NEURO-RIGHTS · CLOSING THE GAPS

The Drafting Table

Where the Law for the Mind Is Missing — and What to Write There

The first essay argued that the mind had become a policy choice. The second showed what choosing looks like in the abstract — definitions, tiers, an inalienable core. This one goes to the drafting table itself, jurisdiction by jurisdiction. It asks a single, practical question for each level of governance that matters to a European reader — the international system, the European Union, and six national legislatures: Belgium, the Netherlands, France, Germany, the United Kingdom and Italy. What protection is actually in force today? Where, precisely, is the hole? And what would a bill that closed it have to say, clause by clause, before the markets and the agencies build themselves around the gap instead?

A long read · comparative law & policy · written for legislators, policy staff and concerned citizens · reads as a standalone

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Published as part of the TI One Voice initiative. TI One Voice (one.witysk.org) is an initiative founded by Stephane van der Aa to give a unified voice to the community of so-called "Targeted Individuals" (TIs) — people who report being subjected to organised harassment, surveillance, and what they describe as remote forms of physical and psychological abuse. The platform brings together their testimonies and supporting documentation in a single, structured place, so that experiences which are too often dismissed or scattered can be recorded, preserved, and examined seriously. Its goal is to document these accounts rigorously, to support the individuals affected, and to advocate before Belgian, European, and international institutions for recognition, protection, and proper investigation.

1. The Question, Made Concrete — Coverage, Gaps, Drafts, Decisions

Two essays in, the argument has been mostly architectural. The first established that the interior of a person had become legible from the outside, and that the law had never been built for it. The second laid out the structure a serious response would take: a definition of neural data that reaches the inference and not just the signal, a six-tier legislative stack, a small inalienable core, a black box that makes the deployed accountable. Both ended, as arguments do, on principle. This essay refuses that comfort. It assumes the case for protection is won and asks the only question a legislator actually faces on a Monday morning: *here, in my jurisdiction, what is already law, where is the hole, and what do I write to close it?*

Four questions, then, asked of every level of governance in turn. **First, coverage:** what protection is genuinely in force today — not aspired to, not recommended, but enforceable in a court or by a regulator? **Second, the gap:** measured against the ten-point test of Section 2, what is missing? **Third, the draft:** what would a bill or amendment have to contain, specifically, to close that gap at that level? **Fourth, the decisions:** which contested political choices does passing it force into the open, where they cannot be deferred to a working group?

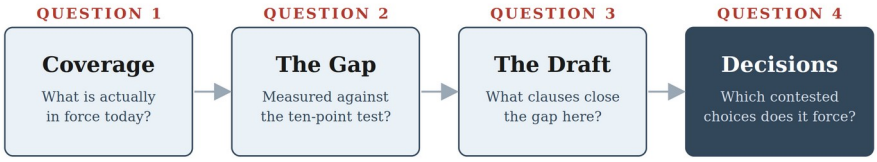


Figure 1. *The method of this essay. The same four questions — coverage, gap, draft, decisions — are put to every level of governance in turn, so the comparison across jurisdictions stays honest rather than impressionistic.*

The geography is deliberately narrow and deliberately layered. A European citizen is governed simultaneously by the international human-rights system, by the European Union, and by a national legislature. A protection can exist at one of those levels and be absent at the other two, and the gap a citizen falls through is usually the gap between them. So the essay walks the levels that bind a reader in Brussels, Amsterdam, Paris, Berlin, London or Rome: the international tier, the EU tier, and six national tiers — **Belgium, the Netherlands, France, Germany, the United Kingdom and Italy.** Each gets the same four questions, so the comparison is honest. The United Kingdom is included precisely because it now sits outside the EU instrument that does most of Europe’s work here, which makes it the cleanest illustration of what that instrument does and does not provide.

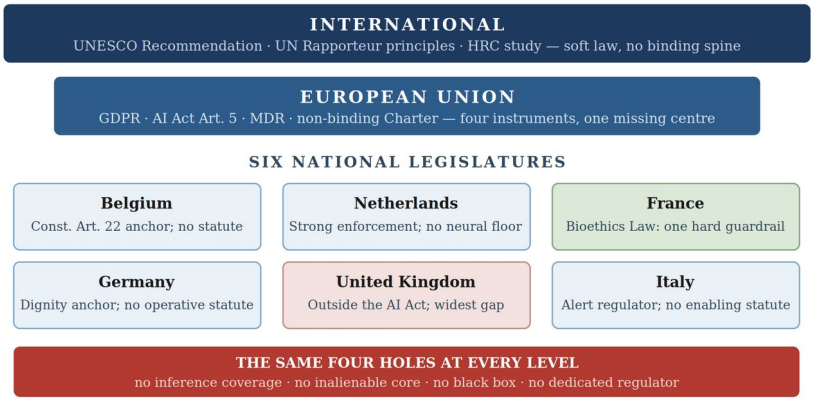


Figure 3. *The eight levels of governance examined, and the single finding that unites them. Each tier carries some general law and an anchor of its own; every one is missing the same four neuro-specific protections. The sections that follow take the levels in this order.*

A word on tone before the diagnosis begins. It is tempting, in a field this charged, to describe every gap as a scandal and every cautious official as complicit. That is neither fair nor useful. Most of the gaps documented below are not the product of bad faith; they are the ordinary lag of law behind capability, the same lag that left us writing the rules for the car after the deaths and for social media after the damage. The argument is not that anyone has failed. It is that the window in which this particular lag is cheap to close is unusually short, because neural data, once pooled, makes everyone easier to read — including the people who never consented — and because the business models and state capabilities now being built will harden around whatever the law leaves open.

2. What “Full Coverage” Would Mean — A Ten-Point Test

To say a jurisdiction has a “gap” presupposes a standard of completeness. Without one, the exercise collapses into impression. So here is the standard this essay measures against — ten things a neuro-rights regime must do to count as adequate. It is drawn from the architecture of the second essay and from the instruments that already exist; each point is a place a real law has already either succeeded or failed. A jurisdiction that satisfies all ten has full coverage. None of the seven examined here satisfies more than a handful.

The test	What it requires
1. Inference, not just signal	The definition of “neural data” reaches the algorithmic inference drawn from the signal, not merely the raw trace. This is the single highest-value clause, and the one most laws omit.
2. Non-consumer actors	The regime binds the state, the employer, the school and the insurer — not only companies selling devices to consumers.
3. Writing, not just reading	It governs modulation and stimulation — writing to the brain — and not only the reading of it.
4. An inalienable core	A small set of protections cannot be waived by consent, contract or terms of service: involuntary reading or writing, neural monitoring of children in school and of workers as a condition of employment, neural interrogation of detainees, neural influence on electoral choice.

5. A real remedy	A private right of action, statutory damages, deletion, injunctive relief, class actions, and personal liability for officers who knew.
6. A regulator that can say no	A body with technical staff, pre-market authority over high-risk products, audit and fine powers, and a duty to report.
7. Black-box logging	A legal requirement that neurotech devices keep tamper-evident, independently auditable logs of every read and every stimulation.
8. Whistleblower protection	Explicit subject-matter coverage for neurotech wrongdoing, multiple un-captureable channels, and remedies that compensate career destruction.
9. Cross-border reach	The law reaches the procurement chain and the foreign actor, and connects to a supra-national enforcement layer for what no nation can police alone.
10. Constitutional anchor	The foundational right is entrenched beyond ordinary political bargaining, so a statute cannot quietly erode it.

Two of these deserve emphasis because they are the ones almost everyone gets wrong. Point 1 — inference — is the difference between locking a door and locking a door beside an open window. A law that protects the EEG trace but not what a model extracts from it protects the part that cannot hurt you and leaves unprotected the part that can. Point 4 — inalienability — is the difference between a right and a default. A protection you can click away in a terms-of-service box is, for the child, the coerced worker and the detainee, no protection at all, because the consent the box records is precisely the consent those people cannot freely give. Hold these two in mind; they are the lens through which every gap below comes into focus.

Figure 2. *The ten-point test, applied to each jurisdiction in the sections that follow. The columns that stay empty across all seven — inference coverage, an inalienable core, black-box logging, a dedicated regulator — are the gaps this essay is about.*

3. The International Level — Soft Law Without a Spine

Coverage. The international tier moved further between 2024 and 2026 than in the preceding decade, and it is worth being precise about what now exists, because the temptation is to over- or under-state it. Three instruments matter. The UN Human Rights Council, by resolution 51/3, commissioned its Advisory Committee to study neurotechnology and human rights; the resulting report reached the Council's fifty-seventh session in September 2024.[1] In March 2025 the Special Rapporteur on the right to privacy delivered a report to the fifty-eighth session setting out principles for regulating neurotechnology and treating neurodata as highly sensitive personal data requiring informed consent.[2] And in November 2025, UNESCO's General Conference adopted the *Recommendation on the Ethics of Neurotechnology* — the first global standard of any kind, agreed by 194 member states.[3]

The gap. Every one of those instruments is soft law. The UNESCO Recommendation is, in the technical sense, a recommendation: states are urged to adopt it, not bound to. The Special Rapporteur's principles are the considered view of an independent expert, not a treaty. The Advisory Committee's study is a think-tank product for the Council. None creates an obligation a state can be held to, none establishes a verification mechanism, and none reaches the two things only the international level can reach: cross-border neural-data flows and the weaponisation question. A Chilean's brain data processed on a server in San Francisco crosses a border no national law fully governs; a cognitive-warfare capability developed by one state against the civilians of another sits in a space no domestic statute can occupy. The defining feature of the international tier in 2026 is therefore a shared vocabulary resting on no binding spine.

The draft. What closes this gap is named in the second essay and bears repeating as a concrete instrument: a **UN Neurotechnology Convention.** A convention is the only form that can prohibit categories no state can police alone, supply verification, and govern the cross-border and weapons questions. The realistic path is incremental and already has footholds. The OHCHR has floated a coordination group of Special Procedures — the privacy, freedom-of-opinion, health and torture mandates — to handle cases where one neurotechnology touches several rights at once, and has noted that such a group need not preclude, and might be a pathway to, a binding instrument.[4] A draft convention should hard-code the inference-inclusive definition of neural data; prohibit, with verification, the development of neuroweapons designed to covertly impair cognition; require that signatory states maintain black-box logging mandates domestically; and establish an enforcement body with the standing of a chemical- or biological-weapons inspectorate. The UNESCO Recommendation supplies the values such a convention would codify; the task of the medium horizon is to harden the one into the other, exactly as the 2021 UNESCO AI-ethics recommendation helped shape the binding EU AI Act.

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[1] UN Human Rights Council, resolution 51/3; Advisory Committee study A/HRC/57/61, "Impact, opportunities and challenges of neurotechnology with regard to the promotion and protection of all human rights" (2024). OHCHR, "Neurotechnology and human rights."

[2] Ana Brian Nougrères, UN Special Rapporteur on the right to privacy, report to the 58th session of the Human Rights Council (March 2025); OHCHR press release, 12 March 2025.

[3] UNESCO, Recommendation on the Ethics of Neurotechnology, adopted by the General Conference, November 2025 (Doc. SHS/BIO/REC-NEURO/2025); adopted by 194 member states.

[4] Geneva Academy / OHCHR discussion of a coordination group of Special Procedures as a possible pathway to a binding instrument; "Neurotechnology and Human Rights: An Audit of Risks, Regulatory Challenges and Opportunities" (2025).

The decisions. Two political choices cannot be deferred. The first is whether to pursue a binding convention at all, against the predictable objection that the states with the most advanced capability — and the most to lose from verification — will not sign. The honest answer is that a convention binding only the willing still sets a norm, builds the verification science, and creates the cost of being seen to defect; the Biological and Chemical Weapons Conventions began with the same objection and changed the landscape anyway. The second is the verification paradox: you cannot inspect for a weapon you cannot detect, and an unverifiable ban mainly disarms the law-abiding. The decision is whether to couple the ban with a serious, funded programme to build the detection science verification would require — or to wait for the science first and legislate never. The defensible course is to draft the prohibition and fund the detection together, treating the present inability to detect as a policy failure to be fixed rather than a reason for silence.

4. The European Union — Four Instruments, One Missing Centre

Coverage. The EU has more relevant law than any other jurisdiction examined here, and — this is the paradox — still no neuro-rights instrument. What it has is four general instruments whose edges happen to touch the problem. The **GDPR** treats health and biometric data as special categories requiring heightened protection, and on the better reading captures neural data, though whether brain signals are "biometric" or "health" data, and whether inferences count, remains contested. The **EU AI Act** does the most direct work: its Article 5 prohibits, since February 2025, AI systems that deploy subliminal techniques beyond a person's consciousness or purposefully manipulative techniques that materially distort behaviour and cause significant harm, and it bans certain emotion-recognition uses in the workplace and in education.[5] The Commission's 2025 guidelines on prohibited practices expressly name neurotechnology and brain-computer interfaces as technologies that raise the manipulation risk Article 5 targets.[6] The **Medical Device Regulation** governs implantables such as deep-brain stimulators. And the non-binding 2024 *European Charter for the Responsible Development of Neurotechnologies* supplies principles without force.[7]

The gap. Lay the four instruments over the ten-point test and the holes are systematic. The MDR governs implanted medical devices but excludes the consumer wearable — the headband, the earbud, the sleep tracker — which is exactly where mass neural-data collection happens. The GDPR was not written with brain-reading in mind: its fit is awkward, its treatment of inference uncertain, and it inherits every weakness of consent-based privacy, where people click "agree" and the protection collapses. The AI Act's Article 5 is genuinely useful but narrow: it reaches manipulation that causes *significant harm* through *AI systems,* leaving untouched the non-AI device, the merely commercial harm, and the vast category of neural reading that manipulates no one but simply extracts. It has, as the second essay put it, safety-critical exemptions large enough to drive trucks through. Above all, none of the four

[5]Regulation (EU) 2024/1689 (AI Act), Article 5; the Article 5 prohibitions became applicable on 2 February 2025. Recital 29 references neurotechnology and brain-computer interfaces as raising the manipulation risk.

[6]European Commission, Guidelines on prohibited AI practices under the AI Act (2025), discussing subliminal and purposefully manipulative techniques and naming neurotechnology among emergent risks.

[7]European Charter for the Responsible Development of Neurotechnologies (2024), European Brain Council and partners — a non-binding, dynamic charter complementing EU consumer-protection and product-safety standards.

creates an inalienable core, a black box, a dedicated regulator, or a cause of action for "my mind was read without consent." The centre of the architecture is missing.

The institutional response, as of 2026, remains preparatory. The European Parliament's STOA panel has run round-tables on whether the EU needs standalone neurotech legislation, expanded AI Act and MDR annexes, or a neural-data repository; the Centre for Future Generations and the European Brain Council have pressed for an EU Neurotechnology Strategy; the León Declaration of 2023 argued that existing rights suffice and need only interpretation.[8] That last position — that no new right is needed, only the adaptation of old ones — is a serious argument, held by serious people, and the essay returns to it in Section 15. But preparation is not protection, and a strategy is not a statute.

The draft. The instrument that fits the EU's competence and habits is a **Neurotechnology Regulation** — a regulation, not a directive, so it binds directly and uniformly rather than leaving twenty-seven transpositions to drift apart. It should do five things the existing four instruments do not. Define neural data to include inferences, settling the GDPR ambiguity in the protective direction. Extend coverage to consumer neurotech, closing the MDR's consumer gap. Establish an inalienable core at Union level — no neural monitoring of children in education, none of workers as a condition of employment, none of detainees, none aimed at electoral choice — so that no member state's implementation can bargain it away. Mandate black-box logging as a product requirement, enforced like CE marking. And create or designate a competent authority with pre-market power over high-risk neural products. The "Brussels Effect" would then do for neural data what the GDPR did for personal data: export the European floor worldwide by the simple force of market access.

The decisions. The defining EU debate is competitiveness against protection, and it is not a strawman. The fear — voiced by industry and by some member states — is that a strict regime makes Europe a harder place to innovate than the United States or China, ceding a $24-billion market and the clinical benefits that come with it to less cautious jurisdictions.[9] The counter, equally real, is that the cost of *not* regulating is an inference layer that becomes structural before anyone votes on it. The political decision is whether to treat a neural-data floor as a brake on industry or, as the GDPR is now widely regarded, as the precondition for the public trust on which the industry ultimately depends. A second decision is institutional: whether to build a standalone regulation and regulator, or to bolt neurotech onto the AI Act and its emerging governance — faster, but at the cost of subordinating a rights question to a product-safety frame. The third is the hardest of all and recurs at every level below: whether the EU is willing to make any part of the core inalienable, foreclosing a business model investors are counting on, or whether it will once again choose the consent-based path of least resistance and watch the protection collapse at the checkbox.

[8]European Parliament STOA round-tables on neurotechnology and neurorights; Centre for Future Generations, "Towards an EU Neurotechnology Strategy" (2026); León Declaration on European Neurotechnology (2023).

[9]Neurotechnology market projected above $24 billion by 2027 (European Brain Council); clinical relevance for the ~179 million Europeans with neurological conditions frequently cited in EU strategy debate.

5. Belgium — A Constitution That Could, a Statute That Doesn't

Coverage. Belgium protects the mind today through three borrowed instruments and no dedicated one. Article 22 of the Constitution guarantees the right to respect for private and family life — the cornerstone of Belgian privacy law and, in principle, broad enough to be read onto neural data by a willing court.[10] The GDPR applies directly, implemented through the Act of 30 July 2018 and enforced by the Data Protection Authority (APD/GBA), whose 2026–2028 strategic plan prioritises large-scale processing and the data of minors.[11] And the EU AI Act applies as it does everywhere in the Union. That is the whole of it. There is no Belgian neural-data statute, no constitutional neuro-rights clause, no dedicated regulator.

The gap. Belgium scores on the general-privacy points and fails the neuro-specific ones. It has a remedy structure (through the APD and the courts) and a constitutional privacy anchor that *could* be stretched — but it has no inference-inclusive definition of neural data, no inalienable core, no black-box requirement, no regulator with pre-market neural competence, and no cause of action framed for mind-reading rather than ordinary data processing. The Article 22 anchor is real but generic: it protects private life, not specifically the inviolability of mental content, and a generic anchor erodes into uncertainty exactly where the technology is most novel. Belgium, in short, has the raw constitutional material Chile used — a privacy and integrity provision — but has not done what Chile did, which was to name brain activity explicitly and let a court order data deleted on that basis.

The draft. Belgium's path has two steps, and the order matters. **First, a constitutional amendment** to Article 22 (or a new Article 22ter) adding the integrity of the mind to the protected interest: the inviolability of mental content, mental privacy, and cognitive autonomy, with an express statement that neurotechnology which reads or writes to the nervous system shall be subject to law. This is the Chilean move, adapted to Belgian text, and it is the part only a constitution can do. **Second, a Neural Data Act** beneath it, supplying what the constitution is too abstract to deliver: the inference-inclusive definition, the inalienable core, the black-box mandate, a private right of action with deletion and class actions, and the designation of a competent authority — most naturally the APD, given a specialist neural-data chamber and the technical staff to match. Belgium's federal structure adds a wrinkle worth naming: education and significant parts of labour and health policy sit with the Communities and Regions, so the school- and workplace-monitoring prohibitions may need to be enacted, or at least operationalised, at sub-national level even where the core right is federal.

The decisions. A Belgian constitutional amendment is not a light undertaking: it requires a declaration of revision, dissolution of the chambers, and a two-thirds majority in the new legislature — a multi-year, deliberately difficult process. The first political decision is therefore whether to spend that scarce constitutional capital on neuro-rights now, or to legislate by statute alone and accept a weaker, more erodible protection. The second is federal: which level enacts the school and workplace prohibitions, and how to prevent a Community from quietly permitting what the

[10] Constitution of Belgium, Article 22 (right to respect for private and family life), the cornerstone of Belgian privacy law (Chambers Data Protection & Privacy 2025, Belgium).

[11] Act of 30 July 2018 on the protection of natural persons with regard to the processing of personal data; Belgian Data Protection Authority (APD/GBA) 2026–2028 Strategic Plan prioritising large-scale processing and minors' data.

federal core forbids. The third is the inalienability decision, in its Belgian form: whether to make the children-and-workers core non-waivable, against the certain objection from employers and ed-tech vendors that a flat prohibition is disproportionate where "consent" could be engineered.

6. The Netherlands — Strong Data Culture, No Neural Floor

Coverage. The Netherlands brings a mature data-protection culture and an unusually capable regulator to a field for which it has written no specific law. Article 10 of the Dutch Constitution protects personal privacy; the GDPR is implemented through the Uitvoeringswet AVG and enforced by the Autoriteit Persoonsgegevens, among the more active data authorities in Europe; the AI Act applies directly. Dutch institutions have also been intellectually forward on the topic — the Rathenau Instituut's work on mental privacy and "mental integrity" has fed directly into European debate. But forwardness in the policy literature is not coverage in the statute book, and there is no Dutch neural-data law, no neuro-rights clause, and no dedicated regulator.

The gap. The Dutch gap is the EU gap with a strong national overlay: excellent general data protection, vigorous enforcement, sophisticated public debate — and none of the four neuro-specific protections (inference, inalienable core, black box, dedicated regulator). The Dutch strength is also a subtle trap. Because the Autoriteit Persoonsgegevens is genuinely effective at applying the GDPR, there is a plausible-sounding argument that no new law is needed — that vigorous enforcement of existing data law will reach neural data too. It will reach some of it. It will not reach the inference gap, because the GDPR's treatment of inference is itself unsettled; it will not reach writing to the brain, because data law governs reading; and it will not create an inalienable core, because the GDPR is consent-based by design. A strong enforcer of the wrong-shaped law still leaves the mind-specific holes open.

The draft. Because the Dutch Constitution is harder to amend than most and Dutch legal culture leans statutory and pragmatic, the realistic instrument is a **Wet neurale gegevens** — a Neural Data Act — rather than a constitutional clause in the first instance. It should carry the inference-inclusive definition, the inalienable core, the black-box mandate and a private right of action, and it should explicitly designate the Autoriteit Persoonsgegevens as the competent authority with a neural-data mandate and pre-market powers over high-risk products. The Dutch advantage is that the enforcement machinery already exists and works; the task is to give it the right statute to enforce. Where the Netherlands can lead is the black box: a Dutch product-conformity requirement for tamper-evident neural logging, pursued in parallel with the proposed EU Regulation, would let a capable jurisdiction prototype the mechanism the whole Union needs.

The decisions. The central Dutch decision is whether to accept the "strong enforcement is enough" argument or to legislate specifically despite it. That choice turns on whether legislators believe the inference gap and the consent problem are real defects of data law or merely gaps in its application. A second decision concerns the constitutional question deferred by the statutory route: whether, having passed an Act, the Netherlands also entrenches a mental-integrity right in Article 10 or 11 (the latter already protecting the inviolability of the body, a natural textual neighbour for the mind), accepting the difficulty of constitutional revision in exchange for an

anchor a future government cannot quietly repeal. The third, again, is inalienability — the recurring fork.

7. France — The One Hard Guardrail, and Its Limits

Coverage. France is the only one of the six national jurisdictions with a hard-law provision aimed specifically at the brain. The Bioethics Law of 2 August 2021 (Law 2021-1017) restricts the recording and monitoring of brain activity to medical, scientific-research and judicial-expertise purposes, and — importantly — a revision narrowed even the judicial use, excluding functional MRI from judicial expertise after concerns that brain imaging was being treated as a lie detector it is not.[12] France also retains a strong data-protection regime under the GDPR and the historic loi Informatique et Libertés, enforced by the CNIL, alongside a constitutional bloc that protects liberty and dignity. The AI Act applies as elsewhere. France thus comes to the table with something the others lack: a statutory line that says, in effect, brain activity may not be recorded for just any purpose.

The gap. The French guardrail is real but partial, and its limits map the gap precisely. It governs *recording and monitoring* — reading — within a purpose-limitation frame, which is genuinely more than most jurisdictions have. But it says little about *writing* to the brain; it predates and does not resolve the inference problem; it creates no inalienable core in the strict sense (it limits purposes rather than declaring rights non-waivable); it carries no black-box logging mandate; and it establishes no dedicated neural regulator, leaving enforcement to the general bioethics and data-protection machinery. The French model is best understood as the strongest *partial* coverage in the group — a purpose limitation on reading — which makes France the most instructive case of how far a single good clause gets you, and where it stops.

The draft. France should build on its own foundation rather than start over. A revision of the Bioethics Law, or a dedicated **loi sur les neurodroits,** should: extend the purpose limitation explicitly to inferences, so that what a model derives from a brain signal is governed as tightly as the signal; add provisions on modulation and stimulation, closing the writing gap; convert the strongest purpose limitations into genuinely inalienable rights for the canonical vulnerable cases (children in school, workers, detainees, voters); add a black-box logging requirement for any neurotech device on the French market; and give the CNIL, or a dedicated bioethics-and-neurotech authority, pre-market competence and audit power. Because France already accepts the principle of statutory limits on brain recording, the political distance to a fuller regime is shorter here than anywhere else examined.

The decisions. France's periodic revision of its Bioethics Law is the natural vehicle, which makes timing the first decision: whether to wait for the next scheduled revision or to legislate ahead of it. The second is scope — whether to keep neurotech inside the bioethics frame, which usefully centres medicine and consent but risks treating the consumer and workplace uses as afterthoughts, or to carve out a standalone neuro-rights law that addresses the employer, the insurer and the platform directly. The third is the fMRI precedent generalised: France has already decided that one neurotechnology (brain imaging) is too unreliable to be trusted in one high-stakes setting (the courtroom). The open decision is whether to extend that evidentiary humility — a refusal to let unvalidated neural inference carry legal weight — across the board, into hiring, insurance and policing, rather than litigating it setting by setting.

[12]France, Law 2021-1017 of 2 August 2021 on bioethics, restricting recording/monitoring of brain activity to medical, research and judicial-expertise purposes; subsequent revision excluding fMRI from judicial expertise.

8. Germany — Dignity in the Abstract, Silence in the Particular

Coverage. Germany brings the most powerful abstract protection of any jurisdiction here and among the least specific. Article 1 of the Basic Law makes human dignity inviolable; Article 2 protects the free development of personality and bodily integrity; and the Federal Constitutional Court has built from these, over decades, a celebrated jurisprudence of personality rights — including the famous "right to informational self-determination" from the 1983 census ruling and a "right to the confidentiality and integrity of information-technology systems" from 2008. The GDPR applies, implemented through the Bundesdatenschutzgesetz and enforced by federal and Länder authorities; the AI Act applies directly. On paper, Germany's dignity-and-personality framework is the most philosophically congenial soil in Europe for neuro-rights.

The gap. Congenial soil is not a planted field. Germany has no neural-data statute, no neuro-rights provision naming brain activity, no black box, no dedicated regulator. The abstract strength creates a specific temptation: because the Constitutional Court has so often extended dignity and personality rights to new technologies, it is tempting to assume it will simply do so again for neurotechnology, making legislation unnecessary. That assumption is risky for two reasons. First, judicial extension is slow, case-driven and uncertain — it protects the litigant who reaches Karlsruhe years later, not the millions whose data was pooled in the meantime. Second, the hardest neuro-rights problems — the inference gap, the inalienable core, black-box logging — are legislative-design problems, not interpretive ones; a court can strike down an abuse, but it cannot mandate that every device keep an auditable log. Germany's gap is thus the gap between a magnificent constitutional principle and the absence of the operative statute that would make it bite.

The draft. Germany does not need a constitutional amendment — Articles 1 and 2 already supply the anchor — which is an advantage. What it needs is the operative statute beneath them: a **Neurodaten-Gesetz** carrying the inference-inclusive definition, the inalienable core, the black-box mandate, a private right of action, and a designated competent authority. The German drafting tradition's precision is an asset here: the country that produced "informational self-determination" as an operational legal concept is well placed to define cognitive autonomy operationally rather than rhetorically. The natural move is to extend the informational-self-determination line explicitly to neural data and its inferences, and to pair it with a product-safety statute requiring logging — marrying the rights tradition to Germany's strong engineering-standards culture.

The decisions. The first German decision is whether to legislate at all or to trust the Constitutional Court to extend existing rights when a case arrives — the "interpretation is enough" position in its strongest national form, because nowhere is the interpretive tradition stronger. The argument against waiting is structural: the harm here is slow, pooled and largely invisible, and the litigant who could trigger judicial extension may never know their data was read. The second decision is federal, as in Belgium: education and policing sit substantially with the Länder, so the school-monitoring and interrogation prohibitions need a federal-state settlement. The third is the recurring one — inalienability — sharpened in Germany by the fact that the dignity clause itself is already treated as partly inalienable (dignity cannot be

waived), which gives German drafters an unusually clean doctrinal hook for saying that certain neural intrusions cannot be consented away either.

9. The United Kingdom — Outside the Act, Inside the Gap

Coverage. The United Kingdom is the control case: a major European jurisdiction that now sits outside the EU AI Act, which lets us see what that Act was doing. The UK retains the UK GDPR and the Data Protection Act 2018, enforced by the Information Commissioner's Office — and the ICO has been notably forward-leaning, publishing work that flags neurotechnology and neural data as an emerging regulatory frontier and warning of the risk of discrimination from neuro-monitoring at work. The UK has no written constitution and so no constitutional anchor of the Chilean or German kind; it relies instead on the Human Rights Act 1998, which gives domestic effect to the European Convention on Human Rights, including the Article 8 right to private life and the Article 9 right to freedom of thought. There is no UK neural-data statute and no dedicated regulator.

The gap. Because it has left the AI Act, the UK lacks even the partial manipulation prohibition that Article 5 supplies across the Channel, and its preferred "pro-innovation," principles-based, sector-led approach to AI deliberately avoids the kind of hard prohibition a neuro-rights regime needs. So the UK has the general data-protection coverage (UK GDPR), a forward regulator (the ICO) with no neural-specific powers, a human-rights anchor that is statutory rather than constitutional and therefore repealable by ordinary majority, and none of the four neuro-specific protections. The UK gap is the widest in structural terms precisely because the UK has chosen, as a matter of policy, the lightest-touch posture — which means the inference layer, the workplace deployment and the consumer device face the least friction here of anywhere examined.

The draft. Without a constitution to amend, the UK route is statutory and regulatory. A **Neural Data Act** should carry the now-familiar payload — inference-inclusive definition, inalienable core, black-box mandate, private right of action — and give the ICO an explicit neural-data mandate with pre-market powers, or create a dedicated Neurotechnology unit within it. Because the UK lacks the AI Act's manipulation prohibition, the statute should also import an equivalent: a free-standing prohibition on neural influence that bypasses conscious deliberation, not contingent on it being delivered by an "AI system." The UK's strongest available anchor is the Human Rights Act's Article 9 — freedom of thought, the one Convention right treated as absolute — and a neuro-rights statute could be framed as Article 9's operative implementation, giving the courts a hook and the regulator a mandate.

The decisions. The first UK decision is whether the "pro-innovation," principles-based philosophy that shaped its AI posture is appropriate for the brain, where the harm is to the seat of personhood and the lightest touch may be the wrong instinct. The second is divergence: having left the EU framework, does the UK align with the coming EU Neurotechnology Regulation to keep market access and avoid becoming a low-protection haven, or does it differentiate — and if it differentiates, in which direction? The third is constitutional in the British sense: whether to rely on the repealable Human Rights Act as the anchor or to legislate a protection robust enough that ordinary politics will hesitate to unpick it. The UK's freedom from the EU framework is real, but it cuts both ways: the freedom to lead and the freedom to fall behind are the same freedom.

10. Italy — A Regulator Ahead of Its Statute

Coverage. Italy presents an unusual configuration: a data-protection regulator that has been among the most vocal in Europe on mental privacy, attached to a legislature that has not yet acted. The Garante per la protezione dei dati personali has publicly flagged the dangers of neuro-imaging approaching "mind reading" and convened attention on mental-privacy violations, making it one of the European authorities most alert to the issue.[13] Italy applies the GDPR through its national Privacy Code; the Constitution protects personal liberty (Article 13) and, through Article 2, the inviolable rights of the person; the AI Act applies directly. There is no Italian neural-data statute and no dedicated neuro regulator — but there is a regulator already leaning into the gap.

The gap. Italy's gap is the EU baseline with an engaged regulator and no enabling statute — the inverse of the Dutch situation in temperament but the same in result. The Garante's alertness is an asset, but a regulator can only enforce the law it is given, and the law it is given is general data protection, with the same four neuro-specific holes as everywhere else: no inference coverage, no inalienable core, no black box, no dedicated competence. An engaged regulator without an enabling statute can warn, convene and apply general rules, but it cannot license neural products before market or mandate logging. The asset is real and the limit is structural.

The draft. Italy should give its alert regulator something to enforce: a **legge sui neurodiritti** carrying the standard payload — inference-inclusive definition, inalienable core, black-box mandate, private right of action — and a designation of the Garante as competent authority with pre-market and audit powers over high-risk neural products. Italy's Article 2, which the Constitutional Court has long read as an open-ended guarantee of the inviolable rights of the person, gives a natural anchor for recognising mental integrity as such a right without formal amendment, much as Germany's Article 2 does. The Italian advantage to build on is institutional momentum: a regulator already speaking publicly about mind-reading is a regulator already half-prepared to administer a neuro-rights regime.

The decisions. The first Italian decision is whether to formalise the Garante's de-facto leadership into a statutory mandate, or to leave mental privacy to general data-protection enforcement and the regulator's persuasion. The second is the anchor question: whether to rest on Article 2's open-ended rights guarantee (flexible, but dependent on judicial willingness) or to legislate a named right (firmer, but requiring political effort). The third is the shared inalienability fork. Italy's particular opportunity is to convert regulatory voice into legislative text while the political attention the Garante has generated is still live — the window in which an engaged regulator can pull a statute into being is itself finite.

[13] Garante per la protezione dei dati personali (Italy) public statements and convening on mental privacy and neuro-imaging approaching "mind reading" (International Bar Association reporting).

11. The Pattern Across the Seven — One Hole, Six Shapes

Set the seven diagnoses side by side and a single pattern emerges. Every jurisdiction has competent general law — privacy, data protection, human rights — and the same four neuro-specific holes: no inference-inclusive definition, no inalienable core, no black-box logging, no dedicated regulator. What differs is the *shape* of the surrounding coverage, and the shape determines the shortest path to closing the hole. The matrix below shows the diagnosis at a glance; the table beneath it gives the detail.

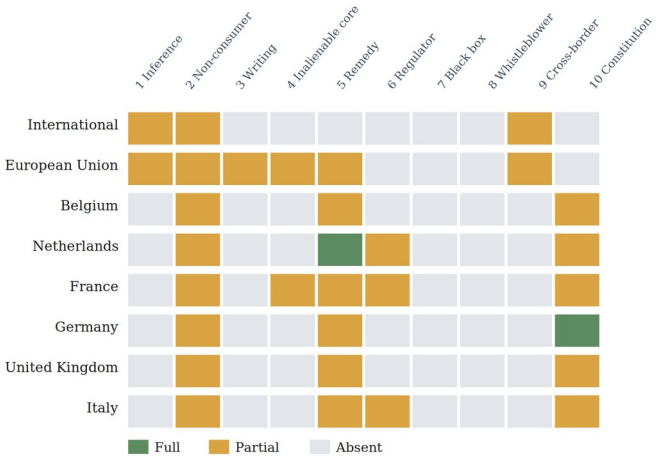


Figure 4. *The coverage matrix — eight levels against the ten-point test of Section 2. The eye goes straight to the empty columns: writing, the inalienable core, the black box, the dedicated regulator, and whistleblower protection are absent almost everywhere. No level scores "full" on more than a single point. Cells are graded full, partial or absent on the assessment in Sections 3–10.*

Level	What is in force	Principal gap	Instrument that closes it
International	UNESCO Recommendation; UN Rapporteur principles; HRC study	Binding force; cross-border; weapons	UN Neurotechnology Convention with verification
EU	GDPR; AI Act Art. 5; MDR; non-binding Charter	Inference; consumer devices; core; regulator	EU Neurotechnology Regulation
Belgium	Const. Art. 22; GDPR; AI Act	Neuro-specific clause; the four holes	Const. amendment + Neural Data Act
Netherlands	Const. Art. 10; strong AP enforcement; AI Act	The four holes behind strong enforcement	Wet neurale gegevens; AP as authority
France	Bioethics Law 2021-1017; CNIL; AI Act	Writing; inference; core; black box	Revise Bioethics Law / loi neurodroits
Germany	Basic Law Arts. 1–2; informational self-determination; AI Act	Operative statute; the four holes	Neurodaten-Gesetz (no amendment needed)
United Kingdom	UK GDPR; ICO; Human Rights Act (ECHR)	No AI Act floor; repealable anchor; four holes	Neural Data Act; ICO mandate; Art. 9 hook

Italy	Const. Arts. 2 & 13; engaged Garante; AI Act	Enabling statute behind an alert regulator	Legge sui neurodiritti; Garante as authority

Figure 6. *Diagnostic summary, in detail. The middle two columns are the argument: the same four holes recur everywhere, while the surrounding coverage — and therefore the shortest closing instrument — differs by jurisdiction.*

Three things follow from the pattern. **First, the hole is portable but the fix is local.** Because the missing pieces are the same everywhere, a model can be shared — the inference-inclusive definition is the same sentence in Dutch, French or Italian. But the vehicle differs: Germany and Italy need no amendment because their constitutions already supply the anchor; Belgium and the Netherlands face a harder constitutional path and may lead with statute; the UK has no constitution to amend and must rely on statute plus a repealable rights act; France should build on a guardrail it already has. **Second, a strong regulator is necessary but not sufficient.** The Dutch and Italian cases show that even an excellent authority cannot reach the inference gap or mandate a black box without an enabling statute; enforcement energy and the right statute are different things, and a jurisdiction can have one without the other. **Third, the levels are interdependent.** A national black-box mandate is far easier to enforce if the EU Regulation makes logging a product-conformity requirement, and an EU Regulation is far easier to defend if a UN Convention sets the global floor. No tier substitutes for the others; each makes the others cheaper.

12. What Each New Law Must Contain — Drafts by Level

The diagnoses above name the instrument for each level. This section says what each instrument must contain, so that a reader could hand a drafter a checklist rather than an aspiration. The clauses are deliberately repeated across levels where they must be — the inference-inclusive definition belongs in all of them — because, as the second essay argued, a clause that appears in one tier and not the next leaves a seam, and seams are where protection leaks.

The international instrument — a UN Neurotechnology Convention

- **Inference-inclusive definition** of neural data, binding on all signatories, so no national transposition can narrow it.
- **Prohibition of neuroweapons** designed to covertly impair or control cognition, modelled on the Biological and Chemical Weapons Conventions, with an inspectorate.
- **Verification coupled with a detection-science programme,** so the ban is not merely declaratory; funding the science is part of the instrument, not a precondition to it.
- **Cross-border data rules** governing the flow and processing of neural data across jurisdictions, and a duty on signatories to maintain domestic black-box mandates.
- **A standing enforcement body** with the institutional weight of a weapons inspectorate, not a reporting secretariat.

The EU instrument — a Neurotechnology Regulation

- **Inference-inclusive definition,** settling the GDPR ambiguity in the protective direction across all twenty-seven states at once.
- **Consumer-device coverage,** closing the MDR gap so the headband and earbud are governed, not just the implant.
- **A Union-level inalienable core** — no neural monitoring of children in education, of workers as a condition of employment, of detainees, or aimed at electoral choice — placed beyond member-state derogation.
- **Black-box logging as a product requirement,** enforced like CE marking, with the log accessible to subject, regulator and independent expert.
- **A competent authority** with pre-market power over high-risk neural products, audit and fine powers, and a duty to report — standalone or designated.

The national instrument — a Neural Data Act (with a constitutional anchor where reachable)

- **The inference-inclusive definition again,** verbatim, so the national floor matches the Union floor with no seam.
- **The inalienable core in national law,** with the school- and workplace-monitoring prohibitions operationalised at sub-national level in federal states (Belgium, Germany).
- **A private right of action** with statutory damages, deletion, injunctive relief, class actions, and personal liability for officers who knew or should have known.
- **A black-box mandate** for any device on the national market, dovetailed with the EU product requirement.
- **A designated regulator** — the existing data authority (APD, AP, CNIL, the German authorities, ICO, Garante) given a neural-data mandate and pre-market competence, rather than a new body built from scratch.
- **A constitutional anchor where the constitution can reach it** — a named mental-integrity right (Belgium by amendment; Germany and Italy by interpretation of existing clauses; the Netherlands by amendment if pursued; the UK via the Human Rights Act's Article 9).

13. The Decisions of the Debate — Eight Choices No Vote Can Avoid

Beneath the drafting lie political choices that no amount of good drafting can settle, because they are genuinely contested and genuinely consequential. A legislator who pretends these are technical will find them reopened at the last reading by whoever was not consulted. Eight recur across every level, and naming them is half of resolving them.

The decision	What hangs on it
1. Inference — in or out?	Whether "neural data" includes the algorithmic inference or only the raw signal. This is the most consequential single clause; including inference reaches the harm, excluding it guards a locked door beside an open window. Every other choice is downstream of this one.
2. Consent or inalienability?	Whether the sensitive core is protected by better consent or made non-waivable. Consent-based privacy has failed everywhere it has been tried; inalienability is the stronger protection and the harder sell, because it forecloses a business model. This is the deepest fork, and it recurs at every level.
3. New right or reinterpretation?	Whether neuro-rights are genuinely new rights to be enacted, or existing rights (privacy, dignity, freedom of thought) to be reinterpreted for a new technology. The León Declaration and serious scholars take the latter view; it determines whether a country needs an amendment, a statute, or merely a willing regulator.
4. Competitiveness vs protection	Whether a strict regime cedes a growing market and clinical benefit to less cautious jurisdictions, or whether a neural-data floor is the precondition for the public trust the industry depends on. The defining EU debate, and a real trade-off, not a strawman.
5. Which level carries the weight?	Constitution, statute, or regulator-and-sectoral-rules. Constitutions resist erosion but are hard to amend; statutes are reachable but repealable; regulators are fast but bounded by their enabling law. Federal states must also decide national vs sub-national.
6. Existing regulator or new body?	Whether to give the data authority a neural mandate or build a dedicated Neurotechnology Commission. Reuse is faster and cheaper; a dedicated body signals seriousness and concentrates expertise. Most jurisdictions will reuse; the question is whether reuse under-resources the function.
7. The black box — mandate or encourage?	Whether tamper-evident logging is a legal requirement or a voluntary good practice. Only a mandate makes abuse provable after the fact; only a mandate is enforceable. The cost falls on industry, which will resist, which makes this a political choice and not merely a technical one.
8. Evidentiary humility	Whether to exclude unvalidated neural inference — "neural lie detection," emotion scoring — from legal weight in courts, hiring, insurance and policing until validated. France has done this for fMRI in court; the decision is whether to generalise that humility or litigate it setting by setting.

Of the eight, two are load-bearing and the rest follow from them. **Decision 1 (inference)** determines whether the law touches the harm at all; **Decision 2 (inalienability)** determines whether the protection survives contact with a checkbox. A regime that gets these two right and fumbles the others is recoverable. A regime that gets these two wrong has, in effect, legislated a placebo — a law that looks like protection and reaches neither the inference that hurts you nor the coercion that makes your consent meaningless. If a debate has time to settle only two questions, these are the two.

14. Sequencing — What to Pass First When You Cannot Pass Everything

No legislature passes a ten-point regime in one session. The realistic question is sequence: given limited political capital, what is the order of operations that buys the most protection per unit of effort and leaves the fewest seams? The diagnoses suggest a sequence that holds across jurisdictions, adjusted for what each already has.

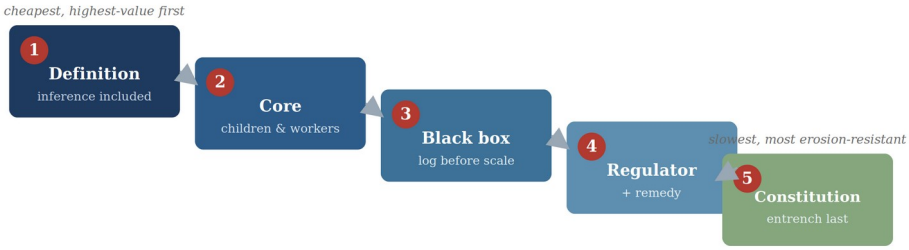


Figure 5. *The order of operations. Pass the definition first because it is cheap and everything attaches to it; entrench the constitutional anchor last because it is the slowest and a jurisdiction should not let it delay the statute. The descending staircase is also a hierarchy of regret — the black box is the thing most expensively retrofitted once the installed base has grown.*

First, the definition. Settle that "neural data" includes inferences, in whatever instrument is moving fastest — a data-protection amendment, a sectoral rule, a line in a broader bill. It is cheap, it is the highest-value single clause, and everything downstream attaches to it. A jurisdiction that does only this has done the most important thing.

Second, the inalienable core for the clearest cases. Children in school and workers as a condition of employment are the cases where coerced consent is most obviously inadequate and public intuition is most firmly on the side of prohibition. These are also the cases the EU AI Act already gestures at, so they have a running start. Passing the children-and-workers core early banks a durable protection and establishes the principle that some neural intrusions cannot be consented away — the principle the rest of the regime depends on.

Third, the black box. Mandate tamper-evident logging, because it is the mechanism that makes everything else provable and because it is, of all the pieces, the one most cheaply done now and most expensively retrofitted later. A logging mandate passed before the installed base is large is a different proposition from one passed after.

Fourth, the regulator and the remedy. Give the existing data authority a neural mandate and create the private right of action. These convert the paper rights into enforceable ones, and they can come slightly later because the definition, the core and the black box are the substance the regulator and the plaintiff will enforce.

Fifth, the constitutional anchor. Entrench the foundational right where the constitution can reach it. This is last not because it is least important — it is the most erosion-resistant of all — but because it is the slowest and hardest, and a jurisdiction should not let the difficulty of the anchor delay the statute that does the immediate work. Germany and Italy can take the anchor early and cheaply, because interpretation suffices; Belgium and the Netherlands should not let the amendment block the Act.

The sequence is a hierarchy of regret. The thing you most regret not having done before the installed base grew is the black box; the thing you most regret having done weakly is the definition; the thing you most regret having made waivable is the core. Sequence to minimise those three regrets, and the order above falls out on its own.

15. The Counter-Arguments, Answered Fairly

An honest case states the other side at its strongest. Three serious objections recur, made by people who are neither careless nor captured, and each deserves a real answer rather than a dismissal.

“Existing rights already cover this; you need interpretation, not new law.” This is the León Declaration’s position and the view of careful scholars who note that mental privacy and integrity are arguably implied by existing rights to privacy, bodily integrity and freedom of thought.[14] They may be right that no *new* right is conceptually required. But the practical gap remains whichever way that debate resolves: existing rights, as currently written and enforced, do not include the inference-inclusive definition, do not create an inalienable core, do not mandate a black box, and do not establish a regulator. Whether one calls the fix a “new right” or “the operative implementation of an old one” is a question of legal taxonomy; the clauses that must be written are the same either way. The interpretation camp and the new-rights camp can hand the same drafter the same checklist.

“Strict regulation will cripple European competitiveness and cede the field.” This is real, and the figures — a $24-billion market, clinical benefit for the 179 million Europeans with neurological conditions — are not trivial.[15] Two responses. First, the GDPR was predicted to cripple the European data economy and instead became a global template that European firms learned to sell into; a well-drafted neural floor may prove a comparative advantage in trust rather than a drag. Second, the framing assumes protection and innovation trade off one-for-one, but the most valuable clinical neurotech — the implant that restores speech to the paralysed — is precisely the use a sane regime protects and encourages; it is the covert inference and the workplace surveillance that a regime constrains, and those were never the source of the clinical benefit. The trade-off is real at the margin and overstated at the centre.

“The exotic claims are unproven, so the whole project is built on fear.” The strongest claims — covert remote control, deployed mind-control weapons — are indeed unproven, and as the second essay insisted, there is at present no validated forensic test that can establish a thought or action was externally directed. But the project does not rest on those claims. It rests on the deployed and documented: the consumer headband whose terms reserve broad rights over brain data, the workplace monitor, the classroom attention-tracker, the inference a 2026 model draws from data shared in 2022. Good policy does not require resolving the exotic; it requires assuming that markets exploit every gap and that the deployed harms are slow, structural and hard to reverse — and then binding the deployed anyway. The black box is the bridge between the two: it cannot detect the exotic, but it makes the deployed accountable, and in doing so it builds the very infrastructure that any future claim about the exotic would need in order to be tested rather than merely believed or denied.

None of these answers requires the other side to be acting in bad faith, and none claims certainty the evidence does not support. That is the posture the whole series has tried to hold: state plainly what is solid, mark clearly what is contested, and resist resolving the uncertainty in either direction for effect. On a subject that touches the

[14] León Declaration on European Neurotechnology (2023); see also M.A. Elizalde Carranza, “Neurotechnologies in the AI Act: Moving away from the Neurorights Debate,” The Age of Human Rights Journal 26 (2025).

[15]

deepest fears and hopes we have about our own minds, that discipline is not a hedge. It is the argument.

In Closing — The Drafting Table Is Open

Three essays have walked the same window from three distances. The first stood back and argued that the mind had become, for the first time, a place the law had to reach. The second drew the architecture: the tiers, the definition, the inalienable core, the black box. This one has knelt at the drafting table itself and asked, of the international system, of the European Union, and of six national legislatures, the only questions that change anything: what is in force, where is the hole, what closes it, and what must be decided to close it.

The findings are consistent enough to state in a breath. Every level examined has competent general law and the same four neuro-specific holes — no inference, no inalienable core, no black box, no dedicated regulator. The international tier has a shared vocabulary and no binding spine; the EU has four instruments and a missing centre; the six national legislatures each have an anchor of some kind and an empty statute book where the operative law should be. The fixes are known, the instruments are nameable, and the sequence is clear. What is missing is not the idea, nor even the draft. It is the decision — by enough legislators, in enough places, on the two questions that carry the rest: to define neural data to include the inference that can hurt you, and to place a small core of protections beyond the reach of any checkbox.

UNESCO has supplied the vocabulary. Chile has shown that a constitution can name the mind and a court can order data deleted. France has shown that a legislature can draw a hard line around brain recording. The European Union has shown, with the GDPR, that a well-built floor can become a global standard by the force of market access alone. The pieces exist; they have simply never been assembled in one place at one time. That assembly is legislative work — unglamorous, specific, and entirely achievable in the near horizon. The window the first essay described is the same window. It is a little narrower now. The drafting table is open, and the only thing it is waiting for is the will to sit down at it and write.

A Note on Method, and on Sources

Where the law is settled — an instrument adopted, a provision in force, a ruling handed down — this essay states it plainly and cites it. Where the position is in motion — a regulation proposed but not passed, a strategy under consultation, a regulator leaning into a gap its statute does not yet fill — it says so, and does not present the aspiration as the achievement. The legal landscape in this field moves quickly: instruments described here as pending in mid-2026 may have advanced, stalled or changed shape by the time this is read, and a reader acting on any of it should confirm the current state of the specific instrument in the specific jurisdiction. The diagnostic framework — the ten-point test, the four recurring holes, the eight decisions — is offered as a durable lens that should outlast the particular state of any one bill. The contested claims about covert capability are treated exactly as in the previous essays: marked as contested, and neither resolved nor dismissed for effect.