Tesi

Finnish Startup Community

Pääomasijoittajat
Finnish Venture Capital Association

# Startup Study



November 2026

# Foreword

Finland's startup story is often told through a few headline successes. This study provides a broader, shared picture of the landscape. Building on the first edition published in 2025, the 2026 Startup Study updates and refines our understanding of more than 4,000 startup-based companies founded since 2010. Our aim remains the same: to establish a clear evidence base, grounded in shared definitions and a transparent methodology, that can be updated and improved over time.

Startups contribute to technological renewal, economic growth and globally competitive jobs. Understanding their development requires clear definitions and reliable data. This study helps founders, investors, researchers and policymakers move from assumptions to evidence, providing a common foundation for discussion and decision-making.

By identifying companies and tracking their evolution—from early stage to scaleup, maturity and exit—the study helps explain how Finland's startup economy develops. This edition refines the company coverage and examines company formation, growth, funding, valuations, employment and compensation. Together, these perspectives provide a foundation for further research into the conditions that help young companies become enduring global companies.

This work was made possible by close collaboration between Tesi, the Finnish Startup Community and the Finnish Venture Capital Association. We also thank FiBAN, Startup100 and Slush, alongside other external experts, for providing valuable data and insights. At Tesi, we especially thank Jakob Sandell for continuing to lead the day-to-day execution of the study, and Rasmus Varjoranta, Iiris Aho, Mirko Laine, Saara Vettenranta, Patrik Björkqvist and Jonathan Paasonen for their valuable contributions. We are also grateful to the many colleagues across our organisations who supported the work. Their expertise and commitment have been essential to bringing together and validating this extensive dataset.

We offer this study as a living foundation for understanding Finland's startup economy. We invite the community to use its findings, explore new questions and share ideas for further development.

Henri Hakamo, Amir Hassan, Jonne Kuittinen

In Helsinki, 13th of November 2026

# Finland's startup economy is developing and has a substantial impact on the broader economy

## Executive summary

- **Startup-based companies make a substantial economic and R&D contribution.** The study covers over 4,000 startup-based companies, including around 1,800 active early-stage startups and 35 scaleups in 2024 (€10m+ revenue and qualifying growth or funding). The broader startup-based company population generated over €13bn in global revenue and employed over 50,000 people worldwide in 2024, and an estimated 43,000 in Finland. R&D expenditure reached €952m, around 16% of Finland's business-sector total, and R&D employment included 980 PhDs. This impact typically materializes after the early-stage and scaleup phases.[1]
- **New company formation has fallen below pre-pandemic levels.** Around 260 identified startups were founded annually in 2022–2023, compared with around 340 in 2015–2019. Formation of companies with the industry code "Computer programming" remained broadly stable; most of the change came from other sectors. AI companies account for about 14% of identified startups founded in 2025. The capital region's share of early-stage startups rose from 52–53% in 2015–2022 to 57% in 2024. Recent cohorts remain incomplete.[2]
- **Early-stage startups show higher median revenue and smaller first-round teams.** In 2024, total early-stage revenue and company numbers both fell by about 17%, while median revenue rose from €102k to €132k. Company movements between categories and missing financial statements contribute to changes in the reported company count. Among early-stage startups raising equity, median funding per employee reached €310k in 2024, compared with roughly €100–200k in 2015–2020. Startups raising their first funding round had a median of three employees in 2023–2025.
- **Scaling takes years.** Typical scaleups are 5–10 years old. Eleven companies entered the scaleup category in 2024, while 17 companies left it. Departures reflected growth and funding criteria no longer being met, revenue falling below the threshold, or being acquired.
- **Scaleup funding has increased, while early-stage equity funding remains broadly stable.** Recorded early-stage funding, excluding angel rounds, was around €600–700m annually in 2020–2025. Preliminary scaleup funding reached €1.56bn in 2025, the highest in the six-year series, driven by large rounds. Foreign investors participated in 60% of second rounds in 2021–2026, up from 25% in 2010–2015. Public funding reached a smaller share of new companies: around 80% of the 2015–2018 cohorts received Business Finland funding within three years, compared with roughly half of the 2019–2022 cohorts.[2]
- **Estimated value is concentrated in a small group of scaleups.** Early-stage startups and scaleups had a combined estimated value of €23bn in 2024. The 35 scaleups accounted for 56% of this total, and the two largest companies for 36%. The preliminary 2025 total is about €26bn, including €18bn for scaleups; early-stage coverage remains incomplete. Exit transactions averaged around 30 annually in 2020–2025. IQM, Sensofusion and Steady Energy completed public listings in 2026, adding to the period's exit activity.

1) Economic impact uses a broader company population, including companies founded before 2010 and companies that have matured or exited.
2) Recent startup cohorts and 2025 figures remain preliminary. Funding comparisons follow the study's definitions; changes in company classification affect annual totals.

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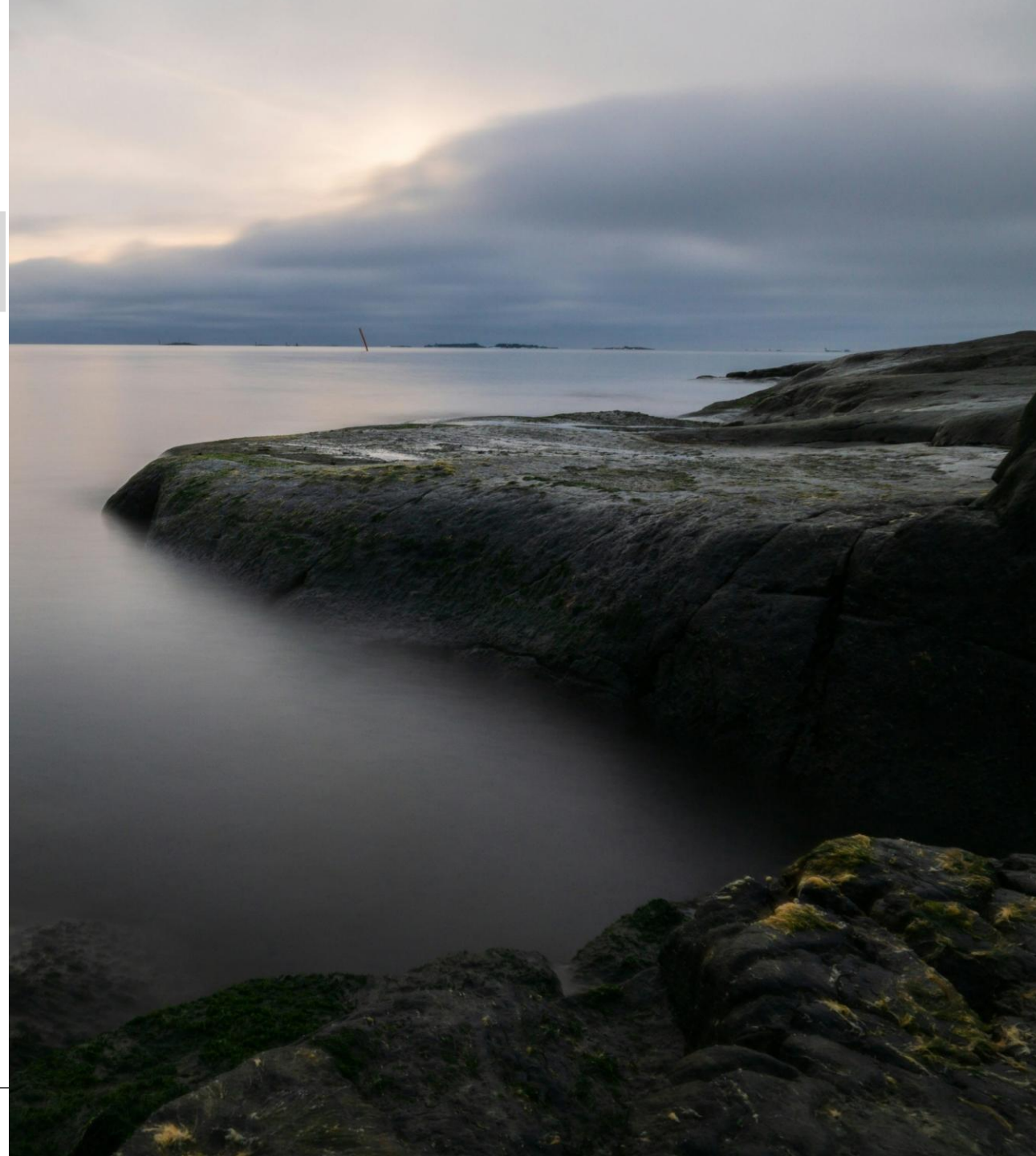
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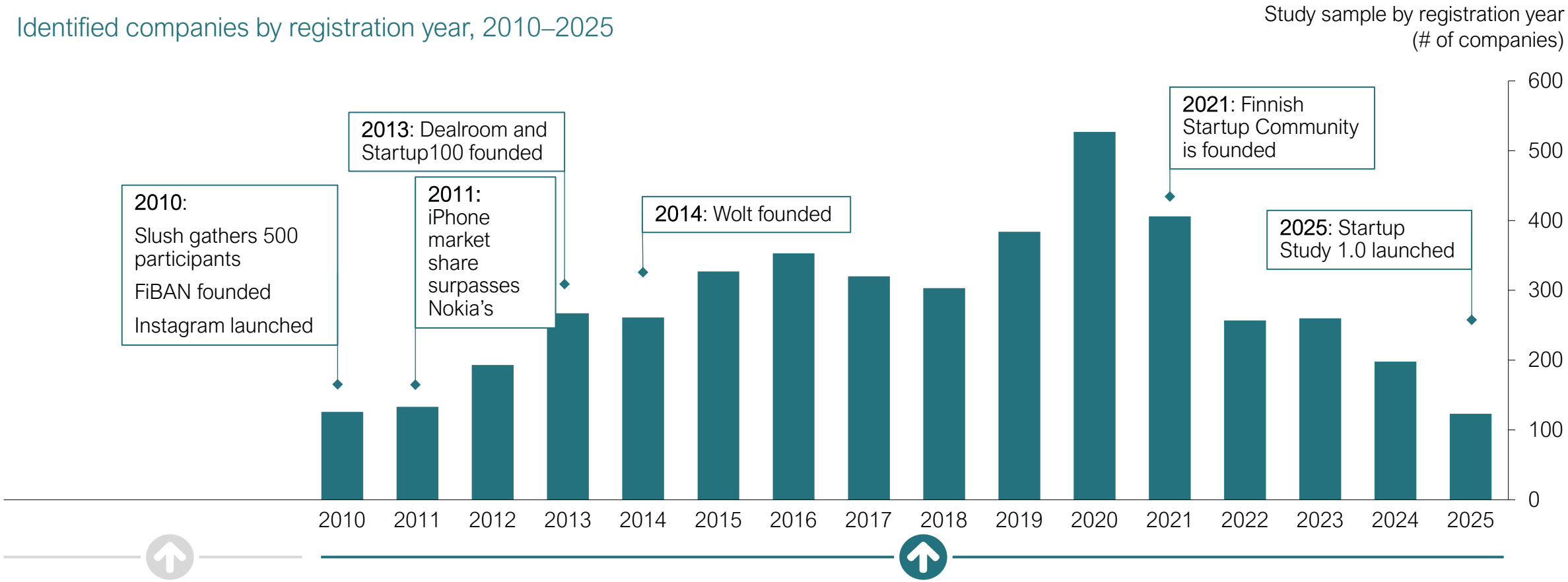
Employees and compensation

Appendix

# The core study covers over 4,000 startup-based companies founded since 2010

## Identified companies by registration year, 2010–2025




Companies founded before 2010 are excluded from the core study sample

e.g. ROVIO RELEX M-Files

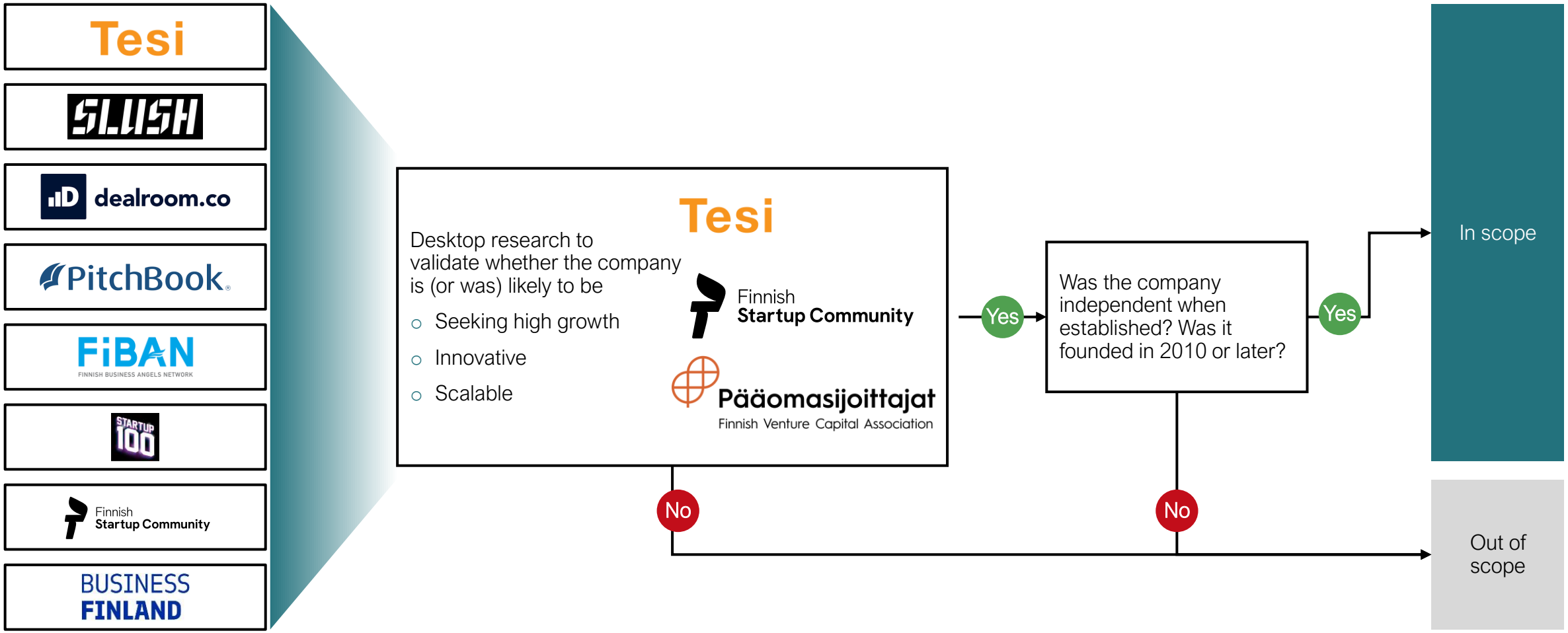
Included in study – coverage likely better in later years[1]

Wolt aiven algorithmiq SUPERCELL ICEYE INFINITED FIBER IQM VARJO HOXHUNT Swappie

1) Given the many sources, we are confident in having identified all startups with traction. Identifying startups that never e.g. generate meaningful revenue is much more difficult, especially for years with limited startup data availability.

# We identify startups from a wide variety of sources, and use a shared definition of what a “startup” is

## Data sources and inclusion criteria



# The 2026 study refines the company list, adds AI validation and corporate spinouts

## Changes from the 2025 edition

Startup Study 2025

**Refined company list**
Added previously missed and unvalidated companies. Removed false positives, such as subsidiaries of larger companies or companies without sufficient innovativeness.

**AI validation**
Replaced variable-based validations with AI-driven validation

**Corporate spinouts added**
A startup that was formed by transferring business, technology, or intellectual property out of an existing operating company, and that had no controlling external owner[1] at the end of its first financial period.

**Updated sources**
Removed Capital IQ, added quarterly Startup100 company lists.

**General refinements**
Bug fixes and refinements across analysis infrastructure.

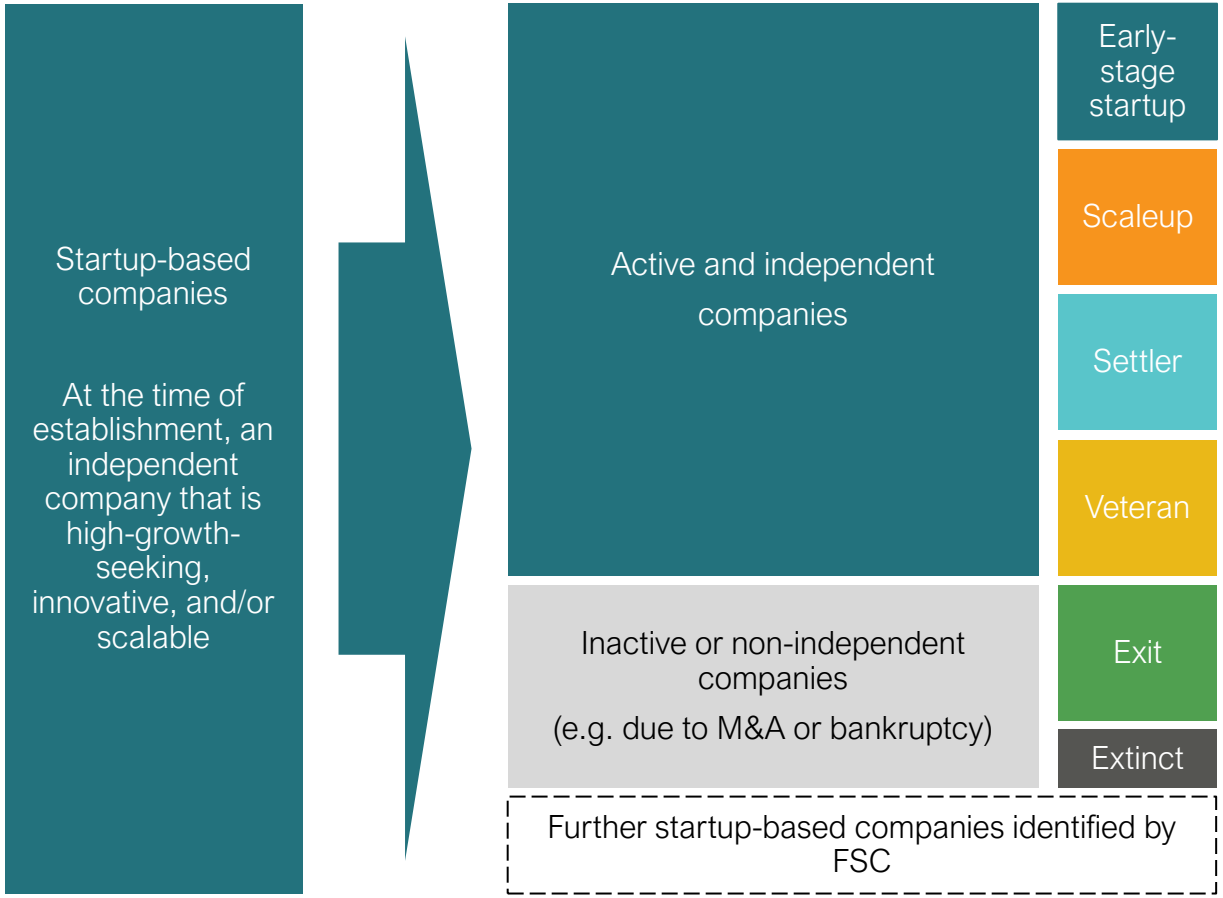
Startup Study 2026

**Comparability between studies**
Figures are not fully comparable with the 2025 edition. Use this edition as the reference for the time series presented here.

1) More than half of the voting rights held by any legal person other than the founders or management.

# Startup-based companies are divided into six categories by looking at the company's status, size, growth, and funding

## Annual classification of startup-based companies

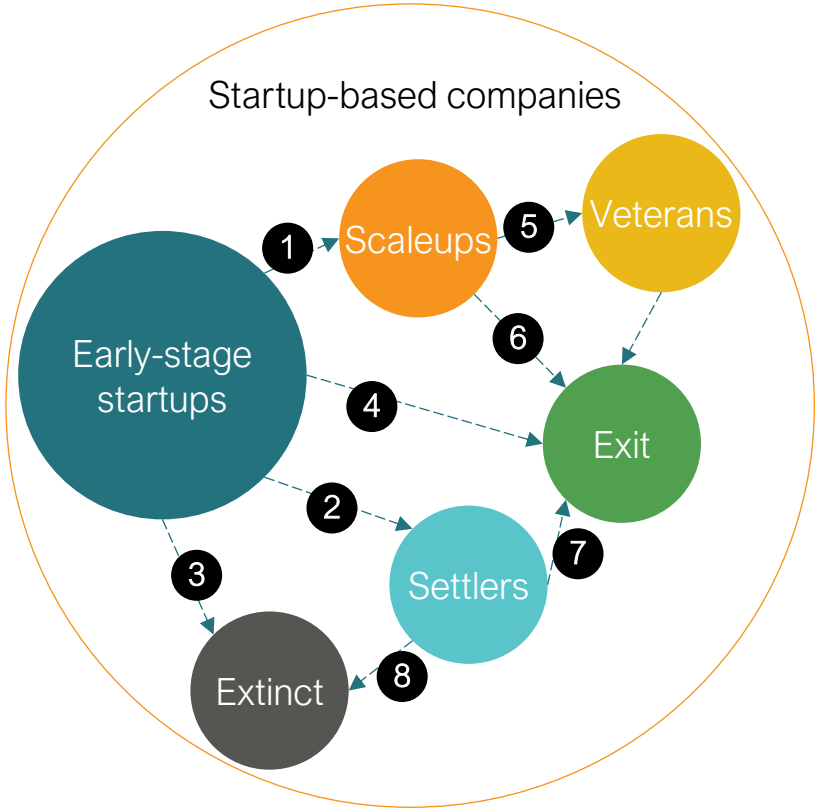



- Under €10m in revenue, under 10 years old, and **either of the following**
  - Funding round[1] during the last 3 years or any of the subsequent years[2]
  - >50% 3-year revenue CAGR or CAGR not available
- At least €10m in revenue, and **either of the following**
  - Funding round[1] during the last 3 years
  - >50% 3-year revenue CAGR
- Under €10m in revenue, and **both of the following**
  - No funding rounds[1] in the last 3 years
  - ≤50% 3-year revenue CAGR
- At least €10m in revenue, and **both of the following**
  - No funding round[1] in the last 3 years
  - ≤50% 3-year revenue CAGR
- Either of the following
  - Majority stake sold through M&A or buyout investment
  - IPO
- Business operations ended (without identified acquisition)
- Companies that are part of the current startup ecosystem, but not in scope for this study (except for the ecosystem analyses on p. 13-16)

1) Funding rounds consist primarily of VC funding (for startups, also angel investments and accelerator/incubators). 2) E.g. a 5-year old company without a >50% 3-year CAGR is not classified as a startup unless it receives VC funding in that year or any later year.

# Companies can move between categories as they grow, mature or exit

## Company categories and typical transitions




| | Most common transitions | Case examples | | | |
|---|---|---|---|---|---|
| | | Wolt | PRYTE | ŌURA | Odds Reactor |
| 1 | The most successful early-stage startups grow to the next level and become scaleups | Year 4 (2018) | | Year 6 (2019) | Year 6 (2022) |
| 2 | Companies whose growth slows down prior to reaching €10m in revenue | | | | |
| 3 | Early-stage startups that cease operations | | | | |
| 4 | Early-stage startups that are acquired/merged or make an IPO early on in their life cycle | | Year 1 (2014) | | |
| 5 | Companies whose growth slows down after reaching €10m in revenue | | | | Year 8 (2024) |
| 6 | Scaleups that are acquired/merged or make an IPO – the typical path for best known success stories | Year 7 (2021) | | | |
| 7 | Settlers that are acquired/merged or make an IPO without reaching €10m in revenue | | | | |
| 8 | Settlers that cease operations after a period of slower growth | | | | |

| | |
|---|---|
| Wolt | Food and retail delivery app. Exit to DoorDash announced 2021, completed 2022. |
| PRYTE | Short-term mobile data access. Exit to Facebook in 2014. |
| ŌURA | Smart ring measuring sleep, readiness, and activity. |
| Odds Reactor | Advanced bookmaking solutions |

The examples illustrate selected transitions between categories. They do not imply a single path or a fixed timetable for all companies.

# Data sources and validation process

## From company identification to analysis

### 1 Company identification

- Tesi
- SLUSH
- dealroom.co
- PitchBook
- FiBAN FINNISH BUSINESS ANGELS NETWORK
- STARTUP 100
- Finnish Startup Community
- BUSINESS FINLAND

### 2 Startup validation

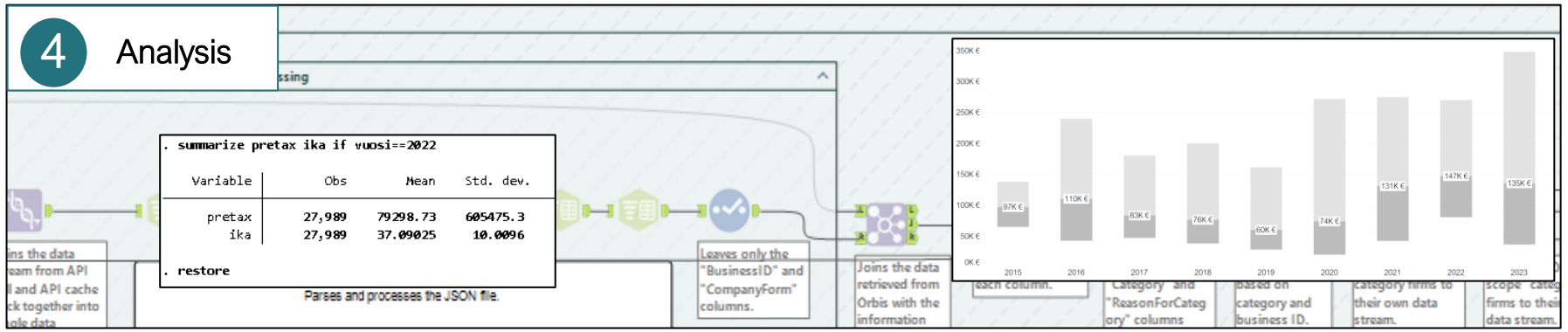
Desktop research on whether the company has a startup background. Annual categories are set in the analysis.

- Tesi
- Finnish Startup Community
- Pääomasijoittajat Finnish Venture Capital Association

### 3 Data enrichment

- Financials: orbis
- Funding data: PitchBook
- Verticals: VAINU
- Exit data: Talouselämä
- Funding data: Mergermarket
- Employee and founder data: Statistics Finland

### 4 Analysis



# AI use and human review in the study

## Roles in company validation, analysis and report preparation

### Building of the startup identification infrastructure

- The backbone of the startup identification infrastructure was built in 2025, without significant use of AI in the process.
- The infrastructure was refined in 2026, and AI was used as a sparring partner for methods, and for verifying the efficiency of the updated workflow.

### Validation of startup-based companies

- Most startups have been validated either through proxy data viewed as reliable (e.g. VC funding) or by a team member.
- For recently incorporated companies, AI has validated human decisions and replaced human validation.
- AI has produced roughly equivalent views on typical companies vs. a human, but has been able to spot outliers[1] much better than humans did.

### Categorization of startup-based companies

- AI has not been used directly for the annual categorization of companies. Some funding rounds and exits have, however, been identified by AI (and validated by humans).

### Data analysis

- The majority of analyses in this report were initially built in 2025 without AI.
- Most analyses have been built in a different analysis platform this year. Old analyses have been replicated and refined, and new analyses have been created, in collaboration with AI.
- The analyses' methodologies and results have been reviewed both by humans and AI.

### Report writing

- AI has been used as a sparring partner for content creation and quality assurance.
- The report in its entirety has been examined and validated by humans, and the insights herein are based on human-led work and industry expertise.
- This report does not contain any analyses without a human in the loop.

AI supported parts of company validation, analysis development and report preparation. The report's methods, results and conclusions were reviewed by humans.

1) E.g. new business IDs continuing the legacy of an old business ID, subsidiaries of larger corporations

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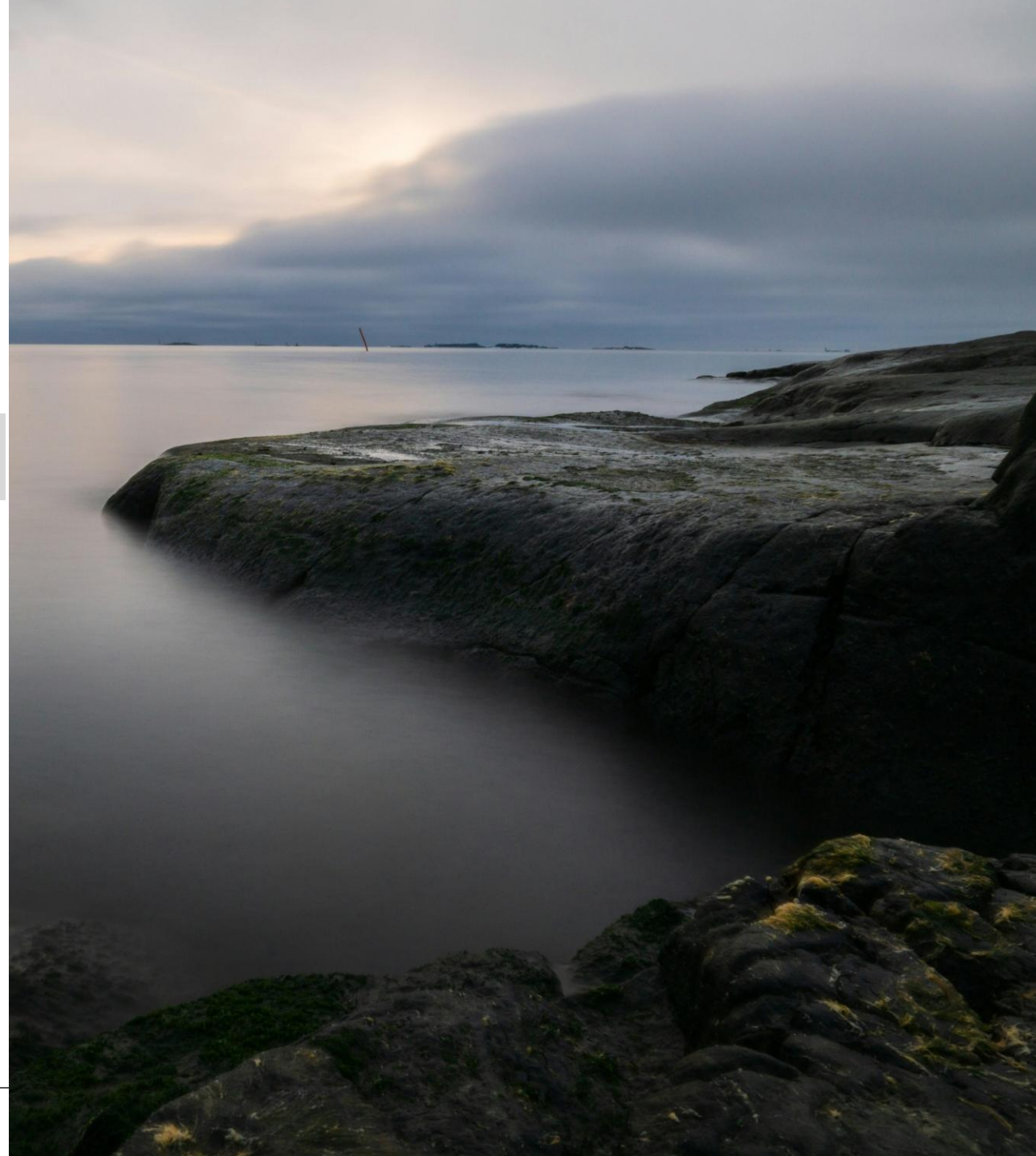
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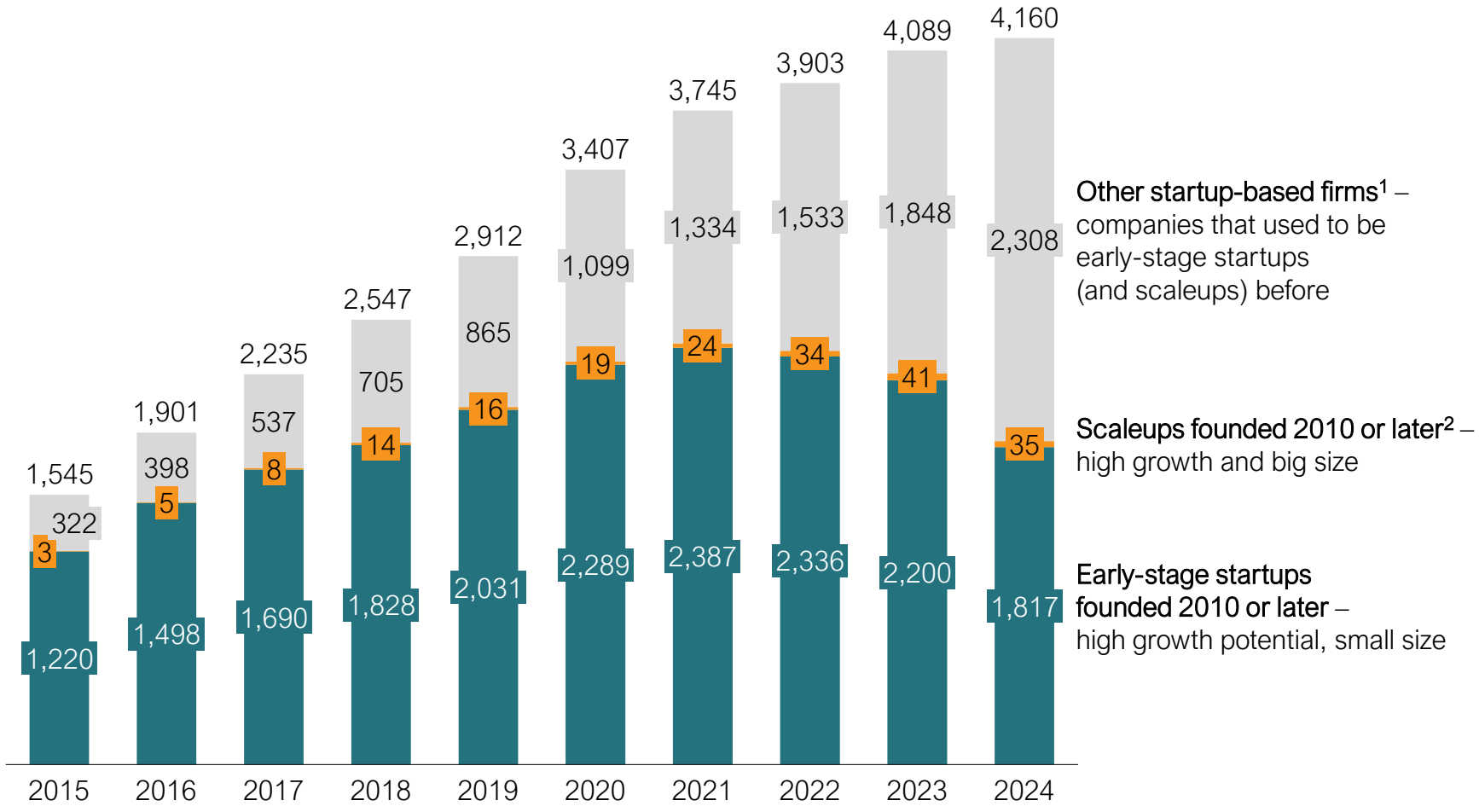



# Startup-based companies include both current and former startups

## Startup-based companies by category, 2015-2024

INDICATIVE

Number of active companies




- We have identified in total over 4,000 Finnish startup-based companies. This number includes three types of companies: approx. 1,800 current early-stage startups, i.e. very young companies with high ambitions but a limited track record; tens of scaleups that already have reached significant revenues but are still growing at a high pace; and other startup-based companies that have settled at either large or small scale.
- The number of startup-based companies is dynamic, as new startups are founded and both early-stage startups and former startups cease to exist. There are two key reasons for companies to cease to exist: shutting down the company completely (e.g. due to bankruptcy), or are absorbed into acquiring companies.

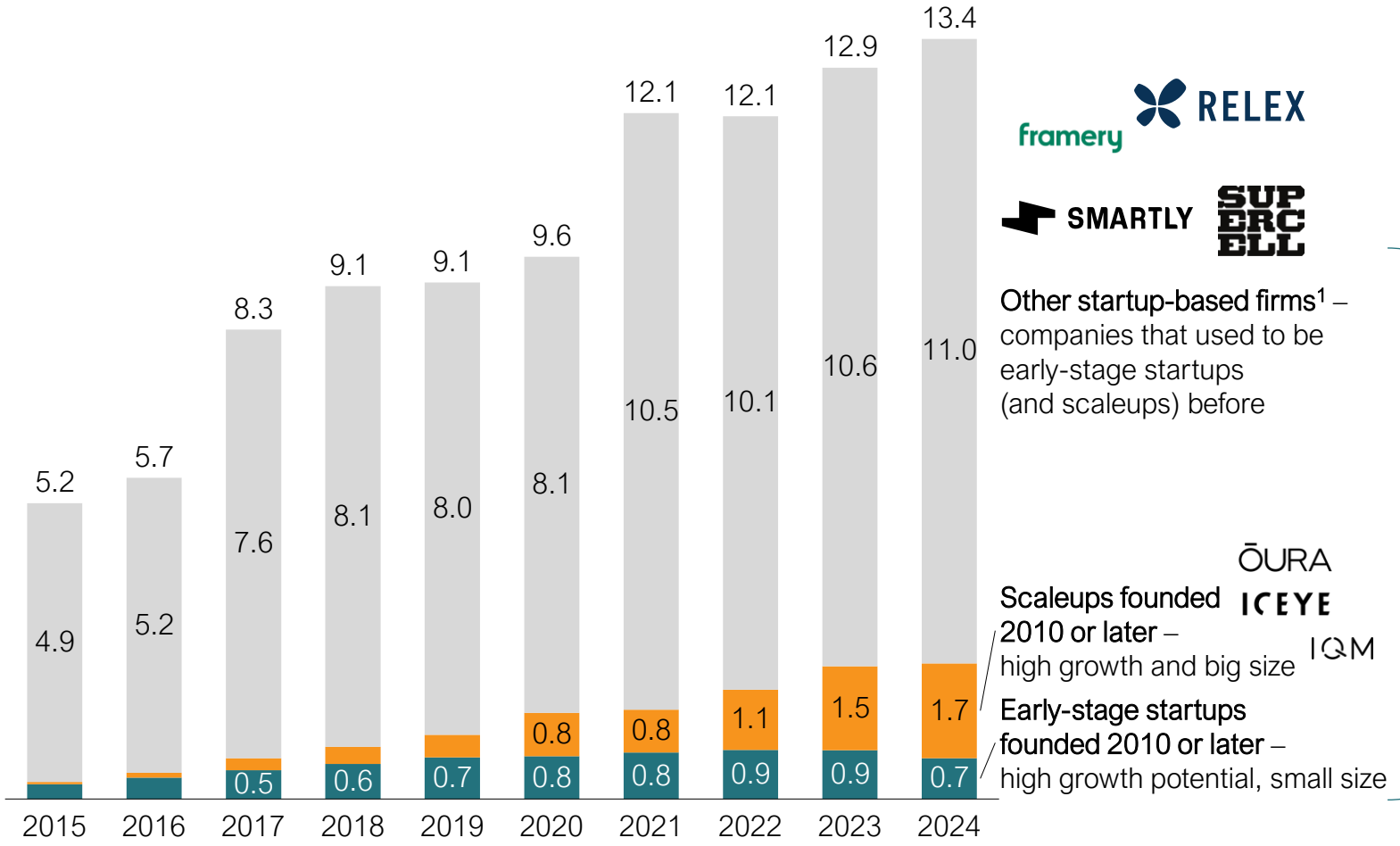
1) Including Settlers, Veterans, post-exit companies and further FSC-identified companies. 2) The illustrated number of scaleups in the 2010s should not be compared to the 2020s, as companies had less time to reach that category during the 2010s. Source: Team analysis based on Tesi's data model and Valuatum

# Startup-based companies generate over €13bn of revenues in total

## Global revenue by company category, 2015-2024

INDICATIVE

Global revenue in €bn




framery RELEX SMARTLY SUPERCELL

**Other startup-based firms**[1] – companies that used to be early-stage startups (and scaleups) before

ŌURA ICEYE IQM

**Scaleups founded 2010 or later** – high growth and big size

**Early-stage startups founded 2010 or later** – high growth potential, small size

Over **€13bn revenue** in all startup-based companies in total[1]

- Startup-based companies generate at least €13bn in annual revenues, although that figure is likely very conservative since it is not possible to track the revenue development of all acquired companies, and most large startup-based companies (e.g. Supercell, Wolt) get acquired sooner or later.
- Early-stage startups' share of total revenue is very small, because they are indeed in the early stages of their lifetime. The role of the early-stage startups is, however, pivotal. All startup-based giants such as Supercell and Wolt started from the bottom, but the revenue impact does not typically show until the company has matured and growth has slowed down from exponential to linear.

1) Including Settlers, Veterans, post-exit companies and further FSC-identified companies. Consolidated financial statements used where available and complemented by unconsolidated. Source: Team analysis based on Tesi's data model and Valuatum

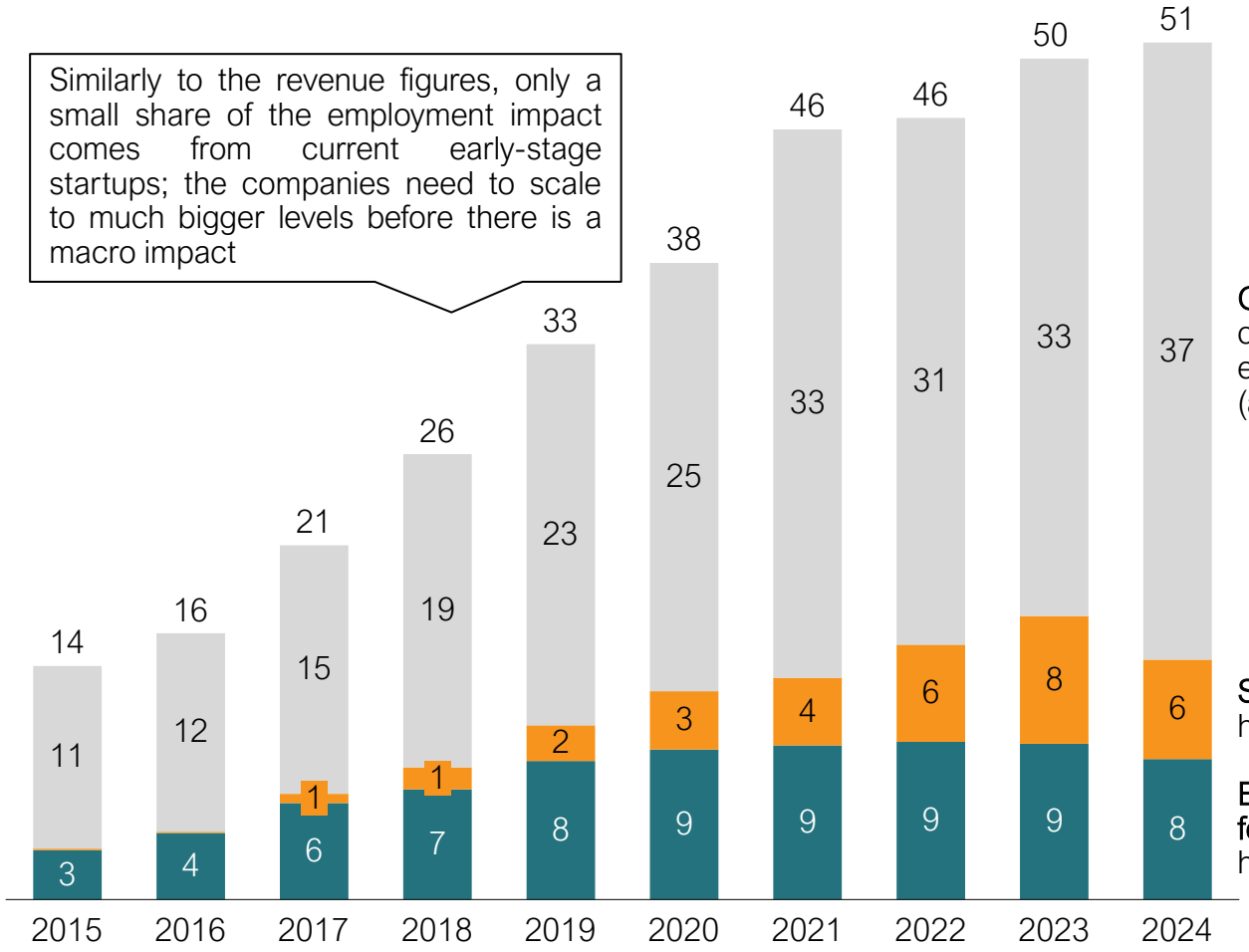
# The Finnish startup ecosystem employs over 50,000 people globally, with most of them in Finland

## Startup-based companies' employment impact, 2015-2024

INDICATIVE

Global employees in thousands

Similarly to the revenue figures, only a small share of the employment impact comes from current early-stage startups; the companies need to scale to much bigger levels before there is a macro impact




**Other startup-based firms**[1] – companies that used to be early-stage startups (and scaleups) before

**Scaleups founded 2010 or later**[2] – high growth and big size

**Early-stage startups founded 2010 or later** – high growth potential, small size

Over

**50,000**

employees in all startup-based companies globally[1], and an estimated

**~43,000**

employees in Finland

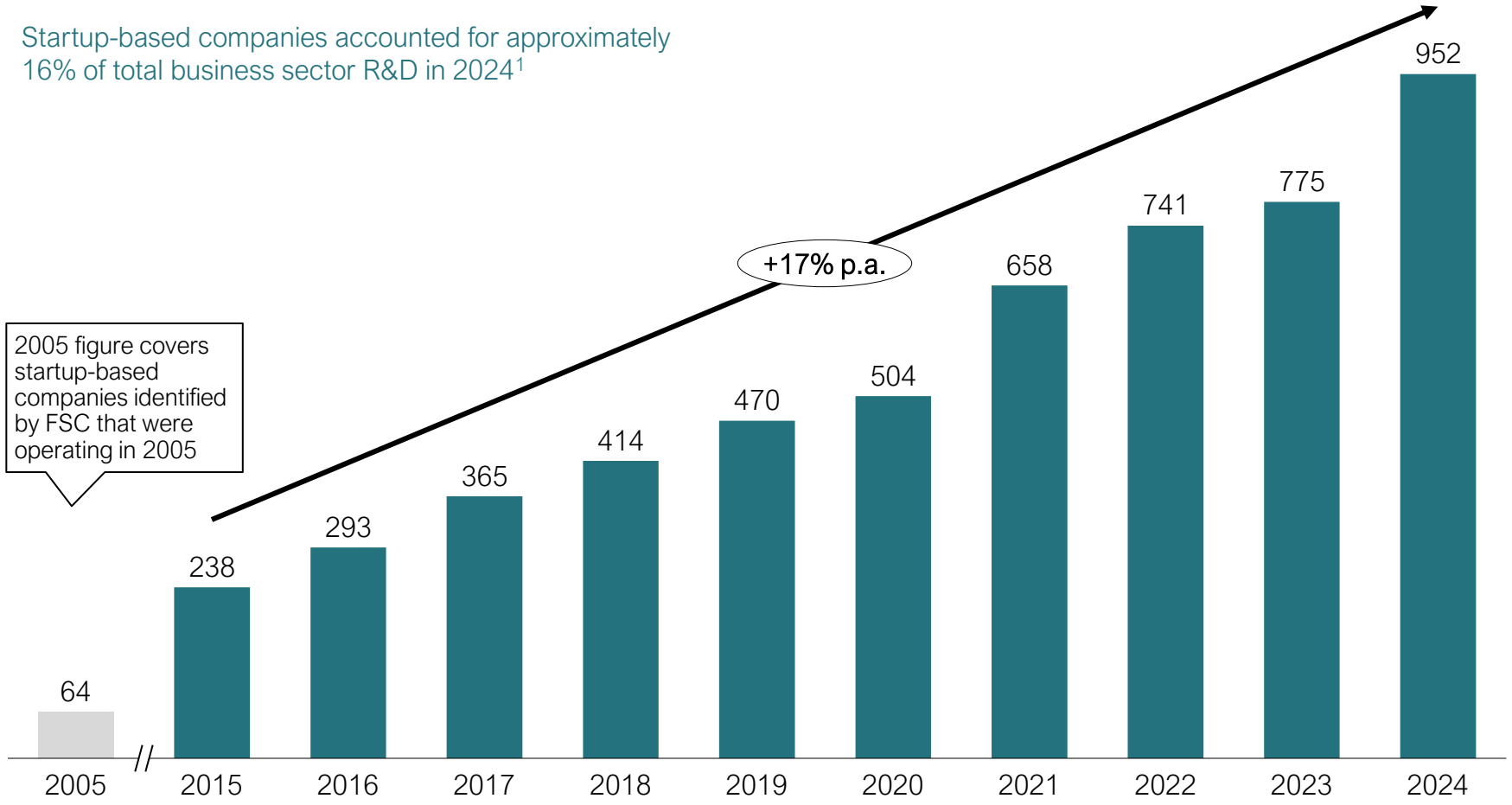
1) Including Settlers, Veterans, post-exit companies and further FSC-identified companies. 2) Decline in scaleup employment in 2023-24 driven mostly by companies changing to other categories. Source: Team analysis based on Tesi's data model, Valuatum, Statistics Finland

# Startup-based companies invested €952m in R&D in 2024, around 16% of business-sector R&D

## Startup-based companies' R&D expenditure, 2005-2024

R&D expenditure in €m

Startup-based companies accounted for approximately 16% of total business sector R&D in 2024[1]




- Startup R&D spend grew about 15x, from €64m in 2005 to €952m in 2024.
- Among startup-based companies with an R&D breakdown, the average allocation in 2024 was :
  - 77% goes to development work
  - 17% to applied research and
  - 6% to basic research.
  - This mix has barely changed since 2011.[2]

R&D spend has grown over 15% a year since 2005

1) Data on private sector R&D is from Statistics Finland, with 2024 R&D at €6bn. 2) Unweighted average of company-reported percentage allocations. Each reporting company receives equal weight, regardless of its R&D expenditure Source: Team analysis based on Statistics Finland data

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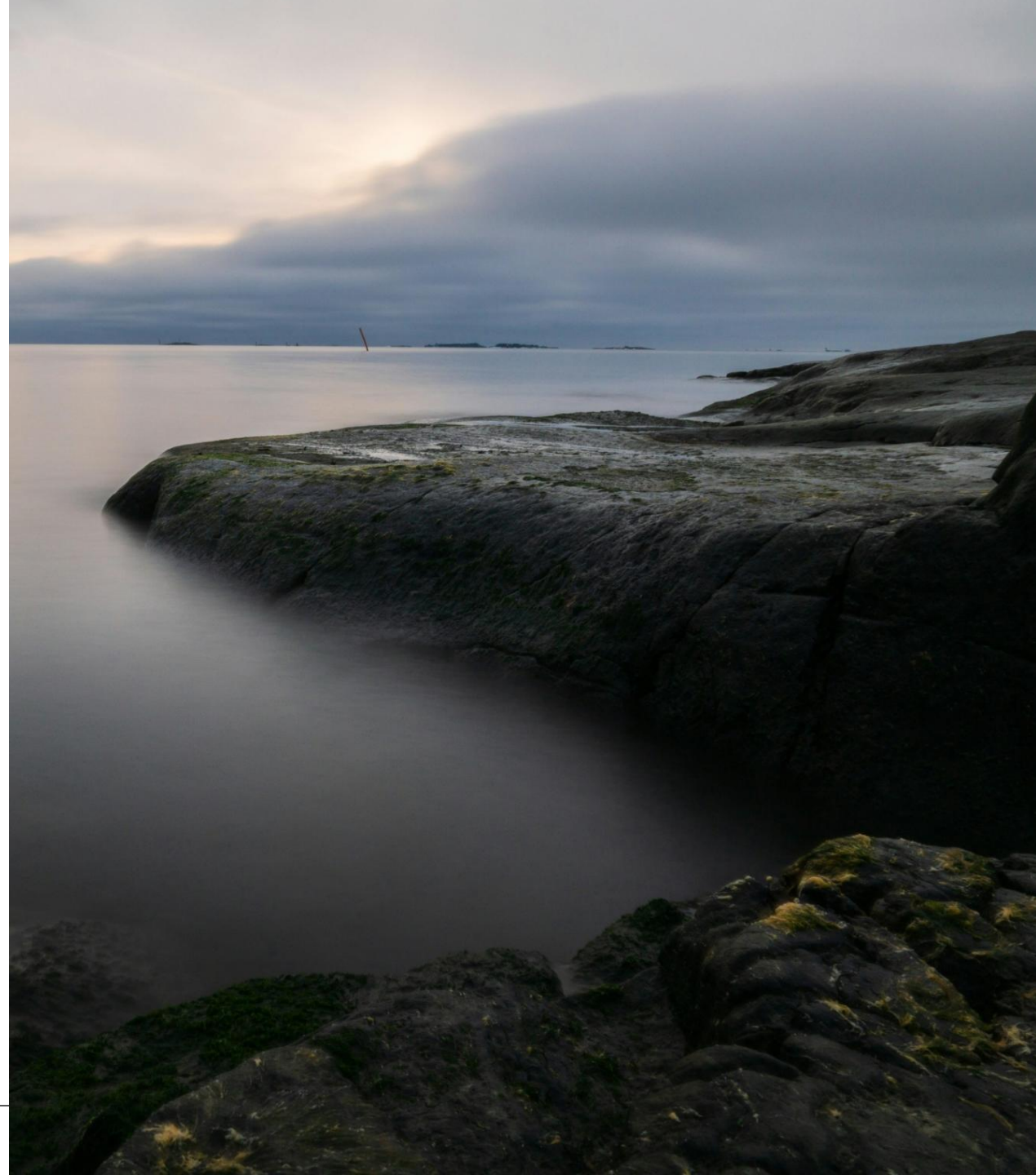
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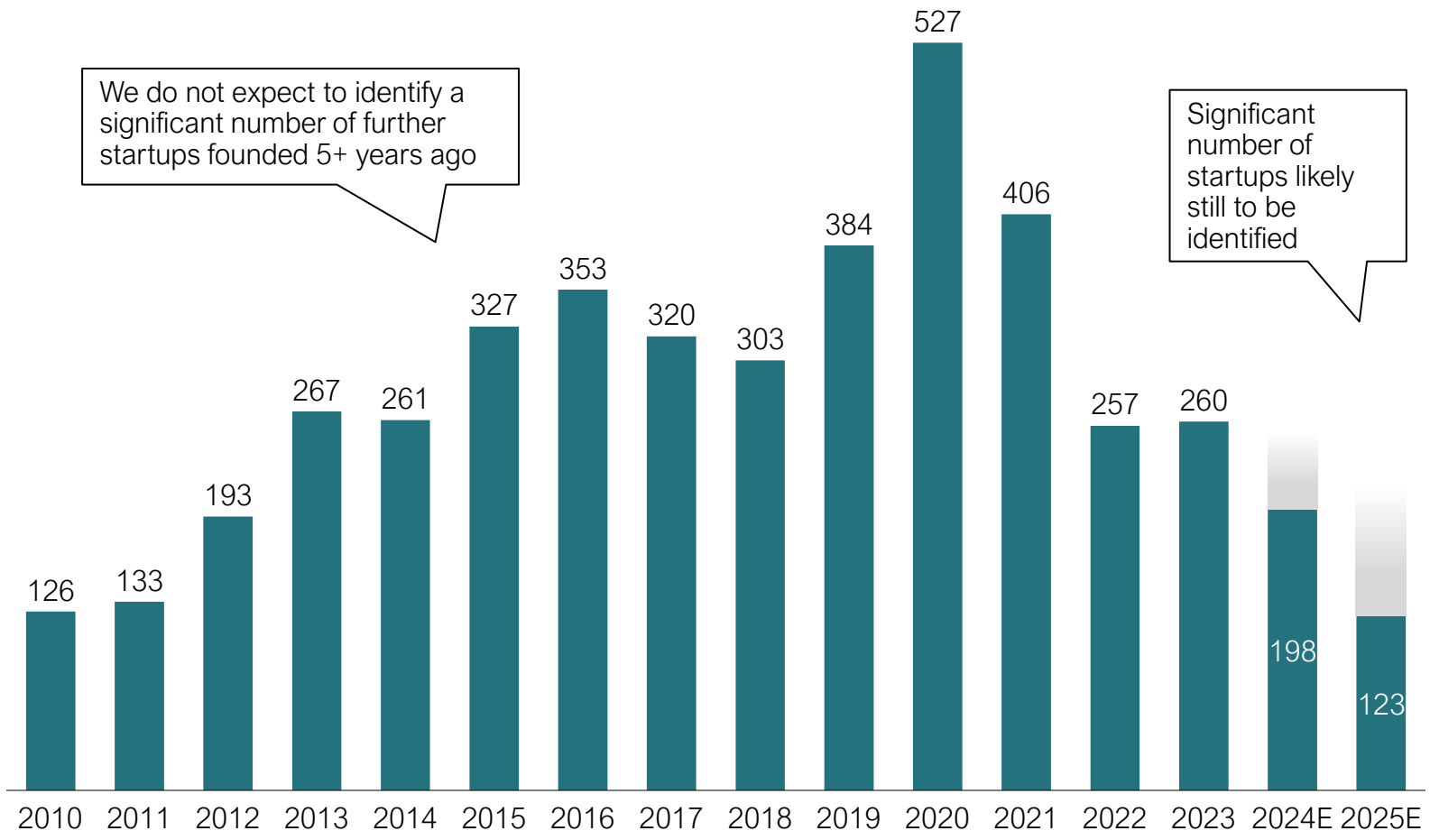
Appendix

# Startup formation has declined to around 260 companies in 2022–23 after the 2020 peak

## Identified startups by registration year

Number of companies




- Startup formation peaked in 2020, with over 500 startups being founded. The annual figures are, however, volatile. Most pre-2020 years saw around 200-400 startups being founded, with a surge in and around 2020.
- The surge around the COVID-19 pandemic may have been driven by both necessity (e.g. job losses) and new opportunities arising from digitalisation, remote work and e-commerce.
- Following the record years of 2020 and 2021, startup formation declined to below pre-2020 levels, with approximately 260 new startups founded annually in 2022–2023.
- The reasons behind the decline remain unclear. However, early-stage startups and scaleups already employ close to 15,000 people and some potential founders might be working for them.

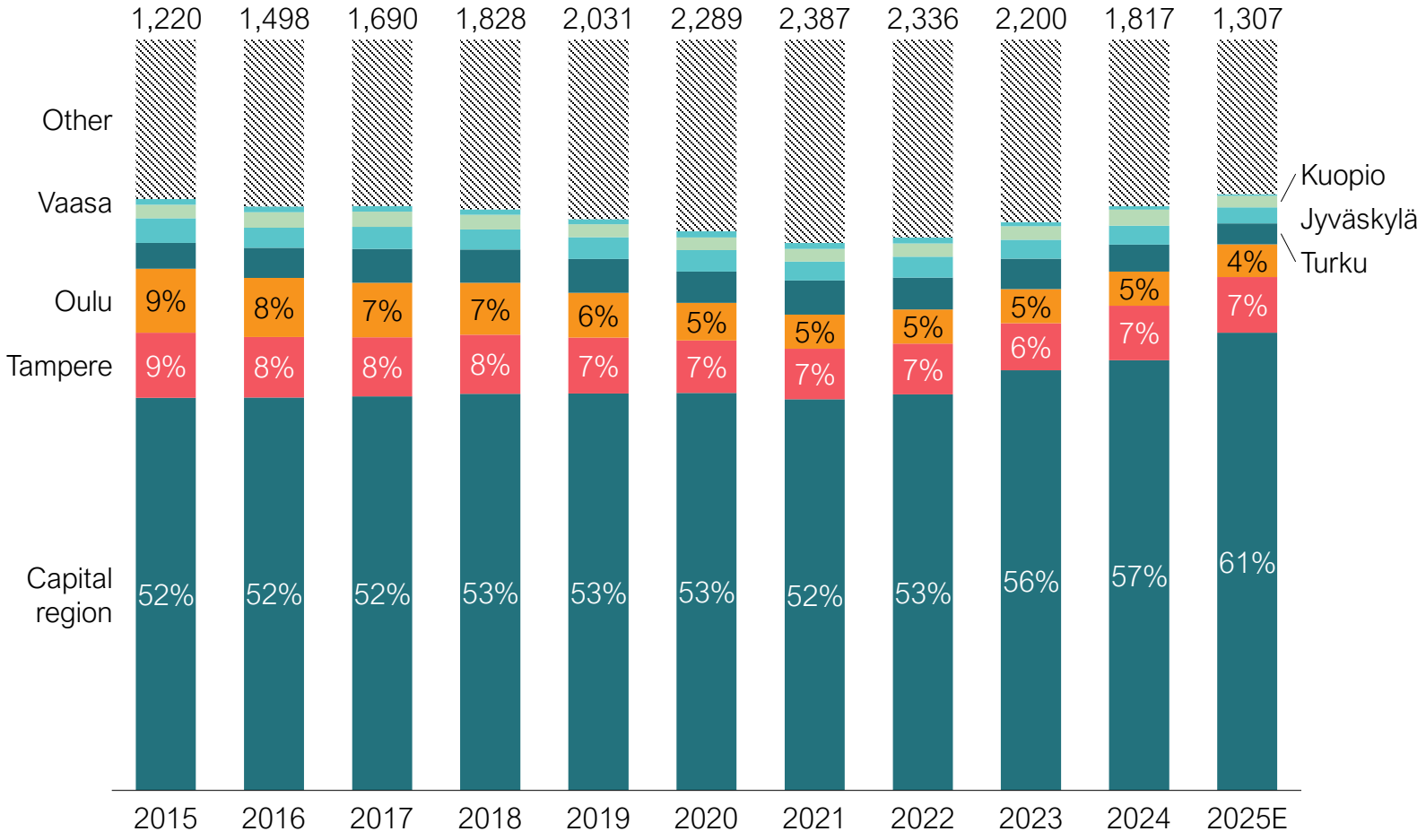
Source: Team analysis based on Tesi's data model

# The capital region accounted for 57% of early-stage startups in 2024, with the proportional share increasing during the 2020s

## Early-stage startups by current HQ location

Share of early-stage startups, 2015-2025

- The Finnish startup ecosystem is increasingly concentrated in the capital region. Its share of early-stage startups held steady at 52–53% from 2015 to 2022, then climbed to 56% in 2023, 57% in 2024 and 61% in 2025. Together with Tampere and Oulu, the three largest hubs now account for 73% of all startups, up from 70% a decade earlier.
- The gain has come at the expense of the other hubs rather than the rest of Finland. Oulu's share has halved from 9% to 4%, Tampere has slipped from 9% to 7%, and Turku, Jyväskylä, Vaasa and Kuopio have all lost ground. The share outside the named cities is back at 21%, the same as in 2015, after peaking at 27% in 2021.
- Beyond the top three, startups are found mainly in university cities such as Turku and Jyväskylä, though 2025 figures are still indicative and may shift as more startups are identified.

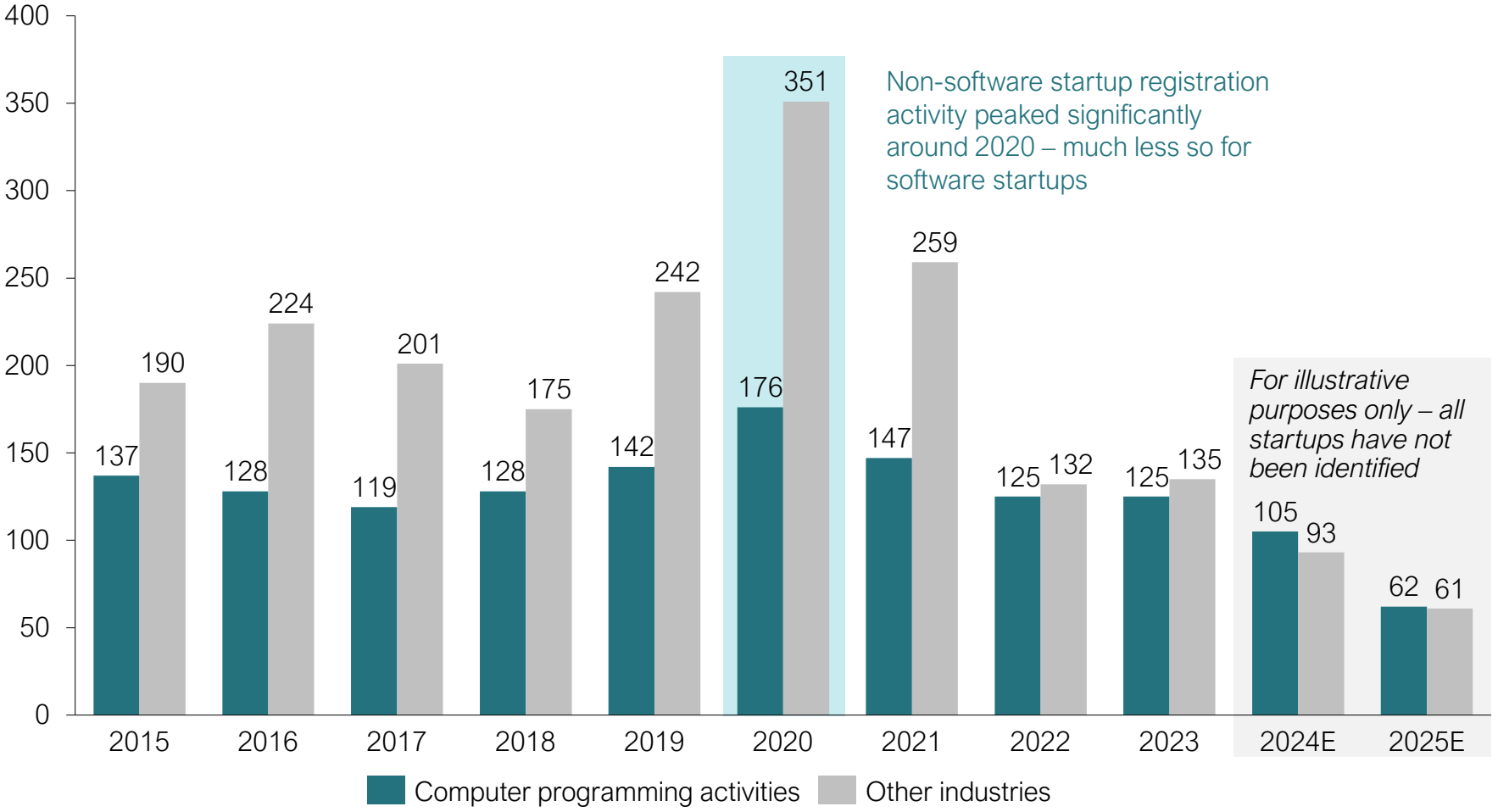



Note: 2025 figures are still indicative, as there are likely still a significant number of startups yet to be identified.
Source: Team analysis based on Tesi's data model

# Close to half of startups are software companies; 2020 peak in registration activity driven by a wide variety of non-software companies

## New startups by industry and registration year, 2015–2025

Count of unique companies by registration year



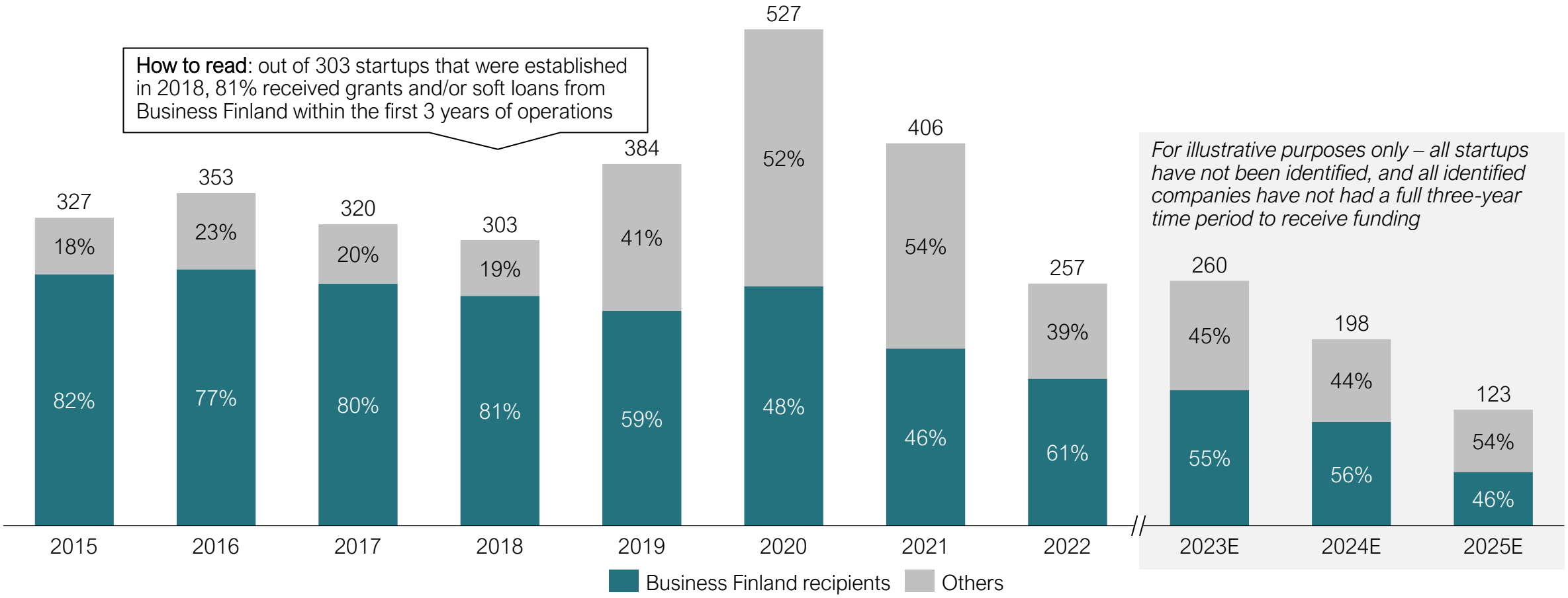

- Computer programming, the largest industry for startups, has maintained relatively stable levels of new company formation throughout the study period.
- Startup formation increased around the COVID-19 pandemic (2019–2021). However, the average number of new computer programming startups remained broadly unchanged before and after the pandemic: 128 per year in 2015–2018 compared with 125 in 2022–2023.
- Most of the variation in overall startup formation comes from other industries, where the number of newly founded startups fluctuates more significantly and has decreased in recent years.

Source: Team analysis based on Tesi's data model

# The share of identified early-stage startups receiving Business Finland funding during their initial years has declined

## Share of companies receiving Business Finland grants or soft loans within three years of registration

% of all companies registered

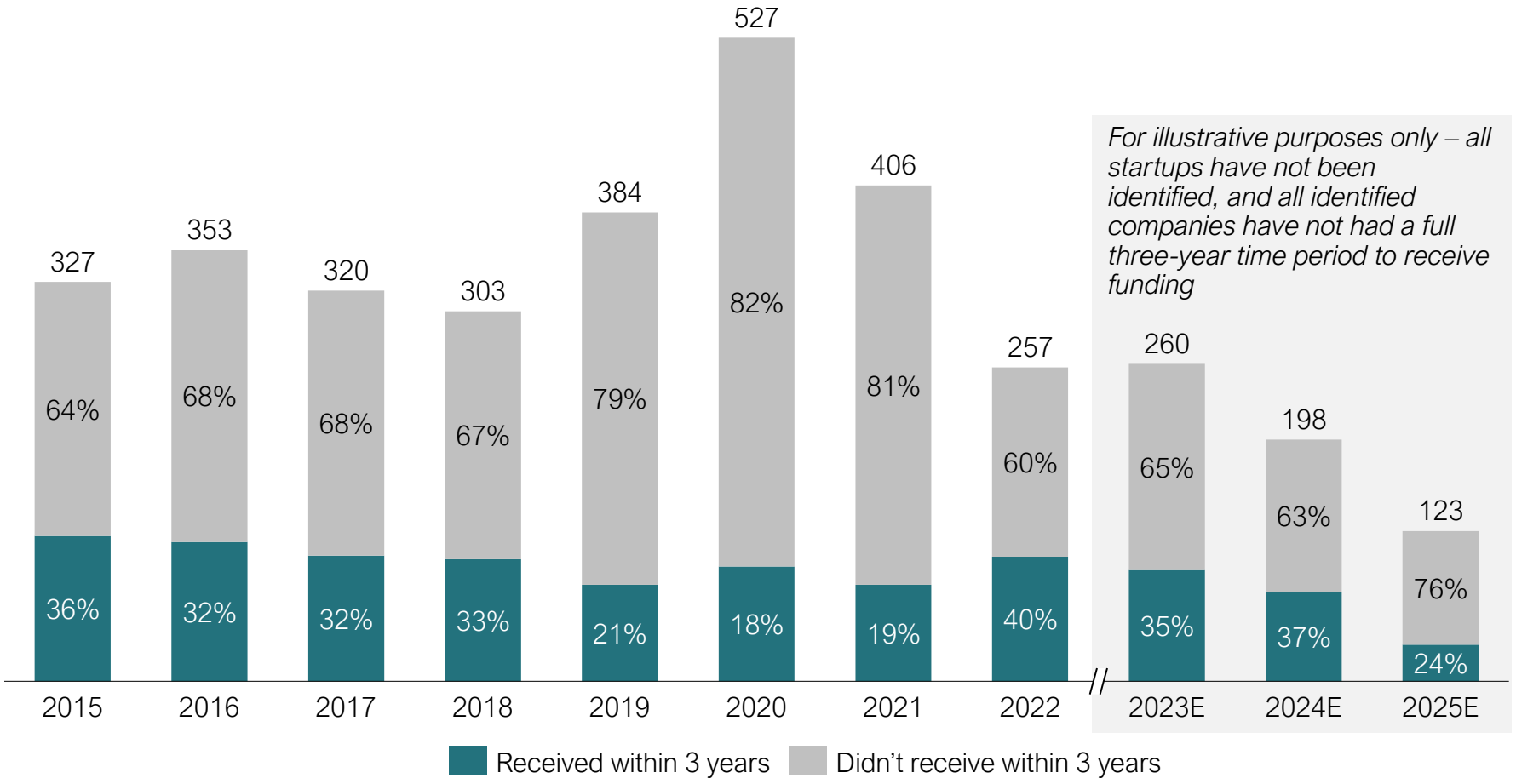



Note: Only ~half of the grants and soft loans have been received during the first 3 years, but for comparability the binary calculation was done with a 3yr threshold.
Source: Team analysis based on Tesi's data model

# A third of startups raise equity within three years; only the 2019–2021 cohorts fell to a fifth

## Early-stage startups by registration year and funding rounds

Share of companies receiving 1st funding round within 3 first years of operations



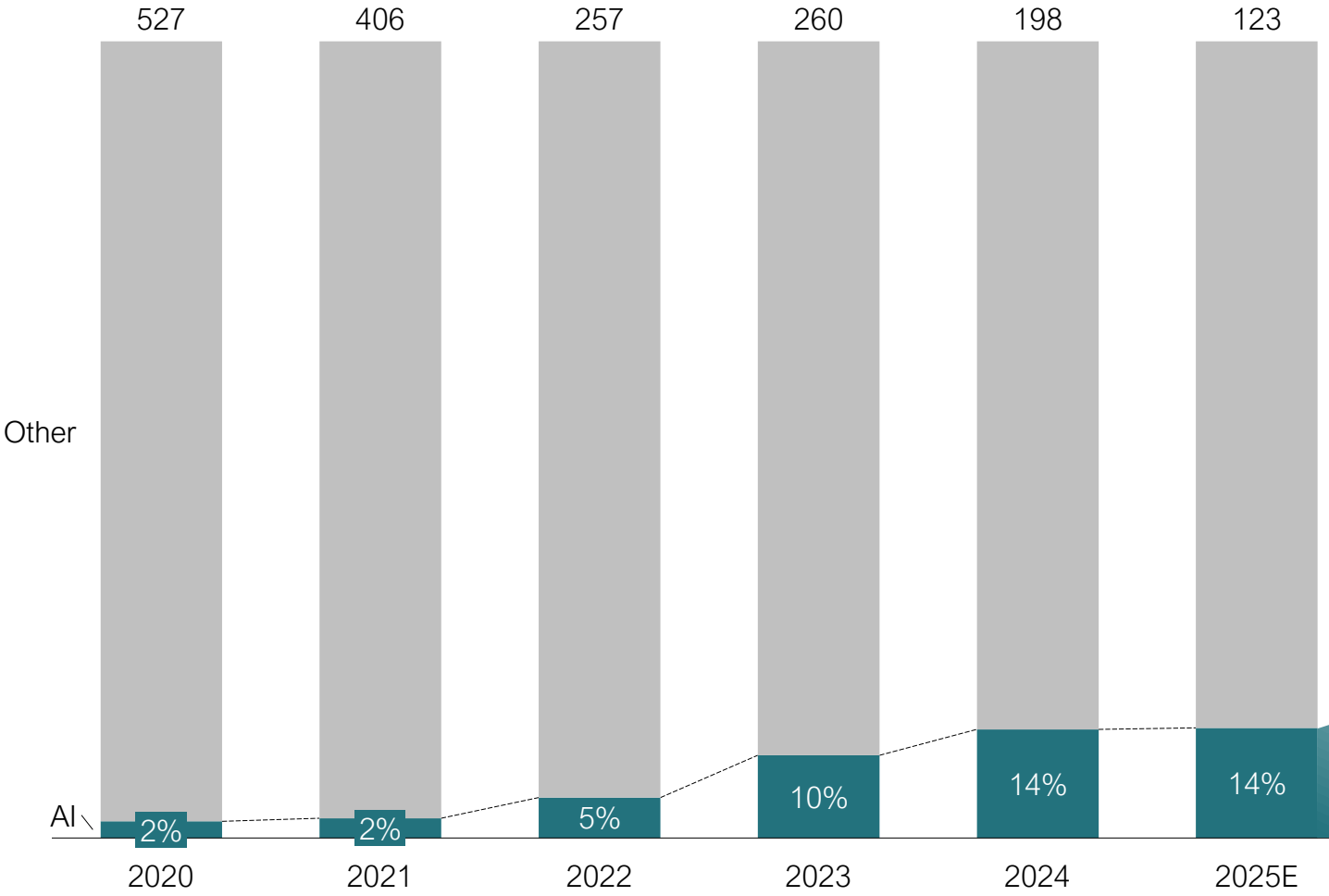

- The number of startups securing their first funding round within three years of founding has declined since 2015, broadly in line with the overall decline in startup formation.
- The share of startups securing early funding has remained stable outside the COVID years. On average, a third of startups founded in 2015–2018 and 2022–2023 received funding within 3 years, compared with just a fifth of those founded in 2019–2021.
- Other investment statistics paint a mixed picture. According to FVCA data, venture capital investments in Finnish early-stage companies have increased significantly, peaking in 2024. Meanwhile, the number of investments reported by Finnish business angels peaked in 2021 before declining sharply, although FiBAN data indicates a recovery in 2025.

Source: Team analysis based on Tesi's data model

# AI companies account for 14% of the 2025 startups identified so far

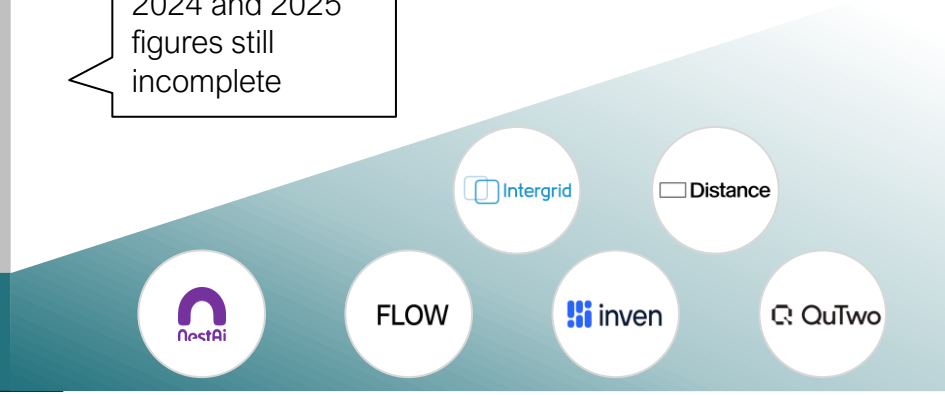
## AI share of newly founded Finnish startups over time

% of companies, 2020-2025




- We have identified roughly a hundred Finnish AI startups founded since 2020 – most were founded in 2023 or later.
- The jump coincides with the launch of ChatGPT (GPT-3.5) in November 2022, followed by a global boom in investment in generative AI and fast technological advances.
- Most Finnish AI startups build applications (e.g. Inven, Intergrid). A limited number of companies operate in earlier layers of the value chain (e.g. Flow Computing in infrastructure, QuTwo in compute orchestration).

2024 and 2025 figures still incomplete



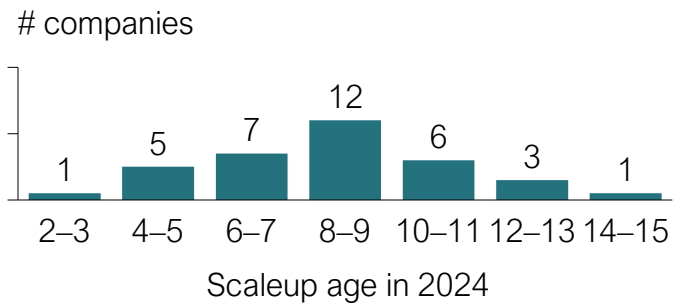

AI company = company that operates as part of the AI value chain (infrastructure, foundational models, operational layer, and applications). For applications, AI must be essential to the value proposition or materially improve it. Source: Team analysis based on Tesi's data model, Stanford HAI Artificial Intelligence Index Report 2024

# 23% of the 2024 scaleups reached scale without identified VC or Growth capital

## Companies classified as scaleups in 2024, n = 35

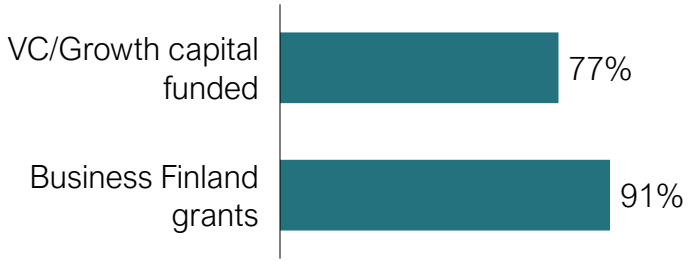
### Years in the making

Scaling up is rarely quick: most companies spend their first years building a product and finding customers before growth takes off. Most scaleups are 5-10 years old.




### VC/Growth funding and public grants

Nine in ten scaleups have received Business Finland grants or soft loans, and 77% have raised VC or growth capital. All three scaleups with revenue above €100m in the cohort are VC-backed.




### Every fourth scaleup has a deep tech background, almost a third utilize AI heavily

**26%** of scaleups are deep tech companies

**29%** have AI as an essential part of the value proposition, or AI materially improves it

### Repeat founders in the majority

**60%** of scaleups have a founder who has founded a company before. Experience, networks and a track record from earlier ventures may make scaling easier – on the other hand, the founders themselves may simply be well suited to entrepreneurship.

Source: Team analysis based on Tesi's data model, LinkedIn

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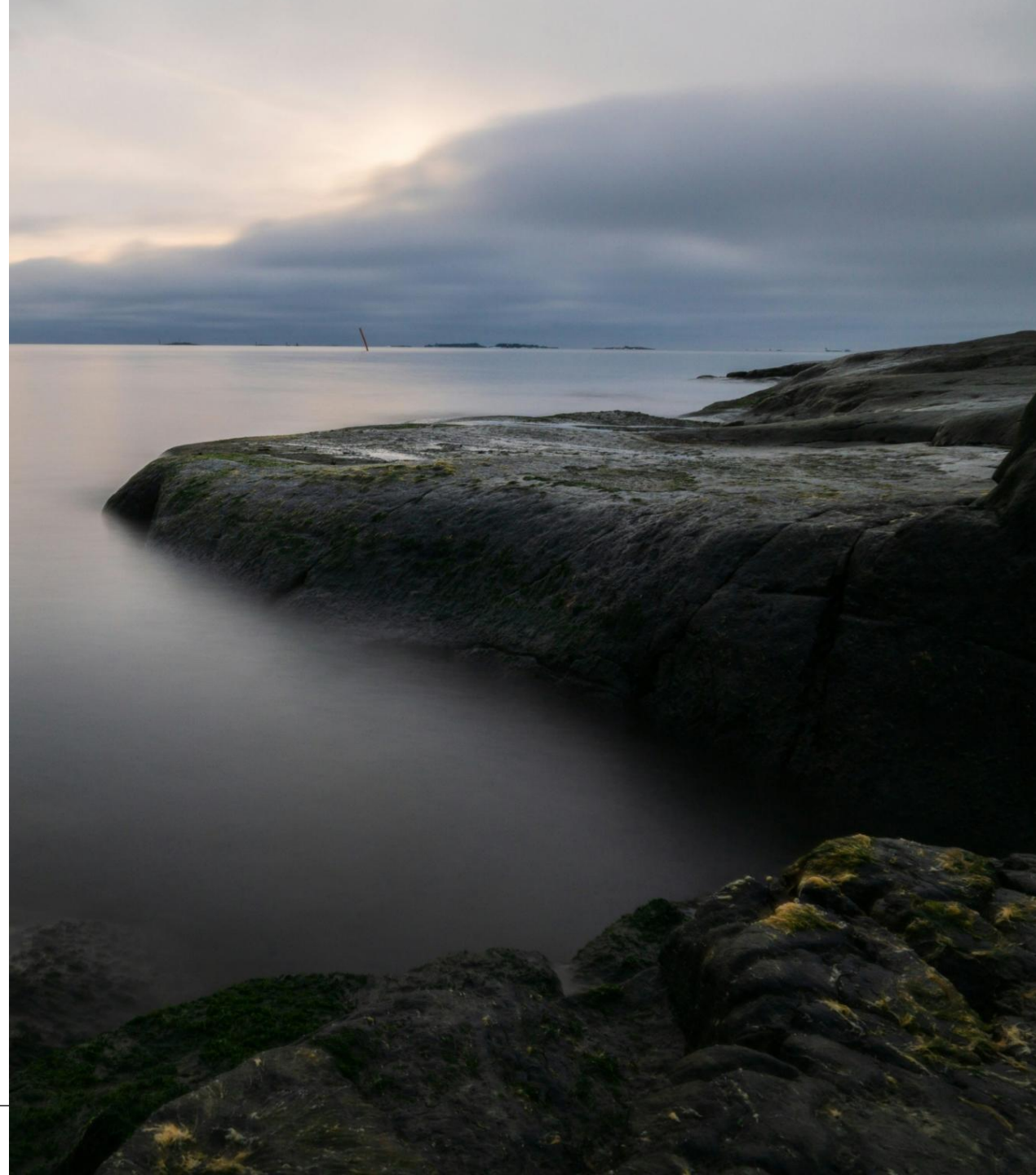
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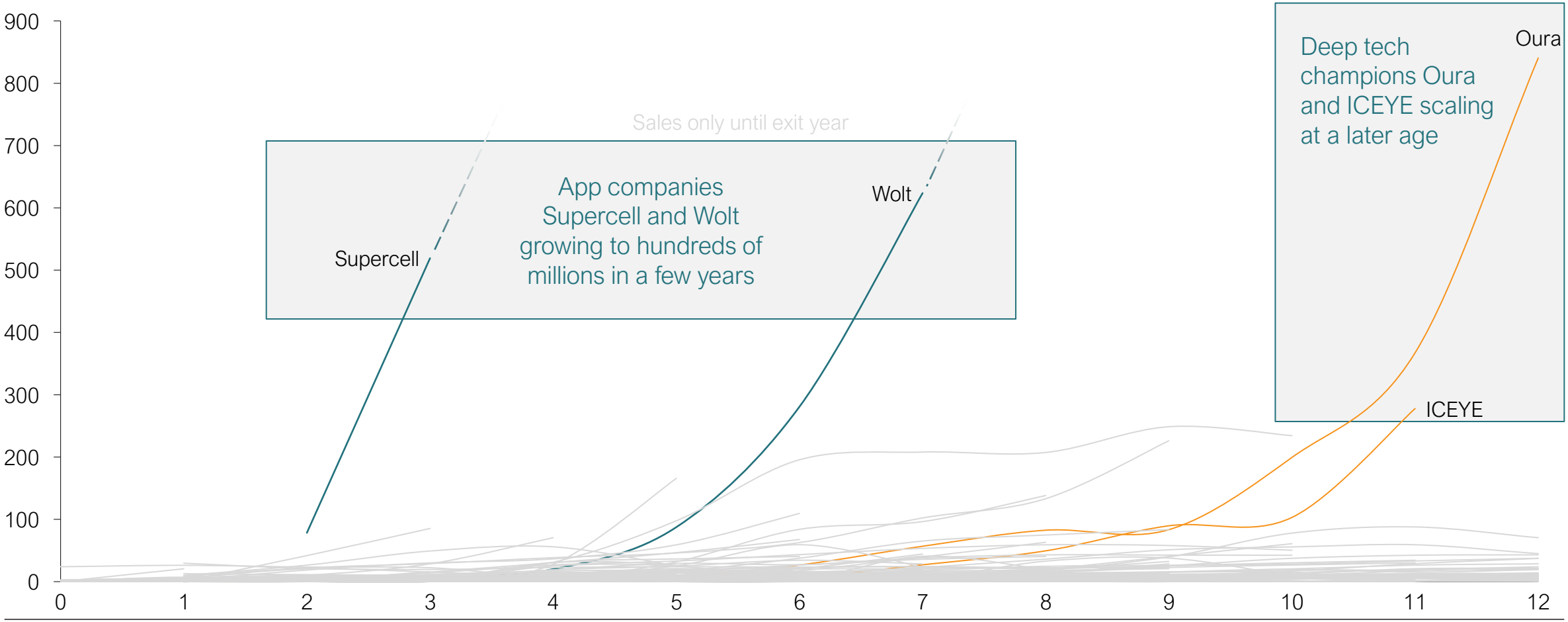
Appendix

# Oura's latest revenue exceeds Wolt's and Supercell's revenue in their exit years

## Revenue development since company registration

Years 0-12 until exit year (or latest available)

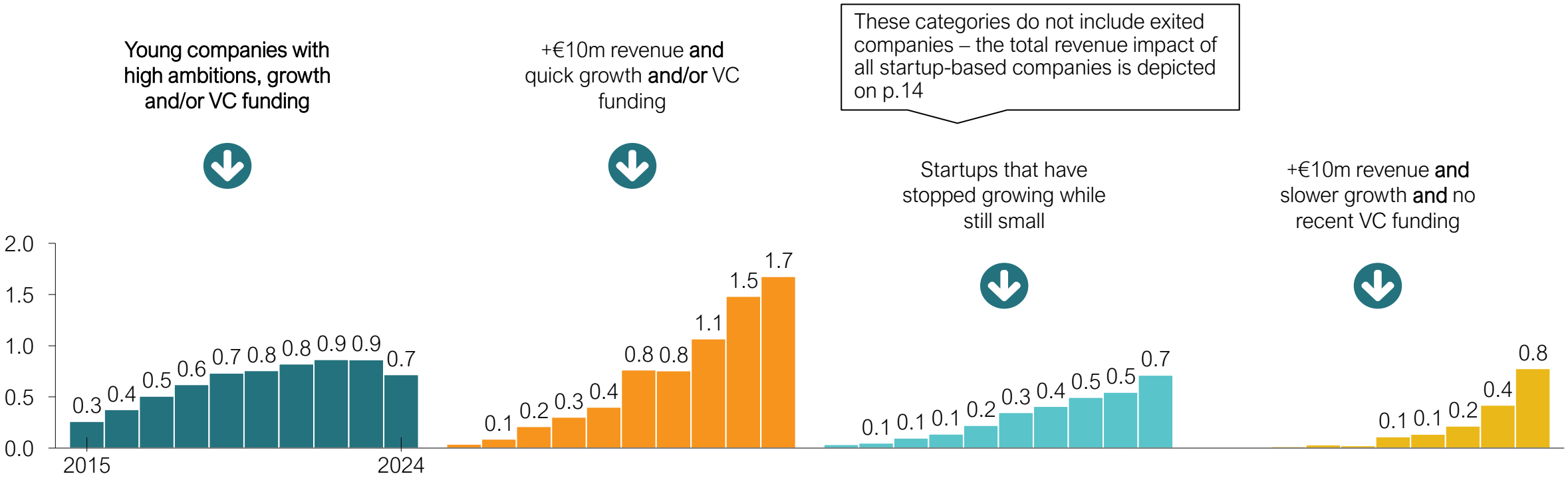



Note: Chart includes full revenue for exit year, but no subsequent years due to comparability issues.
Source: Team analysis based on Tesi's data model

# Early-stage startups generate approx. €700m of annual revenues – the bigger revenue impact comes in the scaleup phase

## Total revenue by category and year

€bn




Sales drop due to many companies moving to other categories – see p.51 for additional information

Growth driven by a few growth rockets, as is typical in the industry

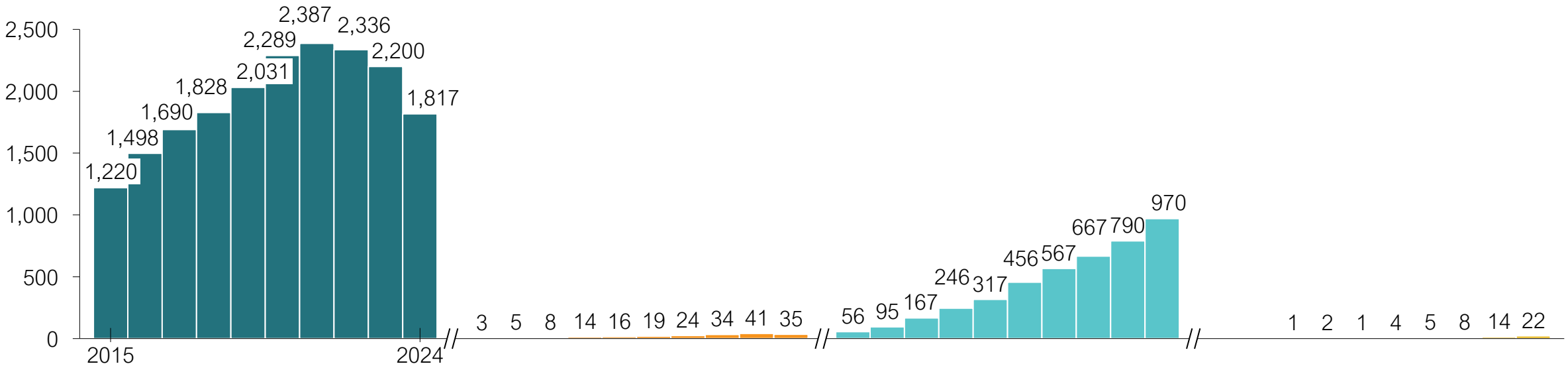
These categories are the end points (until the company is acquired); more and more companies remaining independent

Source: Team analysis based on Tesi's data model

# Thirty-five companies met the study's scaleup criteria in 2024

## Independent and active companies by category

Count of companies, 2015-2024




Decline driven by fewer new companies being founded and old ones maturing

The most volatile category due to the highest requirements – see next page for additional information

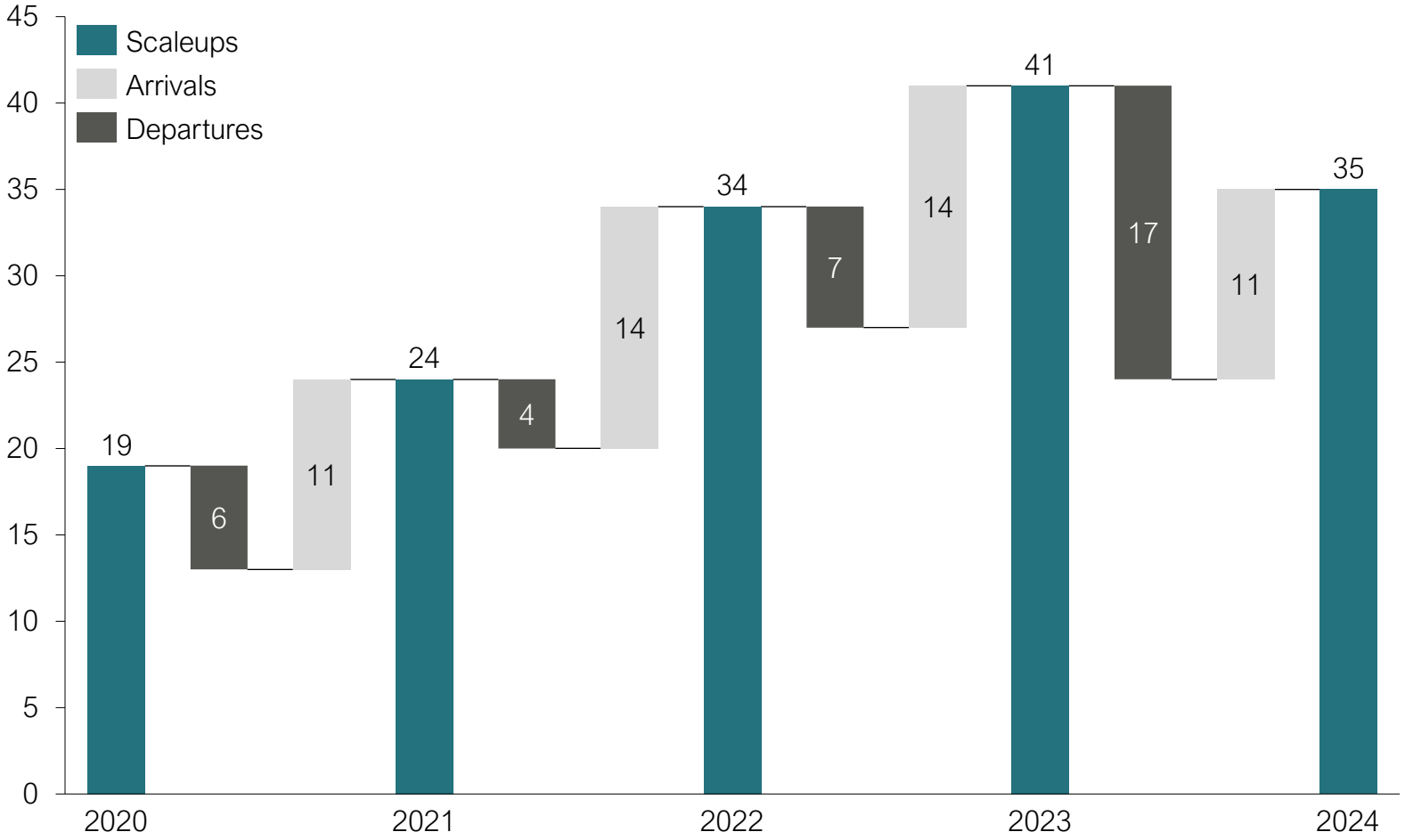
Categories for the years after initial high growth (ambitions) – regular businesses with regular growth and stability

Note: As we typically identify startups only after they have been registered, it is likely that the true number of early-stage startups is somewhat higher in recent years.
Source: Team analysis based on Tesi's data model

# The scaleup category is very volatile, as it is extremely difficult to sustain very high growth at over €10m in annual revenue

## Scaleup arrivals and departures, 2020–2024

Count of companies, 2020-2024



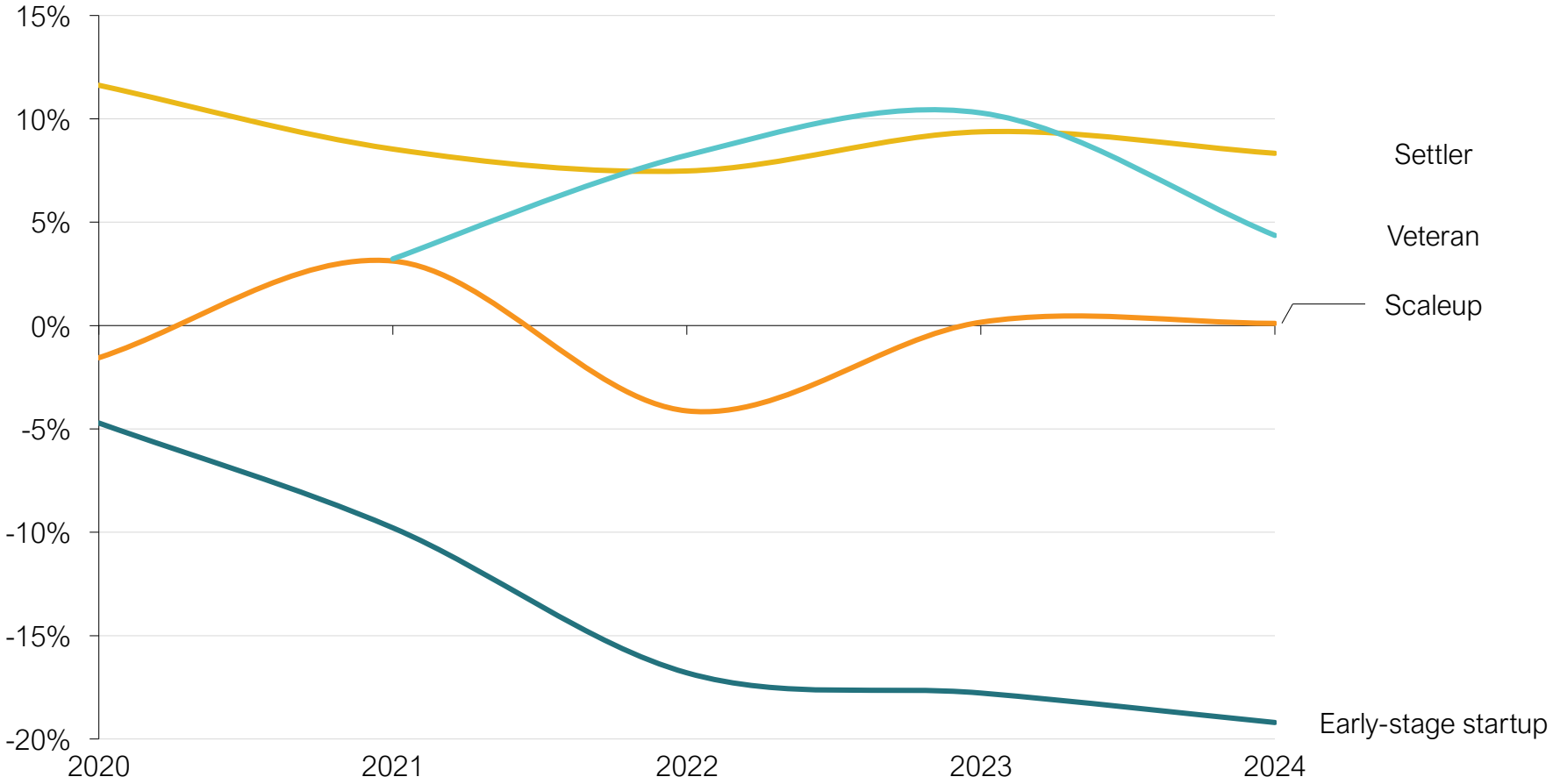

- Staying in the scaleup category is hard, and companies moving in and out of it every year is expected. A company must hold €10m+ in revenue and either raise funding or grow at a 50% 3-year CAGR – a pace few companies can sustain for long.
- The 2023–2024 transition saw 17 companies leave the category, the most in the period observed. There is no single reason behind the high number of leavers, but the all-time high in 2023 is a likely contributor.
- Of the 17 that left the Scaleup category after 2023, eight lost momentum through a combination of lower growth and no recent funding round, six saw revenue shrink to below the €10m threshold, and three were acquired.
- Most of the 35 scaleups are one step from leaving: 23 of them meet only the growth or funding criteria, not both.

Source: Team analysis based on Tesi's data model

# Early-stage startups typically focus on growth and become profitable only when they reach later stages of their lifecycle

## Profitability by category and year

Median EBITDA/Sales

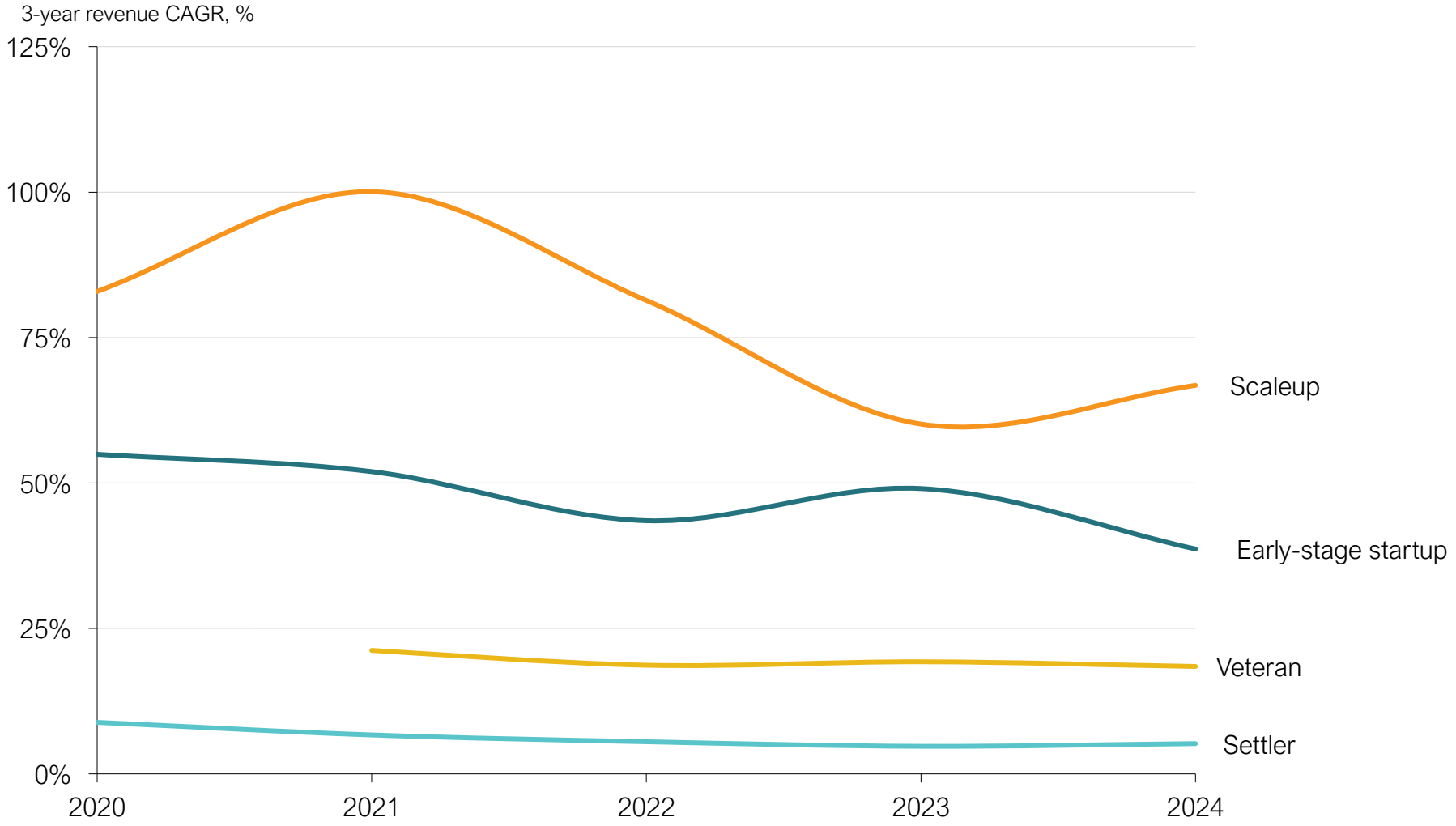



- The median profitability of early-stage startups has been in decline during the 2020s.
- A larger share of early-stage startups have raised funding rounds in recent years – driven by a stable number of funding rounds combined with a decline in the number of early-stage startups.
- Companies that raise funding rounds deliberately run losses: they hire, build products and expand into new markets before their revenues catch up.
- The early-stage startups that do not raise funding rounds have stayed close to break-even throughout the period.

Note: Only years and categories with at least 5 observations.
Source: Team analysis based on Tesi's data model

# Scaleup median revenue growth fell as the scaleup pool grew; other categories' median growth figures have remained stable

## Median revenue CAGR by category and year[1]




- Median revenue CAGRs have been roughly stable across categories over the 2020s, with the exception of scaleups.
- The declining median among scaleups is primarily a composition effect, not a broad growth crisis. As the scaleup pool has almost doubled since 2020, it now skews older (average age over 8 vs ~7 years)[2] and is dominated by returning scaleups whose initial hyper-growth has naturally moderated.
- Furthermore, a growing revenue base — median revenue rose from €19m to €28m — makes sustaining high percentage growth mechanically harder.

1) Only years and categories with at least 5 observations. 2) The maturing scaleup base is likely (at least partially) a reflection of the study scope, which includes only startups founded in 2010 or later. Source: Team analysis based on Tesi's data model

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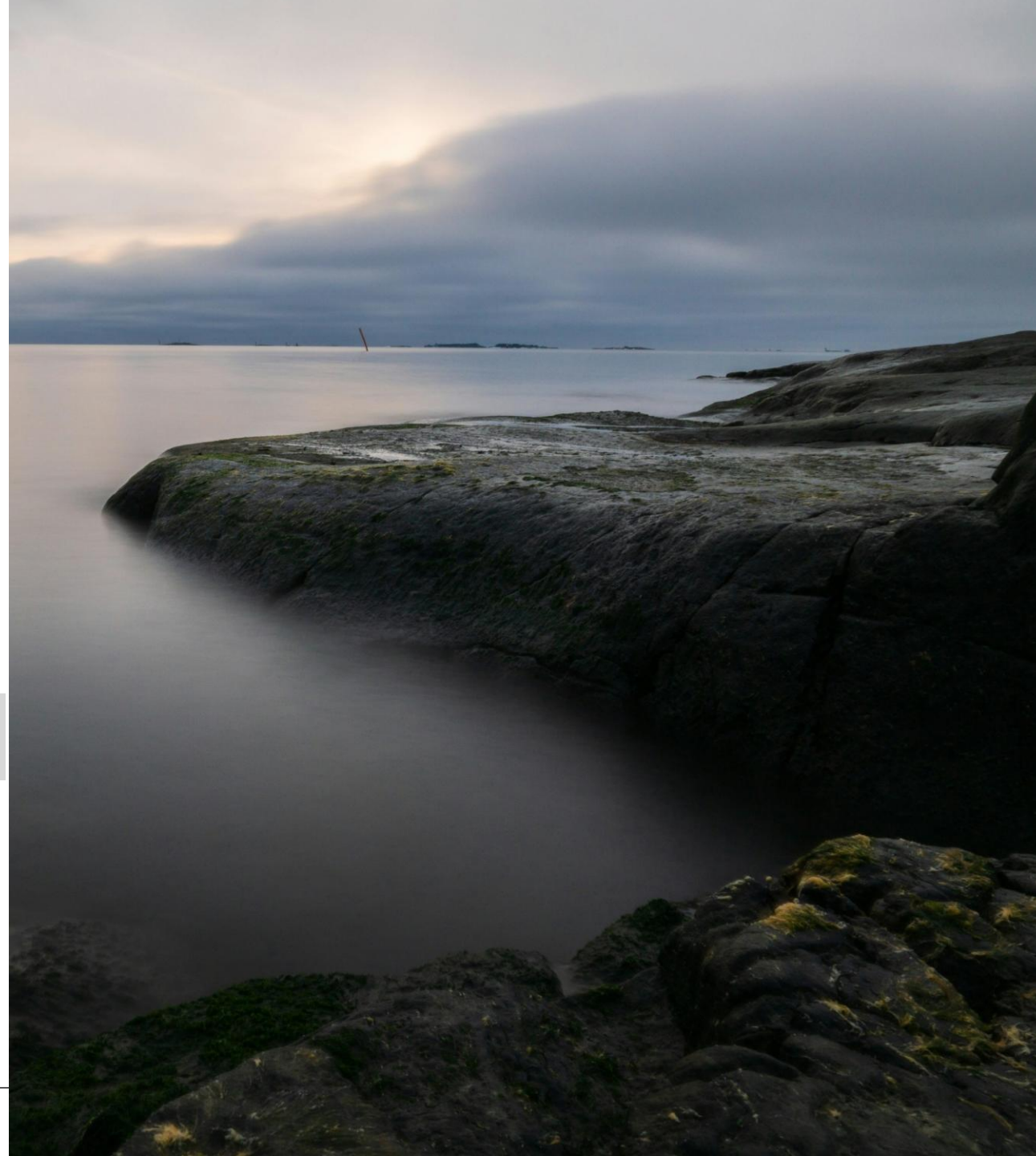
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# Early-stage startups and scaleups were valued at an estimated €23bn in 2024; preliminary 2025 value reached €26bn

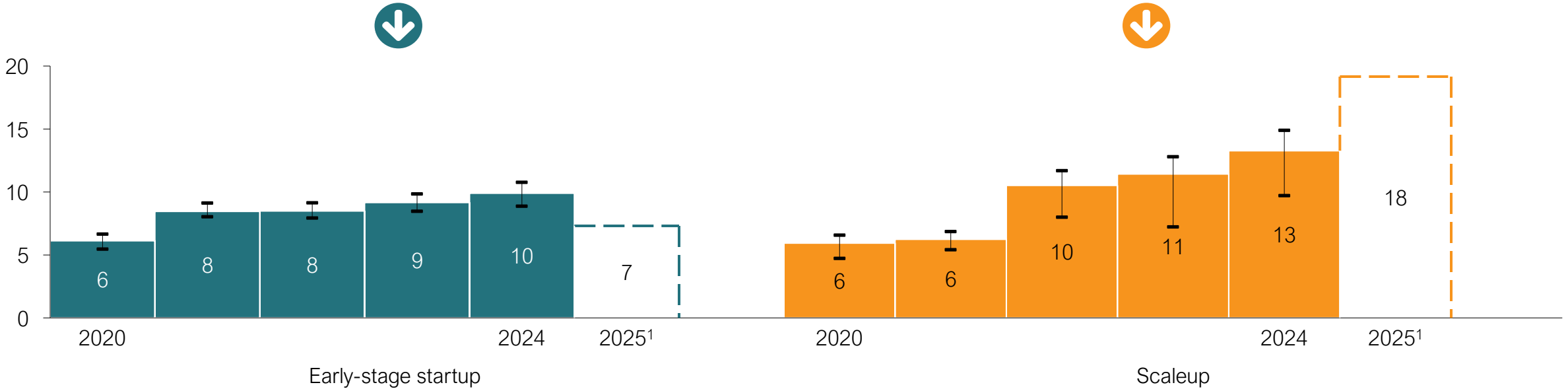
## Estimated company value by category, 2020–2025, 2025 preliminary

INDICATIVE

€bn; whiskers represent the 10-90% estimated range of the total valuation

Early-stage startups are mostly young, often pre-revenue companies, so their value rests on funding raised rather than today's revenue. Total value stepped up from about €6bn in 2020 to €8bn in 2021 but has since been broadly flat at €8–10bn. The 2025 figure is preliminary and will most likely rise as coverage improves.[1]

A few dozen scaleups carry outsized value, with real revenue, real growth, and in many cases fresh capital from investors. Few companies had reached scaleup status before 2020. Valuations have risen since 2021, and major VC rounds in 2025 (e.g. Oura €777m and IQM €275m) pushed them sharply higher still.




**Valuing startup-based companies is inherently challenging: no single method suits all categories, so category-specific methods are calibrated against reported valuations.** Scaleups are valued using a median revenue multiple, with shareholders' equity as a floor. Early-stage startups exhibit non-linear growth, making revenue a less reliable valuation basis. Funded startups therefore receive model estimates using funding and financial data, while unfunded startups are valued at shareholders' equity.

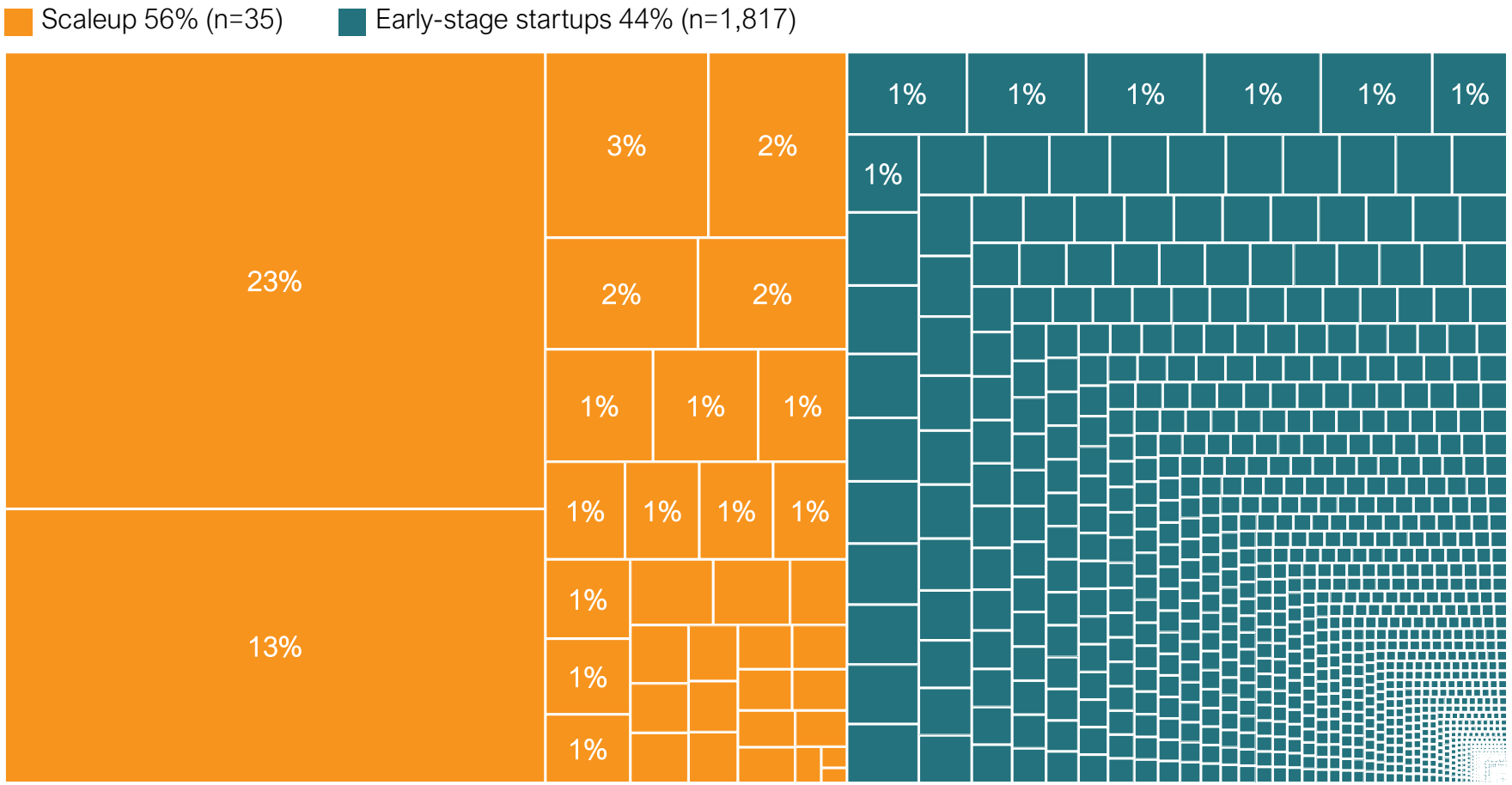
1) 2025 valuations are preliminary and based on partial financial statement coverage. Early-stage startup valuation will most likely rise as more startups are identified.
Source: Team analysis based on Tesi's data model, Tesi fund valuations, PitchBook, Dealroom, Orbis

# 35 scaleups account for 56% of estimated startup and scaleup value

## Share of combined estimated value in 2024, %[1]

INDICATIVE

Share of total valuation (%); n = 1,852



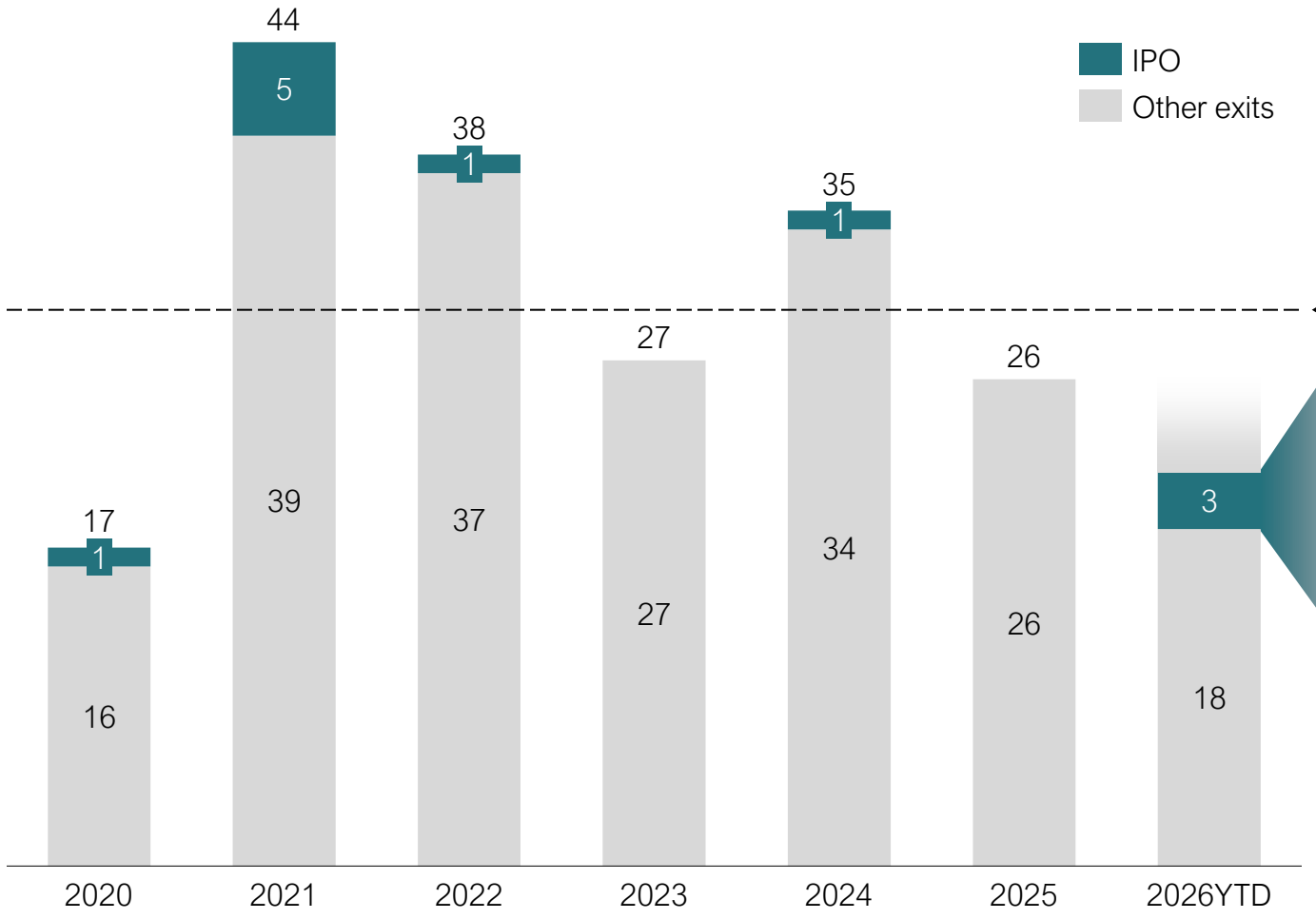

- Much of the €23bn total valuation in 2024 is concentrated in a few large companies. This is expected and natural, since a handful of winners typically create most of the value in startup ecosystems.
- The concentration is most evident in scaleups, which hold 56% of total value. The two largest scaleups alone hold over a third (36%) of the entire 2024 valuation. The average scaleup is worth €361m (median €104m).
- Early-stage startups are less concentrated and hold 44% of value. The average early-stage startup is valued at €5.4m, and the typical one (median) at €0.2m.
- For context, the average Nasdaq Helsinki listed company is valued at €1.8bn and the average First North Finland listed company at around €64m (as of December 2024).

1) Includes early-stage startups and scaleups. Excludes settlers, veterans, exits and extinct companies.
Source: Team analysis based on Tesi's data model, PitchBook, Dealroom, Nasdaq

# Around 30 exits are made per year – the IPO window for startup-based companies seems to have opened again in 2026

## Exits by year

Count of companies in the Exit category, 2020-26YTD




## IPOs in 2026

**IQM**

Listed on Nasdaq in the US and Helsinki in July 2026 through a SPAC merger, raising about €210m at a $1.8bn pre-money valuation

**SENSOFUSION**

Listed on Nasdaq Helsinki in October 2026, raising about €300m at a €1.6bn valuation.

**Steady Energy**

Listed on Nasdaq First North Finland in October 2026, raising about €75m at a ~€350m valuation.

Note: 2026YTD until 13.10.2026

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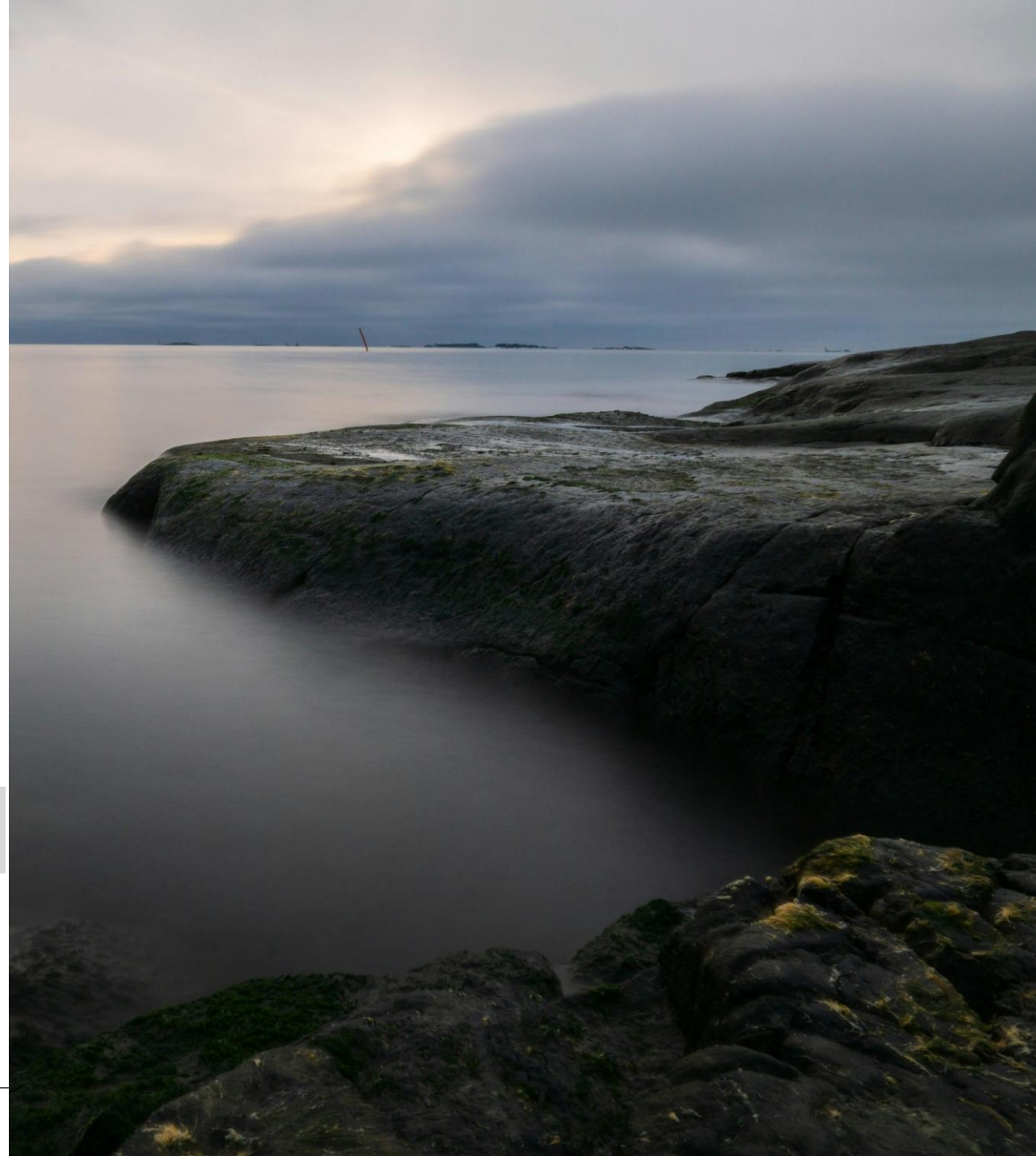
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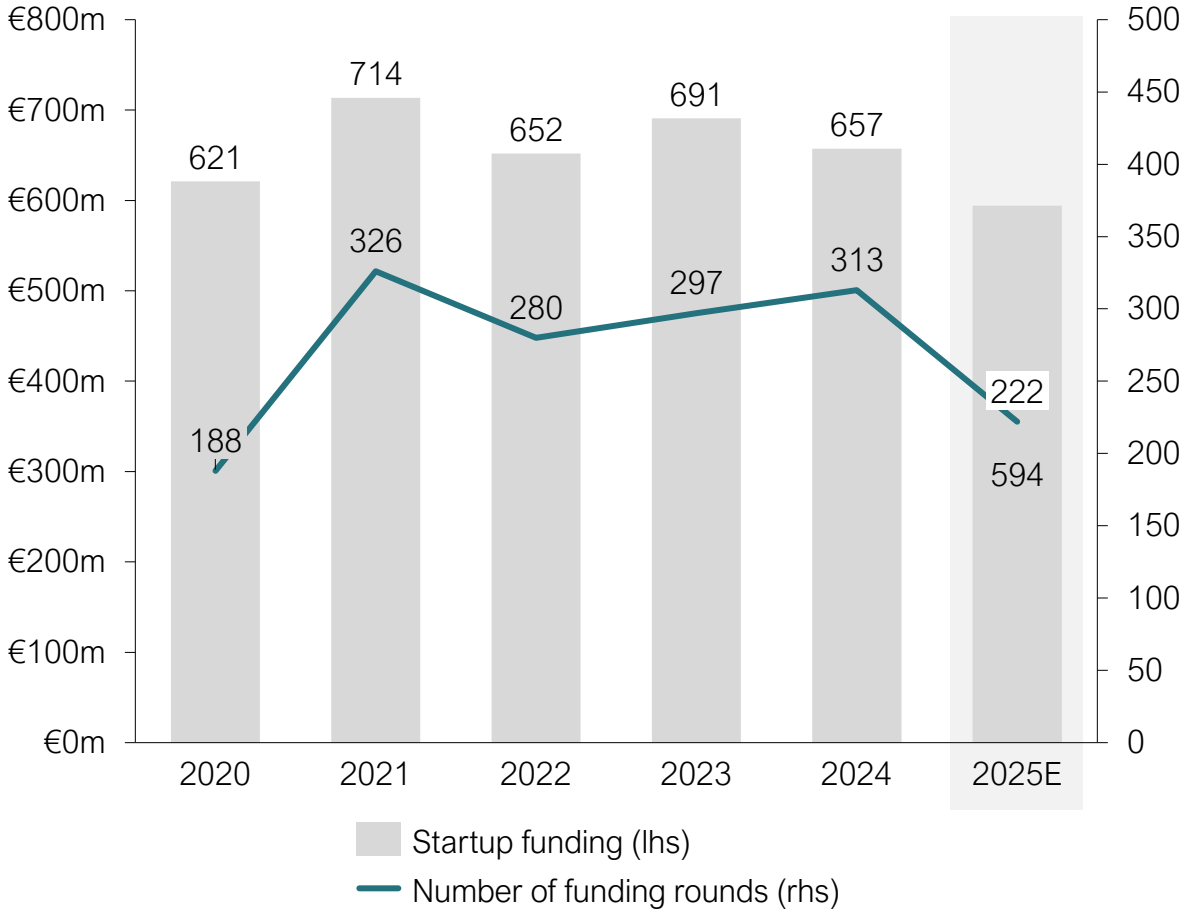
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# Early-stage startup funding has been steady in recent years, despite a few notable outliers raising extraordinary rounds

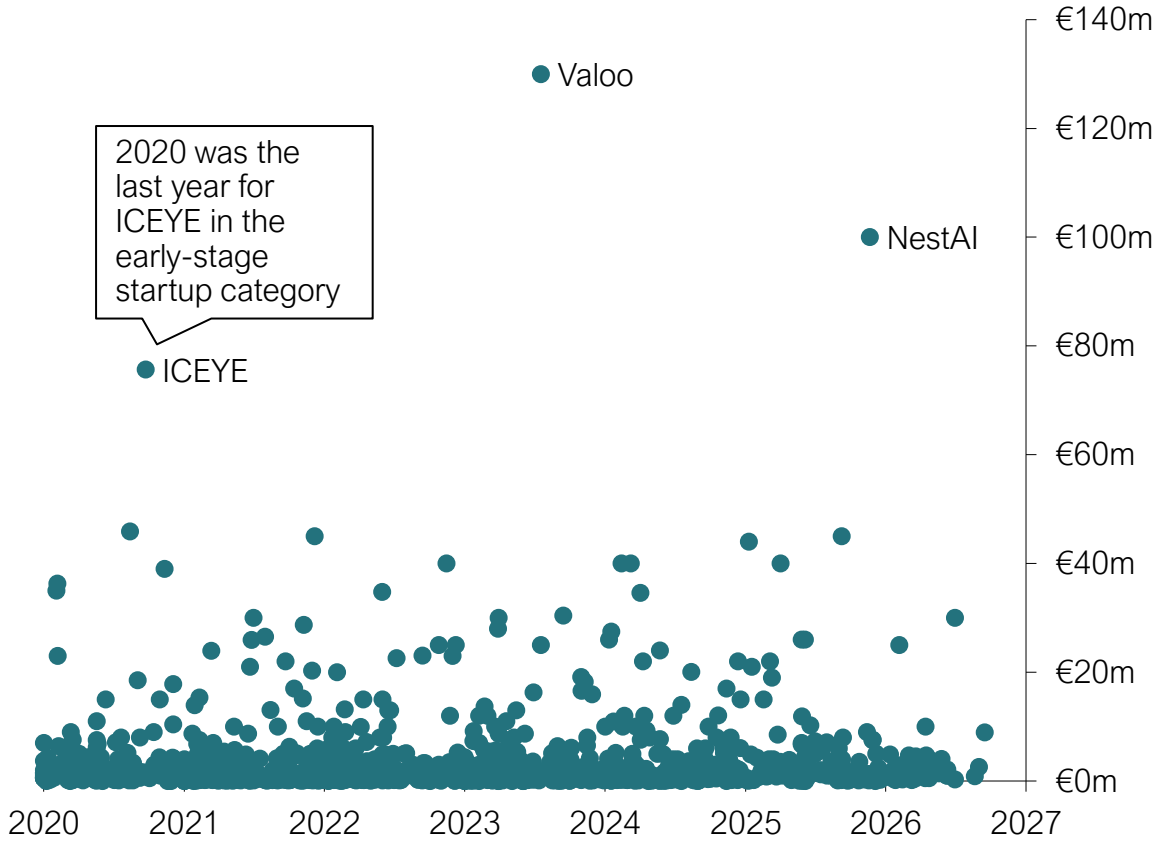
## Early-stage startup funding by year[1] EXCL. ANGEL ROUNDS[2]

€m, # of rounds




## Startup rounds by size and date

Round size in €m

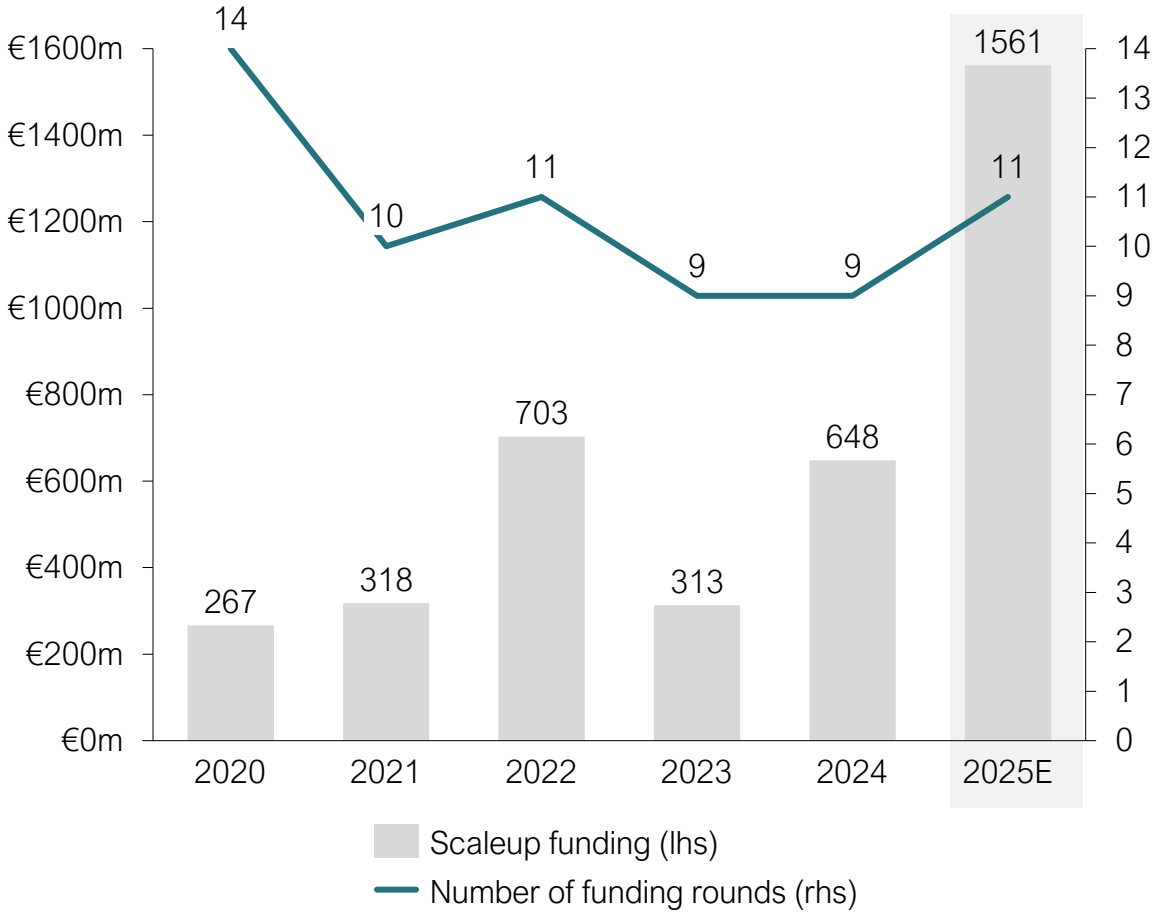



1) 2025 figures are preliminary, because all companies have not been determined yet due to missing financial statements. 2) A similar chart in the 2025 study included angel rounds. Due to lower data coverage into angel rounds, they are filtered out in this study (for all analyzed years). Source: Team analysis based on Tesi's data model

# Scaleup funding hit record levels in 2025 – several high-profile rounds in 2026 show further success among Finnish scaleups

## Scaleup funding by year

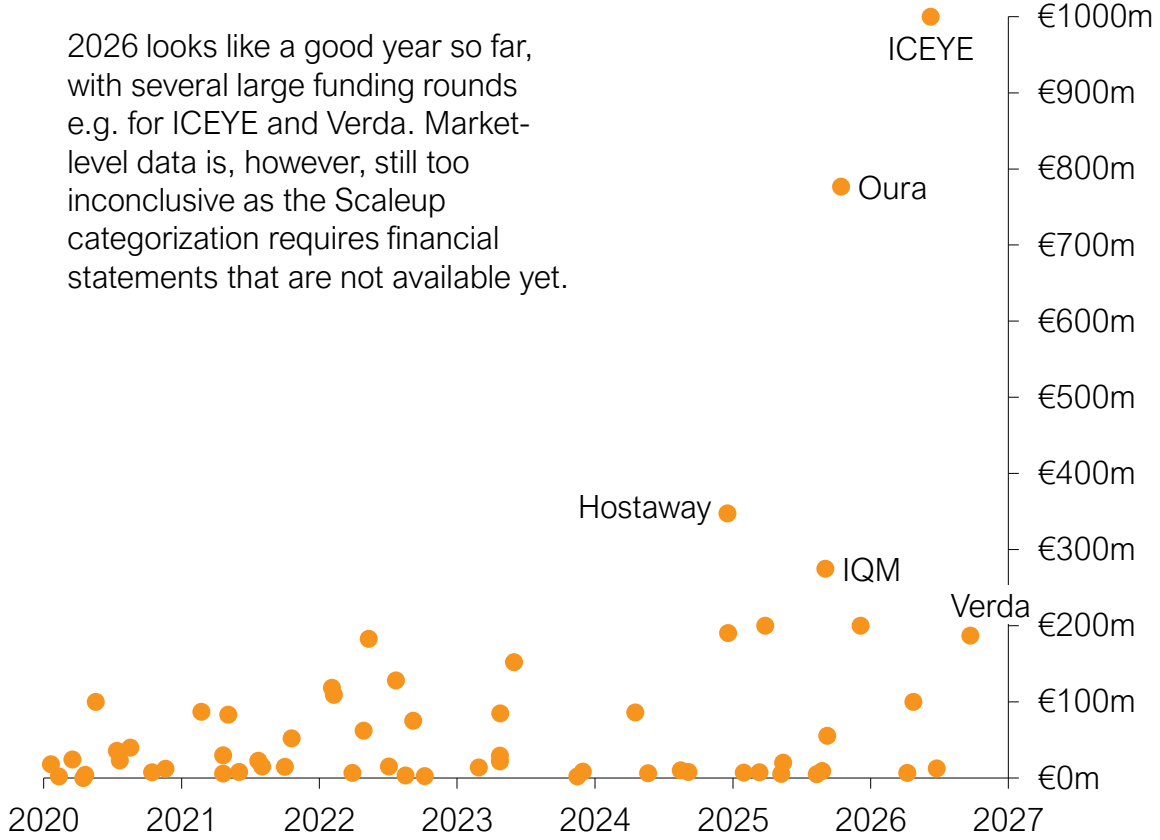
€m, # of rounds




## Scaleup rounds by date

Round size in €m

2026 looks like a good year so far, with several large funding rounds e.g. for ICEYE and Verda. Market-level data is, however, still too inconclusive as the Scaleup categorization requires financial statements that are not available yet.

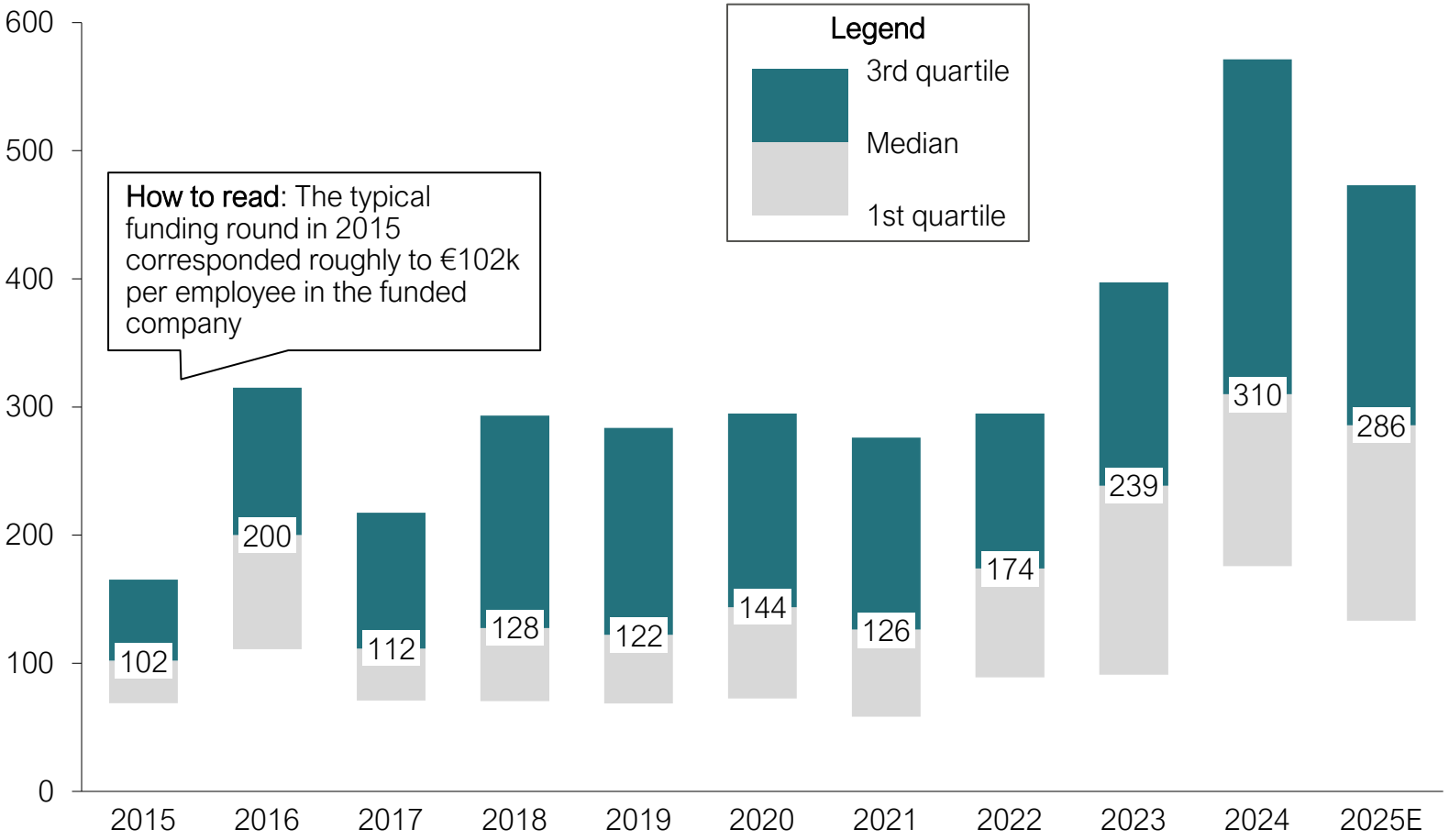



Note: 2026 figures are based on funding rounds for 2025 scaleups, as financials required for annual categorizations are not available yet. Category-level funding data is not shown due to the same reason. IQM's 2026 round would otherwise be included in the figures, but it was also listed in 2026 and will thus be in the Exit category.

# Median equity funding per employee reached €310k in 2024

## Equity funding per employee

€k, median of early-stage startups with equity funding round each year



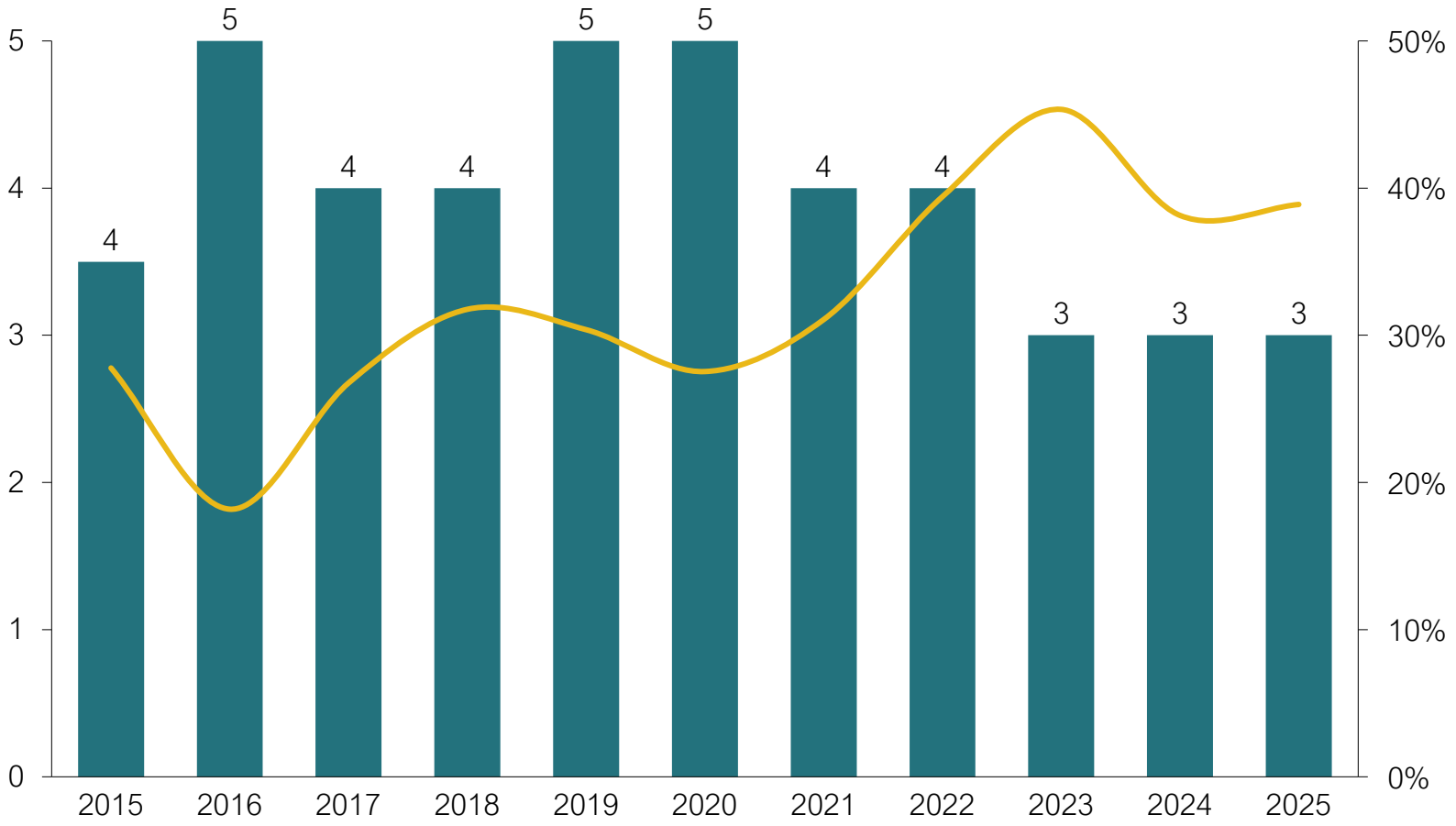

- Many startups are doing more with fewer people. Funding per employee has doubled compared with the 2015–2020 range, and data points to a step change from 2024 onward.
- The 2022 market reset is a possible turning point. Once growth-at-any-cost ended, founders may have trimmed hiring plans while investors favoured leaner teams with a path to profitability. This would push capital per head up.
- AI could be reinforcing the trend. AI-native companies seem to reach product and revenue milestones with smaller teams than earlier generations, while compute and talent costs may be pushing round sizes up.
- Outliers do not explain it, as a few proportionally large 2024–25 rounds (e.g. NestAI, Volare) lift the upper quartile, but the median also remains above 2023 levels.
- Dispersion seems to be growing. The widening spread between quartiles hints at a two-speed market: a well-funded top tier and a longer tail raising modest rounds.

Note: Calculated by summing of round value for a given company in a given year + dividing by the reported employee count; values are medians and quartiles of the analyzed startups that year. Excl. angel rounds, rounds with no known size and companies with <5 employees. Source: Team analysis based on Tesi's data model

# First-round startups had a median of three employees in 2023–2025

## 1st equity funding round by employee count

Median count of employees (lhs); share of companies with fewer than three employees (rhs)




- Startups raising their first funding round seem to become smaller than previously, possibly driven by technological advances such as generative AI.
- Smaller teams are not necessarily weaker teams. Product, cloud and outsourced capacity let a small team reach traction that once took more hires.
- In the 2025 version of this study percentages were calculated out of all funded companies including ones with no disclosed # of employees. This year, only companies with a disclosed number of employees are included in the denominator.
- Small teams are probably under-counted. Companies without a reported employee count tend to be smaller still, so the real share of small teams is likely higher.

Median number of employees (lhs)
Share of companies with less than 3 employees (rhs)

Note: Given that funding may be received early in the year, figures also include some employees hired after the funding round. Source: Team analysis based on Tesi's data model

# Foreign investors participated in 60% of second funding rounds in 2021–2026

## Share of equity rounds with foreign investor participation, by period and round number[1]

%, 2010-26

| Round number[2] Period | 1 (n=893) | 2 (n=362) | 3 (n=142) | 4+ (n=87) |
|---|---|---|---|---|
| 2010-2015 (n=180) | 19% (n=138) | 25% (n=36) | 50% (n=6) | Sample too low |
| 2016-2020 (n=358) | 32% (n=231) | 49% (n=86) | 58% (n=26) | 73% (n=15) |
| 2021-2026 (n=946) | 36% (n=524) | 60% (n=240) | 72% (n=110) | 82% (n=72) |

- Foreign participation has increased in rounds 1-3 in each period from 2010 until 2026. The change appears gradual and spread across stages rather than concentrated in a single funding stage.
- First rounds have the lowest level of foreign involvement in every period, but it has risen at every stage, and second rounds' foreign participation is now close to third rounds. This suggests foreign investors are less likely than before to wait for later stages.

1) Direct investments only. In addition, the share includes rounds with both Finnish and foreign investors. Therefore, the table describes foreign involvement, not foreign-led rounds.
2) nth funding round defined as equity funding round with later date and higher fundraise than previous rounds. Source: Team analysis based on Tesi's data model, PitchBook

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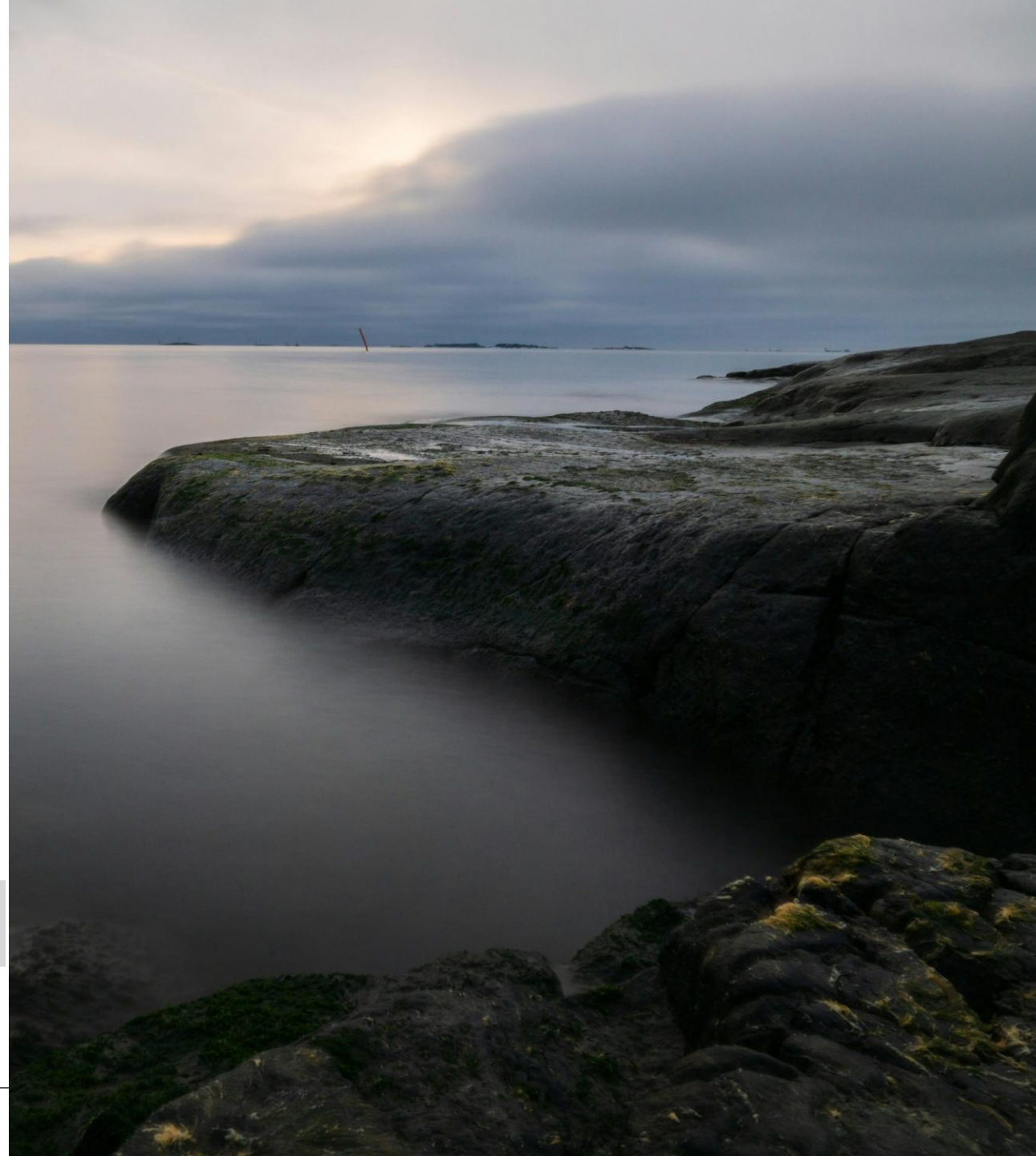
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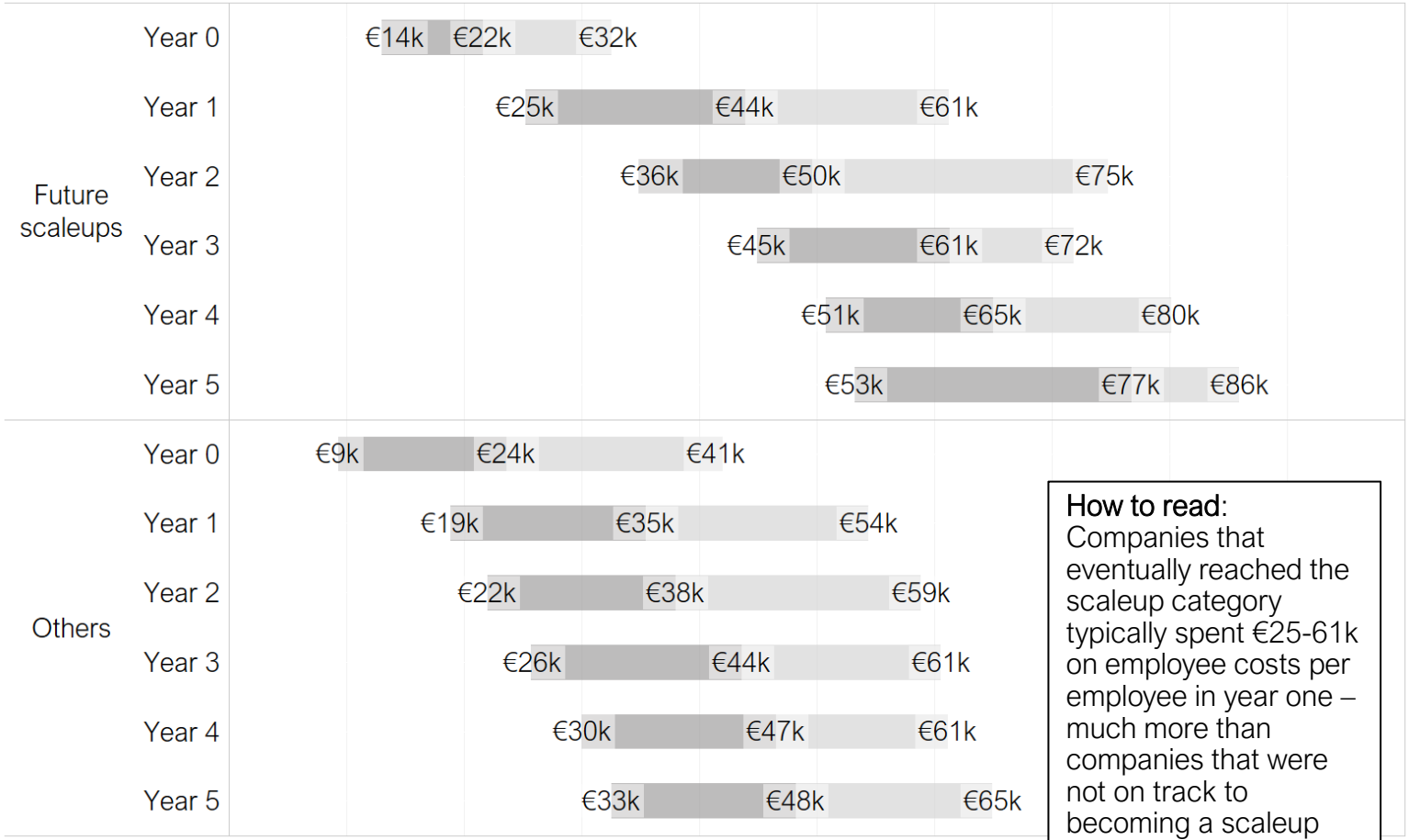
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# Companies that later become scaleups tend to have higher personnel costs per employee from their first years

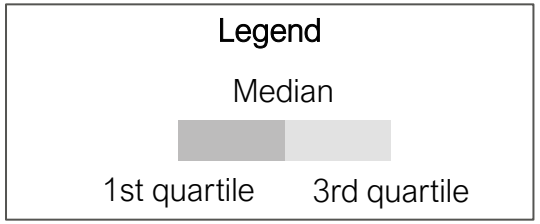
## Personnel costs per employee by years since registration

Future scaleups vs. other early-stage startups




**How to read:** Companies that eventually reached the scaleup category typically spent €25-61k on employee costs per employee in year one – much more than companies that were not on track to becoming a scaleup

- Future scaleups have a higher average employee spend already in one year after founding, and the difference to others grows in year 2.
- There can be many reasons for this difference in employee spend:
  - Higher average pay should correlate with more knowledgeable or experienced employees, which leads to better ideas and execution.
  - On the other hand, a founding team with a better business idea may have been able to raise more capital, which they then spent on costlier employees.

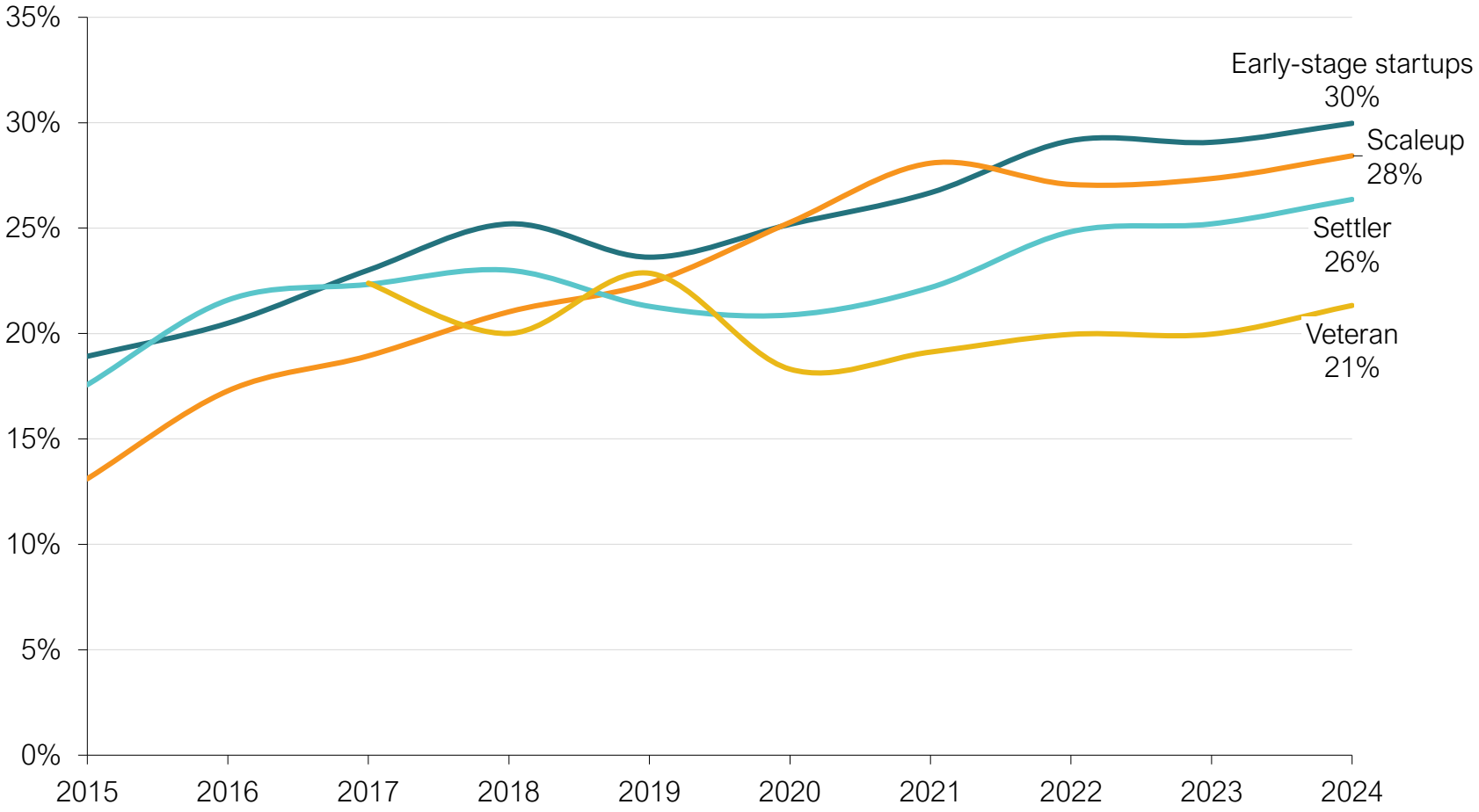



Note: Only companies registered between 2010-2021 with at least 5 employees in a given year
Source: Team analysis based on Tesi's data model

# Women's share of early-stage startup employees rose from 19% to 30% in 2015–2024

## Share of women employees by category and year

% of total employees in Finland

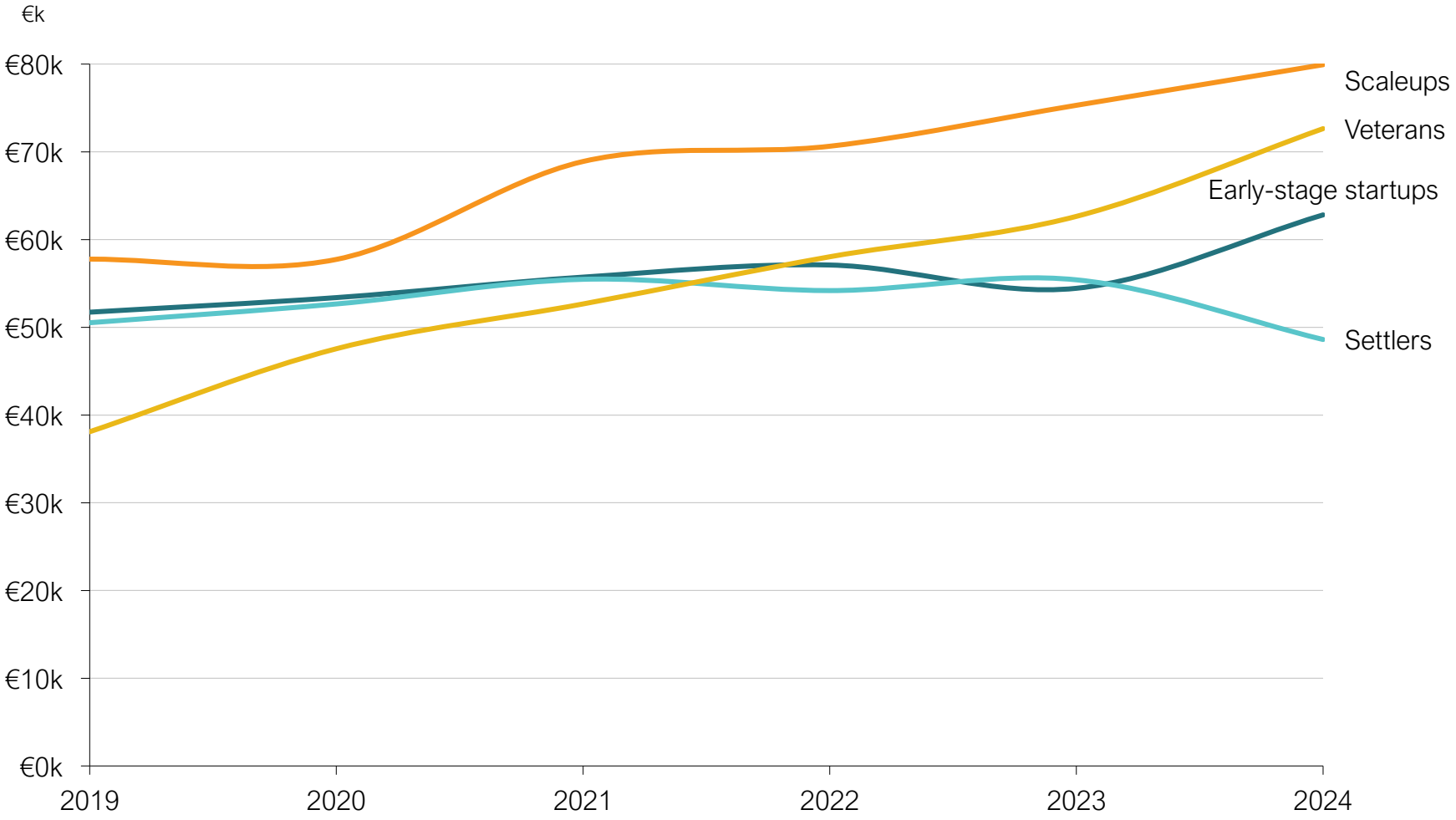



- The startup sector has traditionally been male-dominated, but the share of women is steadily increasing. This imbalance is not primarily because startups themselves exclude women, but rather because many startups operate within the technology industry, which is a field that is itself male-dominated. In addition, men are overrepresented in the private sector in general. This pattern is not unique to Finland but reflects a global phenomenon.
- In 2024, women made up 29% of the workforce in the ICT sector, while their share in human health and social work activities exceeded 85%. Overall, the Finnish labour market remains highly segregated by gender. (Statistics Finland, 2025)

Source: Team analysis based on Statistics Finland data

# Average earned income was highest among scaleup employees in 2024

## Average earned income by employee by category




- Veterans and scaleups offer higher salaries than early-stage startups and settlers. This finding is intuitive, as scaleups are generally more successful according to business metrics.
- Veterans and scaleups have greater access to funding and generate higher revenues, enabling them to pay higher salaries and attract more experienced and more expensive talent. In contrast, early-stage startups are more likely to attract key employees through equity packages, which typically yield returns only after the company achieves an exit or sells shares.

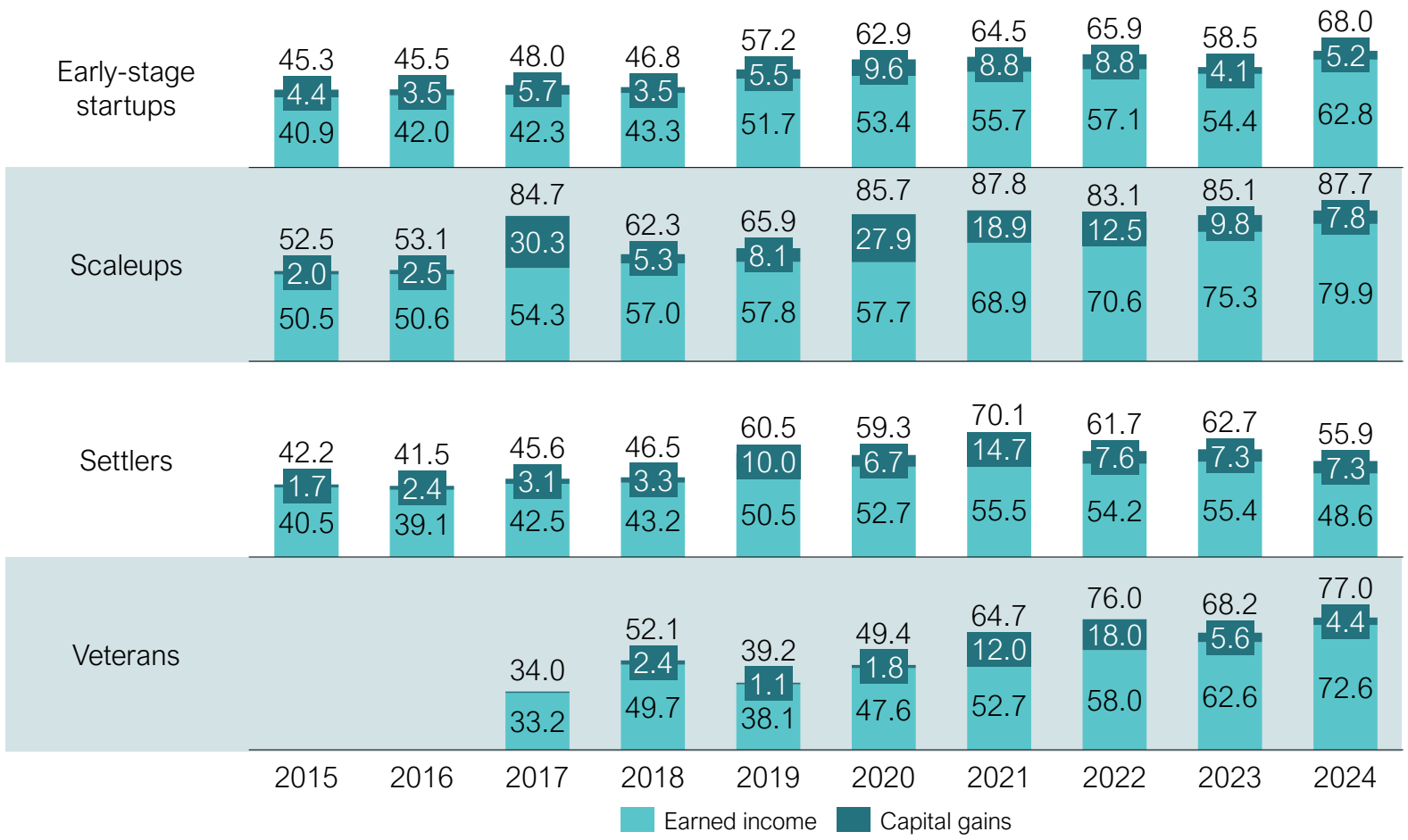
Scaleups and veterans paying more is logical, as they already have a track record and likely funding

Source: Team analysis based on Statistics Finland data

# Most of the employee compensation is done through salary income

## Average total income by employee by category

€k



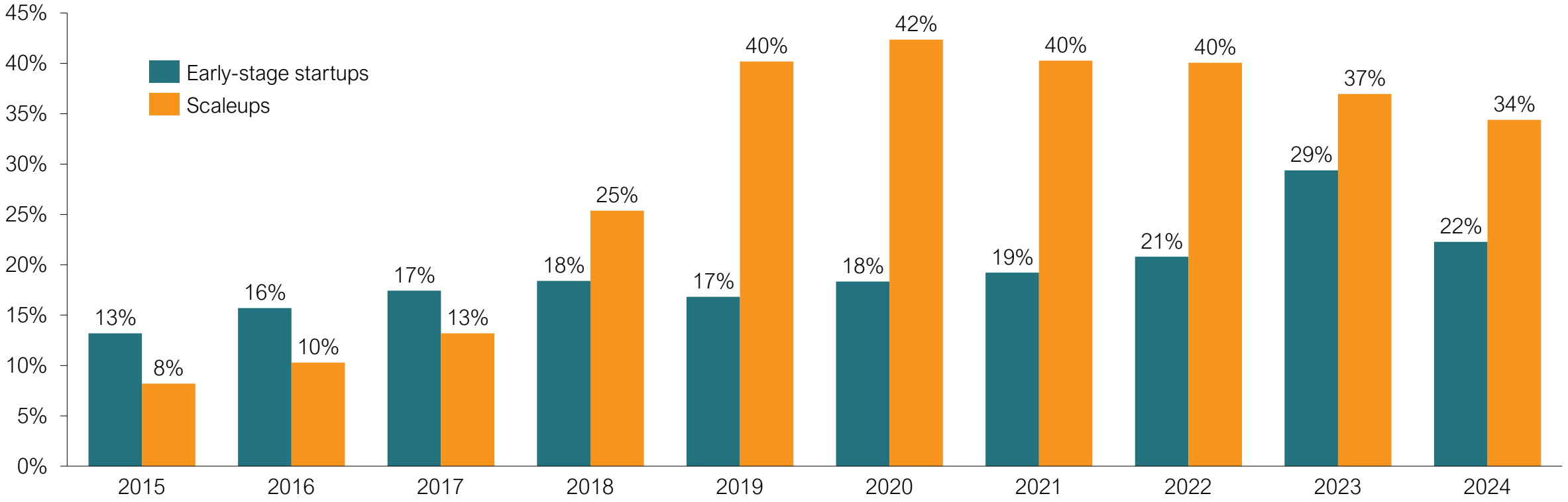

- Using data from Statistics Finland, we can analyze both employees' capital gains and earned income.
- The figures presented here show the mean earned income and capital gains of individuals employed by startups, scaleups, settlers, and veterans.
- It is important to note that exited companies are not included in this analysis.
- We observe greater variance in capital gains, likely because these gains occur when certain key employees realize profits during an exit or a funding event in a given year.
- The increase in capital gains for scaleups in some years indicates exits not captured by our transaction tracking – due to the anonymous nature of the Statistics Finland data analyzed it is not possible for us to identify which exit(s) we have not identified.

Source: Team analysis based on Statistics Finland data

# Employees with a foreign background made up 34% of scaleup staff in Finland in 2024

## Share of employees with foreign background in Finland by category

% of all employees in Finland




Employees with foreign background play a significant role in scaling new startups to international scale

Note: Foreign background defined as person born outside of Finland, or born in Finland, but to foreign-born parents.
Source: Team analysis based on Statistics Finland data

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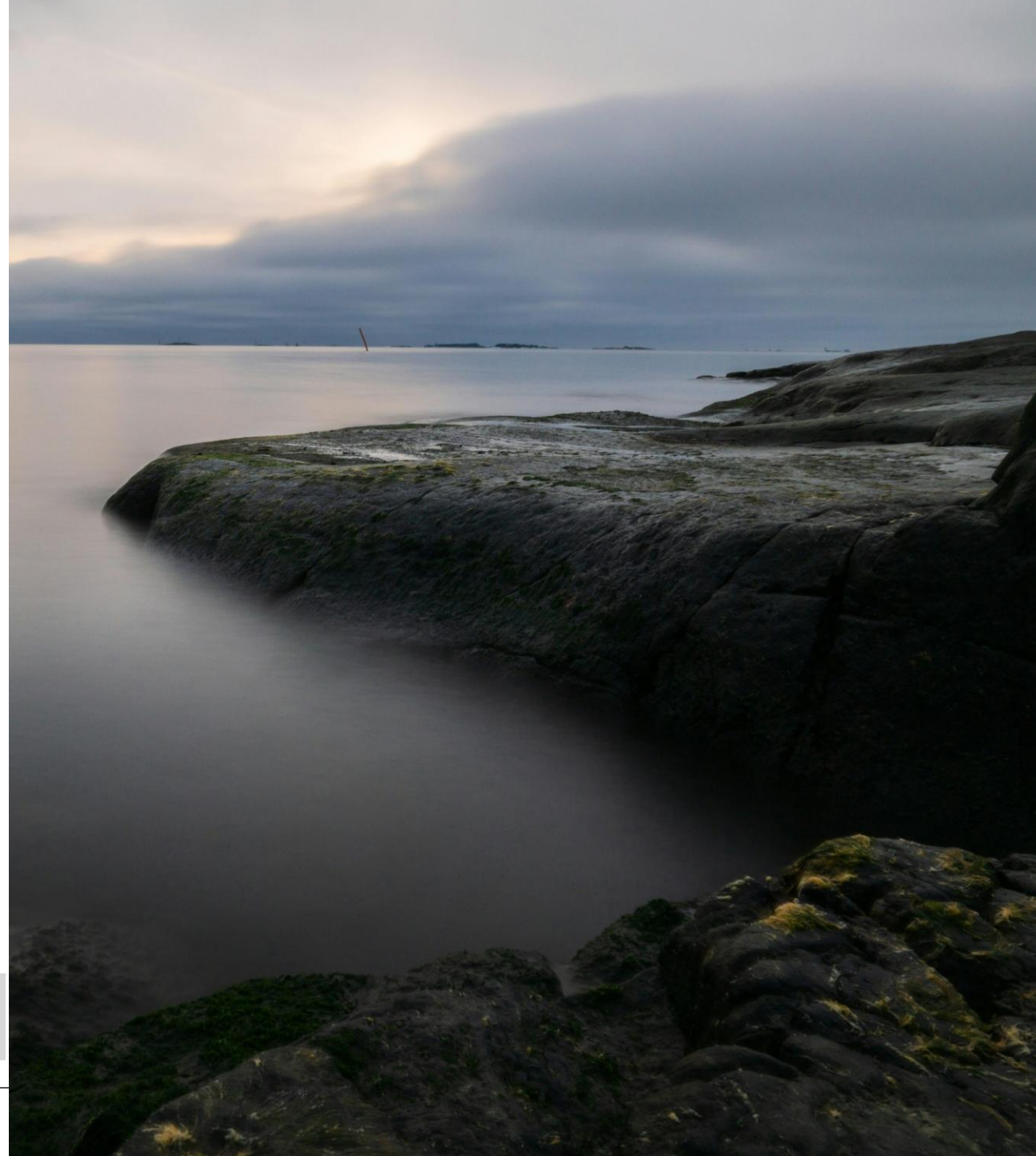
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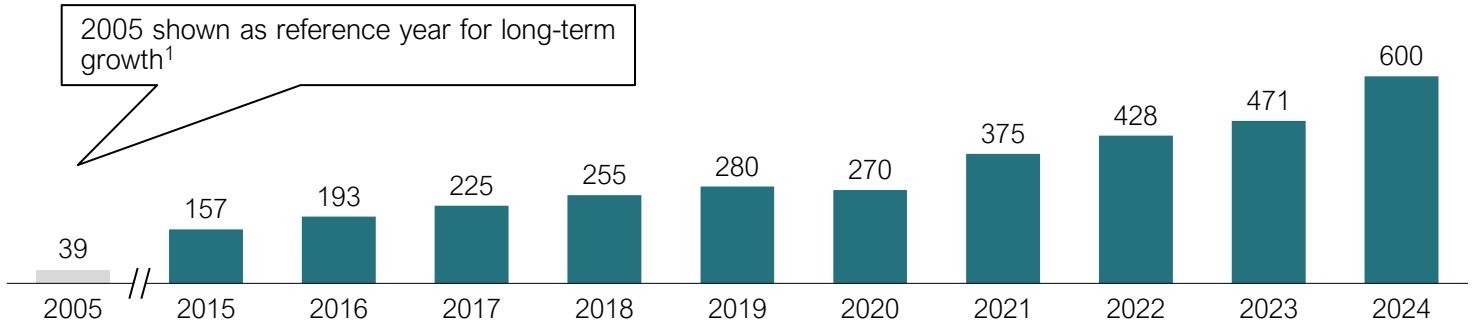
# In startup-based companies, R&D wages grew 15x since 2005 - PhD headcount grew even faster at 19x

## R&D wages and personnel in startup-based companies by year

€m; number of people

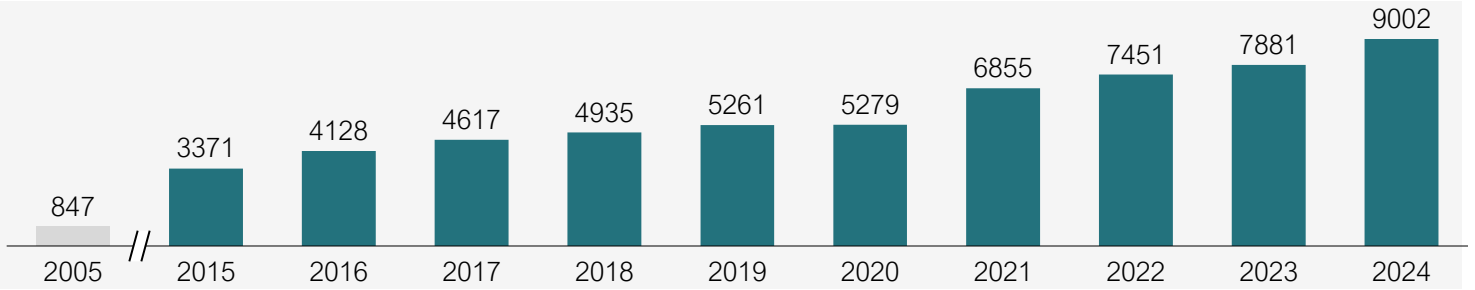
### R&D wages

€m



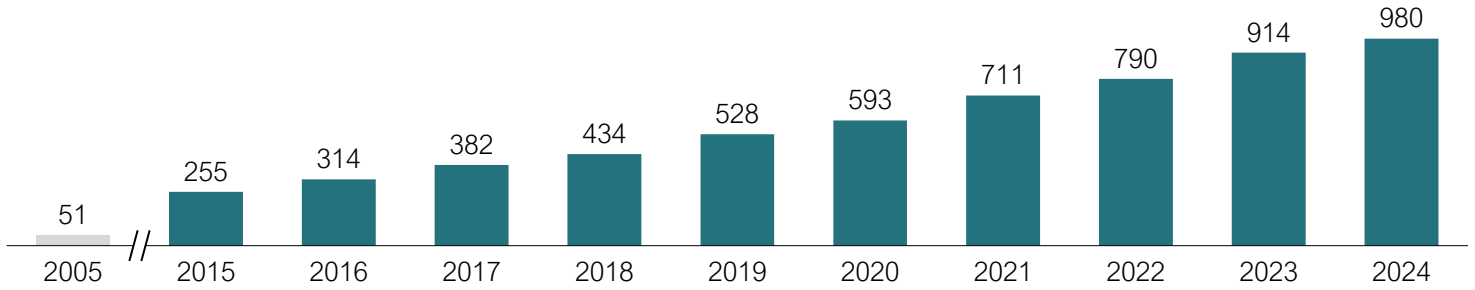

### R&D personnel

#




### PhDs

#




- R&D wages grew 15x, from €39m in 2005 to €600m in 2024. They make up about 60% of R&D spend every year.
- The number of PhDs grew 19x, from 51 to 980. Their share of R&D personnel rose from 6% to 11%.
- The average R&D wage per researcher rose from €46k to €67k.

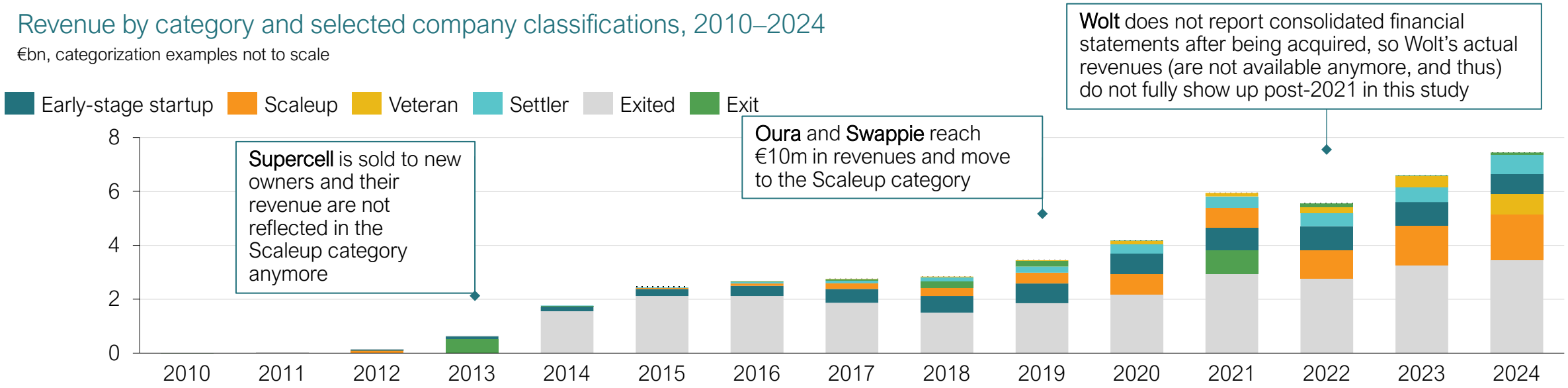
PhDs are the fastest-growing group – up 19x since 2005

1) 2005 figure covers startup-based companies identified by FSC that were operating in 2005
Source: Team analysis based on Statistics Finland data

# Deep dive: Our study categories are dynamic and reflect the lifecycle of a startup-based company, rather than specific companies throughout all years

## Revenue by category and selected company classifications, 2010–2024

€bn, categorization examples not to scale



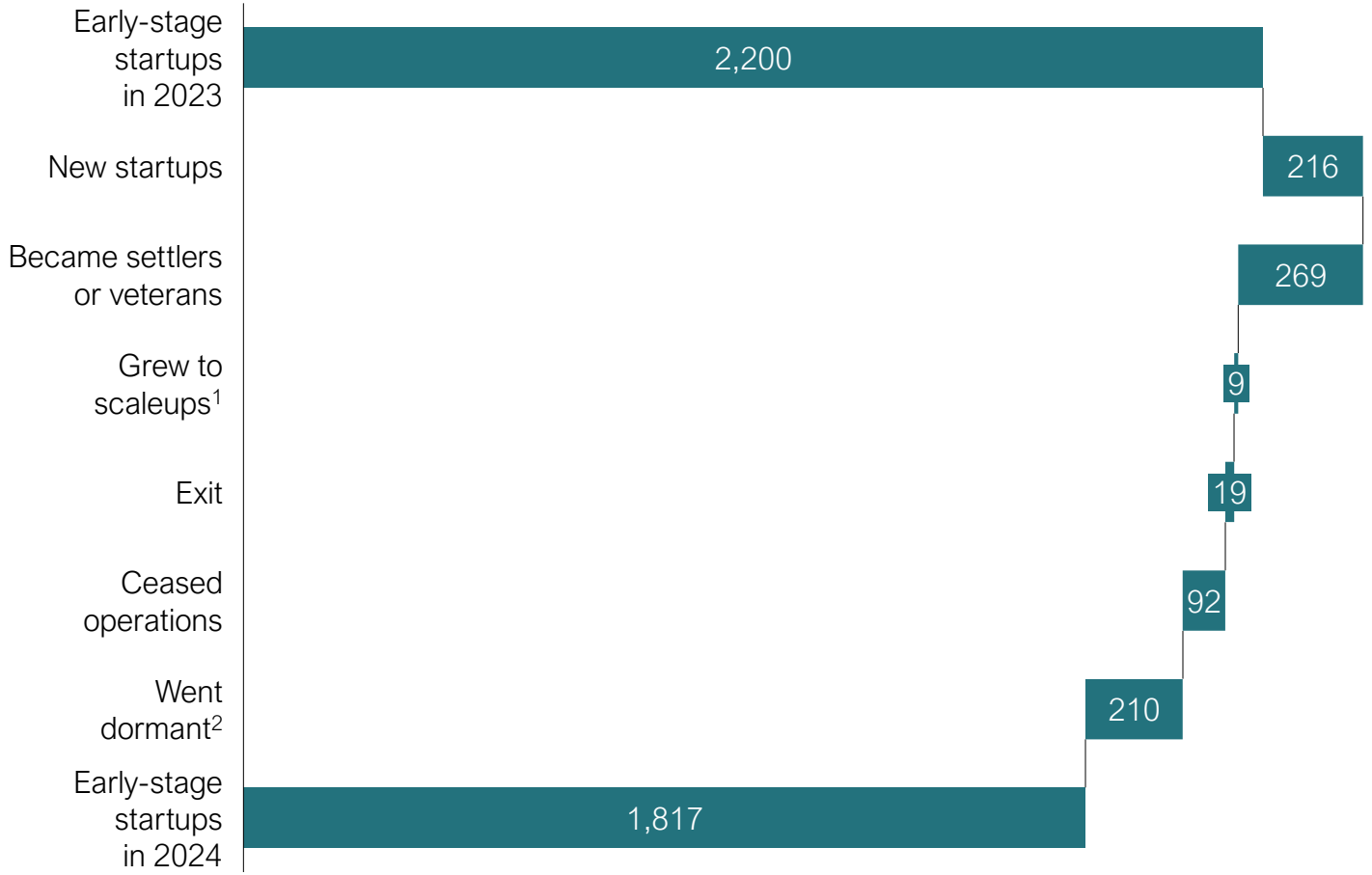

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Supercell | | | 0.1 | 0.5 | 1.5 | 2.1 | 2.1 | 1.8 | 1.4 | 1.4 | 1.3 | 1.9 | 1.8 | 1.7 | 1.9 |
| Oura | | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.4 |
| Swappie | | | | | | | | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| Wolt | | | | | | | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.6 | | 0.1 | 0.1 |
| Aiven | | | | | | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |

Note: The category Exit refers to the exit transaction happening in that specific year, whereas Exited means that the exit has happened in an earlier year.
Source: Team analysis based on Tesi's data model

# Nine early-stage startups entered the scaleup category in 2024

## Movements in the early-stage startup category, including leavers and newcomers

Count of companies, 2023-24



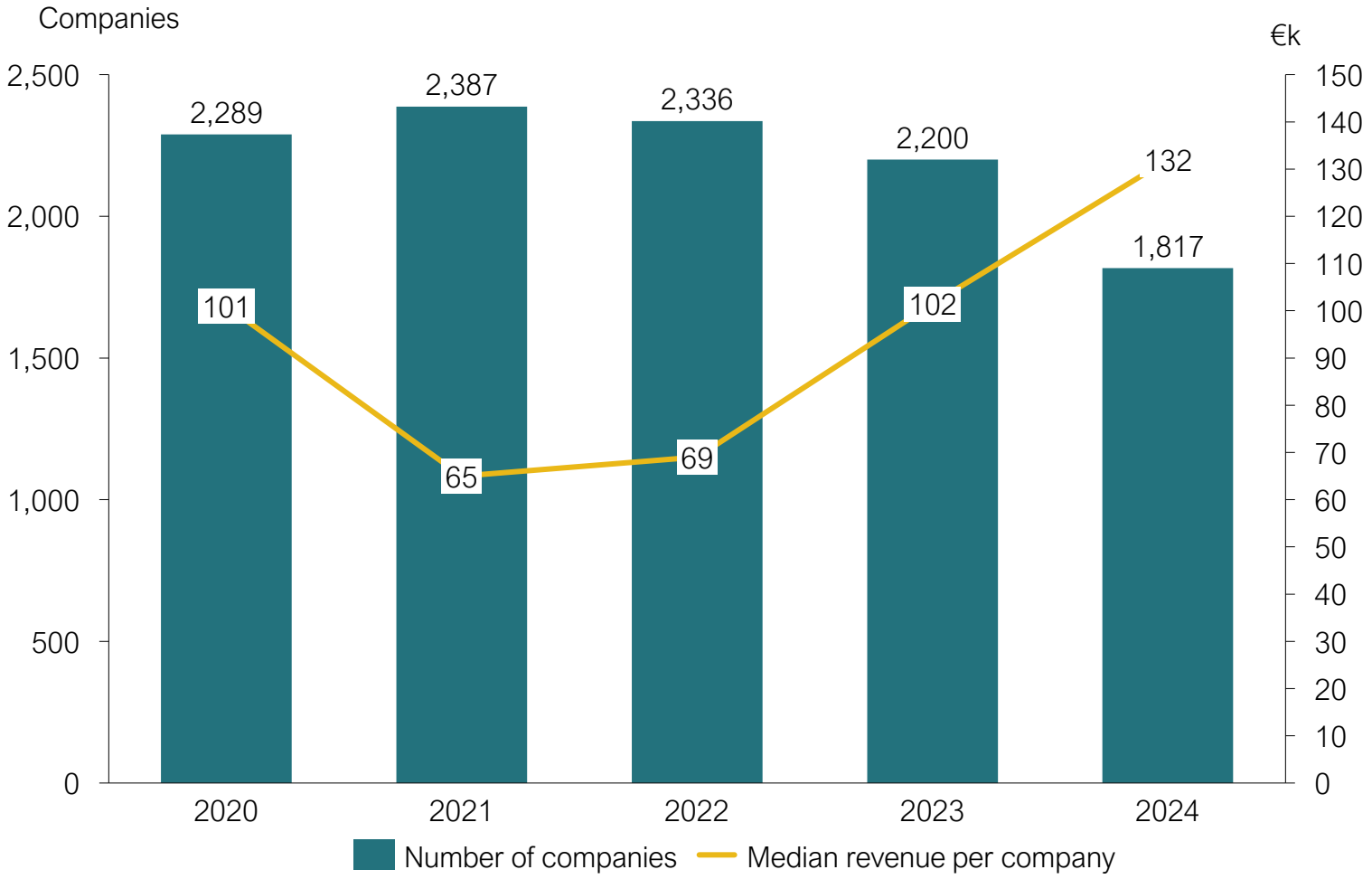

- Startups are usually discussed through success stories and failures, but in a typical year there is no binary transition. The early-stage startup category is a phase, not a permanent label: a company leaves it when it stops raising money, slows down or passes €10m in revenue.
- Settling is the most common path. These companies keep trading as independent, often profitable businesses, but have gone three years without a funding round and no longer grow 50% a year: niche software or product companies, and founders who have stopped chasing venture-scale growth.
- Scaleups and exits are rare in any single year because both take time. Similarly, outright closures are few, as small companies are more often wound down quietly than declared bankrupt.
- Dormancy mostly means a financial statement not yet filed, so part of the 210 will reappear in next year's data.

1) In addition to the 9 early-stage startups that grew to scaleups, also two settlers grew to the scaleup category. 2) Dormant = no financial statement filed for 2024 (201 companies) or not classified (9). Missing filings most likely reflect reporting lag rather than ceased operations. Source: Team analysis based on Tesi's data model

# Deep dive: There are fewer early-stage startups, but median revenue per company is higher

## Early-stage startup company count and median revenue per company

Years, 2020-2024




- Total early-stage startup revenue fell from €863m in 2023 to €718m in 2024, a drop of 17%. Over the same period the number of companies in the category fell by the same 17%, from 2,200 to 1,817.
- Median revenue per company rose from €102k to €132k. The decline in the total is a change in the count, not in the revenue a typical company generates.
- The number of companies has been falling since 2021, well before the total revenue turned down. Of the companies that left in 2024, 278 moved into another category, rather than disappearing.

Note: The number of companies categorized as early-stage startups may still rise as financial reports are published.
Source: Team analysis based on Tesi's data model

# Startups reaching €10m and €100m in revenue by founding cohort

## Cumulative number of startups reaching €10m and €100m in annual revenue per founding year

Number of companies, 2010-24

### Cumulative number of startups reaching €10m in revenue per fiscal and founding year

Fiscal year

| Founding year | 2010 | '11 | '12 | '13 | '14 | '15 | '16 | '17 | '18 | '19 | '20 | '21 | '22 | '23 | '24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 4 | 6 | 6 | 8 | 9 | 11 | 13 | 14 |
| '11 | | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 6 |
| '12 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 5 | 7 | 7 |
| '13 | | | | 0 | 1 | 2 | 3 | 5 | 7 | 10 | 11 | 12 | 15 | 17 | 19 |
| '14 | | | | | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 4 | 5 | 6 |
| '15 | | | | | | 0 | 0 | 1 | 4 | 6 | 7 | 10 | 16 | 20 | 21 |
| '16 | | | | | | | 0 | 1 | 1 | 2 | 3 | 5 | 8 | 10 | 12 |
| '17 | | | | | | | | 0 | 0 | 0 | 1 | 5 | 8 | 9 | 11 |
| '18 | | | | | | | | | 1 | 1 | 2 | 3 | 7 | 8 | 11 |
| '19 | | | | | | | | | | 0 | 0 | 1 | 1 | 3 | 4 |
| '20 | | | | | | | | | | | 0 | 0 | 1 | 1 | 2 |
| '21 | | | | | | | | | | | | 0 | 0 | 1 | 1 |
| '22 | | | | | | | | | | | | | 0 | 0 | 0 |
| '23 | | | | | | | | | | | | | | 0 | 0 |
| '24 | | | | | | | | | | | | | | | 0 |

How to read:

From startups founded in 2013, 5 had reached €10m in revenue by 2017

### Startups reaching €10m…

| | …in 5 years | …in 10 years | …at any point |
|---|---|---|---|
| 2010 | 1 | 6 | 2 |
| '11 | 2 | 5 | |
| '12 | | 4 | |
| '13 | 5 | 15 | 4 |
| '14 | 1 | 5 | 2 |
| '15 | 6 | 21 | 3 |
| '16 | 3 | 12 | |
| '17 | 5 | 11 | |
| '18 | 7 | 11 | |
| '19 | 3 | 4 | |
| '20 | 2 | 2 | |
| '21 | 1 | 1 | |

…and €100m

Recent cohorts (grey) have not completed the same observation windows. Counts should not be interpreted as comparable success rates.

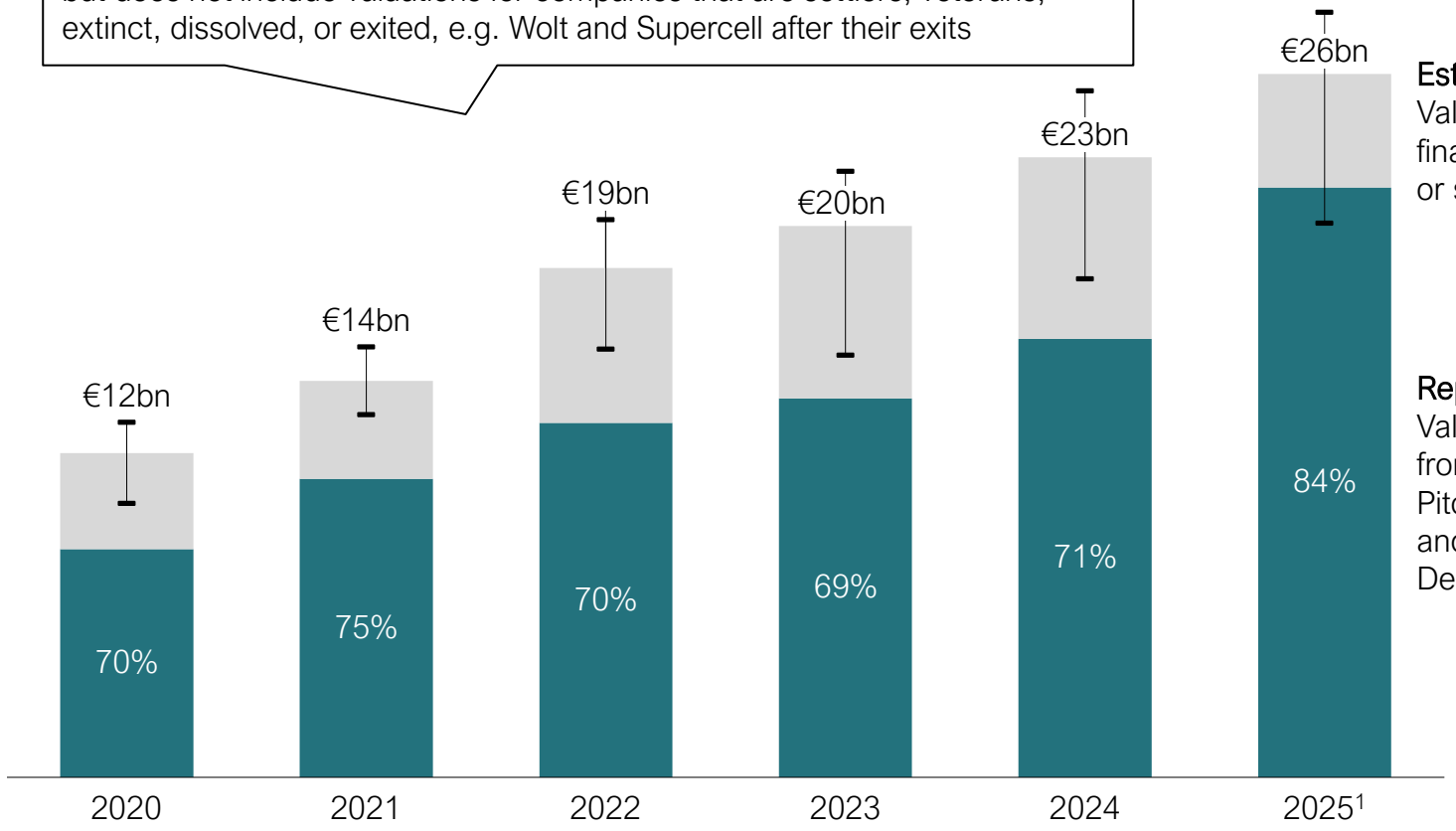
# Valuation totals are mostly based on reported valuations, complemented by a long tail estimated from financials, funding rounds or sales multiples

## Total valuation of early-stage startups and scaleups, 2020–2025

INDICATIVE

€bn; whiskers represent the 10-90% range of the total valuation

**Note**: the total includes valuations only for early-stage startups and scaleups, but does not include valuations for companies that are settlers, veterans, extinct, dissolved, or exited, e.g. Wolt and Supercell after their exits




**Estimated valuations**
Valuation estimated from financials, funding raised, or sales multiples

**Reported valuations**
Valuations from Tesi, PitchBook and Dealroom

- This chart shows the total estimated value of early-stage startups and scaleups each year. The total is built from reported valuations where they exist, and from model estimates or revenue multiples everywhere else.
- Total valuation has grown steadily (17% p.a.) and reached about €23bn in 2024, with a preliminary estimate of €26bn for 2025. The share of reported valuations is about 71% in 2024, which reflects significant coverage from Tesi, PitchBook, and Dealroom data.
- The whiskers show a conservative 10-90% range around each year's total. They reflect the error in our model and multiple estimates, the range of Dealroom estimates, and cases where Tesi has several valuations for a company (e.g. a direct investment and a fund holding). Other reported values are treated as exact.

1) 2025 valuations are preliminary and based on partial financial statement coverage. The reported valuation share is most likely inflated by incomplete startup identification.
Source: Team analysis based on Tesi's data model, PitchBook, Dealroom

# Reported valuations anchor most of the estimated valuations: scaleups follow revenue, while early-stage startups are far more heterogeneous

## Reported valuations used for category-specific estimates

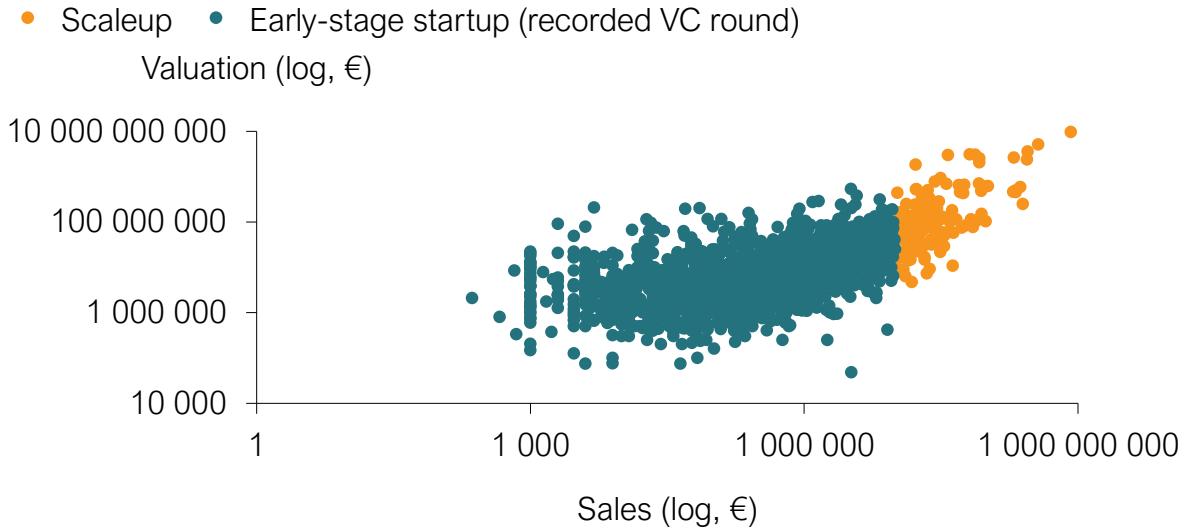
**Reported valuations** are valuations provided by Tesi or other third parties for a particular company and year. There are two types:

1. Tesi company valuations: Tesi's direct investments, and the venture capital and private equity funds in which Tesi has invested, report their value each quarter. Dividing a holding's value by Tesi's ownership share gives the implied value of the whole company.
2. Third-party valuations: PitchBook post-money valuations and Dealroom valuations (exact values and estimated ranges, for which we use the midpoint).

Reported valuations are also used to estimate valuations for other startup-based companies. Note, however, that reported valuations are estimates made by Tesi and third-party providers, not market prices. Where sources overlap, we use Tesi first, then PitchBook, then Dealroom. When several Tesi investors report a valuation for the same company, we take the highest value in the latest quarter of the year. Dealroom provides estimated ranges, in which case we use the midpoint as the reported valuation. Valuations exist only for companies that Tesi, PitchBook or Dealroom follow, so the sample is not random.

**Scaleups** typically have real revenue and several years of data, and their valuations rise in line with revenue. For 44 scaleups without a reported valuation, we apply a revenue multiple to all companies: the median value-to-sales ratio of 43 reported scaleups. Estimated value is sales times this multiple, or shareholders' equity (the accounting value of the owners' stake) if that is higher or sales are missing. More detailed methods, such as industry-specific or profit-based (EBITDA) multiples, did not prove reliably more accurate.

**Reported valuations used as training data for estimated valuations[1]**




**Early-stage startups are inherently more difficult to estimate.** Many are young and have little or no revenue, so their value reflects what investors expect them to become, not what they earn today. Growth is non-linear: a few companies grow explosively while most stay small, and value moves in steps with each funding round rather than gradually with sales. The chart above shows this: for a given level of sales, reported startup valuations span a far wider range than those of scaleups, which cluster more tightly. Two startups with the same sales can be worth €1m or €100m, depending on whether investors believe in their growth. Startups without a recorded VC round are valued at shareholders' equity where they exist.

1) The chart shows the reported company-years with positive sales (n = 1,826). In total, reported valuations exist for 2,568 company-years (1,071 unique companies).
Source: Team analysis based on Tesi's data model, Tesi fund valuations, PitchBook, Dealroom, Orbis

# Valuation methodology, continued: estimation methods, accuracy and ranges by category

## Valuation methodologies based on category

| Category | How each category is estimated | Training data | Typical error factor[1] | 10–90 % range | Estimated company-years | Share estimated[2] |
|---|---|---|---|---|---|---|
| Early-stage startups (recorded VC round) | *Elastic net:* a linear regression that estimates the logarithm of value from funding raised, round size and balance sheet variables; two penalties shrink less useful variables toward zero. | 2,161 company-years, 919 companies | ×1.8 (73 % within ×2) | ×0.46 – ×2.3 | 5,235 | 71% |
| Early-stage startups (no VC round) | *Shareholders' equity:* the accounting (book) value of the owners' stake, i.e. assets minus liabilities. It reflects capital invested and past profits, not expected growth, so it is a conservative lower bound. | No model | Lower bound | None | 9,541 | 97% |
| Scaleups | *Sales multiple:* one multiple for all scaleups, the median value-to-sales ratio of scaleups with a reported valuation (3.6×). Shareholders' equity as the floor. | 128 company-years, 43 companies | ×2.5 (41 % within ×2) | ×0.31 – ×4.1 | 103 | 45% |

### Typical error factor

The usual distance between a reported and an estimated value. For early-stage startups with a VC round, the factor is ×1.8, so a reported value of €10m would be estimated at roughly €5.6m to €18m.

### Elastic net model

Type of linear regression model that estimates the logarithm of value as a weighted sum of input variables. Used to estimate valuations for VC-funded early-stage startups. Details on the next slide.

### 10–90 % range

In 8 of 10 cases, the reported value lies within this range of the estimate. For an early-stage startup with a VC round, a €10m estimate means a €4.6m to €23m reported value (×0.46–×2.3).

### Alternatives we tested

More detailed methods, such as industry-specific multiples, EBITDA multiples and boosted decision trees, were not reliably more accurate.

1) Cross-validation (elastic net), leave-one-company-out (multiples). 2) Share of company-years with a value that are estimated (model, multiple or equity). Source: Team analysis, Tesi, PitchBook, Dealroom, Orbis

# Valuation methodology, continued: the elastic net model for estimating VC-funded early-stage startups

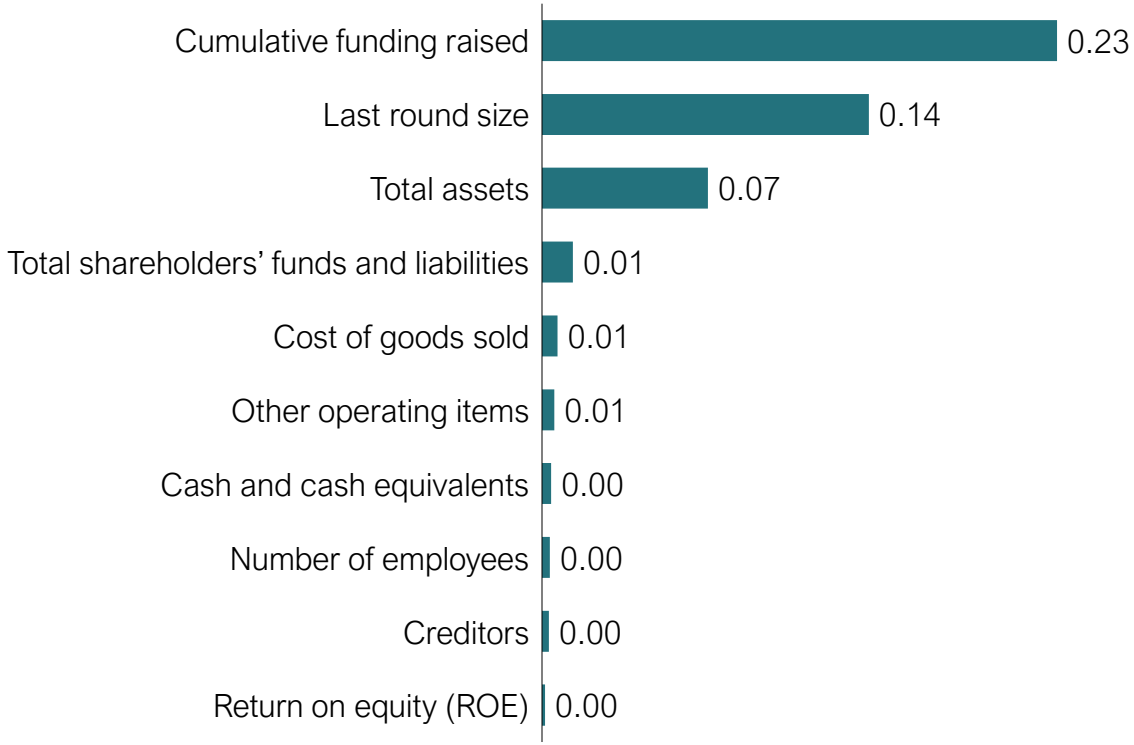
## Elastic net model and its ten most important variables

**Funded early-stage startups.** For startups with a recorded VC funding round and no reported valuation, we estimate company value using a statistical model based on funding raised, the size of the most recent round, and financial statement data. We trained the model on more than 2,100 reported company-year valuations, covering approximately 900 companies, all with a recorded VC round. After comparing different estimation methods, we chose the elastic net, which was as accurate as the alternatives we tested and easier to interpret. Note that the model learned from startups with reported valuations, which generally have larger funding rounds and balance sheets.

**Elastic net** is a type of linear regression that estimates the logarithm of value as a weighted sum of input variables (funding raised, round size, balance sheet size, and about 210 other financial variables from Orbis). The weights, called coefficients, are learned from the data. The model combines two penalties (lasso and ridge) that shrink less useful variables toward zero, automatically dropping or down-weighting inputs that add little. This keeps the model simple and avoids overfitting to noise in the training data. As the chart on the right shows, the most important variables were: 1) cumulative funding raised, 2) last round size, and 3) total assets.

**How we tested it.** We tested the model on companies it had not seen. Companies were split at random into five groups; the model, including its penalty settings, was fitted on four groups and tested on the fifth, for each group in turn and for three different random splits. A typical estimate is within a factor of 1.8 of the reported value, and 73% are within a factor of two (each company weighted equally). The model was used to estimate 5,235 company-years.

**Most important variables in the elastic net model**




**How to read:** bar = increase in cross-validated prediction error (RMSE) when the variable's values are shuffled across companies. RMSE (root mean squared error) is the typical size of the model's errors. Larger = more important. Bars are not additive, and related variables share importance.

Source: Team analysis, Tesi, PitchBook, Dealroom, Orbis