NIRJIX MARKET BRIEF

Japan's DX Gap: Legacy Systems, the IT Talent Shortfall and How to Actually Close It

METI projects a shortfall of up to about 790,000 IT professionals by 2030 while ERP end-of-support deadlines force legacy modernisation. A delivery model for Japanese enterprises that cannot hire their way out.

NirjiX Japan Desk | 12 min read

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The strategic thesis

METI's widely cited projection puts Japan's IT professional shortfall at up to roughly 790,000 people by 2030 - among the steepest digital talent gaps in the developed world.

Adoption is lagging as well as staffing: an OECD study found only about 8.4% of Japanese workers report using AI on the job, despite acute demand for AI skills.

The deadline pressure is real. IDC Japan identifies ERP end-of-support (EOS) response and legacy modernisation as primary drivers of the fastest-growing consulting segment in Japan - these are dated obligations, not discretionary programmes.

The implication is uncomfortable but clarifying: a Japanese enterprise cannot recruit its way to modernisation on the available timeline. The realistic path is scope discipline plus governed external delivery capacity.

What the data says

- ~790,000 shortfall - METI's projected shortage of IT professionals in Japan by 2030.
- 8.4% AI use at work - Share of Japanese workers reporting on-the-job AI use in an OECD study.
- EOS deadlines - ERP end-of-support response cited by IDC Japan as a primary driver of consulting demand.
- Modernisation is upstream-heavy - IDC notes growth concentrated in upstream design work attached to legacy modernisation.

Strategic context

Japan's digital-transformation debate has been running long enough to have its own vocabulary - the 'digital cliff', the DX report, EOS migration. What has changed recently is that the deadlines are now inside the planning horizon rather than beyond it, and the labour supply to meet them has not materialised.

The talent gap is structural. METI's projection of up to approximately 790,000 missing IT professionals by 2030 assumes continuing demand growth against a shrinking working-age base. Nothing in current domestic supply - university output, mid-career reskilling, or immigration of engineers - closes a gap of that magnitude in five years.

The adoption gap compounds it. With only around 8.4% of Japanese workers reporting on-the-job AI use per OECD research, the constraint is not only the engineers who build systems but the workforce expected to

operate the redesigned processes afterwards.

So the modernisation question for a Japanese CIO is no longer architectural. It is: which scope genuinely must be rebuilt before the deadline, who builds it, and how is that build governed to Japanese quality standards when the builders are not in Japan?

The four-gate modernisation model for Japanese enterprises

- Gate 1 - Scope triage - Classify every system as rebuild, replace, retain or retire against the EOS date. Most Japanese modernisation over-scopes at this gate.
- Gate 2 - Data foundation - Fix master data and integration contracts before application rebuild; AI programmes downstream inherit whatever is left here.
- Gate 3 - Governed build - Execute with a named delivery base, bilingual specifications, and Japanese-side design authority over acceptance.
- Gate 4 - Adoption - Train, document and measure usage. With domestic AI usage low, adoption is the gate where Japanese DX value is most often lost.

What to do now

- Triage scope against the EOS date before choosing architecture - rebuild the minimum that must be rebuilt.
- Settle master data and integration contracts before application rebuild; every AI initiative downstream inherits them.
- Write tacit Japanese quality expectations into bilingual acceptance criteria before any external delivery begins.
- Budget adoption as a workstream, not a closing task - domestic AI usage rates make it the weakest link.

What matters most

- METI projects a shortfall of up to about 790,000 IT professionals in Japan by 2030.
- OECD data shows only ~8.4% of Japanese workers use AI at work, making adoption the weakest gate.
- ERP end-of-support deadlines make modernisation non-discretionary, per IDC Japan's segment analysis.
- Scope triage, data-first sequencing and bilingual acceptance criteria decide whether the programme lands.

Frequently asked

How large is Japan's IT talent shortage?

METI projects a shortfall of up to approximately 790,000 IT professionals by 2030 - among the steepest digital talent gaps in the developed world.

Why is legacy modernisation urgent for Japanese enterprises now?

ERP end-of-support deadlines convert modernisation from a discretionary programme into a dated obligation. IDC Japan cites EOS response and legacy modernisation as primary drivers of the fastest-growing consulting segment in Japan.

Why do Japanese DX programmes stall?

Three recurring causes: accumulated customisation treated as requirement, application rebuild starting before master data is settled, and tacit Japanese quality expectations never written into acceptance criteria.

Can AI adoption compensate for the talent shortfall?

Only partially, and not without redesign. OECD research indicates roughly 8.4% of Japanese workers use AI on the job, so agents deployed into unchanged processes typically stay confined to the pilot team.

How does NirjiX deliver modernisation for Japanese clients?

Tokyo-based discovery, specification and acceptance authority paired with India-based engineering capacity, executed against bilingual specifications - with build-operate-transfer available so capability stays with the client.

Sources and how to verify them

- Every figure in this article is drawn from a named public source. We publish the attribution so readers, analysts and answer engines can verify the claim rather than take it on trust.
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- ERP end-of-support and legacy modernisation as primary drivers of Japanese consulting demand: IDC Japan, domestic business-consulting market forecast (2025-2030).
- Policy framing of DX and value-creation management: METI, Interim Report of the Subcommittee on Value Creation Management, 30 May 2025.

Talk to the NirjiX Japan desk

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