banqup

The missing tax quality layer

Why e-invoicing networks can now deliver and report any invoice in real time but still cannot tell you whether the tax on it is right

15 September 2026

A white paper on tax quality and semantic standardisation in the mandated e-invoicing ecosystem

Jan Druppel
CEO Documents Division

Danny Vermeiren
Head of Tax Solutions

Banqup Group

1 · Executive summary

One layer is missing from the e-invoicing transformation. The networks that now carry business invoices can deliver and report any invoice, anywhere, in near-real-time. However, no actor in those networks checks whether the tax on the invoice is right, and the semantic layer needed to automate that check does not exist. This is the argument of this paper, and it rests on three observations, each verifiable.

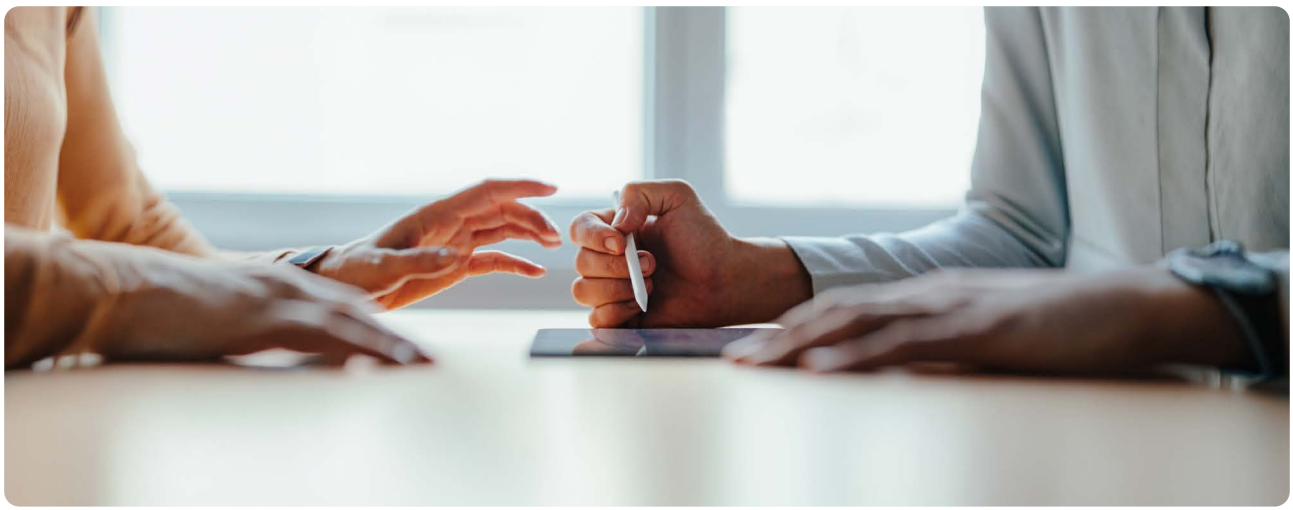
First: the network delivers and reports the invoice, reliably and increasingly in real time. That problem is solved, and it is a real achievement. What began as a voluntary interoperability network is becoming legally mandated, tax-administration-governed critical infrastructure. Belgium reached 88% business adoption within six months of its mandate. France's mandate took effect in September 2026, bringing five to six million businesses into mandatory invoice reception. Under the EU's VAT in the Digital Age (ViDA) package, formally enacted in 2025, every intra-EU B2B invoice will be structured and reported to tax administrations in near-real time by July 2030, with legacy national systems required to converge by January 2035. In jurisdictions introducing continuous transaction controls, the decentralised five-corner model, where certified service providers exchange invoices and report tax data to the authorities in parallel, has established itself as the dominant standard.

Second: no actor in the network checks whether the tax on the invoice is right. Everything called "validation" in the ecosystem today verifies that the invoice is well-formed: schema, business rules, code lists, arithmetic consistency. None of it verifies that the tax treatment is correct. An invoice that applies the standard rate to a zero-rated supply passes every check at every corner of the network. In the published session material of the Peppol Conference Europe 2026, some 580 slides produced by the people building out this ecosystem,[1] no session, slide or bullet addresses the substantive correctness of the tax on the invoice. Correctness is silently assumed to happen upstream. It is nobody's declared responsibility in the network, and the discussion the network's own forums are having is about format, not content.

Third: the semantic layer needed to automate that check does not exist. Every jurisdiction's tax rules are written against the nature of the supply: foodstuffs or catering, medicines or cosmetics, repair or construction. Yet in the European standard the nature of goods and services travels, in practice, as free text. A classification field exists, but it is optional and, in practice, rarely used. Outside Europe, classification is increasingly mandatory, but the resulting national systems are mutually incompatible. We found no EU or OECD initiative to standardise the classification of goods and services on the invoice for tax purposes.

The consequence deserves to be stated plainly: **real-time reporting of wrong tax is not tax compliance; it is the faster distribution of errors.** Invoices are becoming self-executing. They pre-fill returns, drive the counterparty's deduction claim and feed tax-administration analytics, so an error at issuance no longer surfaces at a year-end reconciliation. It propagates instantly, in every direction, with the taxpayer liable and the authority watching.

This paper describes the gap, explains why it becomes acute between now and 2030, sets out the requirements any credible answer must meet, and closes with a concrete agenda for standards bodies, tax administrations, the EU legislator and service providers. The infrastructure the ecosystem has built is extraordinary. It deserves a quality layer to match.



[1] The Plenary (183 slides), Business Track (201 slides) and Technical Track (195 slides) of the Peppol Conference Europe 2026, Brussels, 16–17 June 2026. See the evidence note at the end of this paper.

2 · The transformation nobody disputes

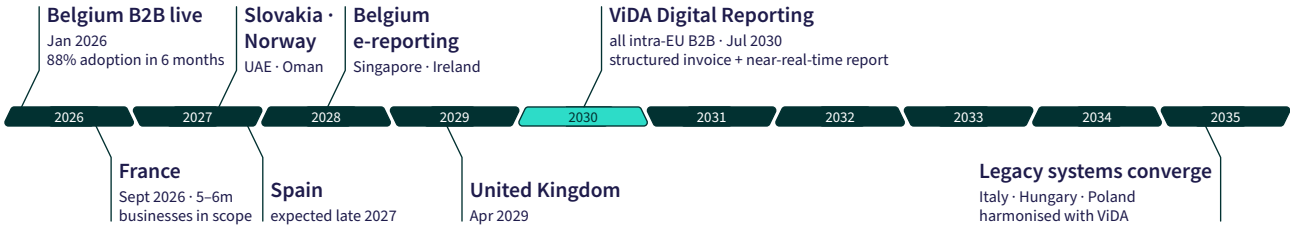
The premises of this paper's argument are the ecosystem's own published record.

E-invoicing has become critical infrastructure. OpenPeppol's Secretary General framed the June 2026 conference in one sentence: Peppol is moving "from interoperability facilitator to provider of critical infrastructure." That is description, not aspiration. Mandatory regimes now reference Peppol directly in law, so dependency arises by legal requirement rather than commercial choice. The network counts over a thousand association members across 48 countries and territories, 26 national Peppol Authorities and 3.4 million registered receivers.[2]

The mandates are no longer coming; they are here. Belgium's B2B mandate went live in January 2026, and adoption rose from 18% in mid-2025 to 88% in June 2026. In the twelve months to April 2026, 140 million invoices moved over the network in Belgium, reaching thirty million documents a month by mid-2026, up from roughly one million a month in mid-2025, before the mandate's entry into force.[3] France's mandate took effect on 1 September 2026, with five to six million businesses required to receive structured invoices via a "Plateforme Agréée" (PA) and mandatory issuance applying to large and mid-sized enterprises, with small and micro-enterprises following in September 2027.

Slovakia, Norway, the UAE and Oman follow in 2027; Belgium's e-reporting phase, Singapore's expansion and Ireland in 2028, with Spain's phase-in awaiting a pending implementing order and expected from late 2027; the United Kingdom follows in April 2029.[4] At the European level, ViDA adds: structured e-invoicing plus near-real-time digital reporting for all intra-EU B2B transactions from July 2030, with pre-2024 national systems (Italy, Hungary, Poland) required to harmonise by January 2035. The wave is global as well as European: Billentis, the sector's reference market analyst, expects worldwide e-B2B invoice volumes to rise from roughly 88.3 billion in 2026 to 107 billion by 2030 on officially announced mandates alone, a figure the report itself treats as a conservative baseline.[5] None of this is smooth for the businesses concerned: a mandate arrives with software migration, supplier onboarding and master-data clean-up attached, and that burden lands hardest on the smallest businesses.

The mandate wave, 2026–2035
E-invoicing and digital-reporting mandates in force or legislated, by go-live date



Legislation and official announcements as of September 2026. Spain's phase-in is expected from late 2027, pending its implementing order. Dates may shift; the direction of travel does not.

The five-corner model has won. For a decade, continuous transaction controls split between centralised clearance, where the tax authority sits in the invoice flow and can block it, and post-audit freedom. Centralised systems designed in the earlier wave are still going live, like Poland's KSeF and Malaysia's MyInvois, but the design choices of 2025–2026 point the other way, toward the decentralised five-corner model: invoices exchanged between certified service providers, tax data extracted and reported in parallel to the authority. France adopted it after abandoning its central exchange portal. Slovakia's law goes furthest: the taxpayer's reporting obligation is deemed fulfilled the moment the e-invoice reaches its certified service provider, and it is the provider that, under the network's accreditation requirements, produces and reports the tax data to the government. The UAE, Singapore and the EU's own ViDA pilot follow the same pattern.[6] Under ViDA, no new national system may deviate from the harmonised reporting requirements after 2030 and the systems that predate it must converge by January 2035.

[2] Network figures from the OpenPeppol Secretary General's keynote, Peppol Conference Europe 2026: 1,059 OpenPeppol members across 48 countries and territories, 26 countries and territories with Peppol Authorities, and 3,410,461 registered receivers as at 26 May 2026. Independent network trackers arrive at different totals depending on how participant identifiers are counted; treat absolute counts as indicative.

[3] Adoption figures from FPS Finance, 'A policy success?'; monthly volumes from VBO-FEB (Federation of Belgian Enterprises), 'Business community – the experience so far', both in the plenary session 'Belgium eInvoicing mandate – 6 months in', Peppol Conference Europe 2026 (Brussels, 16 June 2026). The twelve-month invoice count is from the OpenPeppol Secretary General's keynote cited in note 2.

[4] HMRC, 'Tax update 2026: simplification, modernisation and fairness' (policy paper, updated 23 June 2026): 'The government has announced that the electronic procurement system Peppol will be the core interoperability network for e-invoicing in the UK. This will give software developers and taxpayers an indication of the direction of travel for our work towards the e-invoicing mandate in 2029'. The UK has to date announced the network layer only; a real-time reporting component has not been announced.

[5] Billentis, Riding the Tornado: A Guide to Mastering Multinational E-invoicing and Compliance, June 2026, §4.1.3 ('Mandate-Driven E-B2B Growth to 2030').

[6] The UAE describes its regime as one of the first fully operational five-corner ecosystems (UAE Ministry of Finance session, Peppol Conference Europe 2026); the Peppol ViDA pilot has 22 tax administrations and over 90 service providers testing the pattern, with live end-to-end demonstrations as of June 2026 (OpenPeppol ViDA pilot session, same conference).

The structural meaning of that victory is easy to understate. In a clearance model, the tax authority is the platform. In the five-corner model, **certified service providers are the infrastructure**: they carry the invoice, produce the Tax Data Document and increasingly carry the tax reporting itself. Accreditation regimes are hardening accordingly, with security certification, testing stages and national accreditation processes.[7] The service-provider layer is becoming a regulated, certified industry, the one place in the flow that touches every transaction and already answers to the state.

Why do governments do all this? The mandate is fiscal: the VAT compliance gap in the EU stood at €128 billion for 2023.[8] But the bigger prize, as Xero's Simon Foster put it in the closing plenary of that same conference, is the digitalisation of the economy. Both motives assume one thing about the data flowing through the new rails: that it is right. That assumption is the subject of the rest of this paper.

> "Certified service providers are the infrastructure: they carry the invoice, produce the Tax Data Document and increasingly carry the tax reporting itself."

3 · What "validation" means today

The ecosystem does not validate badly. It validates form. The claim of this section is that nothing in the stack validates tax substance — and that this is documented in the ecosystem's own specifications.

3.1 The anatomy of validation in the stack

Follow an invoice through the network, layer by layer:

Layer	What is checked	Where
Syntax	Is this a well-formed invoice file (UBL or CII) of the right version?	Checked at the sending and receiving service providers
Business rules & code lists	Are mandatory fields present? Are the codes used for currencies, tax categories and units legal values from the official lists?	Checked by Schematron rules from EN 16931 and the Peppol BIS
Arithmetic consistency	Do the line amounts, the VAT breakdown and the totals add up? Is the stated rate consistent with the stated tax category?	Checked by the same rule sets
Identity & security	Is the sender who it claims to be? Is the file free of malware? Are the VAT identifiers well-formed?	Checked at the network layer; failures reported back via message-level status reporting (MLS, replacing the older MLR)[9]
Tax correctness	Is this the right rate, category, exemption and country for this supply to this counterparty?	Checked nowhere

[7] For example, the UAE's accreditation framework lists 22 requirements for service providers, including ISO/IEC 27001 certification and compliance with the Federal Tax Authority's tax data reporting requirements (UAE Ministry of Finance session, Peppol Conference Europe 2026). Separately, OpenPeppol has made ISO/IEC 27001 certification a condition for all Peppol service providers, phased in through 2026–2027.

[8] European Commission, tax-gap report published December 2025 (VAT compliance gap, 2023).

[9] Peppol is transitioning from the older Message Level Response (MLR) to the standardised Message Level Status (MLS) specification, with the phase-in ongoing from July 2026. Grounds for a negative status are technical (schema and validation failures, malformed content, inability to deliver) and the specification leaves room for provider-specific practice. In neither generation of the mechanism is there a status category for the business content of the invoice. The network does carry a business-level response channel (the Peppol Invoice Response, by which a buyer can accept or reject an invoice commercially); it too has no category for tax correctness.

Even the most state-led regime in Europe draws this line itself. Hungary has operated real-time invoice reporting since 2018 and now receives over 350 million invoices a year. The accredited-software model it presented at the June conference as its future ViDA design goes further, requiring invoicing software to pre-validate invoice files before issuance (mandatory fields, structure, identifiers). Yet none of this amounts to VAT determination: neither today's reporting checks nor tomorrow's pre-validation asks whether the tax treatment fits what was supplied, and the NTCA's own material describes the receiving endpoint's check as verifying 'technical processability — not legal invoice validity'.[10] Slovakia's corner-five Tax Data Document is triggered by the mere presence of a VAT identifier; its validation is structural.

The revised EN 16931-1:2026, for which the definitive text was published in March 2026, is instructive precisely because it is the newest artefact in the stack. It adds substantially richer tax representation: a new category code, structured exemption reasons, per-reason VAT breakdowns, a goods/services indicator. It adds consistency rules. But consistency is not correctness.

3.2 One invoice, every check passed

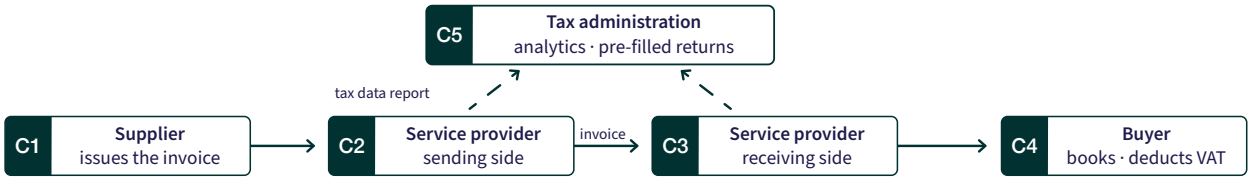
Consider a Belgian wholesaler selling a €10,000 consignment of goods to a VAT-registered French retailer. Assume the goods are physically dispatched from Belgium to France and every condition for the intra-Community exemption is met. As an intra-Community supply, the invoice should carry no Belgian VAT: the supply is exempt in Belgium, and the French buyer accounts for the VAT itself under the reverse-charge mechanism (20% French VAT, €2,000, self-assessed and, for a fully taxable buyer, deducted in the same return). But the supplier's billing system, configured years ago for domestic sales, applies the Belgian standard rate of 21% and adds €2,100 of Belgian VAT that should never have been charged.

The invoice file is technically flawless. Every mandatory field is present. The VAT identifiers of both parties are valid and verified. The category code says "standard rate"; the rate says 21%; the two are consistent, and €10,000 × 21% = €2,100, so the arithmetic reconciles to the cent. The invoice passes the schema checks, the business rules and the network's rejection mechanism, and lands in the buyer's system and in two tax administrations' analytics platforms: structured, timely, and wrong. VAT charged in the wrong country, under the wrong regime, with consequences on both sides of the transaction. The buyer holds €2,100 of wrongly charged tax it cannot simply deduct. The supplier owes that €2,100 to the Belgian treasury even though it was never due, and recovers it only by crediting and re-issuing the invoice: a correction cycle that ties up cash in the meantime and, repeated at scale, is exactly the pattern that draws audit attention.

The purely domestic version of the error behaves identically: a reduced-rate or zero-rated good invoiced at the standard rate is internally consistent and passes every check. Nothing in the flow could have caught either case, because nothing in the flow asks the question. Every check verifies that the invoice agrees with itself. No check verifies that the invoice agrees with the law.

What is checked where

Validation in the five-corner model — every check verifies that the invoice agrees with itself; none that it agrees with the law



	Schema	Business rules & code lists	Arithmetic consistency	Identity & security	Tax correctness
C1 · Supplier / ERP	✓	✓	✓	✓	
C2 · Sending service provider	✓	✓	✓	✓	
C3 · Receiving service provider	✓	✓	✓	✓	
C4 · Buyer	✓	✓	✓	✓	
C5 · Tax administration	✓	✓	✓	✓	

Checked by no one, at no corner

Check scope: EN 16931 / Peppol BIS schema and Schematron rules, Message Level Status specification, national reporting and pre-validation regimes. See section 3.

[10] NTCA, "Hungary's ViDA Readiness", Peppol Conference Europe 2026.

3.3 Consistent is not correct

The distinction that matters is between an invoice that is internally coherent and an invoice that is substantively right: right rate, right category, right exemption, right country, for this supply to this counterparty. Today's stack verifies only the former, deliberately and for defensible historical reasons. The words "tax engine," "tax determination" and "tax calculation" do not appear anywhere in the June Peppol conference material. Correctness is implicitly delegated upstream: to the supplier's system configuration, to a specialised tax engine in the rare enterprise that owns one, and, repeatedly and by name in the conference material, to "tax advisers," cast as the support channel for the millions of newly mandated smaller businesses.

That delegation was tolerable when the invoice was a document a human would re-examine before anything consequential happened to it. Section 4 describes why it is tolerable no longer.

4 · The asymmetry

The transformation of section 2 and the gap of section 3, combined, produce an asymmetry that we believe is the defining tax-policy question of the 2026–2030 window.

Tax administrations gain transaction-time sight of tax content. France states its programme openly: pre-filled VAT returns, faster refunds, better-targeted audits through data mining. Slovakia's published architecture places a heavy analytics capability behind its corner five. Hungary's real-time system already ingests hundreds of millions of invoices a year. From July 2030, the tax data of every intra-EU B2B invoice reaches a central European database "without delay". Enforcement is shifting from sampling years after the fact to anomaly detection at or near the transaction.

Meanwhile, the invoice becomes self-executing. When the structured invoice is the report, and the report pre-fills the return, an error at issuance no longer waits to be found at year-end. It propagates instantly into the supplier's declared position and into the buyer's VAT deduction. That deduction is real money: a faulty invoice can cost the buyer the right to deduct the VAT on it, the one legal concern raised at the June conference that bears directly on invoice content.[11] Buyers therefore acquire their own interest in the tax quality of invoices they receive, before booking them.

Then there is the mandate wave itself: it reaches millions of businesses that have never needed a tax function of their own — not because they are careless, but because nothing in their size or history ever required one. Commercial tax-determination engines have existed for decades: for multinationals with tax departments, at enterprise prices, with enterprise implementation projects. They matter, but they sit on one side of the transaction. An engine inside the seller's ERP produces a private answer, shaped by that company's configuration and interpretation; the buyer's system may resolve the same supply differently, and neither sees the other's logic. The invoice travels between them carrying one party's conclusion, checked by nothing both parties can rely on. The mandates bring everyone onto the same rails, including the millions for whom such tooling was never a realistic option. Slovakia alone brings an estimated 800,000 businesses, self-employed operators and public institutions into its mandatory receiving framework; France five to six million businesses; for most of them, the tax position on an invoice rests on default settings in their software and on their accountant's attention.

[11] International VAT Association, 'ViDA Developments & Challenges', Peppol Conference Europe 2026 (Brussels, 16 June 2026). The IVA warned of 'disproportionate restrictions conflicting with CJEU case law: formal deficiencies should not automatically deny the right to deduct', calling on Member States to set clear limits. Settled EU case law protects the right to deduct against formal invoice defects where the substantive conditions are met; how that protection operates once tax data is reported in real time is, in our reading, the boundary still to be tested. Wrongly charged VAT, as in the example in section 3.2, raises a separate issue again: VAT that was never due is in principle not deductible at all, and is recovered through correction of the invoice rather than through deduction.

Put the three together: a system that makes tax errors instantly visible to the state, self-executing in their consequences, and produced at scale by businesses that were never equipped for automated tax determination — while nothing anywhere in the flow works to prevent them. Millions of businesses have gained a faster way to be wrong.

The intention here is not to criticise tax administrations or frame them as the root of the problem. The opposite. Every ambition the authorities have articulated — closing the VAT gap, pre-filled returns, 'getting it right from the start', reducing the administrative burden for compliant businesses — depends on the quality of tax data at source. Analytics on wrong data yields wrong anomalies, and a pre-filled return built on mis-rated invoices spreads the error at scale. Authorities are the natural allies of a tax quality layer, and stand to gain from it as much as anyone. What they cannot do, for reasons of law rather than capability, is build it themselves: validating taxpayers' determinations at issuance would shift liability to the state and undermine the principle of self-assessment. Hungary, one of the most state-led regimes in Europe, keeps even its planned pre-validation in the software and service-provider environment, outside the tax authority itself. Detection will be built by governments. Correctness assurance, structurally, is left to the market and the ecosystem.

5 · The missing semantic layer

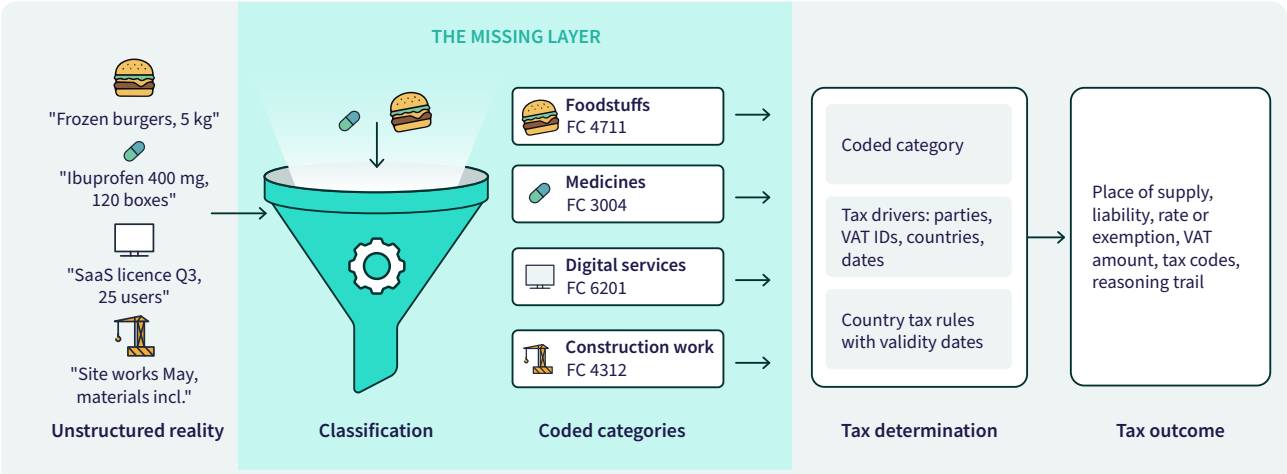
If the ecosystem agreed tomorrow that tax correctness should be checked in-flight, it would immediately hit a deeper problem: the invoice does not say, in machine-readable form, what is being sold.

5.1 Why classification is the bottleneck

Every jurisdiction's tax rules depend on the nature of the supply. Rates, exemptions, reverse-charge mechanisms, reduced-rate schedules and margin schemes are written largely against categories of goods and services: foodstuffs or catering, medicines or cosmetics, digital services or licences, repair or construction. A machine cannot apply a rule without first knowing which category the line item belongs to. Classification is the bottleneck of automated taxation. Downstream of it, everything can be expressed as deterministic rules; upstream of it is unstructured reality.

A fair objection runs: the nature of the supply is not the only determinant, and invoices do not always carry the others either. A goods invoice does not always state ship-from and ship-to, and a car-rental invoice may not explicitly say where the car was collected. The difference is that for those facts a machine has somewhere to start. The parties, their VAT identifiers and their countries already travel as structured data, and where a fact is missing, there is a reasonable presumption: absent contrary information on the invoice, goods move from the supplier to the customer, and the car is collected where the rental company operates. That presumption is rebuttable, and explicit data overrides it, but it exists. For the nature of the supply there is no presumption to fall back on: free text gives a machine nothing to reason from. That asymmetry, not the number of determinants, is why classification is the bottleneck.

One scoping remark completes the picture. The classification problem has two parts: deciding what a given supply is, and having an agreed category to express that decision in. The same meal can be catering when eaten on the spot or a supply of foodstuffs when taken away, and in some cases deciding which applies takes judgment. That decision we assume here is made correctly. This paper is about the other part: today no agreed, universal set of tax categories exists, so even a correct decision has no machine-readable place to land.



The category code is shown for illustration: no agreed European classification for tax purposes exists today, which is the gap this section describes.

5.2 The current state: free text in Europe, fragments elsewhere

The state of that bottleneck can be summarised in one sentence: where classification is not mandated, the nature of the supply travels as free text; where it is mandated, it fragments by country.

In the European standard, the "nature of the goods or services" that ViDA requires to be reported flows as BT-153 and BT-154, a free-text item name and description, in any of the twenty-four languages. The standard does contain a line-level classification field, BT-158, which accepts codes from any of the recognised international schemes.[12] It is optional and unenforced, and two decades of experience with this network point one way: what a standard does not enforce, practice largely ignores. Where classification codes do appear on European invoices — HS codes for exporters, GS1 codes in retail supply chains — they are carried for customs or logistics, in whichever scheme that purpose dictates, and cannot be relied on for tax. In the published material of the Peppol Conference Europe 2026, the main international classification schemes receive zero mentions across all three tracks. HS codes appear exactly once, in a customs-driven wish list for a "trade-grade" invoice, motivated by customs reuse rather than VAT.

Outside Europe the picture inverts. Several mandates already require line-item classification, each against a different, mutually incompatible national system:

Jurisdiction	Classification requirement on the e-invoice
India	HSN codes (goods) and SAC codes (services) mandatory per line; 4 or 6 digits depending on turnover
Malaysia	45 mandatory national classification codes at line level, covering goods and services
Egypt	GS1 GPC (goods) or national EGS codes (goods and services); products registered per taxpayer
Brazil	NCM and CFOP codes on every NF-e line (goods); services take separate municipal service codes
China	National tax classification catalogue covering both goods and services
EU	None — free text (BT-153/BT-154); BT-158 optional, rarely used in practice

Table 1 — Line-item classification requirements in force (September 2026).[13]

The fragmentation is sharpest for services: goods can at least lean on customs and product-data standards, but no global tax classification of services exists and services are where the hardest VAT questions often live.

Nor is the gap on any standards agenda: we found no initiative at EU or OECD level to standardise the classification of goods and services on the invoice for tax purposes, even though customs has run a working global classification regime for decades, the Harmonized System, often one line away on the same trade documents.

Both halves of the summary sentence are problems, and both compound as mandates multiply. Free text defeats the authorities' own analytics ambitions: anomaly detection on rates requires knowing what was sold, and item descriptions in twenty-four languages do not scale to that. Fragmentation defeats the businesses. A multinational seller today maintains HSN codes for India, 45 codes for Malaysia, GPC for Egypt, NCM for Brazil, and free text for Europe, for the same product.

5.3 Two gaps, one problem

The tax quality gap and the classification gap represent the same issue from different perspectives. You cannot automate the check "is this the right tax treatment?" without a machine-readable answer to "what is this?" — and you cannot justify the cost of coding every line item without a tax quality process that consumes the codes. Any serious agenda for one must include the other. That is why section 7 addresses them together.

[12] The UNTDID 7143 code list, which includes UNSPSC, CPV, GS1 GPC, HS and ECLASS, among others.

[13] Non-EU entries reflect, at a high level, the national mandate documentation as of September 2026 (India: GST e-invoicing rules; Malaysia: MyInvois guidance; Egypt: ETA e-invoicing requirements; Brazil: NF-e/NFS-e specifications; China: the national tax classification catalogue). Requirements evolve and conditions may apply; we are citing these jurisdictions to indicate the direction of mandated, mutually incompatible national systems without a claim of completeness.

6 · What a tax quality layer would look like

This section describes requirements, not products. The reader may treat what follows as a checklist for evaluating whatever emerges.

At issuance, not after. The check must happen before the invoice enters the network, at the supplier or at its service provider, because everything downstream is distribution. Detection after reporting is the authorities' job and is already being built; the missing layer is prevention at source. The OECD's "right from the start" doctrine, cited approvingly at the conference by Belgium's tax administration, says exactly this.

At line level. Tax treatment is decided per line (nature of the supply, counterparty status, place-of-supply logic), not per document. Document-level plausibility is a smoke detector. Line-level determination is the standard the mandates themselves have set, since the reporting regimes collect line-level data.

Deterministic and auditable. A compliance verdict must be explainable: this line, this fiscal category, this rule, this rate, with a reasoning trail that a tax inspector or auditor can inspect at any time, including years later. This is what separates a compliance control from a suggestion engine. Statistical components may assist, in classifying free text for instance, but the tax conclusion itself must be reproducible and grounded in cited rules. Accreditation regimes already demand security certification of service providers; expect them to demand the same auditability of any tax-relevant processing.

Taxonomy-agnostic. Given section 5, the layer cannot bet on any single classification standard. It must map the messy reality of invoice lines onto an internal representation of the supply's fiscal nature, and map that onto whatever each jurisdiction demands (EU rate schedules, HSN, Malaysian codes, GPC), so that every standardisation outcome, including continued fragmentation, is survivable. If a common standard eventually emerges, the mapping layer becomes more valuable, not obsolete: someone must translate the world's invoice lines into it.

Human-in-the-loop for exceptions. The bulk of domestic B2B is standard-rated and trivially right. The value of the layer concentrates in the exceptional minority (reduced rates, exemptions, cross-border, margin schemes) where error cost and audit attention concentrate. A credible layer routes routine lines silently and escalates genuine doubt to a human with the evidence attached, rather than pretending to certainty it does not have.

Non-blocking before blocking. The network's own history teaches the sequence: warn first, reject later, mandate last. Structured formats and security certification both followed that path. A tax quality layer should begin as an advisory signal at issuance, become a buyer-side control on received invoices, and mature toward enforcement only if the ecosystem makes it an accreditation requirement. Anything that starts by blocking invoices will be rejected, rightly, by the businesses whose cash flow depends on them.

Where can such a layer live? Three candidate homes, with very different prospects:

Where can a tax quality layer live?
Three candidate homes — the layer must sit where it touches every transaction

ERP / billing layer
where determination happens today

- Serves the enterprise minority that buys tax engines
- Thousands of ERPs; the mandated millions run on software with no tax logic to retrofit
- One party's answer alone: seller and buyer may resolve the same supply differently

A feature for the few

Service-provider layer
the certified network operators

- Touches every transaction
- Already certified and regulated; accreditation regimes hardening
- Files the tax data on the taxpayer's behalf in Slovakia's model
- One check attached to the invoice: seller and buyer see the same verdict
- Seeking differentiation as transport commoditises

The natural home

Network trust framework
a compliance profile in the standards

- Conceivable in the long run — the path ISO 27001 followed, from differentiator to mandate
- Standards bodies codify practice; they rarely originate it

The eventual codification

The realistic sequence: service-provider capability first → buyer-side control → only later, if ever, a regulatory expectation

The ERP and billing layer is where determination happens today, for the enterprise minority that buys tax engines. But there are thousands of ERPs, and the mandated millions run on software with no tax logic to retrofit. A determination made inside one party's ERP is also that party's answer alone: the same supply can be resolved one way by the seller's engine and another way by the buyer's, with nothing in between to reconcile them. The network's own trust framework is conceivable in the long run, as a compliance profile; but standards bodies usually write down what the market already does — they rarely invent it first. The service-provider layer is the natural home. It touches every transaction; it is already certified and regulated; in Slovakia's model it is already the party that files the tax data; and it is the one place where a check can attach to the invoice itself, so that seller and buyer see the same verdict on the same document instead of each trusting their own configuration. It is also commercially in search of exactly this kind of differentiation as transport commoditises. The realistic sequence: tax quality appears first as a service-provider capability, then as a buyer-side control, and only later, if ever, as a regulatory expectation.

7 · An agenda for the ecosystem

Here is one actionable request for each stakeholder, each of which can be taken up independently.

For CEN/TC 434 and OpenPeppol: open the classification conversation. The maintenance cycle of EN 16931 and the BIS 4.0 work programme seem to us a natural place to start the conversation about the semantic question. The ask is modest and immediate: put goods-and-services classification for tax purposes on the maintenance agenda; strengthen BT-158 from an unused option toward a recommended, eventually structured, element. Study how existing schemes (the Harmonized System, product-data standards, national tax code lists) map onto fiscal categories, before a fragmented answer is imposed from outside, one national extension at a time. The non-EU mandates in Table 1 show where the default path leads.

For tax administrations: publish the rules as data, and put tax quality in accreditation thinking. Authorities that want correct tax at source can lower the cost of producing it: machine-readable rate schedules, category definitions and rule changes, published the way exchange rates are published today. That single act would commoditise the plumbing of correctness and let competition move to quality of judgment. And as accreditation regimes for service providers harden, "does this provider do anything to assure the quality of the tax data it reports on the taxpayer's behalf?" is a legitimate question to begin asking, as a criterion of merit before it is ever a requirement.

For the eInvoicing Directive revision: put data quality in scope. The public consultation on the revision closed in June 2026, and the Commission is expected to table its legislative proposal around the end of the year. That makes this the right moment rather than a missed one: the proposal is being drafted now, and once it is adopted, every stakeholder can submit formal feedback through the Commission's Have Your Say portal, published and forwarded to" wordt: "published, summarised and presented to the European Parliament and the Council for the negotiations that follow. Our request, to the drafters today and the co-legislators tomorrow: recognise substantive tax data quality, and the machine-readable expression of the nature of supplies, within the framework's scope of concern. Not to mandate a solution, but to stop defining the problem as transport alone. A framework renewed without a word on quality will define the network's ambitions well into the 2030s.

For service providers: claim the layer that transport no longer provides. Transmission is commoditising by design; that is what standards are for. Accreditation costs rise, margins on carrying documents compress, and consolidation is under way. The differentiation the market will pay for sits exactly in the gap this paper describes: not "we deliver your invoice" but "we help make sure the tax on it is right before anyone else sees it." The Slovak configuration, where the service provider files the tax data on the taxpayer's behalf, merely makes explicit what the five-corner model implies everywhere: the party producing the tax record has an interest in its quality. Service providers who build or adopt a tax quality capability early will define what it looks like; the rest will meet it later as a requirement written by others.

For the businesses on the network — and their advisers: ask one question of your invoice channel: who checks that the tax is right, and when? Today the honest answer, from one end of the network to the other, is "no one, at no point." Asking the question, at scale, is how that changes.

The window for shaping this conversation is now, before the 2030 reporting wave generates the data-quality pain that will otherwise force a rushed answer. Every actor above has more room to move in 2026 than they will have in 2029.

8 · About the authors

Jan Druppel. CEO Documents Division and Chair of the GENA (Global Exchange Network Association) Benelux Chapter – with over 25 years of experience in software ecosystems, ERP integration and digital supply chain transformation, Jan has worked extensively on interoperability and structured document exchange. Since joining Banqup Group in 2017, he has been closely involved in the evolution of e-invoicing and the move toward mandated e-invoicing and the five-corner model, bringing practical experience of the technology and data flows that underpin these developments.

Danny Vermeiren. Head of Tax Solutions – with almost thirty years of indirect tax experience in senior in-house indirect tax roles in large corporates, in an international technology company and as a partner in a Big Four firm, Danny joined Banqup Group in 2023 to integrate the tax engine he created with the Banqup electronic invoicing platform.

banqup

Banqup is a leading European provider of e-invoicing and financial-administration services for businesses and the software platforms and service providers that serve them. Banqup operates on the Peppol network across multiple mandated markets and develops, among other things, tax validation capabilities. This paper, however, is written as a contribution to the ecosystem conversation, not as a product description. Its claims rest on the published record cited throughout, and its recommendations stand or fall independently of anything Banqup builds.

Contact: jan.druppel@banqup.com · danny.vermeiren@banqup.com

Evidence note

The two central claims of this paper are claims of absence, so their evidentiary basis deserves precision. **(1) Tax quality**: across the Plenary (183 slides), Business Track (201 slides) and Technical Track (195 slides) of the Peppol Conference Europe 2026 (Brussels, 16–17 June 2026), no session, slide or bullet addresses the substantive correctness of tax determination; all validation discussed is schema-, code-list- or arithmetic-level. The closest approaches are HMRC's outcome-level objective to "reduce errors in tax returns," Belgium's citation of the OECD "right from the start" doctrine, and Hungary's explicit scoping of its planned regime's receiving-endpoint check to "technical processability — not legal invoice validity." **(2) Classification**: the main international classification schemes (UNSPSC, CPV, ECLASS) receive zero mentions across all three tracks; HS codes appear once, in a customs-driven trade-invoice proposal; EN 16931's BT-158 is optional and unenforced; and we found no EU or OECD initiative to standardise goods-and-services classification for tax purposes on the invoice in external research as of September 2026. These are statements about a defined body of material and a dated search: the authors would welcome — and will publicly acknowledge — any counter-example. The review combined full-text search of all three conference decks with manual inspection of every slide; the underlying analysis is available on request.

The EU VAT compliance gap figure (€128 billion, 2023) is from the European Commission's tax-gap report published December 2025. Market-size and growth figures attributed to Billentis are estimates, labelled as such. Mandate dates reflect legislation and official announcements as of publication date of the white paper (September 2026) and may shift; the direction of travel does not.

No public statistics on BT-158 usage exist; our characterisation of the field as rarely used is an observation from operating practice, and we would welcome data that corrects it.

Annex · Key terms

Term	Meaning
Peppol	The international network and standards for exchanging e-invoices and other business documents through accredited providers; governed by the OpenPeppol association
Five-corner model	The five-corner model is an electronic invoicing framework where a seller and buyer exchange standardised digital invoices through their respective accredited service providers (the first four corners) while simultaneously reporting the required tax data in real time to the government or tax authority (the fifth corner)
Service provider	A certified operator ("access point") that connects businesses to the network and exchanges documents on their behalf
EN 16931	The European standard defining what an electronic invoice must contain (its "semantic model"); revised version published in March 2026
Peppol BIS	Peppol's implementation specification of EN 16931 — the rulebook invoices on the network must follow
Schematron	The rule language used to check invoices automatically against the standard's business rules
Message Level Status (MLS)	The network's standardised status message for technically invalid or undeliverable invoices, currently replacing the older Message Level Response (MLR); phase-in ongoing from July 2026
UBL / CII	The two XML formats an EN 16931 invoice can take (Universal Business Language; Cross-Industry Invoice)
ViDA / DRR	The EU "VAT in the Digital Age" package, adopted in 2025; its Digital Reporting Requirements make structured e-invoicing plus near-real-time reporting mandatory for intra-EU B2B from July 2030
BT-153 / BT-154	Two fields of EN 16931: the item's name and description (free text)
BT-158	A field of EN 16931: the item's classification code (optional; rarely used in practice)
Tax Data Document (TDD)	The standardised set of tax data reported to the authority alongside the invoice; specified for the Peppol ViDA pilot and instantiated nationally, for example in Slovakia

Jan Druppel
jan.druppel@banqup.com

Danny Vermeiren
danny.vermeiren@banqup.com