A future-proof ban

A proposal for a narrow, conditional exclusion from the vending machine provisions of the forthcoming regulations banning the sale of high-caffeine energy drinks to under-16s

Submitted to	Department of Health and Social Care
Via	Ian Roome, Member of Parliament for North Devon
From	Sion Grand, founder, Nubar Technology LTD
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Copy to	The Automatic Vending Association

Summary

1. This submission supports the ban announced on 16 July 2026. It does not ask the Department to reopen the age threshold, the caffeine definition, or the decision that traditional vending machines cannot sell these drinks. Each of those decisions should stand.

2. It asks for one narrow addition when the regulations are drafted: **a sale should fall outside the vending machine prohibition where the machine physically cannot release the goods until the buyer has been verified as 16 or over by an age-assurance service certified under the government's own digital verification services trust framework, and where every sale and every verification is logged and available to enforcement officers.** A machine that cannot meet that condition, which includes every traditional vending machine in the country, remains banned from selling these drinks, exactly as announced.

3. The consultation outcome rejected technological solutions on four grounds: they are not used consistently, their reliability is unproven, their effectiveness depends on setting, and the hardware is expensive. Each of those was a fair description of add-on age-check hardware bolted onto traditional vending machines. None of them describes a smart cooler, a newer category of machine whose door is locked and controlled by software over an internet connection, and for which age verification requires no new hardware. Section 4 addresses each of the Department's four reservations in turn.

4. The outcome document itself anticipated this possibility: *"we are keen that our policy is future proof. Businesses have a choice about whether to invest in technology that allows sales from vending machines to those verified as being 16 or over should solutions develop. Should any solutions develop, we will work with industry on guidance and updates to legislation, if that is required."* The purpose of this submission is to report that such a solution has now developed, to describe how it works, and to ask that the regulations be drafted so that no amendment is needed once it is in service.

5. We make three requests, in descending order of preference:

> **(a)** a conditional exclusion in the regulations as drafted, on the terms sketched at Annex A;

(b) failing that, a power in the regulations for the Secretary of State to designate approved age-verification standards later, by notice, so that recognising a proven system does not require fresh legislation;

(c) failing that, a named commitment that certified age-verified sale from smart coolers will be assessed in the post-implementation review, supported by a supervised pilot, which we offer to run with the Department and Trading Standards at no cost to public funds, beginning before the ban commences in April 2027.

1. Who is making this submission

6. Nubar is a small British technology company. We build the identity and payment layer for smart coolers: a customer enrols once, verifies their age once with a certified provider, and can then buy from any participating machine, from any manufacturer, with the machine confirming who they are before the door unlocks.

7. We declare our commercial interest openly: if the regulations recognise certified age verification at smart coolers, Nubar's product becomes more valuable. The same is true of the product of any competitor who meets the same certified standard; the request is for a standard, not for Nubar. We are not seeking an exclusive position or approved-supplier status, nor any arrangement that names a particular company rather than a capability.

8. Nubar provides neutral infrastructure. It is not a drinks manufacturer, does not own or stock machines, and earns nothing from any individual sale decision. That neutrality matters to the substance of this proposal, for a reason set out at paragraph 27.

2. What a smart cooler is, and what it is not

9. The consultation, its outcome, and the coverage around both use the phrase "vending machine" for two categories of equipment which, beyond refrigeration, have little in common.

10. A **traditional vending machine** is a mechanical dispenser: payment is inserted, a coil turns and the product drops. It has no means of establishing who is standing in front of it. The Department's reservations about age verification (retrofit hardware, high cost, inconsistent set-up) are reservations about this category of machine, and we share them.

11. A **smart cooler** is a locked, internet-connected fridge. The door does not open until a remote service instructs it to, which means that software determines, before the customer can reach any product, whether that person may open that door. Cameras and weight sensors then record what has been taken, and the customer is charged accordingly. The two capabilities the Department found missing from vending machines, namely knowing who the buyer is and controlling access accordingly, are not accessories here; they are the defining features of the product.

12. A **micro market** is different again: open shelving in a space with staff nearby, with self-checkout after the goods are already in hand. This submission does not ask for anything in respect of micro markets. The proposal's central condition, verification *before* the goods can be reached, is one a micro market cannot meet, and we have deliberately confined the request to machines that can meet it.

13. The distinction reflects a rapid structural change in the industry rather than a point of technical detail. The Automatic Vending Association's own census records 2,850 smart fridges in the UK, the sector's fastest-growing format, up roughly 50 per cent in a single year, within an automated retail industry now turning over £3.78 billion [1]. In the United States the shift is further along: smart coolers dominated the industry's 2026 national trade show, and are widely credited with returning growth to a mature sector [2]. They are concentrated where staffed catering has withdrawn (workplaces, gyms, universities, hospitals and hotels): the semi-private and private settings where the vending sector told the consultation more than 80 per cent of machines already sit (Figure 1, Annex C). The United Kingdom is following this trend rather than leading it. The regulations will determine whether the most modern part of the British estate is regulated to the standard of its oldest, or whether the ban gives operators a clear reason to upgrade.

3. What we are asking for, and what we are not

14. We are **not** asking for a location-based carve-out. The outcome document rejected setting-based exemptions because *"there is no existing definition of these settings and, in practice, access may vary over time or between businesses."* We agree with that reasoning, and would add that a location-based rule cannot be tested without visiting the location, and that even then the position may change over time. Nothing in this proposal depends on where a machine is sited.

15. We are asking for a **capability-based condition** that is binary and testable at the machine: either the door physically will not release these drinks to an unverified buyer, or the machine may not sell them at all. Age is verified once, against the person's account, through a provider certified under the UK digital verification services trust framework: the assurance scheme the government itself established, which has had statutory footing under the Data (Use and Access) Act 2025 since December 2025, with certification by independent conformity-assessment bodies and a public register of certified providers [3]. The outcome document already points in this direction in its section on online sales: *"the government is undertaking wider work to support trusted digital identity solutions as underpinned by the Data (Use and Access) Act 2025. As these technologies continue to develop, they may support age-restricted sales in a range of settings."* We are proposing the first of those settings.

4. The Department's four reservations, taken in turn

16. *"These are not currently used consistently across vending machines."* This was true, and it is the strongest argument for writing the condition into the regulations rather than leaving the market to improvise. Inconsistency arises where each manufacturer and operator adopts its own scheme. A network-level check, under which one account is verified once and honoured identically by every participating machine from every manufacturer, is consistent by construction: the same certified check produces the same record whatever the brand on the door. A conditional exclusion also generates consistency by design, because only machines meeting the certified standard may sell at all. The ban addresses inconsistency by prohibiting all machines; the condition addresses it by defining what compliance looks like and excluding everything else.

17. *"It is unclear if these solutions can reliably prevent underage sales."* This is an evidence gap rather than a policy objection, and the government has already run the exercise that goes furthest towards closing it. In the Home Office's 2022 regulatory sandbox, five supermarket groups including Tesco, Asda, Morrisons and the Co-op put certified digital age checks in front of roughly 94,000 real alcohol purchases; the participating retailers reported that not one person under 18 wrongly passed [4]. That result was achieved at staffed tills, where the technology operates as a second line of defence. At a smart cooler it operates in front of a locked door: a buyer under 16 who fails the check is not refused at the point of payment but is never able to reach the product, and no staff discretion is involved at any stage. If the Department wishes to see this evidence generated within the vending sector rather than read across from grocery retail, paragraph 31 offers a means of doing so.

18. *"Their effectiveness would depend on the technology used and how it is set up and run in different settings."* That is true of hardware installed and configured machine by machine, but not of verification held at the level of the account: the check is done once, by a certified provider, and the result travels with the person. The same account is verified to the same standard whether the cooler is in a warehouse in Carlisle or a gym in Croydon. Dependence on setting was the defect the Department identified in location-based exemptions; an account-level check removes it by design.

19. *"The use of age verification hardware has a high cost to install and use... [it] may not be profitable for many vending machine businesses and may result in the removal of high-caffeine energy drinks from machines."* We agree, as regards hardware fitted to traditional machines. A smart cooler requires none: the lock, the connectivity and the software are already there, because they are what makes it a smart cooler. On Nubar's implementation the machine-side addition is a printed QR sticker/NFC tag [image 1]. The age check itself runs once per customer on the customer's own phone, costs pence rather than hundreds of pounds, and is a network cost rather than a per-machine installation. The Department's objection on cost was, in substance, an objection to retrofitting unsuitable machines; we would not propose retrofitting them either.

5. What a verified sale actually looks like

20. **For the customer**, once enrolled, the process is to scan the sticker on the door, confirm with a single tap, take a drink once the door opens, and walk away. On the first occasion, and only the first, that they use an age-restricted machine, they complete a one-time check with a certified provider on their own phone (identity document, liveness check and face match), typically taking about a minute. From then on, every age-restricted machine on the network recognises them as verified.

21. **For their privacy**: Nubar never sees the document, the image, or the date of birth. The certified provider confirms a single attribute (that the customer is over 16, or over 18), and that attribute, together with a timestamp and the provider's check reference, is all that is stored. This is the trust framework's data-minimisation model operating as designed: the seller learns only what it is required to know.

22. **For the under-16**: the door does not open. The control is not a warning notice or a prompt that can be dismissed, but a locked door. An under-16 cannot rely on a verified

adult's status unless that adult hands over their own phone and account; that is the same proxy-purchase boundary with which every age-restricted regime contends, with the difference that here the account holder's own identity is attached to the sale and the whole event is recorded.

23. **For the operator and the premises manager**: the regulations will make the person who controls or manages the premises liable for underage sales. At present that person has no reliable means of demonstrating compliance. Under this proposal they would have a record: every door opening traceable to a verified account, and every verification traceable to a certified provider's reference. A gym manager asked by an enforcement officer "how do you know no under-16 bought from this machine?" can, for the first time, answer with evidence rather than assertion. Without provision of this kind, the rational response of premises managers to the new liability will be to remove the category from their sites altogether, at a cost to the industry estimated at £43 million a year in lawful adult sales [5], with no corresponding gain in protection for children.

24. **For the enforcement officer**: this may be the aspect of the proposal of greatest practical value to the Department. The outcome document contemplates covert test purchasing under the Regulation of Investigatory Powers Act, subject to Home Office agreement, which involves sending child volunteers into shops under statutory safeguards. A smart cooler can be tested in under a minute without any of that apparatus: an officer scans the sticker with an unverified account, and if the door of a machine stocking these drinks opens, the breach is established. No child participant or RIPA authorisation is required, and there is little for a tribunal to dispute. The audit trail then covers every historical sale rather than the single occasion on which a test purchase took place, so compliance can be assessed across the whole record rather than by sampling.

25. **By default**: on the Nubar network every machine requires 16+ verification unless the operator formally attests that it stocks nothing age-restricted, and the attestation itself is logged, with wording and timestamp, precisely so that it can be produced to a Trading Standards officer. Protection is therefore the default position, and disabling it is itself a recorded act.

6. A higher standard than the checks children meet elsewhere

26. From April 2027, a 15-year-old who wants one of these drinks will face a shopkeeper's judgement. Independent test-purchase auditors have reported for years that staffed retail, at its best, declines to challenge somewhere between one visit in seven and one in three, depending on the channel [6], not through indifference but because human checking under pressure has practical limits. The same 15-year-old at a verified smart cooler faces a cryptographic check performed once by a certified provider against an identity document, enforced by a lock. If the regulations admit verified smart coolers, the most protected point of sale for these drinks in England will be the machine, and future consideration of unattended retail of any age-restricted product will start from the precedent that the machine must *prove* the buyer's age rather than estimate it. That is a precedent worth setting deliberately.

7. This has been done before

27. **The government's own trial** is described at paragraph 17: certified digital age checks, five supermarket groups, roughly 94,000 checks, no reported underage pass [4]. The framework those providers are certified under is now statutory [3]. What has never existed until now is the network to carry that check across every manufacturer's machines, which is why the consultation's respondents could not point the Department to one. Verification at a single manufacturer's coolers would recreate exactly the patchwork the outcome document feared; a neutral layer, serving every manufacturer and operator on identical terms, is what makes "used consistently across vending machines" achievable at all. That layer is what Nubar has built.

28. **Germany faced the same question in 2007**, in relation to a more harmful product. Rather than ban Europe's largest cigarette-vending estate, it required every machine to verify age electronically before releasing goods, first against the identity card and the bank-card chip [7]. Machines capable of verification remained in service, the access children had previously enjoyed through them ended, and the system operated for eighteen years until the chip itself was retired in favour of newer methods. Prohibition and verification are alternative means of keeping a product from children; Germany's experience suggests that verification can achieve this without diminishing an industry.

29. **The UK's 2011 tobacco vending ban**, which the outcome document cites as precedent, deserves careful reading. The impact assessment found that *retailers* could not effectively prevent underage sales from those machines, and it was right to do so, because the only "age verification" a 2011 cigarette machine could offer was a member of staff glancing over from the bar, or a token handed across the counter. The finding was about what that hardware could do. It was made three years before the first smartphone age-estimation tools existed and fourteen years before the certification framework had statutory force. To cite that finding against the certified, logged, pre-access verification available in 2026 is to apply a judgement about machines that had no means of identifying their buyers to machines whose defining feature is that they must.

8. What the Department would get

30. The ban's promise to parents is kept in full: an under-16 cannot buy these drinks from any machine, anywhere, and at verified smart coolers that promise is enforced by a lock and a certified check rather than by signage. Enforcement becomes simpler and stronger, with a test that takes under a minute and a complete audit trail in place of covert operations. The government's digital verification framework gains its first substantial application in physical retail, in exactly the "range of settings" the outcome document anticipated. A substantial share of the £43 million of lawful adult sales is preserved, in gyms, workplaces and depots that are overwhelmingly adult settings, and it is preserved *because* operators invest in the newest and most accountable machines, so the ban accelerates the modernisation of British unattended retail rather than arresting it. Finally, the regulations are future-proof from the outset, requiring no amendment when the technology the Department has said it will monitor arrives, because provision will already have been made for it.

9. The offer

31. We offer the Department and National Trading Standards a supervised pilot, at no cost to public funds, beginning before commencement in April 2027: a defined estate of smart coolers running certified pre-access age verification, with the Department and participating local authorities given the full audit trail, unannounced test-access rights on demand, and the results published whatever they show. We would work with officials to agree the test protocol (what an officer checks, what records must be produced, and what constitutes a failure), and we would want that protocol published as an open standard that any certified provider can be assessed against. If the evidence gap named in the outcome document can be closed before the regulations are laid, the exclusion can be drafted with confidence; if the Department prefers to legislate first and assess at the post-implementation review, the pilot will have the evidence waiting.

32. We would welcome the opportunity to demonstrate the system to officials. A full demonstration takes around five minutes.

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Annex A — The shape of the exclusion

A sale of a high-caffeine energy drink from an automated machine falls outside the vending machine prohibition only where **all** of the following are met:

1. **Locked by default.** The goods are physically inaccessible until released by the machine.
2. **Released only to an account.** Release requires authentication of an identified customer account, not merely payment.
3. **Verified before access.** The account holder has, before release, been verified as 16 or over by an age-assurance service certified under the UK digital verification services trust framework (or any successor scheme the Secretary of State designates).
4. **Logged.** A record of each release and sale, including the verification reference, is retained for a prescribed period and produced to an authorised officer on request.
5. **On unless attested off.** Where such a machine stocks high-caffeine energy drinks, the verification requirement cannot be disabled; any general capability to disable it must itself be recorded.

The burden of showing the conditions were met should rest on the seller. A machine meeting none of them, which includes every traditional vending machine, remains banned, as announced.

An alternative legislative approach achieving the same end: a power for the Secretary of State to designate approved age-verification systems for the purposes of the vending provisions, by published notice, against published criteria. This adds nothing to the ban as announced and avoids the need for further legislation once the Department is satisfied with the evidence.

Annex B — Sources

1. Automatic Vending Association census figures as reported in trade and business press, May 2026: 2,850 UK smart fridges, ~50% one-year growth; sector turnover £3.78bn. (BM

Magazine, "UK vending and automated retail sector hits £3.78bn", 21 May 2026; Facilities Management Journal, same census.)

2. Vending Market Watch, "Smart coolers become a strategic business decision" (2026); NAMA Show 2026 coverage (retailsystems.org, "NAMA 2026: AI drives opportunities for unattended retail").

3. UK digital verification services trust framework, GOV.UK collection; statutory footing under the Data (Use and Access) Act 2025, Part 2 (in force December 2025); certification by BSI and Kantara Initiative; public register of certified providers on GOV.UK.

4. Home Office regulatory sandbox on digital age verification for alcohol sales, January–May 2022: five supermarket groups (incl. Tesco, Asda, Morrisons, Co-op), ~94,000 checks; participating retailers reported no under-18 wrongly passed. (Reported by techUK, "Yoti digital age verification trialled at supermarkets"; Computer Weekly, "UK supermarkets to trial age estimation tech for alcohol purchases".)

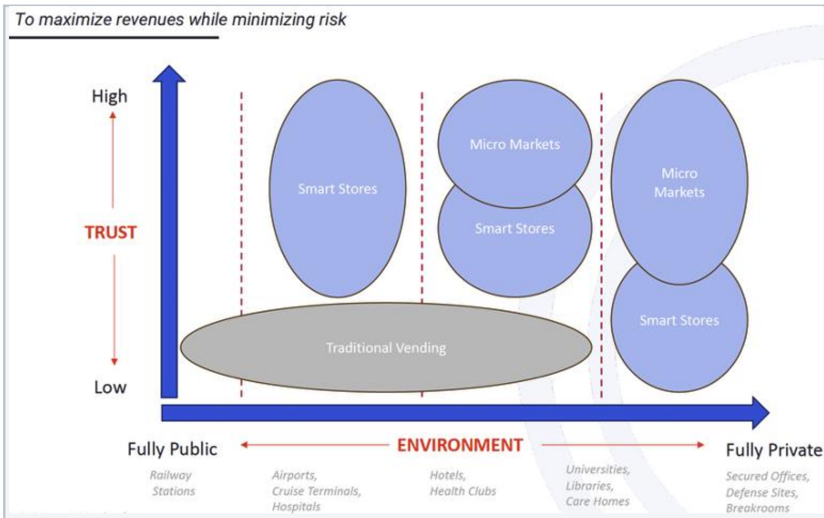
5. Industry-commissioned estimate cited in the consultation outcome and by the AVA: losses of around £43 million per year from a complete vending ban; AVA chief executive statement, July 2026.

6. Serve Legal test-purchase audit results as reported in trade press (Morning Advertiser, 2012–2014 series; The Grocer, rapid-grocery age-check investigation): supermarket pass rates peaking around 85%, pubs near two-thirds, challenge rates of 77–81% in recent supermarket/convenience audits.

7. German mandatory electronic age verification at cigarette vending machines from 1 January 2007 (Jugendschutzgesetz amendments; GeldKarte chip and ID-card verification; industry investment of ~€300m), operated until the GeldKarte's retirement at end-2024, with modern replacements following. (Stars and Stripes, 2 Jan 2007; GeldKarte, Wikipedia; Retail Dive on successor systems.)

8. Department of Health and Social Care, "Banning the sale of high-caffeine energy drinks to children: consultation outcome", 16 July 2026. All quoted passages are from the sections "Vending machines", "Additional information from the vending sector" and "Online sales".

Annex C — Figure 1



: 365 Retail Markets chart — "Trust vs Environment": smart stores and micro markets positioned in semi-private and fully private environments (offices, universities, health clubs, secured sites); traditional vending occupying the low-trust, fully public zone.

Source: 365 Retail Markets. The chart illustrates the placement economics of the category: smart coolers are deployed where the surrounding environment already provides accountability; that is, in overwhelmingly adult settings.