



The Japan-Type OSS Model

Native Species, Seeding Strategy, and Rules as Code

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Until infrastructure breaks down, its value goes unnoticed

Open source is social infrastructure now.

And infrastructure is rarely recognised until it stops working.

A world learning the hard way

XZ Utils

A long-dormant maintainer handover, weaponised. Supply-chain risk earned its real-world lesson in 2024.

AI slop

Untouched AI-generated PRs land in OSS inboxes — burning volunteer maintainers, bending review loads.

To build a strategy that looks ahead, we have to know **where we stand today.**



The two viewfinders of complementarity

Survey A — mindset and policies

**Software-trends survey of
362 Japanese firms**

Industry × firm-type, weight-back corrected. What corporate Japan says it does with OSS.

362 Japanese firms, 2025 cohort

Survey B — the code that is actually released

**GitHub study of 30,298
public-sector repositories,
7 countries**

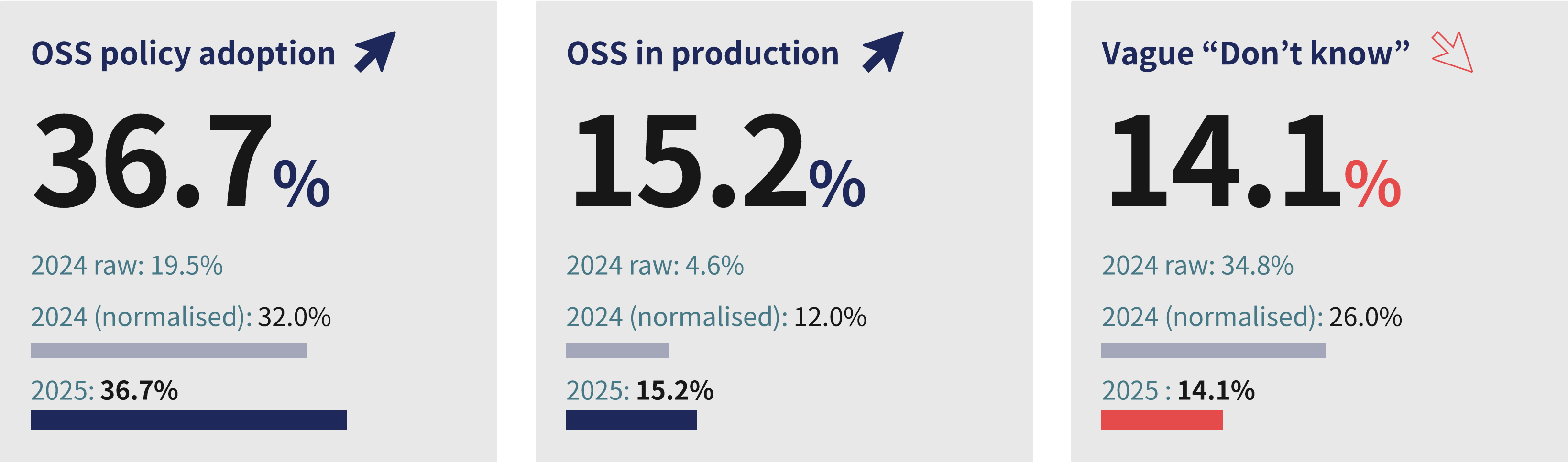
What governments actually publish. JP, EE, SG, DE, FR, UK, US.

30,298 public-sector repositories



From **not knowing** to **practice**.

Three indicators. Each shows the raw 2024 figure, the industry-mix-normalised 2024 figure, and the 2025 figure.



Practice-stage concerns take over
Security concerns **25.7%** · Talent & skill shortage **21.5%** It has taken on the form of a practical challenge

Policies spread. **OSPPOs do not.**

OSS policy adoption ↗

36.7%

Real movement, year on year. The corporate layer is writing the rules it works by.



OSPPO actually established →

4.1% **6.9%**
including those
planning one

Essentially flat against 2024. Policy without the organisation to run it.

While policies continue to expand, the organizations responsible for implementing them do not.
It is this gap that holds the potential for synergies with the public sector.



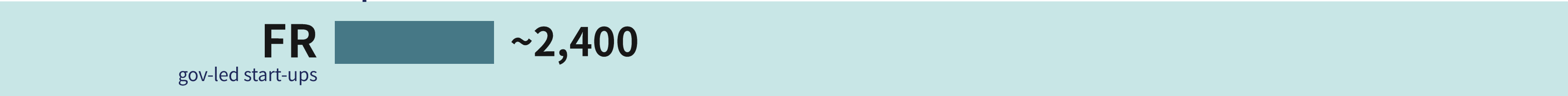
Three landscapes, seven countries.

30,298 public-sector GitHub repositories — Sep–Oct 2025. Sorted by activity; grouped by pattern, not rank.

Large-scale · central or rhizome



Mid-scale · state-led start-ups



Small-scale / native-type · concentrated, learning-by-doing



Japan sits in the same development stage as Germany, Singapore, and Estonia. **Scale is not developmental lag.**



A native-species ecology, in numbers.

626 public-sector repos across **22 organisations**. Maps & GIS strength that grew **organically from frontline needs**.

Where the activity clusters — repos by organisation



GSI
Geospatial Information
Authority

PLATEAU
MLIT · 3D urban

20 other orgs
combined

GSI and PLATEAU are the two largest of the 22 organisations.

Two success factors — curated open data and an active community — suggest an **AI-ready foundation already taking shape**.

A different kind of signal

Digital Agency

7 repositories

1,043 stars

Stars per repo far exceed every other organisation — latent interest, at home and abroad.

Absolute scale

626
VS
~16,000

JP and UK.
Their absolute scales are different.

Pull-requests per repo

6.1

The lowest in the small-scale group. **Tight quality control — and patchy outside collaboration.**

Heroes & catalogs

Success stories ride on the **right person in the room.**

Missing metadata standards make repositories **hard to find, hard to reuse, hard to count.**

This diagnosis is the **starting line**, not the verdict.

Three strategic axes, one model.

Not an imitation of Western blueprints — a strategy tuned to our own ecology, transferrable as a frame.

1

Native Species Strategy

Find the strengths already growing in your soil — and cultivate them.

2

Seeding Strategy

Public sector sows — private vendors scale what grows.

3

Rules as Code

Institutions become machine-readable — and trustworthy to AI.

Cultivate what already grows.

We do not aim for a GDS-style centralised plantation. The work is noticing what the soil already produces.

What PLATEAU's success was made of — two factors

1 Standardised open data, published early

The format was consistent and the door was open before demand caught up.

2 Converters for Unity & Minecraft invited game developers, educators, start-ups.

The leverage point

Cultivate the native species, then **plant new species around them.**

The open question

How do we turn a hero-driven success into an **institution?**

Public sector sows. Industry scales.

Government cannot realistically run a large in-house engineering force. Its leverage is in **what it puts into the soil**.

What the public sector provides

**Data models, calculation logic,
standard specifications — the seeds.**

Focus where government has the unique comparative advantage — the public-good artifacts no vendor would build alone.

What industry does

**Vendors and GovTech start-ups grow
seeds into services — and seed them
into markets.**

“Government OSS users” aren’t end-users — they’re the vendor ecosystem. Design with them in mind.

~1/3

Across all 7 countries

of technical fields are **developer tools** — test code, SDKs, CI/CD.
These are not finished products, but rather “recipes and cooking tools.

Two government seeds released as OSS — the model already at work.

Digital Agency — Gennai

Part of the central-government generative-AI environment, released as OSS on GitHub under a commercial-use licence — to prevent duplicate AI-platform builds across ministries and municipalities, and pull improvements in from industry.

The seed's users: other governments and vendors.

IPA — ODS-RAM

Open Data Spaces Reference Architecture Model V2, published with a reference-implementation OSS and SDK — the standard spec and working code shipped as one seed.

The seed: standard spec + code.

Make institutions machine-readable.

Challenge: Statutory text is read by each vendor in **its own way**. Systems don't talk.

What Rules as Code offers

Define the “**optimal solution (standard model)**” for administrative procedures as code and release it as OSS

→ Establish a “**system free of interpretive discrepancies**”

Example: Open-source the calculation logic for social security and other systems as a rules engine

→ Improve vendors' development efficiency and accuracy

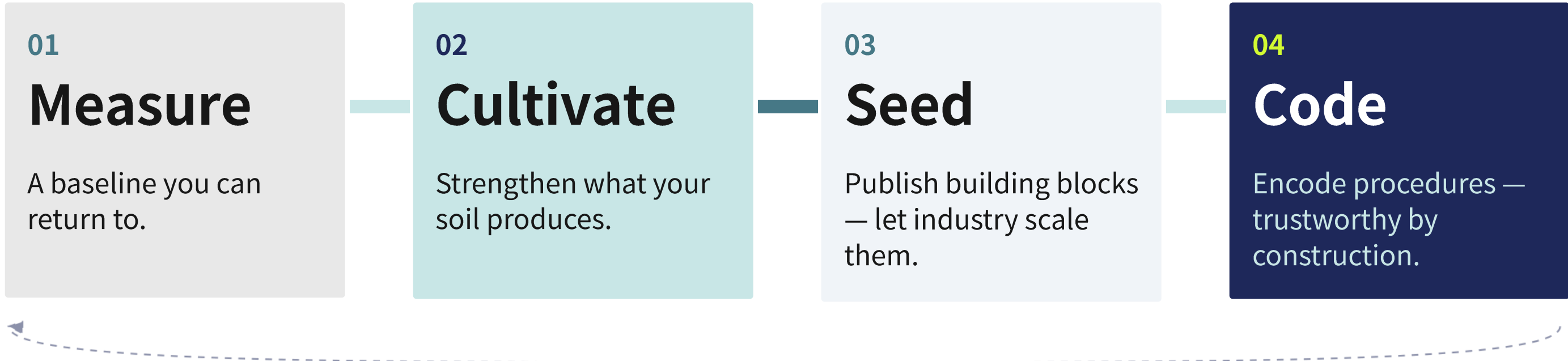
Why it matters even more under AI

When AI agents execute procedures on our behalf, **machine-readable rules become the substrate of trustworthy AI** — a place to verify how a decision was reached.



A transferable framework.

Not a prescription for Japan — a cycle any country or organisation can run.



What we measure, three registers

Quantitative

Repo counts, policy %, OSPO adoption.

Qualitative

Native-species expansion. Rules-as-Code implementations.

International

The baseline, re-measured annually.

Idea: Share baseline data with the community **as reusable benchmarks.**

Japan's view has been **under-represented** in global OSS-policy talk.

The addition of that perspective will enhance the diversity and resilience of the world's ecosystems.

Companies with policies

Can move from **using standards** to **setting them**.

Governments that seed

Can become **ecosystem anchors**, not endpoints.

**Map your terrain. Cultivate the native species.
Seed. And code the institutions that hold the soil.**



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