More graduates, the same shortage

The number of Dutch ICT graduates has nearly tripled since 2015. Yet in 2024, 63% of companies still failed to fill every IT vacancy.

Summary

The Netherlands produced 8,710 ICT graduates at bachelor and master level in 2024, against 3,101 in 2015. That is a rise of 181% in nine years, far faster than the 28% growth in total graduates. Yet the share of companies with hard-to-fill IT vacancies stayed around 63%. More supply from education has not resolved the shortage, and this report sets out why.

When a market is structurally short of people, the usual conclusion is that education supplies too few. For the Dutch IT market that conclusion is wrong.

Supply has nearly tripled

The Netherlands produced 8,710 ICT graduates in 2024, counting bachelor and master level together. In 2015 the figure was 3,101. A rise of 181% in nine years.

For comparison, over the same period:

- ICT: from 3,101 to 8,710, a rise of 181%
- Engineering: from 10,992 to 17,052, a rise of 55%
- Health: from 22,631 to 25,945, a rise of 15%
- All fields together: from 142,439 to 181,687, a rise of 28%

ICT grew more than six times as fast as education as a whole. This is not a field education has neglected.

And the shortage held

Over the same period, little changed in how hard employers find it. Of Dutch companies seeking IT specialists, 69% had hard-to-fill vacancies in 2018, 70% in 2022 and 63% in 2024.

Nearly a tripling of intake, and the share of employers who cannot fill vacancies falls by six percentage points. That needs explaining.

Why more intake was not enough

The first reason is scale. Employment in IT occupations grew from 282,000 in 2013 to 562,000 in 2025, an increase of 280,000 people. That averages more than 23,000 a year. The annual intake of 8,710 graduates sits against it.

Those two figures are not directly comparable. Not every ICT graduate takes an IT job, and a large share of entrants to IT occupations switch in from another field. As an order of magnitude the point holds: even at nearly three times the output, education covers only part of the growth, before anyone who leaves has been replaced.

The second reason is experience. Of employers with hard-to-fill IT vacancies, 41% name missing relevant work experience as a reason. A graduate does not resolve a vacancy asking for three years of experience. Education cannot supply experience.

The third reason is that demand moved. Employers want specialists in cloud, cybersecurity, data and AI. Generic IT profiles are losing ground. A degree that takes four years moves more slowly than demand that shifts every two.

The Netherlands produces relatively few ICT graduates

Despite the strong growth, the Netherlands sits mid-table internationally. As a share of all graduates in 2023:

- Finland 8.3%
- Denmark 6.1%
- Norway 5.9%
- Germany 5.7%
- Netherlands 4.6%
- Sweden 4.6%
- France 3.9%
- Belgium 2.6%

Finland produces nearly twice the share the Netherlands does. That stands out, because Finland also has the lowest vacancy rate of these countries at 1.1% and 43% hard-to-fill IT vacancies against 63% here. There, a larger intake as a share of the whole goes together with less scarcity.

The next five years look different

Here is the caveat these figures need. The series runs to 2024 and shows a rise. ING simultaneously reports that enrolment in IT education is falling.

That is not a contradiction. Three to four years pass between enrolling and graduating, so a fall in enrolment now only shows up in graduate numbers around 2027. The figures in this report describe the pipeline's past, not its future.

If that decline continues, the rise described here reverses, precisely when ageing drives replacement demand up.

What this means

- **Waiting for education is not a plan.** Intake nearly tripled and the shortage held. There is no version of this problem where education solves it alone.
- **The constraint is experience, not degrees.** Demanding three years of experience excludes the entire intake, then competes with everyone else for the same small group.
- **Hiring a junior is a supply decision.** Every employer who hires only experienced people shrinks the experienced layer of five years from now.
- **Watch 2027.** If falling enrolment continues, the pipeline tightens exactly as retirement-driven outflow peaks.

Method and sources

Graduate counts come from Eurostat, dataset educ_uoe_grad02, bachelor and master level summed, fields of information and communication technologies, engineering and health, reference years 2015 to 2024. The country comparison uses 2023 because it is the most recent year all covered countries report.

Figures on hard-to-fill IT vacancies come from Eurostat, dataset isoc_ske_itrcrn2, as a share of companies that actually sought IT staff. Employment in IT occupations comes from CBS StatLine. The observation on falling enrolment in IT education comes from the ING sector analysis of April 2026.

Growth, Education, IT, All markets

Sources

- Eurostat (educ_uoe_grad02), CC BY 4.0
- Eurostat (isoc_ske_itrcrn2), CC BY 4.0
- CBS StatLine, CC BY 4.0
- ING sectoronderzoek