intermediary, Hintco (Hydrogen Intermediary Company), which acts as a trader. It runs auctions to buy green ammonia on 10-year contracts at the lowest possible production price (which is still high). This gives producers the long-term certainty they need for bankability. It then turns around to run auctions to sell that ammonia to industrial buyers on short-term (often 1-year) contracts at the highest possible market price (which is still low). Because the price gap is still there, the German government provides the funds to cover the difference.

NASA COTS: Creating the Commercial Spaceflight Industry

The aerospace and defense sectors are the clearest examples of demand aggregation where the government acts as the "Anchor Tenant." The Commercial Orbital Transportation Services (COTS) program was initiated in 2006. Prior to COTS, NASA operated under a "cost-plus" procurement model, where it owned the design and paid contractors for development costs plus a fee. This stifled innovation, kept costs high, and saddled the government with all development risk.

Under COTS, NASA shifted its role from a designer/operator to an investor/customer. The agency created its own demand for cargo delivery to the International Space Station (ISS). The contracts allowed for milestone-based payments. Crucially, NASA did not pay for "effort" or "hours worked"; it paid only for success. If a milestone was missed, the payment was withheld. By guaranteeing a market for cargo delivery (later becoming contracts worth billions), NASA allowed companies like SpaceX and Orbital Sciences to raise private capital. Because it was structured as an "anchor" commitment rather than a government grant, it leveraged significant private investment.

The result was the creation of a competitive US commercial space launch sector that broke the monopoly of traditional cost-plus contractors. For this model to work well, the government must allow vendors to fail (e.g. Rocketplane Kistle, reallocating the remaining $175 million) where in a traditional model, the government likely would have spent billions trying to fix the failing project.