

The open infrastructure for OIV standards

Putting the OIV reference frameworks on-chain to help winegrowers meet their compliance obligations — open-source, with no token.

Compliance is going digital

Regulation (EU) 2021/2117 brought wine into mainstream consumer-information law. Compliance is no longer a one-off event: it is a continuous — and digital — flow.



Stricter labelling

Nutrition declaration and ingredient list are now mandatory for wines marketed in the EU.



The e-label becomes the norm

The QR-code electronic label is the route the sector has chosen — framed by the OIV (ECO 676-2024).



A burden that repeats

Every vintage, every cuvée, every export market multiplies the label versions to produce and maintain.

8 Dec 2023

the obligation applies to wines produced after this date

100,000+

wine references must maintain a compliant e-label, year after year

0 personal

data may be collected through the e-label (OIV and EU requirement)

Printed QR codes, mortal platforms

Today's answers are proprietary, centralised platforms. They are useful — but they create a structural dependency.



A QR code printed on a bottle must keep resolving for 10 years or more.

- If the platform disappears or changes its terms, millions of QR codes point to nothing.
- The producer becomes non-compliant overnight — through no fault of their own.
- The e-label can be silently modified after market release: no proof of its original state.



What the sector lacks

A labelling and traceability infrastructure that depends on no single provider, whose history anyone can verify, and whose core remains free.

The OIV has already done the harmonisation work

For a century the OIV has maintained the corpus that harmonises the sector's legislation. But it is published for lawyers and oenologists — not for software.



Wine labelling standard — e-label revision through resolution OIV-ECO 676-2024



Code of Oenological Practices — permitted practices, product definitions



International Oenological Codex — specifications of winemaking inputs



International methods of analysis — reference for analysis and authentication certificates



Sustainability principles — OIV-CST 518-2016 and implementation guide

And the OIV is pushing digital

- Digital transformation is a strategic axis of the organisation
- Digital trends observatory and dedicated symposia
- First OIV online course devoted to blockchain (2024)

The missing link: an open, verifiable reference digital transposition. That is XDCellar.

A digital commons for the sector



Open-source, end to end

Schemas, contracts and tooling under free licences. Any vendor or trade body integrates them without permission or royalties.



The standard comes first

XDCellar invents no standard: it faithfully transposes the OIV frameworks, at the pace of General Assembly resolutions.



Blockchain as a notary

Only fingerprints, timestamps and signatures go on-chain. The data stays with the actors.



Economic neutrality

No token, no speculation, no capture by capital. A governance institutions can read.

A digital notary, not a database

The question is not “where to store data” but “how to prove”. Blockchain provides four guarantees no centralised provider can offer alone:



Enforceable proof

Each e-label's fingerprint is timestamped at market release: its original state is demonstrable in an inspection or dispute.



Durability

The registry survives the disappearance of any operator: a printed QR code still resolves ten years on.



Verifiable signatures

Laboratories, certifiers and producers sign their attestations: you always know who claims what.



Zero personal data

Nothing personal on-chain, no consumer tracking: GDPR/OIV compliance by construction.

On-chain: Fingerprints (Merkle), timestamps, identities of signing organisations

Never on-chain: Personal data, commercial data, document contents

Three services, built one upon the other



1. OIV nomenclature registry

OIV standards transposed into open schemas (JSON-LD), versioned and anchored on-chain. The quiet infrastructure beneath everything else.

Free — a commons



2. Verifiable e-label

An EU + OIV compliant electronic label whose fingerprint is anchored at market release. Proof, durability, zero tracking.

SaaS — the product



3. Digital batch passport

Attestations signed by producers, laboratories and certifiers: vine-to-glass traceability, ready for European product passports.

Pilots — 2027

The verifiable e-label, step by step

1

Generate

The electronic label is generated from the OIV schemas: nutrition, ingredients (Code vocabulary), allergens, multilingual.

2

Anchor

At market release, the e-label's fingerprint is anchored on XDC (batched in a Merkle tree: near-zero marginal cost).

3

Verify

Anyone scanning the QR code reads the e-label; any inspector can verify its integrity and date, publicly.



Invisible to the winegrower

No crypto wallet, no token to acquire: fees (near zero on XDC) are borne by the service operator. The winegrower uses a simple web tool — the blockchain is an implementation detail.

The batch passport: truth comes from who signs

A blockchain does not make data true: it proves it has not changed. Trust comes from accredited signatories — each attesting what falls within their competence.



The producer declares vineyard and cellar practices in the OIV vocabulary



The laboratory signs the analysis certificate referencing OIV methods



The certifier signs the organic / sustainability attestation (OIV-CST 518-2016)



Logistics records transfers of custody down to distribution

Decentralised identifiers (DIDs) + Verifiable Credentials (W3C): a directory of accredited actors, governed by the consortium.

An open-source consortium — with no token



The consortium

- Non-profit association: one member, one vote — power cannot be bought
- Balanced colleges: producers, trade bodies, laboratories, vendors, academia
- Schema committee: transposes each OIV resolution through a public, dated process
- Decisions, minutes and roadmaps are public



Why no token?

- An adoption barrier for non-crypto-native users
- Volatility and speculation foreign to the mission
- MiCA regulatory obligations with no benefit to the sector
- Reviewable by the consortium if a real incentive need emerges

The commons is free; the services fund it



The commons — open-source

- Schemas, registry, contracts, libraries, documentation
- Funded by membership fees, public grants (agricultural digitisation, European programmes) and the XDC ecosystem

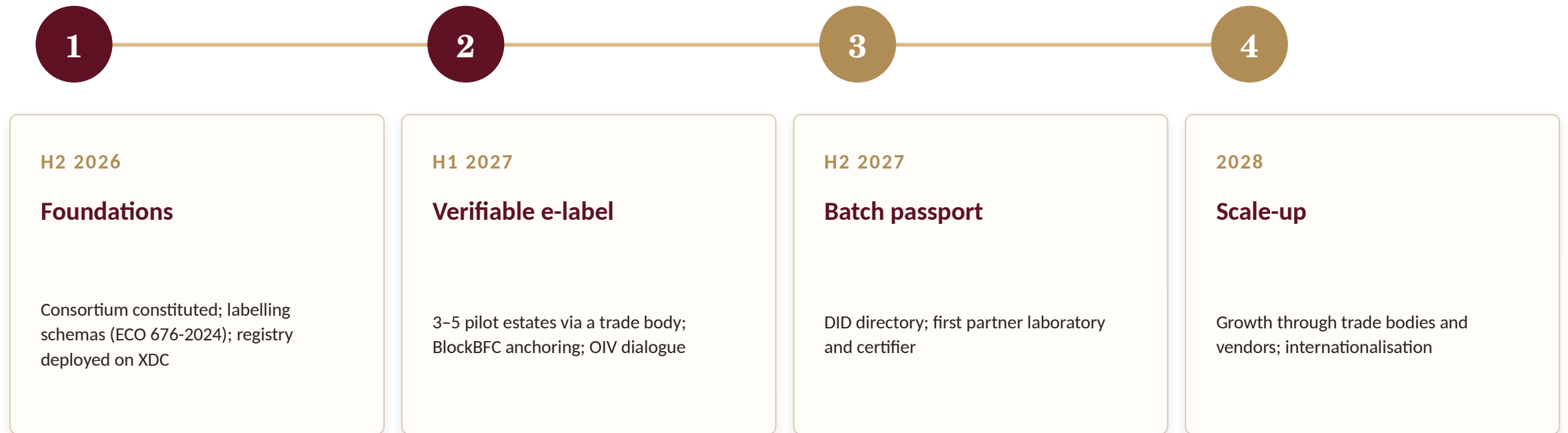


Operated services — revenue

- E-label SaaS: simple per-estate pricing, pooled offers through trade bodies and cooperative cellars
- Vendor / ERP integrations, passport hosting, training and support

Everything being open-source, anyone can self-host: the services' value lies in operational quality, not in a lock-in.

From foundations to scale



Sensors & IoT (storage, transport): deliberately deferred — opened once passports have created the demand.

Join the consortium

We are looking for partners for the foundations:



Estates & trade bodies

e-label pilots 2026-2027



Laboratories & certifiers

first accredited signatories



Vendors & contributors

integrations and open-source code



Institutions & funders

sustaining the commons