

Holding a Civil Reserve by Owning It Rather Than by Requiring It: a submission on the retained-interest model for robotic systems

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Holding a Civil Reserve by Owning It Rather Than by Requiring It

A submission on the retained-interest model for robotic systems, and why the Swiss constitutional order is the one best able to adopt it

Christopher I. V. Farmer

Geneva, 19 October 2026

Addressed to: Eidgenössisches Departement für Wirtschaft, Bildung und Forschung / Département fédéral de l'économie, de la formation et de la recherche (WBF/DEFR)

Copies: Bundesamt für wirtschaftliche Landesversorgung / Office fédéral pour l'approvisionnement économique du pays (BWL/OFAE); Staatssekretariat für Wirtschaft / Secrétariat d'État à l'économie (SECO); Eidgenössisches Justiz- und Polizeidepartement / Département fédéral de justice et police (EJPD/DFJP), in view of the artificial-intelligence bill due for consultation by the end of 2026

Corrected text. This text corrects the version of 6 August 2026, published on the author's website, on the following points:

- Parts I to III and VIII, including the table in Part II: the Confederation does bear a holding cost, the servicing described in Part IV, so the reserve is not costless to hold.
- Parts II and VIII: besides the federal guarantee of bank loans, the carrying costs of compulsory stocks are met largely from sectoral guarantee funds and passed on to consumers.
- Part II: the unemployment figures are dated May 2026 rather than described as the latest available, since SECO had published the June figures on 6 July 2026; cantonal unemployment is compared within May 2026 (Grisons 1.4 per cent, Geneva 5.0 per cent), with SECO's caveat on the December 2025 figures.
- Part III: requisition under Article 80 of the Military Act, as revised with effect from 1 June 2026, is now addressed, including in the targeting discussion.
- Parts III and VIII: the losses on the Confederation's guarantees for Swiss ocean-going ships are now acknowledged, with the caution that the residual value on which the comparison depends is an estimate.

- Part III: the 2021 activation of the United States Civil Reserve Air Fleet is called the evacuation from Afghanistan, as in its source, rather than “Allies Refuge”, a name none of the sources gives.
- Part III: the United Kingdom took up forty-five merchant ships from trade for the Falklands, not forty-six by requisition.
- Part III: the definition of a military objective now includes the second limb of Article 52(2) of Protocol I.
- Part IV: the Machinery Regulation opens the tracing log to a reasoned request from a competent national authority; what it does not do is reach the possessor.
- Parts II and VI: Article 26 has to be met under both its paragraphs, and the institutional guarantee rests on paragraph 1, not paragraph 2.
- Part IX: *Regulating Robots by Owning Them*, available on request in August, is now cited by its DOI.
- Lettre d’accompagnement: “droit de retour” becomes “droit de rappel temporaire”.
- Names and sources: State Secretariat for Economic Affairs (SECO), National Economic Supply Act (NESA) and the FONES category “industry”; Article 139 of the Constitution, which the text does not use, is removed; the sources now give pinpoints, links and access dates, and add the ICRC Commentary (Part III) and the Landlord and Tenant Act 1985 (Part IV).
- Smaller points: the scope of the comparison in Part II.1 and the statement of method in Part IX.

Lettre d’accompagnement

Madame, Monsieur,

Je vous sou mets la présente proposition relative au régime de propriété applicable aux systèmes robotiques destinés à un usage civil.

La Suisse détient déjà une réserve civile en mains privées. Elle l’obtient en imposant une obligation contractuelle de stockage à quelque 280 entreprises et en garantissant le financement bancaire correspondant. La proposition ci-après vise le même résultat par un moyen différent et, à mon sens, moins coûteux : au lieu d’imposer une obligation à celui qui détient la chose, la Confédération conserve la propriété et cède la possession. Le détenteur acquiert la machine pour ses propres besoins et en supporte le coût ; la Confédération conserve un droit de rappel temporaire qu’elle n’exerce qu’en cas de pénurie grave.

La proposition ne requiert, à ce stade, aucune décision de principe. Elle appelle un examen technique, et la partie VIII précise la demande exacte : que l’OFAE examine, dans le cadre du mandat qu’il tient déjà de l’art. 102 Cst. et de la LAP, si la capacité robotique doit figurer parmi les biens soumis au stockage obligatoire, et si la forme « propriété retenue » est moins onéreuse que la forme « obligation contractuelle » pour détenir cette capacité.

Le document est rédigé en anglais ; une version française peut être fournie sur demande dans un délai de deux semaines. Je demeure à votre disposition pour toute

précision.

Veillez agréer, Madame, Monsieur, l'expression de ma considération distinguée.

Christopher I. V. Farmer

Genève, le 19 octobre 2026

Part I — The proposal in one page

What is proposed. That the Confederation retain title to designated classes of robotic system and pass possession to the holder under an agreement, rather than title passing on sale. The holder obtains exclusive possession, use for any lawful purpose, quiet enjoyment, transferability, and compensation for any deprivation not arising from breach. The Confederation retains the reversion, a defined right of inspection, and a reserved right of temporary recall in a declared severe shortage.

What it delivers, in order of Swiss relevance.

First, a civil reserve whose only holding cost to the Confederation is its servicing. Every unit in private possession is capability the Confederation may call upon in a severe shortage, without having procured it, stored it or paid to hold it idle. Because title never passed, recall is the exercise of a reserved right in the Confederation's own chattel and not an expropriation of anyone's property. The reserve is funded by private consumption and housed by private users in the ordinary course of using their machines, and the servicing the Confederation undertakes, described in Part IV, is also its inspection.

Second, an enforcement route for the control of dangerous modification. A robotic system in private hands can be altered in ways its manufacturer did not contemplate. Every instrument now in prospect — in Switzerland and in the Union — attaches at the moment the product is placed on the market and is discharged there. A right to inspect the thing let is an ordinary incident of a lessor's interest, so the retained interest supplies during the operating life what market-entry rules cannot.

Third, a standby labour-market instrument that costs nothing to hold unexercised. Because possession is granted, the number of units may be regulated. This limb is not urgent in Switzerland and this submission does not argue that it is. It is worth having in reserve, and Part V explains why holding it costs nothing while acquiring it later may not be possible.

What is asked. Nothing of principle. Part VIII sets out two technical questions for the Federal Office for National Economic Supply, both answerable within its existing mandate and the second arising only if the first is answered affirmatively.

What this is not. It is not a proposal to nationalise robotics, to restrict what Swiss citizens may use, or to create a new inspectorate with general powers over private homes. Part VII takes the objections at their strongest and concedes what cannot be answered.

Part II — Why this is put to Switzerland first

The underlying analysis was drafted at European Union level. On working it through against national constitutional orders, an uncomfortable conclusion emerged and is stated plainly in the academic version: a scheme of this kind is easiest for states with weak protections for private property and hardest for those with strong ones. That is a serious objection to the proposal, because an instrument available only to authoritarian states is not an instrument a liberal order should want.

Switzerland is the exception, and it is the exception for four specific and verifiable reasons rather than out of courtesy to the reader.

1. The constitutional door is already open, and it was opened for exactly this purpose

Article 102 of the Federal Constitution provides that the Confederation shall ensure that the country is supplied with essential goods and services in the event of the threat of politico-military strife or war, or of severe shortages that the economy cannot by itself counteract, and that it shall take precautionary measures. The second paragraph then provides that, in exercising its powers under that Article, **the Confederation may if necessary depart from the principle of economic freedom.**

That sentence is doing something no other constitution examined in preparing the underlying work does. The objection that defeats this proposal in the United States, and complicates it in the Union, is that it restricts what a person may acquire and on what terms. Swiss constitutional law does not treat that as an anomaly requiring novel justification. It treats it as a foreseen consequence of a mandate the Confederation already holds, and it says so in terms.

The property guarantee at Article 26 is not displaced by this and nothing in this submission suggests otherwise. A restriction must satisfy Article 36: a statutory basis, with grave restrictions provided for in the statute itself; a public interest; and proportionality. And Article 26 paragraph 2 provides that expropriation, **and restrictions of ownership equivalent to expropriation, shall be fully compensated** — which, with the guarantee of ownership itself in paragraph 1, is what this proposal has to survive and what Part VI addresses at length.

The point here is narrower and it is about the starting position. **In most jurisdictions a proposal of this kind begins by arguing that a departure from ordinary property arrangements can ever be justified. In Switzerland that argument has already been won, in writing, for supply-security purposes.**

2. Switzerland already holds a civil reserve in private hands — and holds it the harder way

This is the central observation of the submission and it is the reason the proposal is worth an official's time.

Under the National Economic Supply Act of 17 June 2016 (NESA), the Federal Council may subject essential goods to compulsory stockpiling. The mechanism has four

features worth stating precisely because the comparison turns on them.

- The obligation is **contractual and imposed**: an undertaking enters a stockpiling agreement and must then establish and maintain the store.
- The Confederation specifies **which goods and how much**.
- **The stocks remain the private property of the undertaking**, which manages them.
- The Confederation **facilitates the financing**, by guaranteeing bank loans raised to fund the holdings; the carrying costs are met, for the most part, from guarantee funds formed by the sectors and passed on to consumers through prices.

At the end of 2025 roughly 280 undertakings held compulsory stocks, across food-stuffs, energy, therapeutic products and industry.

Now set the retained-interest model beside it. Both arrangements produce a reserve that sits in private hands, is bought at private cost and is available to the Confederation when it is needed. They differ in the direction of the property relation, and every practical difference follows from that one.

	Compulsory stockpiling	Retained interest
Title	Private	Confederation
Possession	Private	Private
Basis of the holder's duty	An imposed contractual obligation	A term of the agreement under which possession was taken
Why the holder participates	Because required to	Because they wanted the machine
Financing	Bank loans guaranteed by the Confederation; carrying costs met from sectoral guarantee funds and passed to consumers	None required
What is held	Commodities, held idle	Capability, in continuous productive use
Maintenance	A cost of the obligation	Servicing by the Confederation, which is also the inspection (Part IV)
Scale	~280 undertakings	Potentially every household and undertaking that acquires a unit
Access to the thing held	Through the stockpiling contract	An ordinary incident of the retained interest

The retained interest is the same policy obtained by inverting the property relation instead of imposing a duty. Nothing has to be required of the possessor, because the possessor wanted the machine anyway. Nothing has to be financed,

because the possessor is paying. Nothing has to be stored, because the machine is in use. And the reserve is capability — units that can carry, lift, clear, monitor and assist — rather than commodities that must be moved and converted before they help anyone.

It should be said honestly that compulsory stockpiling does something the retained interest does not. A compulsory stock is a *quantity of a known good, in a known place, in a known condition, verified*. A reserve of robotic units is heterogeneous, distributed, and of variable readiness. The two are complements rather than substitutes, and the proposal here is an addition to the toolkit rather than a replacement for any part of it.

3. The differentiation the instrument permits is natively Swiss, and the data already exist

Where the number of units is regulated, the number need not be uniform. It may be set by sector, by region and by category of applicant. In most states the regional limb is the hardest to justify and the hardest to administer.

In Switzerland it is neither. The Confederation is already organised around cantons whose labour markets differ sharply, and the State Secretariat for Economic Affairs (SECO) already publishes the relevant figures monthly. Swiss registered unemployment stood at about 3.0 per cent nationally in May 2026, having been 3.2 per cent in January and February. Within that national figure the cantonal spread is wide: in May 2026 Grisons stood at 1.4 per cent and Geneva, the highest, at 5.0 per cent; in December 2025 Jura reached 5.3 per cent, the highest in the Confederation that month, although SECO cautions that the December figures do not exactly reflect the position at the month's end because of a change in the system for processing and paying unemployment benefits. The Office will have the current series.

Within a single month the spread is more than threefold inside one small country, across distances measurable in a morning's drive. It is the plainest available demonstration of a point the underlying academic work makes in the abstract: displacement is a set of local events and fiscal instruments are national. A federal charge on robotic capital would fall identically on Grisons and on Jura. A quantity set per canton on figures the Confederation already publishes would not.

Two Swiss cautions attach and both are real.

Cantonal differentiation is a significant economic power exercised close to the affected interests, which is where capture is easiest. The answer available is publication of the number, the rule and the reasons, which makes the decision reviewable rather than incorruptible.

And internal arbitrage is a live risk in a country this size. A holder permitted in one canton and operating in the next defeats the scheme unless the agreement conditions on the place of *use* rather than the place of registration — which is verifiable on the inspection the modification limb requires, and which is why the limbs are not separable.

4. The technical predicate exists, and it was reconfirmed in March 2026

An inspection that is to be tolerable in a private home must yield the minimum information that answers the question. The method proposed in the underlying work is that the unit computes a cryptographic attestation of its configuration and the inspector compares it against the published value for the approved configuration. A mismatch establishes modification; a match establishes conformity; the inspector reads no code, no logs and no data.

That method requires a documented approved configuration to compare against. It exists: the machinery conformity assessment records it.

Switzerland has access to that reference without adopting Union law wholesale. The Mutual Recognition Agreement covers machinery among some twenty product sectors and accounts for around three-quarters of Swiss industrial exports to the Union. The Swiss Machinery Ordinance is already in the process of being adapted to the Union's Machinery Regulation, and the package of agreements signed with the Union on 2 March 2026 both updates the Mutual Recognition Agreement and, in the covered areas, provides for dynamic alignment with Union rules.

That last point cuts in two directions and both belong in this submission.

It secures the technical predicate. If the machinery rules are dynamically aligned, the approved configuration recorded in the conformity assessment is a stable reference that stays stable, which is precisely what an attestation-based inspection needs and which a divergent Switzerland could not guarantee.

And it does **not** constrain the proposal, for a reason that is the whole point of the underlying analysis. **The retained interest is not a product rule.** It does not govern what may be placed on the market, what it must be designed to do, or how conformity is assessed. It governs the terms on which a unit is possessed after all of that is complete. That is the interval every market-entry instrument leaves empty, and because the Union has no instrument occupying it, there is nothing there to align with. Switzerland can act in that space without touching its market-access commitments.

The submission should be candid that the timing is nonetheless awkward. The package signed in March 2026 is in its parliamentary phase and is politically contested, and 2026 is a presidential year for the head of the Department to which this submission is addressed. That is one further reason the request at Part VIII is a technical question for an office rather than a proposal for a department.

Part III — The supply-security case, stated at the width it can bear

What the reserve would consist of

Robotic systems now entering civil use in Europe fall into classes whose emergency utility is not speculative: load carriage and logistics over damaged ground; casu-

alty movement; debris clearance; work in contaminated, flooded or confined spaces; perimeter and area monitoring; and assistance and care tasks.

A state facing a severe shortage, a natural disaster, a major industrial accident or an epidemic needs physical capability at a speed no procurement cycle supplies. Under ordinary arrangements it obtains that capability by requisition. In Switzerland the army's instrument is Article 80 of the Military Act, revised with effect from 1 June 2026: when the army is called up for active service, every person must make requisition goods available to the military administration and the army — movable and immovable property, controllable natural forces such as electricity, data, radio frequencies, intangible goods, and work and services — and the duty extends to the preparatory work for active service once ordered. The Federal Council may apply the same right to the army's assistance service, which includes support to the civil authorities in disasters, and a new Requisition Ordinance was put to consultation on 1 April 2026. Requisition engages the property guarantee, requires that statutory basis, must be proportionate and attracts compensation. It can be planned and prepared in advance, but it remains a taking that must be ordered against each holder and paid for in the emergency, and it is contestable and expensive.

If title never passed, there is nothing to take. **Expropriation asks whether the state may take what is yours. Recall asks whether the state may have back what is its own.** The first is a hard question answered slowly. The second is a question about the construction of an agreement whose terms were published before anyone entered it.

The defence limb, stated rather than implied

Article 102 speaks expressly of the threat of politico-military strife or war, so it would be evasive to present this as a purely civil proposal. Where the Confederation also operates the supply channel it sets the price at which the machines reach possessors — it buys as a monopsony and it retains the residual value — so it can price below what a private market charges. Every subsidised unit is then capability the Confederation may call on, purchased and housed by somebody else.

The arithmetic is a defence-budget arithmetic rather than a welfare one. A state procuring the same capability directly bears the unit cost, the storage, the maintenance of machines nobody is using, the obsolescence of stored equipment, and the capital tied up in idle assets. A state subsidising possession bears the subsidy less the residual it keeps, and none of the other four, each of which is a cost of idleness. It does bear the servicing it undertakes (Part IV): an expense, but one that keeps the contingent capability serviceable and from which the possessor benefits in the meantime.

The precedents are old and unremarkable. Privately owned commercial aircraft have been contractually committed to United States military airlift since a joint agreement of December 1951, activated for Desert Shield and Desert Storm, Iraqi Freedom and the evacuation from Afghanistan. The United Kingdom took up forty-five merchant ships from trade for the Falklands campaign in 1982. What the retained interest changes is that the commitment is a term of the agreement under which possession was taken, so there is nothing to negotiate in the emergency.

Switzerland has a precedent of its own, and it is a cautionary one. Because ships under the Swiss flag can be compulsorily chartered for the national economic supply in a threat of war or a severe shortage, the Confederation guaranteed loans to Swiss shipowners from 1959, from 1992 in the form of joint and several guarantees, and the National Economic Supply Act still allows guarantees for means of transport essential to the supply (Article 36). When the shipping crisis that followed 2008 forced the sale of twelve guaranteed ships, Parliament voted a supplementary credit of CHF 215 million in May 2017; the loss to the federal budget came to CHF 204 million, and the Finance Delegation recommended in June 2019 that joint and several guarantees no longer be used. The difference should be stated without being overstated. A guarantor stands behind a borrower's debt on a specialised asset whose resale market can collapse, and has no say in how the asset is run; the retained interest keeps title to a mass-market chattel, sets the terms on which it is used and holds the residual itself. But the residual is an estimate rather than a certainty, and the arithmetic above depends on it.

And what converted civil machines can actually do should be stated at the outset. They are a sustainment capability, not a combat one: they lack ruggedisation, resistance to electronic attack, communications security and the energy architecture a contested emplacement demands. What survives conversion is carriage, casualty movement and clearance — which is where military and civil logistics both break, and is therefore not a small thing.

The targeting consequence, which is the most serious objection in this submission

Stating the defence limb plainly is what exposes it, and the exposure is the reason for stating it.

Military objectives are limited to objects which by their nature, location, **purpose** or use make an effective contribution to military action and whose total or partial destruction, capture or neutralisation, in the circumstances ruling at the time, offers a definite military advantage. "Use" means present use. **"Purpose" is understood as intended future use.**

A statute providing that every unit of a designated class is subject to recall for defence tasks in a declared emergency has stated an intended future use, in advance, for every unit in the class. On the ordinary meaning of the word, those units would acquire a military purpose before any emergency and without any act by anyone — and the dwellings holding them would become a question rather than an assumption, since the presumption in favour of a dwelling's civilian character operates where there is doubt and a published statute is not a source of doubt.

The civil-reserve arrangements this submission draws on escape this by accident of location. Committed aircraft sit at airports. Ships taken up from trade sit in ports. A general requisition statute does not escape it: Article 80 of the Military Act reaches movable and immovable property wherever it is kept, private garages and dwellings included, and the "purpose" objection, pressed that far, would make military objectives of them too — an indication of how far it can sensibly be pressed. The difference is that requisition liability attaches to everything of a kind, by statute and

in the abstract, while the retained interest attaches to designated units by agreement, which makes the drafting discipline below both more necessary and more achievable. A reserve distributed across the residential building stock has no escape by location, and the obligations to keep military objectives away from densely populated areas and not to use the presence of civilians to shield them both engage.

Four design responses follow and the first carries the weight.

The permitted tasks must be listed exhaustively and confined to functions that do not make an effective contribution to military action — humanitarian carriage, casualty movement, clearance, decontamination, civil-protection monitoring. Munitions carriage, engineering in support of operations, and the carriage, mounting or operation of a weapon must be excluded expressly. The moment the list includes the second class, every unit in the country acquires a military purpose.

A state wanting the excluded capability must obtain it through a separate designated class — held by undertakings rather than households, not kept at dwellings, separately registered and marked. That is the Civil Reserve Air Fleet structure, and it works because the aircraft are at airports.

The reservation must be drafted as a civil-contingency power in which armed attack is one listed emergency, not as a standing military assignment.

And recalled units must be delivered away from the dwelling before any use, because a unit operated in situ converts the dwelling with it.

What cannot be drafted away. A belligerent minded to argue that the Confederation has distributed a military reserve across its housing stock will make the argument whatever the statute says, because the machines are general-purpose and under software control. The counter-argument is available and it is a counter-argument rather than an answer. **A state unwilling to accept that residual should adopt the scheme without the recall limb**, which leaves the quantity and inspection capabilities intact and forgoes the third. That is a real option and this submission does not press against it.

The exemptions are requirements, not concessions

Care and assistance units must be exempt absolutely. A robotic system performing personal care, mobility assistance or medical support for a disabled or elderly person is not a fungible asset, and a state that recalled it would be creating the emergency it claimed to be answering. The exemption must not be capable of suspension by the same power that authorises the recall, because a discretion exercised under emergency pressure is not a protection.

Recall must be time-bounded, compensated for loss of use, and reviewable. A reserved right exercised indefinitely is expropriation under another name. Drafting it as a temporary recall with a payment for the period of dispossession is what keeps the legal characterisation accurate rather than merely convenient.

And the trigger must be statutory rather than executive. Recall on a declaration by a department is a different instrument from recall on a statutory trigger with parliamentary reporting and judicial review. Only the second should be considered.

What the Confederation should not expect from it

The reserve is heterogeneous and its readiness is unverified between inspections. It is a supplement to planned capability and not a substitute for any of it. Any assessment which counted privately possessed units as though they were held stock would overstate what is available, and the honest planning assumption is a substantial discount to nominal numbers.

Part IV — The modification problem, which is the reason to act before the units arrive

A robotic system in private possession can be altered: its hardware, the software it runs, or the constraints imposed on either. A system altered outside its design envelope is dangerous in ways its manufacturer did not contemplate and its possessor may not understand. The paradigm case is not sabotage. It is a possessor removing a speed limit, a hobbyist replacing control software with something more capable, or a small undertaking disabling an interlock that slows a process.

Three features determine what any instrument must do about it. The problem arises *after* acquisition, by construction. It is not detectable without examination, because a modified unit looks like an unmodified one. And it is not necessarily malicious, so the deterrent effect of criminal law is weak.

Every instrument now in prospect attaches at a moment and is discharged there. A market-entry rule attaches when the product is placed on the market and is satisfied by the design and documentation as they then stand. It says nothing about the unit in a household three years later running modified firmware, and it imposes no duty on anyone to find out.

The Union's Machinery Regulation, which applies from 20 January 2027 and which Swiss machinery law tracks in substance through the technical-barriers framework and the Mutual Recognition Agreement, illustrates the defect in its sharpest form. Its Annex III requires machinery to **“collect evidence of a legitimate or illegitimate intervention in the software or a modification of the software installed on the machinery or related product or its configuration”** (point 1.1.9), and requires the tracing log of the data generated in relation to an intervention, and of the versions of safety software uploaded after the machinery was placed on the market or put into service, to be enabled for five years after each upload, “exclusively to demonstrate the conformity of the machinery or related product with this Annex further to a reasoned request from a competent national authority” (point 1.2.1(f)). The evidence of modification is therefore required by law to exist inside the unit, and the request it contemplates is the reasoned request about conformity that the Regulation addresses to manufacturers, importers and distributors. No provision creates any relationship with the possessor: nothing obliges the person in whose home the unit sits to retain, present or disclose anything, and nothing requires anyone to find out whether a unit three years into its life has been altered. **The legislature has**

mandated the creation of the record and opened it only for the purpose, and through the parties, of market entry.

That is the gap the retained interest fills, and it fills it without inventing a new power. A lessor answerable for the condition of the thing let may enter to view its condition; the principle is unremarkable and is expressed in statute in comparable systems. Which yields a design point that is not obvious and is offered as the most useful practical finding in the underlying work:

Free mandatory servicing is not merely a sweetener. It is the doctrinal predicate for the inspection right. A Confederation that supplies the unit, retains the reversion and undertakes to maintain it is entitled to see the condition of what it must keep in repair. A Confederation that retained the reversion and undertook nothing would be asserting a bare right of entry, which is a materially weaker position both legally and politically. The service visit and the inspection are the same visit, and the possessor experiences a benefit rather than an intrusion.

Timing matters here more than anywhere else in this submission. The instrument is cheap to establish before a large installed base exists and expensive afterwards, because it operates only on units placed on the market after commencement and cannot reach what is already owned outright. Every year of delay is a cohort permanently outside the scheme.

Part V — The labour-market limb, stated at its true weight for Switzerland

It would be easy, and wrong, to lead a Swiss submission with displacement. Registered unemployment at around 3 per cent does not describe a labour market in distress, and an argument that ignored that would deserve to be dismissed.

The limb is nonetheless worth having, for two reasons and no others.

Because a quantity instrument is the only kind that can act on a rate. A charge alters the cost of an activity and leaves the decision with whoever bears the cost, so the quantity that results depends on an elasticity nobody has measured. If the policy objective is that the stock of substituting capital should grow no faster than a labour market can absorb — which is what a concern about adjustment is a concern about — that objective is a statement about a quantity, and only a quantity instrument delivers it by construction.

And because holding the power costs nothing while acquiring it later may be impossible. A statutory power to regulate the number, unexercised, imposes no burden on anyone. The same power legislated in the middle of a displacement episode, against an established industry and an installed base, is a different political proposition entirely.

If it were exercised, it should be graduated

The instrument should not bind uniformly. Three bands:

Possession as of right up to a household entitlement — illustratively three units for a household, one for a single-person household. No application, no queue, no discretion. Most possessors would never encounter the licensing machinery at all.

Possession on application above the entitlement and below an industrial threshold. The applicant states the intended use, the place of use and the number sought; the authority grants unless satisfied on stated grounds that it should not. **The purpose of this band is not restriction but disclosure**, and it is the part with no fiscal analogue: an application states an intention, before deployment, in units and places and uses, where a tax return records a completed transaction, afterwards, in money. It is how the Confederation would learn where robotic substitution was actually arriving, early enough to matter.

A binding cap only at industrial scale — illustratively six or more units, or possession by an undertaking for use in its trade. Only here is anything refused, and only here would cantonal differentiation operate.

Two consequences deserve emphasis for a Swiss reader. The restriction falls where the gain from substitution is captured, so households are not rationed. And a charge on robotic capital would do the opposite: it falls on the pensioner's single assistance unit and on the logistics operator's six-hundredth alike, because a base defined on the machine cannot distinguish them.

The structure is not invented. Goods-vehicle operator licensing in the United Kingdom has for decades exempted private use, required a licence for use in a trade or business, specified a maximum number of vehicles on the licence, and tied those vehicles to a stated operating centre. What is proposed is that shape, applied to a different chattel, with a retained title the vehicle regime does not have.

Part VI — What would have to change in Swiss law

This Part is indicative. It identifies the instruments that would be engaged and the questions each raises; it does not attempt the drafting, which would properly follow a decision to examine the proposal.

A formal federal statute is required, not an ordinance. Article 36 requires that grave restrictions of fundamental rights be expressly provided for in a statute in the formal sense. A regime under which title to a class of chattel vests in the Confederation is a grave restriction on the guarantee of ownership, whatever its merits, and anything short of a formal statute would be vulnerable and would deserve to be.

The competence basis is Article 102 rather than the labour-market provisions, and the submission is deliberate in this. The supply-security mandate is express, includes precautionary measures, and expressly contemplates departure from economic freedom. The quantity power should be constructed as a supply-security and

safety instrument that happens to admit of labour-market differentiation, rather than as an economic-steering instrument that would raise a harder competence question.

The National Economic Supply Act is the natural home for the reserve limb, because it already contains the machinery for designating classes of essential goods, for contracting with holders, and for the administrative relationship the scheme requires.

The product-safety and technical-barriers framework carries the inspection limb, since it is where the conformity assessment and the approved configuration already sit, and where the Mutual Recognition Agreement gives Switzerland access to the Union reference.

Proportionality under Article 36 has to be argued and can be. The measure operates prospectively on units placed on the market after commencement, so it expropriates nothing anyone already owns. It leaves the possessor with the substance of what a purchaser wants — exclusive possession, use, quiet enjoyment, transferability, compensation on deprivation — and withholds only the reversion. It is confined to designated classes selected on stated criteria. And Parts III to V argue that the less intrusive alternatives do not deliver the objectives, which is the form a proportionality argument must take.

Article 26 is the harder provision and it has to be met on two fronts: the compensation rule in paragraph 2, and the guarantee of ownership itself in paragraph 1.

Compensation for material expropriation. Restrictions of ownership equivalent to expropriation attract full compensation; restrictions of lesser intensity are borne without it. The submission's position is that the scheme is not a restriction of ownership at all in the relevant sense, because it operates **prospectively on the interest that may be acquired** in a chattel not yet placed on the market. A person who has never owned a thing has not had ownership of it restricted, and the doctrine of material expropriation addresses the devaluation of positions already held. Where the Confederation does interfere with a position already held — on a recall — the design provides payment for the period of dispossession, which is what keeps the characterisation accurate and what Article 26 paragraph 2 would require in any event.

The institutional guarantee, which is the sharpest Swiss objection to this proposal and is not fully answered. Article 26 protects private property as an institution and not only as a set of individual holdings. A rule vesting title to an expanding class of consumer machine permanently in the Confederation can be argued to attack the institution rather than any particular holding, and that argument does not depend on identifying a loser. Three replies are available and none of them disposes of it. The class is designated on stated criteria and is not general, so private property in machinery at large is untouched. The possessor holds the substantive attributes that make ownership valuable, so what is withheld is the reversion rather than the enjoyment. And other classes of thing are already held on terms the state sets, without anyone suggesting the institution has been damaged. **A reader who nonetheless regards the institutional guarantee as engaged has identified the objection the author found hardest, and it would be dishonest to present the constitutional path as clear.**

Cantonal competences are engaged and this needs care. Nothing in the proposal requires cantonal implementation, but a scheme whose quantity varies by canton will be read as touching cantonal economic policy whether or not it does. The consultation procedure is where that would have to be settled, not this submission.

Part VII — The objections, at their strongest

The surveillance objection, which is the hardest

A right of access sufficient to inspect is a right of access sufficient to surveil. The scheme creates a lawful, routine, scheduled entitlement for a public body to interrogate a machine that lives in a private home, that has sensors, and that has been present for everything that happened there. Whatever the statute says the inspection is for, the capability exists, and capabilities are repurposed.

The answer is structural rather than reassuring, and it is partial.

The attestation method means the inspection yields one bit: the unit computes a cryptographic representation of its configuration and the inspector compares it against a published value. The inspector does not read the code, the logs or the data, and cannot, because the protocol does not transmit them. The scope limit must be jurisdictional rather than instructional — an inspection exceeding it is unlawful, the evidence is inadmissible, and the possessor has a remedy — because a limit that merely instructs officials to be restrained is not a limit. And the right should be vested in a technical body at arm's length from the executive and from police and security functions, with a statutory bar on disclosure of anything incidentally learned.

What cannot be offered is an assurance that those limits hold under pressure. Statutes are amended, bodies are reorganised, and emergencies generate exceptions. A reader who regards any domestic inspection capability as unacceptable regardless of its design holds a coherent position that this submission does not refute.

The register is a second surveillance surface and it is conceded

The application band described at Part V would accumulate a forward record of where robotic capability is being deployed. That is a real capability and it is not answered by the attestation argument, which concerns inspection rather than registration. Three things bound it: the entitlement band means most possessors never appear in the record; the record holds stated intentions about units, uses and places rather than anything a unit has observed; and publication should be in aggregated form only, with identification of applicants barred. Those constraints are weaker than the ones protecting the inspection, and it would be dishonest to pretend otherwise.

The property objection

The guarantee of ownership is engaged. The replies are prospectivity, the substance of what the possessor retains, and proportionality under Article 36 — set out at Part

VI and not repeated. The objection is not disposed of by those replies; it is answered well enough to be arguable, which is the most that should be claimed at this stage.

The trade objection

Switzerland is a member of the World Trade Organization and an exporter of precision machinery. Two exposures.

A regime capping the number of units in circulation restricts the quantity that can be sold into the market, and the fact that the restriction operates through a property structure rather than at the border does not obviously save it. The defence is that the measure regulates the conditions of possession and use, applies to all units however sourced, and pursues a legitimate objective that less restrictive instruments do not achieve. Whether it succeeds is not something this submission can settle.

More sharply: if the Confederation were to become the channel through which units reach possessors, the state-trading disciplines are engaged directly. That exposure is real. It is also smaller than it first appears, because the discipline has been interpreted as a non-discrimination obligation rather than a general requirement that a state enterprise behave commercially — so a channel purchasing from all manufacturers on published, non-discriminatory terms is on materially better ground than one favouring a domestic producer. The residual risk is that a monopsony purchasing on published terms still writes those terms, and a well-advised complainant would go there.

The supply channel is severable. If the trade exposure is judged unacceptable, the retained-interest scheme can operate alongside ordinary private sale, at the cost of a weaker answer to evasion. That is a policy choice and not a defect in the design.

The competence and capacity objection

An inspectorate capable of examining a large installed base is a substantial capability that may simply not be buildable. Two replies and a concession. Attestation-based inspection is cheap by construction — a challenge and a comparison, performable at a service point rather than by an official attending premises. An inspectorate need not inspect everything: scheduled inspection for high-capability classes and sampling for the rest is how product-safety surveillance already operates. **The concession is that this has not been demonstrated at the contemplated scale**, and a reader who doubts the scaling has identified the proposal's most vulnerable point.

The direct-democracy objection, which is decisive on timing

A federal act of this kind is subject to the optional referendum: fifty thousand citizens entitled to vote, or eight cantons, within a hundred days of publication. It is realistic to expect that a statute vesting title to a class of consumer machine in the Confederation would attract that number.

Two observations follow and neither is a reason to abandon the proposal.

It argues for sequencing, not for silence. A scheme introduced as a supply-security measure for designated classes, with an absolute care exemption and no quantity restriction on households, is a materially easier proposition to defend at a vote than one introduced as economic steering. The order of justification is not presentational; it determines what the campaign is about.

And a referendum is a feature. An instrument of this weight *should* be settled by a popular vote rather than slipped through, and a scheme that carried one would be far more durable than one that did not. If the proposal cannot survive that test it should not be adopted, and the honest position is that this is not yet known.

Part VIII — What is actually asked

Nothing in this submission requires a decision of principle, a legislative commitment, or a public position.

The request is that the Federal Office for National Economic Supply examine, within its existing mandate under Article 102 of the Constitution and the National Economic Supply Act, two questions:

First — whether robotic capability belongs in the compulsory-stock categories at all. The existing categories are foodstuffs, energy, therapeutic products and industry. The question is whether capability of the kinds described at Part III — carriage, clearance, contaminated-space work, monitoring, assistance — is now sufficiently established in civil use, and sufficiently useful in a severe shortage, to warrant treatment as an essential good. That question is answerable on the Office's own criteria and requires no view on anything else in this document.

Second — and only if the first is answered affirmatively: whether the retained-interest form is a cheaper way of holding that capability than the contractual-obligation form. The existing model imposes a duty on undertakings, guarantees their financing and passes the carrying cost to consumers through prices. The alternative imposes no duty and finances nothing, because the possessor acquires the machine for their own purposes, but it commits the Confederation to the servicing described at Part IV and depends on the residual value discussed at Part III. The comparison is a matter of arithmetic, of the burden on undertakings, possessors and consumers, and of administrative cost, and the Office is the body equipped to make it.

Three subsidiary suggestions, offered without expectation.

The artificial-intelligence bill due for consultation by the end of 2026 addresses transparency, data protection, non-discrimination and supervision. Physical robotic systems in private possession raise a question none of those four headings reaches — what happens to a machine after it is sold — and it would cost nothing to note the gap in the explanatory material even if nothing is proposed about it.

If the first question above is answered affirmatively, a limited pilot in a single canton, confined to logistics and clearance classes and to undertakings rather than house-

holds, would generate the operational evidence this submission cannot supply and would test the administrative burden at low cost.

And whatever is decided, **the prospective-only character of the instrument means the option decays**. It operates on units placed on the market after commencement. Each year of delay is a cohort of machines permanently outside any scheme of this kind, and at some point the installed base is large enough that the option is gone.

Part IX — Standing of this submission and how it was prepared

This submission is made in a personal capacity. The author has no commercial interest in robotics manufacture, supply, servicing or insurance, and no client on whose behalf it is advanced.

It summarises the argument of an academic paper, *Regulating Robots by Owning Them: A Retained Property Interest as a Graduated Quantity Instrument for Labour-Market Adjustment, an Enforcement Route for Modification Control, and a Civil Reserve Funded by Private Consumption*, which is available at <https://doi.org/10.5281/zenodo.23462134> and which contains the full apparatus, the drafted instrument, and the treatment of the objections at greater length.

Every statement of Swiss law and every figure in this document has been checked against a primary or authoritative record, and the sources below give the provision or passage relied on. Where a proposition is argument rather than law it is marked as argument. Where an objection has not been answered, the submission says so rather than managing it — at Part VII on surveillance, on scaling, and on the referendum, and at Part III on the readiness of a distributed reserve.

The author would welcome correction on any point of Swiss law or practice, and is available to meet, to provide a French version within two weeks, or to answer questions in writing.

Sources relied on

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