

The Weakest Link and the Final Say: An Economic Commentary on the Franco-German Joint Paper on Digital Sovereignty

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Abstract. On 17 June 2026 France and Germany published a joint paper defining digital sovereignty as a graded capability, organized in six dimensions and three categories, with a risk-based application logic intended to feed the EU’s Tech Sovereignty Package. This commentary reads the framework as an economic mechanism, against a corpus of formal and measured results on European digital dependency, and asks what behavior each design choice induces. The architecture is sound: sovereignty appears as relative and context-scoped, substitutability is a first-class dimension defined in switching-cost terms, open source is named in two of six dimensions (with open standards in a third), and the paper carries a measurement ambition.

Four design choices carry economic risk. First, the compensatory aggregation rule (“strengths in one dimension can compensate deficits in others”) contradicts the weakest-link structure of dependency: on a measured 52-category graph of the European stack, a captured category on every path cuts them all, per-layer certification does not compose, and the exposure of an application context arrives by composition from blocks its procurement never sees. Within a deployment context the aggregate should be the binding constraint, with compensation reserved for portfolio-level investment planning. Second, the headquarters criterion reads one channel of control; the certain channels are economic (80 percent of European business cloud and software spending flows to US vendors, EUR 265bn per year, with prices on the locked base rising 8.7 percent annually), and no dimension of the framework prices rent exposure on the installed base. Third, substitutability “within reasonable time and financial expenditure” is measurable now with existing instruments, and the framework has no incumbent in its model: exit is priced strategically by the seller, so the dimension must score contracts alongside architectures. Fourth, a voluntary, self-assessed, compensatory framework is the configuration most exposed to sovereignty-washing.

The paper’s own transparency and SBOM bullets are the raw material of the verification infrastructure that would fix this, and the Commission’s Cloud Sovereignty Framework already operates the weakest-link assurance gate the fix requires. A closing section maps each dimension onto measurable objects that existing instruments already compute, which the paper’s own ambition to be “as operational as possible” requires.

JEL: F52, L86, O25, D82. **Keywords:** digital sovereignty, Franco-German joint paper, dependency networks, switching costs, weakest-link aggregation, open-source software, public procurement, sovereignty-washing.

1. THE JOINT PAPER, AND WHAT THIS COMMENTARY DOES

On 17 June 2026 France and Germany published a joint paper setting out their common understanding of digital sovereignty (France and Germany 2026). The document is explicitly political: it “seeks to provide impetus to and guidance on the upcoming discussions and legislative work at EU level”, names the Commission’s 2026 legislative vehicles (the “Tech Sovereignty Package, including the Cloud and AI Development Act”) as its immediate audience, and supplies three things: a definition, six dimensions organized in three categories, and an application logic. The definition makes sovereignty a capability: “the capability and capacity to develop, provide, use, adapt and control digital technologies including hardware

in an independent, self-determined and secure manner”, scoped to “the specific risk constellation of the respective application context” and “oriented towards technologically and economically competitive solutions”. The six dimensions are the capability to implement and enforce (3.1) and the capability to design, deploy and use technologies (3.2), grouped as foundational; economic value creation capability and capacity (3.3), the economic category; and protection of data (3.4), substitutability and interoperability of systems (3.5), and infrastructure resilience (3.6), grouped as technical and systemic. The paper states two ambitions for the framework: to make the concept “as operational as possible”, and to serve as “a voluntary reference framework for the ecosystem to assess the vulnerabilities of the digital aspects of its activity”.

Economics enters through those two ambitions. A definition with dimensions becomes a mechanism the moment anyone scores against it: suppliers decide what to disclose and what to fix, buyers decide what to weight, and the incumbent vendors whose position the framework is meant to weaken decide how to respond. This commentary reads the joint paper as that mechanism and asks what behavior each design choice induces. It draws on a corpus of formal and measured results built for exactly this object: a measured 52-category dependency graph of the European digital stack with an exact cut calculus and typed jurisdictional-reach edges, a scored criterion over the Technological Building Blocks of the Open Internet Stack with sourced market anchors, switching-cost and screening models of sovereign procurement, the economics of the FLOSS value network on both its demand and supply sides, and an economic foundation for supplier-side sovereignty scoring. Internal papers are cited by short title; the reference list carries their repository paths.

The assessment: the framework’s architecture is right, and four of its central design choices need amendment. The aggregation rule is compensatory where dependency is weakest-link (Section 3). The headquarters criterion reads one channel of control and the framework nowhere prices the channel that is certain, the rent on the locked installed base (Section 4). The substitutability dimension is defined correctly and left unmeasured, in a game where the incumbent moves next (Section 5). The open-source bullets name the stock and say nothing about who sustains the flow (Section 6). And the voluntary self-assessment channel, combined with compensatory scoring, is the configuration most exposed to sovereignty-washing (Section 7). Section 8 closes by mapping each dimension onto measurable objects that existing instruments already compute. Section 2 first records what the framework gets right.

2. WHAT THE FRAMEWORK GETS RIGHT

Sovereignty is graded and context-scoped. The definition rejects the binary reading (sovereign or dependent) in favor of a capability aligned with “the specific risk constellation of the respective application context”, and the application logic grades requirements “corresponding to the criticality of the respective product or service cluster and, where such differentiation is necessary, components”. This is the position the measurement literature needs: sovereignty as a relative, multidimensional position, assessed at the level of a node in a stack. The clause “where such differentiation is necessary, components” is, in measurement terms, node scope, and Section 8 takes the paper at its word on it.

Control is multi-channel. The criteria mix legal instruments (restriction of extraterritorial data access, enforcement preconditions), technical properties (modularity, open interfaces, SBOM), and economic structure (value-added share, R&D and operational-control location, protection against takeover). Frameworks that reduce sovereignty to jurisdiction alone produce paper sovereignty; the joint paper does not make that reduction, and its 3.1 explicitly includes economic instruments alongside legal and political ones.

Substitutability is a first-class dimension, correctly defined. Dimension 3.5 requires that system design “enable a change of provider and technology within reasonable

time and financial expenditure”. That is a switching-cost definition (Farrell and Klemperer 2007), and the listed characteristics are the right observables: modular architecture, open data standards and interfaces, SBOM disclosure, and “migration paths, technical, economic and legal exit concepts, and multi-vendor strategies”. A policy document that names exit concepts and multi-vendor strategies as design requirements has absorbed the central lesson of the lock-in literature and states it in operational language a procurement office can apply directly.

The measurement ambition is real. Dimension 3.3 proposes indicators for “the share of value added generated within the EU of a digital service or product”: territorial anchoring, reliance on European technology suppliers, and the location of R&D, engineering, and operational control, all of which are observable from corporate disclosures and supplier registries.

Open standards and open source both appear. Dimension 3.1 names international rules and standards as what ensures the “interchangeability and adaptability of technologies”; the English text writes “open source standards” where the French version says « standards ouverts ». The French reading is the precise one, since a standard is a specification while open source is a class of implementations, two distinct and complementary instruments (the CNLL EIF response documents the distinction and the complementarity). Open source itself appears in two of the six dimensions: as a co-creation channel in 3.2, and in 3.5 with the strongest formulation: “Open source solutions can and should play an important role in this regard.” Section 6 argues the framework needs the economics that make those bullets deliver. The paper also sees the scale problem: most European digital companies have fewer than 250 employees, and the framework reads this as a supply-side scaling challenge; Section 6 returns to the demand side of the same fact, which the framework half-sees in 3.2’s “promotion of industrial demand for key digital technologies”.

3. STRENGTHS DO NOT COMPENSATE A CUT: THE AGGREGATION RULE

The application logic states the framework’s aggregation rule in one sentence: “Strengths in one dimension can – depending on the context – compensate deficits in others, allowing for a differentiated and pragmatic assessment while supporting technological competitiveness and strategic positioning.”

Compensation is the right rule for one object and the wrong rule for the other. For a portfolio (an economy planning investment across many contexts and years), weighted profiles are defensible: a deficit in one program can be offset by strength in another because the portfolio’s owner arbitrates across contexts. For a given deployment, the object the definition itself names when it speaks of “final decision-making authority regarding its processes and activities”, dependency is a path property, and path properties aggregate as minima. A workload’s decision rights run along the paths that serve it; one captured link on every path removes the option to route around it, whatever the scores elsewhere. The corpus makes this concrete: on the measured 52-category graph of the European stack, reach is computed from typed jurisdictional edges, and the cut calculus identifies which categories sever which paths (*Cuts and Options; Path Sovereignty*). The criterion paper over the Technological Building Blocks composes these measures block by block and finds a uniform floor: every block currently has option number $N = 1$ and coercion number $\kappa = 1$, because the unique minimal trace crosses the semiconductor floor, and five blocs (the United States, China, Japan, Korea, Taiwan) are each solo cutters for every block (*An Open Internet Stack*). The stated consequence is the aggregation lesson in miniature: no block can be adequate in isolation, and per-block checklists cannot certify the stack. The general form is a composition theorem: per-layer certification does not compose into stack-level assurance (*Cuts and Options*; restated for the EIF review in the CNLL response, Annex A2).

The same measured graph shows why the deficit is invisible from where assessment happens. Contracting the graph onto the blocks, the demand layer’s measured edges land on cloud and applications, touch identity exactly once, and never land on AI foundations, operations tooling, or the development toolchain: procurement sees the top of a cone whose exposure arrives by composition from below (*An Open Internet Stack*). An application context therefore cannot read its own “risk constellation” off its direct suppliers; a self-assessed, dimension-by-dimension scoring would have it do just that. A provider with excellent economic value creation (3.3) and a failing substitutability score (3.5) delivers, for the workload concerned, the sovereignty of its worst dimension, and an EU-headquartered service built on a captured toolchain inherits the toolchain’s cut. The amendment is small and structural. Within a deployment context, the aggregate should be the binding constraint: publish the six-dimension profile and the minimum, and let the minimum govern. Reserve compensation for what it is good at, ranking investments across a portfolio. Operational practice has already converged on this: the European Commission’s Cloud Sovereignty Framework gates awards with a weakest-link assurance level beneath its weighted score (*Scoring the Seller*).

4. THE HEADQUARTERS BULLET READS ONE CHANNEL

The first measure listed under 3.1 is the “use of digital products or services from a provider whose top-holding company is headquartered in an EU Member State or, under certain risk-based conditions, in a trusted international partner state”. Holding-company jurisdiction is a real channel of control, and it is one among several. The measured taxonomy of conditioning channels (*Channels of Power*) runs through technology and licensing (roadmap control, feature gating, license repricing, update cutoff), data and identity custody, distribution and market access, standards authorship, and the rent channel, alongside the legal-reach channel the bullet reads.

The bullet admits false positives, and the framework already contains the antidote. An EU top-holding company reselling a licensed non-EU stack passes the bullet while roadmap, feature gating, repricing, and update cutoff remain with the licensor; the sovereign-wrapper ventures documented in the corpus depend on this channel by construction (*Channels of Power*). Organizational control also decays: the capture registry (33 cases against a 125-firm universe) shows control migrating through acquisition and partnership over time, so a headquarters snapshot ages badly (*Sovereignty as a Flow*). The antidote is already in 3.1 (transparency of ownership shares including subcontractor chains, and disclosure of economic, legal, and technical dependencies on third countries), and those bullets do the work the headquarters bullet cannot, provided they are verified and re-read over time, which Section 7 takes up.

The certain channel is priced, and the framework does not price it. The joint paper cites the Draghi report for the link between digital sovereignty and macroeconomic stability (Draghi 2024). Arithmetic makes the link concrete: 80 percent of European business cloud and software spending flows to US vendors, EUR 265bn per year (Asterès 2025), and prices on the locked base have risen 8.7 percent annually over three years, with EUR 93bn per year leaving Europe from the price escalation alone (Asterès 2026). This is the rent on an installed base with high switching costs, and it is the channel of exposure that operates with certainty, in every scenario, without any invocation of extraterritorial law. Dimension 3.3 measures the inflow side (the EU share of value added); no dimension prices the outflow on the installed base. Two indicators would close the gap: the price trajectory on locked contracts, and the bundling of new features into existing commitments, the mechanism the capture data identifies (Asterès 2026). With those added, the framework tracks the channel that is certain with the same seriousness it already applies to the legal one.

The framework’s openness to trusted-partner supply is consistent with the channels view: where the economic channels are verified open (substitutable, disclosed, rent-competitive),

origin matters less; where they are closed, an EU headquarters does not by itself open them, as the sovereign-wrapper cases in the capture registry illustrate.

5. SUBSTITUTABILITY IS MEASURABLE, AND THE INCUMBENT GETS A MOVE

Dimension 3.5 is operational as written: “within reasonable time and financial expenditure” makes exit a quantity per service, with a time term and a cost term. Instruments that measure it exist. The cloud-services taxonomy scores real services on architectural coupling and exit tax (*Cloud Services Matrix*); the measured graph carries service-level exit-friction scores (*Path Sovereignty*); and the UK Competition and Markets Authority’s cloud market investigation found the two exit-cost terms independently, egress and re-architecture (documented in the CNLL EIF response, Section 6). Three additions (pricing the exit concept and rehearsing it, scoring the contract alongside the architecture, and recognizing substitutability as the multiplier) would give the dimension operational force.

Price the exit concept and rehearse it. “Designing migration paths, technical, economic and legal exit concepts” should be read as a deliverable with a number and a test date. An exit concept that has never been executed, even partially, is a paper option; the analogue in prudential regulation is the resolution plan that must be credible to the supervisor.

Score the contract alongside the architecture. The framework has no incumbent in its model, and the incumbent moves after the framework publishes. Exit is priced strategically by the seller: egress fees, commitment discounts, and the bundling of AI features into locked contracts are the observed mechanism of the current price escalation (Asterès 2026), and the procurement corpus models the move formally (*Exit or Own; Cheaper and Losing*). A dimension that scores architectures while ignoring contract terms invites contractual degradation of exactly the measured artifact: the architecture stays modular and the egress clause does the locking. The dimension should therefore read egress terms, repricing clauses, and bundling provisions as first-class characteristics, next to SBOM and open interfaces.

Substitutability is the multiplier on the rest of the framework. With open interfaces and priced exit, the European capacity built under 3.3 and 3.6 competes for the installed base from day one; without them, entrants compete only for new demand and subsidy alone loses to incumbent pricing (*Cheaper and Losing*; the lock-in floor result, CNLL response, Annex A1). The joint paper’s structure has this right by making substitutability a dimension of its own, and under the compensation rule of Section 3, 3.5 is the dimension that strengths elsewhere would most readily outvote while also being the dimension that makes those strengths pay.

6. OPEN SOURCE: THE STOCK, THE FLOW, AND WHO PAYS FOR IT

The joint paper names open source twice: “direct technical co-creation by users, especially via open source, open hardware and open access” (3.2), and the flagship sentence in 3.5. (The standards of 3.1 are a neighboring and distinct instrument, specifications where open source supplies implementations; Section 2 records the distinction.) The economics of the FLOSS value network separates the stock from the flow: the licensed code is a non-rival asset, and what keeps it deployable is a flow of assurance, adaptation, and assistance services around it (Jullien, Viseur and Zimmermann 2025). The Commission’s own impact study estimates the stock’s economy-wide contribution at EUR 65 to 95bn of EU GDP (Blind et al. 2021). Three consequences follow for the framework.

A license is an option; capability exercises it. The sovereignty value of “open source solutions” is the credible fork, and the credibility of a fork is proportional to the absorptive capacity of whoever must exercise it (Lerner and Tirole 2002; the capability typology in Jullien, Viseur and Zimmermann 2025). This makes 3.2 and 3.5 complements: the co-creation and competence bullets of 3.2 turn the open-source bullet of 3.5 from a license fact into an exit option. A compensatory aggregate that scores the two dimensions separately misses

the complementarity; a binding-constraint aggregate (Section 3) captures it automatically, because either deficit caps the pair.

Openness needs a durability weight. Relicensing away from open terms is an observed strategy with a modeled economic logic: as margins erode or maturity plateaus, the funding path bends toward enclosure (*Value Capture*). The license grant stands retrospectively; the forward flow moves behind the fence. A criterion that scores “open source” as a present-tense label will misprice this risk, so the characteristic should be read with governance and stewardship attached: who holds the trademark and the repository, what the fork precedent is, how the maintaining entity is funded.

The flow has to be paid for, and the framework’s own SME fact says by whom. That most European digital firms are under 250 employees is also a statement about buyers: fragmented demand under-provides the maintenance flow, which is a collective-provision problem. Demand aggregation through buyers’ clubs with a dues mechanism is its operational instrument (*Buyers’ Clubs for the Open-Source Flow*). This is the concrete content available for 3.2’s “promotion of industrial demand for key digital technologies” and for the “toolbox for strategic public procurement” of 3.3. The stakes are priced in the criterion paper: exactly two of its captured-block verdicts rest on jurisdictional reach into forkable open-source substrate, and public cost anchors price stewardship engagements around three orders of magnitude below build-or-buy alternatives (*An Open Internet Stack*). Stewardship of the open substrate is the cheapest sovereignty euro in the framework’s entire scope, and it is invisible to a dimensions checklist because the substrate sits below the demand cone that procurement sees (Section 3).

7. THE VOLUNTARY CHANNEL INVITES THE LEMON

The joint paper offers itself as “a voluntary reference framework for the ecosystem to assess the vulnerabilities of the digital aspects of its activity”, and, for private procurement, as “a toolbox for the assessment of their dependencies”. The information structure of that market is known: effective control is multidimensional and hidden, cheap to fake and costly to verify, so absent a credible screen the pool prices at the washed level and sovereign suppliers cannot separate (*Scoring the Seller*; the procurement version is *Screening for Sovereignty*). Sovereignty-washing is the pooling equilibrium of exactly the configuration the joint paper sketches: voluntary participation, self-assessment, and a compensatory aggregate under which the washed supplier reports strength in the compensating dimensions and the binding constraint stays out of view.

The framework contains its own fix in raw form. The transparency and disclosure bullets of 3.1 (ownership shares including subcontractor chains, disclosure of third-country dependencies) and the SBOM bullet of 3.5 are the ingredients of verification infrastructure: standardized disclosure on a fixed register, a self-declared channel next to a black-box observation channel whose disagreement is the measured washing gap, weakest-link aggregation so the score cannot bury the constraint, and a durability weight because control is a flow (*Scoring the Seller*). The operational precedent exists in the institution the joint paper addresses: the Commission’s Cloud Sovereignty Framework ran a competitive tender on eight sovereignty objectives, awarded EUR 180M in April 2026, and gates with an assurance level beneath its weighted score (European Commission 2026a, 2026b).

A framework, an index, or a certification changes the information and cost parameters that procurement, exit, and coordination depend on; none of them delivers sovereignty, and treating adoption of the framework as the achievement would repeat a documented policy failure mode (*Screening for Sovereignty*). The gradation clauses are a lobbying surface: pressure concentrates on “The principles of proportionality and cost efficiency are applicable”, and the nearest precedent is on the record (the European Interoperability Framework’s retreat from royalty-free standards between 2004 and 2010 was lobbied and documented as

such; CNLL and EuroStack 2026). Criteria-setting under the framework therefore needs the same transparency the framework demands of suppliers.

8. FROM SIX DIMENSIONS TO A MEASURED FRAMEWORK

The joint paper wants the concept “as operational as possible”. Operational means measured, and most of the measurement exists. The table maps each dimension onto its measurable object and the instrument that already computes it; the instruments are cited in full in the references.

Dimension	What it asks	Measurable object	Existing instrument
3.1 Implement and enforce	Who can condition whom, through what	Typed jurisdictional-reach edges; capture registry	<i>Path Sovereignty; Sovereignty as a Flow</i>
3.2 Design, deploy, use	Capability to absorb, author, and standardize	Capability typology; standards authorship	<i>Channels of Power; Julien, Viseur and Zimmermann (2025)</i>
3.3 Economic value creation	EU share of value added; territorial anchoring	Sourced market sizes and EU-provider shares	<i>An Open Internet Stack</i> (45 anchor rows with sources and confidence flags)
3.4 Protection of data	Custody of data and reach over it	Data- and identity-custody edges	<i>Channels of Power; Path Sovereignty</i>
3.5 Substitutability	Exit time and cost; provider options	Exit-friction scores; option counts; contract terms	<i>Cloud Services Matrix; Cuts and Options</i>
3.6 Infrastructure resilience	Whether the stack withstands denial	Cut calculus; solo cutters; block contraction	<i>An Open Internet Stack; Path Sovereignty</i>

Measurement changes three things. The aggregate becomes computable, so the choice between compensation and binding constraint (Section 3) becomes an explicit, inspectable design decision instead of a drafting ambiguity. The framework becomes falsifiable: a scored provider can be checked, and a dispute about a score becomes a dispute about an edge or an anchor, which is resolvable. And the risk-based gradation acquires its unit: the joint paper’s “product or service cluster and, where such differentiation is necessary, components” is node scope, the level at which the instruments above already operate.

The Franco-German paper is not the first framework of its kind to reach a government. A report to the Swiss federal administration, two years earlier, worked from the German-language consensus definition and closed with a costed list of measures whose first item is to create a national standard for digital sovereignty, explicitly so that the concept can be used as a criterion in procurement, to compare similar-sounding offers, to audit solutions and to certify them [Stürmer 2024]. That is the operationalisation this section asks of the Franco-German framework, proposed for a smaller polity and assigned to a named body with a budget. It also inherits the difficulty: a standard that enumerates attributes still has to say what verification accuracy it requires before it can separate a compliant supplier from one that resembles compliance.

Measurement also forces a caveat the prose version can avoid. On current data every block of the measured stack crosses a semiconductor floor that five external blocs can each sever alone (*An Open Internet Stack*). A framework applied as written at European scale will therefore find binding constraints that no Member State instrument can lift. The caveat argues for the joint paper’s founding premise: national measures are essential and insufficient, and the coordination has to happen at the level where the constraint binds.

9. CONCLUSION

The Franco-German joint paper is a good frame: graded, multi-channel, measurement-minded, and explicit that substitutability and open source are central. Four amendments would align it with the economics of the object it regulates. Within a deployment context, aggregate by binding constraint and publish the constraint, reserving compensation for portfolio planning. Give the economic channels of control the same first-class status as the legal ones, starting with rent exposure on the installed base. Make substitutability contractual and priced, because the incumbent moves after publication, and close the voluntary channel's adverse-selection gap with the verification infrastructure the paper's own transparency bullets already sketch.

The definition's final clause promises "final decision-making authority", and on a measured stack the final say sits at the weakest dependency on the path that serves the decision.

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ANNEX A: WORKING NOTES (TEMPORARY ANNEX)

The internal materials relevant to this paper, removed at finalization: the source document (../../references/20260617-franco-german-joint-paper-digital-on-sovereignty.pdf, read in both its English and French versions), the sibling policy filing whose documented findings Sections 5 and 7 import (../../eif-2026/papers/cnll-eif-

response.md), and this paper’s internal companion (notes/franco-german-commentary-wp.md).

ANNEX B: REPRODUCTION: SCRIPTS, DATA, AND FIGURES

This paper computes no new numbers. Every imported quantity is reproduced by the verification suite of its source paper: the floor result, the block contraction, the demand-cone finding, the market anchors, and the stewardship cost anchors by `../../../../open-internet-stack/verify/tbb_matrix.py` (75 checks, results and regression pins in `verify/results/`, data in `data/market-anchors-v1.csv` and `data/cost-anchors-v1.csv` with per-row sources, URLs, access dates, and confidence flags); the capture-registry statistics from `../../../../eurostack-path-sovereignty/data/` as documented in that project’s findings; the reach and exit-friction measures by the `eurostack-path-sovereignty` suite; and the aggregation-rule properties by `../../../../rsi/verify/rsi_aggregator.py`. The Asterès, Blind et al., and Draghi figures are public-source citations carried with URLs and access dates above.