

CERTIFICATION BODIES

Companion Guide

A practical playbook for implementing trusted certification data exchange with GS1



Executive summary

Certification scheme owners are increasingly being asked to support digital verification in processes like marketplace onboarding, listing controls, audits, reporting and product transparency initiatives. In these workflows, certificates that are shared as PDFs, spreadsheets and email attachments can be tough to manage – slow to validate, hard to keep current and difficult to reuse consistently across many products and systems.

A trusted certification data exchange approach will keep the certification body as the authoritative source of truth, while making certification information easy to find, verify and reuse digitally across markets and systems.

This guide is a practical companion for certification scheme owners that want to move beyond exchanging documents to understanding what a credible, phased approach to digital certification data looks like in practice.

At a high level, the path consists of:

- 1. Define the scope clearly** using GS1 identifiers that are recognised by downstream systems.
- 2. Publish one authoritative certification record** that is digitally accessible and stable over time.
- 3. Structure the key data** so that systems can interpret it consistently.
- 4. Enable the discovery and reuse of certification data** so that others can verify and use the record without repeated bespoke requests.

This approach does not require that certification bodies redesign how certification itself works. Rather, it calls for making the certification record easier to use in digital channels while keeping the certification body in control of certification decisions, status updates and authoritative records.

About this guide

This guide is for certification bodies that want their certification information to be easy to find, verify and reuse correctly across markets and systems.

It is especially relevant when addressing questions like:

- Does this certificate apply to this exact product, site or organisation?
- Can we check certification status without manually reviewing documents?
- Can this certification information be reused in marketplaces, retailer systems, Digital Product Passports (DPPs), audits or procurement platforms?
- Can independently verified information be distinguished from self-declared claims?

The need is compelling

Certification information is increasingly being used outside the certification process. Today, marketplaces, retailers, brands, regulators and procurement system providers want to use certification data in workflows such as:

- Supplier and product onboarding
- Listing and claims controls
- Audit and compliance checks
- Sustainability reporting
- Product transparency or DPP-style experiences

When certification records are exchanged primarily through PDFs, spreadsheets and email, it becomes hard to manage the information at scale. Verification takes longer, the same information is requested repeatedly in different formats, and status changes such as renewal, expiry or withdrawal are harder to consistently manage.

For certification bodies, this creates real pressure and greater dependence on downstream actors interpreting certificates correctly and increased risk that outdated or incomplete information is used in the market.

To be truly valuable, certification information must be efficiently used, consistently and accurately in digital workflows. This is why more certification scheme owners are now considering how to make their certification data easier to identify, publish, discover and verify.

What this approach means in practice

Trusted certification data exchange is a decentralised approach where the:

- Certification body remains the authoritative source of certification information and lifecycle status.
- Wider ecosystem can discover, verify and reuse that information more efficiently in digital workflows.

This doesn't mean that certification bodies must move their certification registry into someone else's platform, hand issuance decisions to a third party or centralise certification data into a single global database.

Rather, the shift is from documents sent to each requester to authoritative records that can be reliably discovered and verified. Instead of sending certificates in different formats to different actors, the certification body simply maintains one authoritative record that others can find, check and reuse through common digital patterns.



Certification bodies continue to issue, renew, suspend and withdraw certifications, and remain the authoritative source. What changes is how the certification record travels — not how certification itself works.

Roles and responsibilities across the ecosystem

An important element for a highly efficient model is the clear definition of roles and responsibilities.

The **certification body or scheme owner** is responsible for:

- Defining certification criteria and scope rules
- Deciding what is certified
- Maintaining certification status and lifecycle updates
- Remaining the authoritative source of the certification record

Increasingly, if independently verified attributes are in scope, the certification body may also become the authoritative source of those verified attributes.

Applicants, brands and manufacturers are responsible for:

- Providing the relevant identifiers when applying for certification
- Using certification information in product master data, product pages or DPP views
- Ensuring any public-facing use of certification information refers back to the correct authoritative record

Marketplaces, retailers and regulators are responsible for:

- Defining their verification needs
- Integrating certification information into onboarding, listings, reporting or audit workflows
- Checking or consuming authoritative records at scale

GS1 Member Organisations help with:

- Identifier readiness and in-market validation practices
- Working with local actors to help them understand and adopt the GS1-aligned certification data model
- Helping determine how links to authoritative certification records should be published and discovered in that market context
- Aligning local stakeholders around shared approaches, pilots and learnings

GS1 provides the shared infrastructure that makes certification information more reusable. This includes:


- Identifiers to define scope
- A common data language
- Linking and discovery mechanisms that help others discover authoritative records

The GS1 role is not intended to replace the certification body. Rather, the GS1 role is to make authoritative certification data easier to identify, publish, discover and reuse.



GS1 approach to trusted certification data exchange


GS1 standards provide a framework for certification bodies to **Identify - Connect - Share - Use**, rather than a strict implementation sequence.

 **Identify:** Ensure the certification scope is precise.

Each certification record should clearly state what it applies to, using identifiers that downstream systems already recognise.

For product certifications, the identifier is the GS1 Global Trade Item Number® (GTIN®) that is used in trade and marketplaces to uniquely identify products. For site or organisation certifications, the identifier is the GS1 Global Location Number (GLN) that is used for legal entities and locations.

 **Why this matters:** It is to remove ambiguity about what is certified and give downstream systems something reliable to work with.


 **Connect:** Publish one authoritative record that is accessible in digital workflows.


With unambiguous scope in place, users need a consistent way to reach the authoritative certification record and check status.

For certification bodies, the first practical requirement is **digital access**:

- Each certification record should be accessible, using a stable reference point such as a secure URL or controlled registry entry.
- When the certification status changes, certification bodies can then update that one authoritative record.


With scan-to-digital experiences, a **2D barcode powered by GS1 Digital Link** can use the product identifier to connect the physical product to digital resources. In many cases, the physical access layer is implemented by brands or downstream platforms, yet it depends on the certifier's authoritative information being accessible and stable.


 **Why this matters:** It makes certification checks possible without bespoke integrations or repeated emails.

 **Share:** Structure certification information in a standardised, machine-readable way.

While a human-readable page is useful for people, systems need key fields in a structured form so they can interpret status, scope, dates and programme details consistently.


In plain language, this guide refers to a **GS1 Certification Data Model** — a GS1-aligned structure for expressing certification information consistently in machine-readable form. Technically, this is based on GS1 Web Vocabulary semantics and is often represented using JSON / JSON-LD.

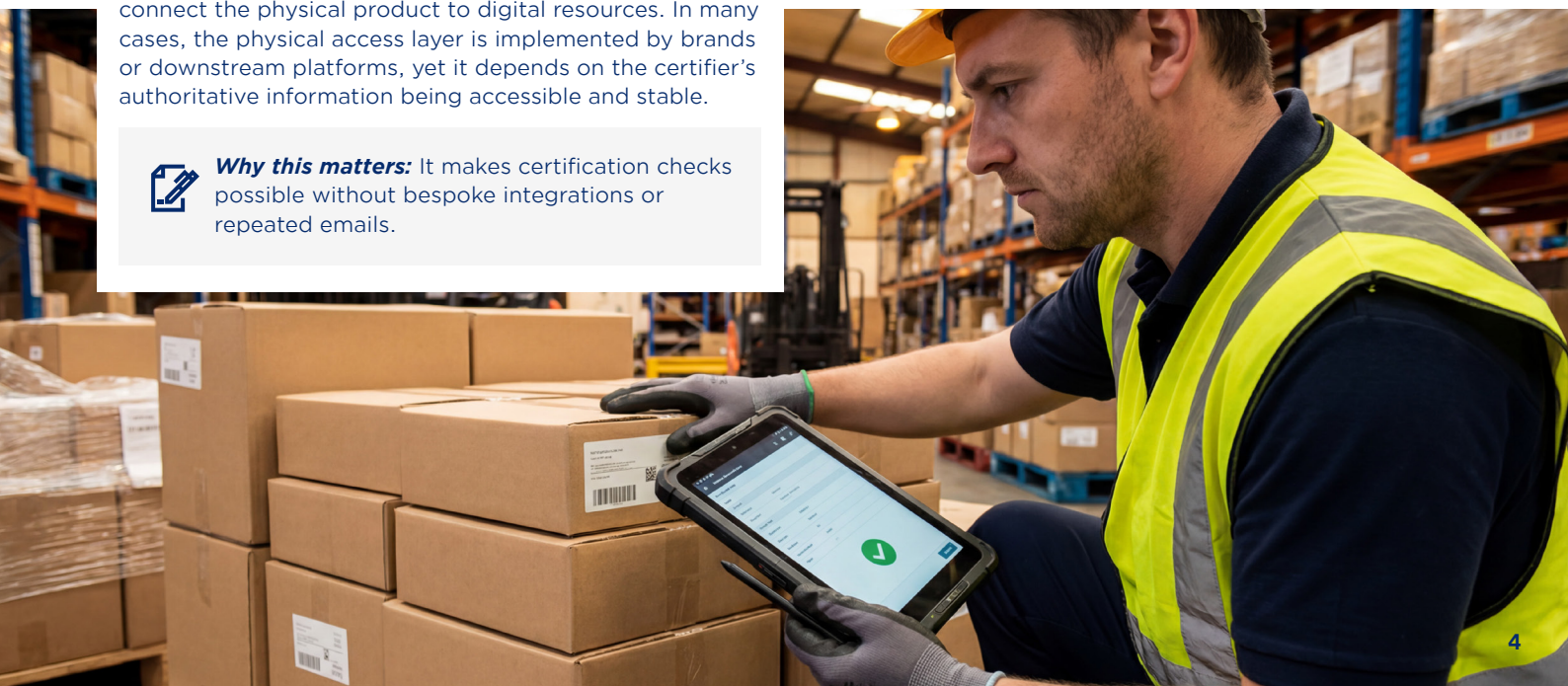
 **Why this matters:** It supports automation across many downstream systems, while reducing custom mapping and avoiding misinterpretation.

 **Use:** Enable others to verify and reuse within workflow processes.

Once the certification record is clearly identified and digitally accessible, downstream users can use GS1-based discovery patterns to find the certification data in workflows such as:

- Marketplace onboarding and listing checks
- Retail / commercial compliance checks
- Audits and sustainability reporting
- DPP implementations that reference authoritative certification information rather than copying it

 **Why this matters:** It shifts verification from manual document handling to repeatable digital interactions.



Six steps to put strategies into practice

In this section, we provide steps that a certification body can individually take as well as areas where it will coordinate with others.

1. Decide what the certification applies to.

Start with one certification programme rather than trying to convert everything at the same time. Define whether the certification scope applies to a product, site / facility or organisation. Then, decide which GS1 identification standard (e.g., GTIN, GLN) will define the scope.



Output: A clear data requirement such as: «Every certification record must include a GTIN for products, or a GLN for sites and organisations.»

2. Collect identifiers from applicants. Confirm that they match what is certified.

In most cases, the applicant will provide relevant identifiers. Yet, the role of the certification body is to ensure the certification record is associated with the most appropriate identifiers.

This will result in:

- Collecting identifiers in structured form, not only in PDFs
- Applying checks so that identifiers correspond to the applicant and the certified scope
- Storing the identifiers as part of the authoritative certification record

Considerations when collecting identifiers such as GTINs and GLNs

Common situations to plan for include:

- The product does not have a final GTIN at the point of certification.
- One certified product may have multiple GTINs.
- Applicants could provide identifiers in inconsistent formats.
- Some schemes could need a one-time exercise to add identifiers to records issued before the requirement was introduced.

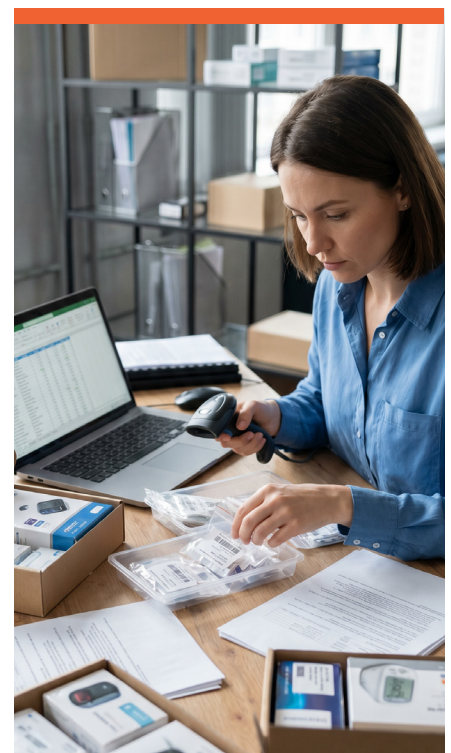
A typical rollout often includes:

1. Update the certification database so that GTINs and GLNs can be stored.
2. Add the relevant identifier field to the application form.
3. Start requiring the identifier field for new certifications.
4. Gradually backfill the identifier field for existing records, where feasible.

In many implementations, collecting the right identifiers from applicants is the most challenging part of the transition — more so than the technical publication model.



Why this matters: It prevents downstream mis-matches and makes certification reusable beyond the certification body's own directory.



3. Publish the authoritative certification record with a stable digital reference.

This is the “publish once, reuse many” step.

A strong publication approach is:

- **Authoritative:** The certification record is published and maintained under the certification body’s control.
- **Stable:** The reference does not change each time a PDF is regenerated.
- **Updatable:** Renewals, expiry, suspension / withdrawal and corrections are updated in one place.

A publication pattern often includes a **human-readable view** for people and a **machine-readable representation** for systems.



Important: A page that looks structured to a person is not automatically machine-readable. Machine-readable means a system can retrieve structured fields with defined meaning.



An appropriate “minimum set” can be defined as enough to answer what is certified, under which programme and if it’s currently valid, to include:

Data Element	Requirement	Notes
Product or organisation identifier (GTIN / GLN)	Required	The scope anchor – what the certification applies to
Certification body / scheme owner	Required	The authoritative source of the record
Certification programme name	Required	Identifies the specific programme under which certification was issued
Certification standard or scheme reference	Required	The standard or scheme version the certification is based on
Certification status	Required	Current state: valid, suspended, expired, withdrawn
Issue date	Recommended	Supports audit trails and reporting
End date / expiry date	Recommended	Enables downstream systems to check currency automatically
Certification ID / certificate reference	Recommended	Allows specific records to be referenced unambiguously
Certification level / tier	Recommended	Relevant for schemes with multiple certification levels
Last update date	Recommended	Signals when the record was last maintained
Additional product identifier	Conditional	If needed in a specific market or regulatory context
Country applicability	Conditional	For schemes with geographic scope rules
Stable digital reference to the certification record	Conditional	Required if the record is published for digital discovery
Machine-readable certification URI or API endpoint	Conditional	For schemes offering structured data access
Verified attribute set	Conditional	Where independently verified claims are in scope

If certification records are already maintained in a database or structured file, a good first step is to map the existing fields to this minimum set rather than redesigning everything.

4. Choose a sharing model that matches the certification body's digital maturity.

Not every certification body needs to start with an API. A practical approach depends on the maturity of the scheme and the needs of the downstream users.

Option 1: Structured file / table exchange

For schemes that are early in their digital journey, a structured file-based exchange can be a good starting point. The important thing is that the:

- Data follows a consistent structure.
- Authoritative record remains under the certification body's control.
- Updates are time-stamped and shared predictably.

Option 2: API-based access

For schemes with higher digital maturity, an API can provide a more efficient way for downstream systems to retrieve and verify certification information. A viable API may only need to support retrieving:

- A list of certification records or updates
- The details of a specific certification record

Option 3: Human-readable page and machine-readable payload

In many cases, the most practical publication model is a combination of a:

- Stable page for people
- Structured payload behind it for systems



Important: Don't focus on starting with the most sophisticated model. Rather, centre on choosing a path that is stable, structured and capable of maturing over time.

5. Enable discovery so that others can find the authoritative record.

Once an authoritative record is digitally accessible and stable, it can be made easily accessible through standard linking and discovery capabilities.

Here's how it works:

- The certification body publishes and maintains the authoritative record.
- A downstream actor - often the brand with support from the relevant GS1 Member Organisation - can register or reference the link to that record.
- A user or system can then move from the product or organisation identifier to the authoritative source without bespoke one-off processes.

A useful way to think about this is that the certification body is not being asked to integrate with every marketplace, retailer or regulator individually. The certification scheme owner's responsibility is to ensure the authoritative record exists, is stable and stays current.

This is the meaning of "publish once, let many discover."

6. Keep certification status current.

Lifecycle handling is not a separate capability from the authoritative record. It is part of making that record trustworthy in practice.

Plan explicitly for lifecycle states and updates that include:

- Issued
- Renewed
- Expired
- Suspended / withdrawn
- Scope



Important: When the authoritative record is well maintained, downstream users should be able to check certification status directly, without needing to contact the scheme owner to confirm it.



Areas of consideration

Here are some practices to consider and prepare for when implementing the transition.

Data quality and readiness

Certification data is only as reliable as its identifiers and records. When identifiers are provided by applicants, certification scheme owners should check to ensure they are correctly associated with the applicant and the certified scope.

Different levels of digital maturity

Not every scheme starts with structured data publication or API access. A stable digital reference is often a pragmatic first step, with structured publication evolving over time.

Implementation hurdles

A few recurring issues tend to appear early in the transition:

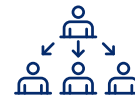
- The relevant GTIN or GLN may not be available early enough.
- One certification may apply to many GTINs.
- Legacy directories may not be structured for reuse.
- Brands, schemes and downstream users may each assume someone else should own the linking or publication step.
- Some schemes assume they need to implement a full API platform, when in practice they could take a lighter first step.

Coordination and governance

Trusted exchange typically involves several stakeholders: schemes, brands, marketplaces, regulators, solution providers and GS1 MOs. Clearly defined roles associated with who publishes, who links, who verifies and who displays the information are essential to keeping the model trustworthy and scalable.

Verified compared to self-declared

As product pages and DPP-style experiences become more common, an important question is: "How should independently verified attributes be distinguished from self-declared brand content?" This may be a future maturity step, but is worth considering early in the process.



Case studies and learnings

The GS1 system approach described in this guide has been put into practice. Initial implementations in different markets are showing that the use of GS1 standards and services for trusted certification data exchange can improve efficiency, consistency and confidence across the value chain.

Two complementary examples demonstrate how the GS1 system approach is working for:

- Marketplace efficiency
- Digital interoperability for certified products

Marketplace efficiency

GS1 US, Amazon and TCO Certified



GS1 US worked with Amazon and TCO Certified, the world’s only global sustainability certification for IT products, to test whether certification data could support Amazon’s Climate Pledge Friendly programme in a structured, machine-readable way. The approach was straightforward: GTINs were used to identify products, and a GS1 Certification Data Model, based on GS1 Web Vocabulary, was used to express certification information as a JSON payload that Amazon

could validate programmatically. A [public GitHub repository](#) was also created to make the technical artefacts and payload examples reusable by others.

The result was significant. Verification that had previously taken 15 to 20 days — sometimes up to 30 days — was reduced to seconds. The key lesson was not that technology solved the problem, but that anchoring certification records to a standard product identifier and expressing them in a consistent structure made the entire verification process automatable. Neither party needed to build new infrastructure; they used identifiers, registries and data formats already commonly used.

Digital interoperability for certified products

GS1 Sweden and TCO Certified



GS1 Sweden worked with TCO Certified to integrate the GTIN as a mandatory requirement in TCO’s certification criteria¹. Every certified product now carries a GTIN as part of the certification record, creating a direct and standardised link between the product and its certification status. That link is what makes the record discoverable and reusable beyond TCO’s own registry.

The impact was improved data quality and a more precise scope definition. Furthermore, it laid the groundwork for future discoverability via GS1 Digital Link and broader product transparency requirements. The starting point was not a technology project; it was a process change in how TCO collects information from applicants at the time of certification.



What both case studies have in common: Despite different starting points and objectives, both initiatives reached similar conclusions.

- Standardised identifiers are the foundation — GTIN for products and GLN for organisations; without them, linking certifications reliably to the right thing is difficult.
- Structured data, expressed using GS1 Web Vocabulary, replaced ad hoc document exchange with a consistent, predictable payload that both sender and receiver could rely on.
- Neither project required new technology platforms. And the same patterns that make verification faster for marketplaces and retailers also help schemes prepare for the emerging transparency and reporting requirements coming through EU policy and beyond.

1 - <https://www.gs1.org/insights-events/case-studies/building-sustainable-foundation-links-products-and-certifications>

What you can do now and where GS1 can help

You can move quickly when you separate what you can control individually from what you must coordinate with others.

What you can do independently

- Define scope rules and the identifiers that you will require.
- Ensure your authoritative record is digitally accessible and stable.
- Decide the minimum dataset that you want to publish.
- Keep lifecycle updates current.

Where GS1 Member Organisations can help

- Align on which identifiers make sense in your market.
- Help with identifier readiness and validation practices.
- Explain how your authoritative record can be linked and discovered.
- Connect with potential pilot partners.
- Help structure a pilot that will be useful without becoming too large, too early.

A pragmatic first pilot

An effective first pilot usually encompasses:

- One certification programme
- One or two participating brands
- One downstream verifier or use case
- A defined set of identifiers in scope
- Clear success measures such as time-to-verify, reduction in manual evidence requests and lower mismatch/error rates

The goal is to prove the pattern and surface the next design questions – not to solve the whole ecosystem in round one.

Get started today.

The approach and path described in this guide does not require a wholesale change of how your scheme currently operates. Rather, it requires a small number of deliberate process changes — anchoring certification scope to identifiers, publishing one authoritative record, keeping status current — that together make your certification data significantly more useful to the organisations that rely on it.

Your local GS1 Member Organisation is the right place to start for turning this approach into a concrete first step.

Contact your GS1 Member Organisation today.



Contact

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