



EMERGING TECH RESEARCH

Vertical Snapshot: Semiconductor Scale-Ups

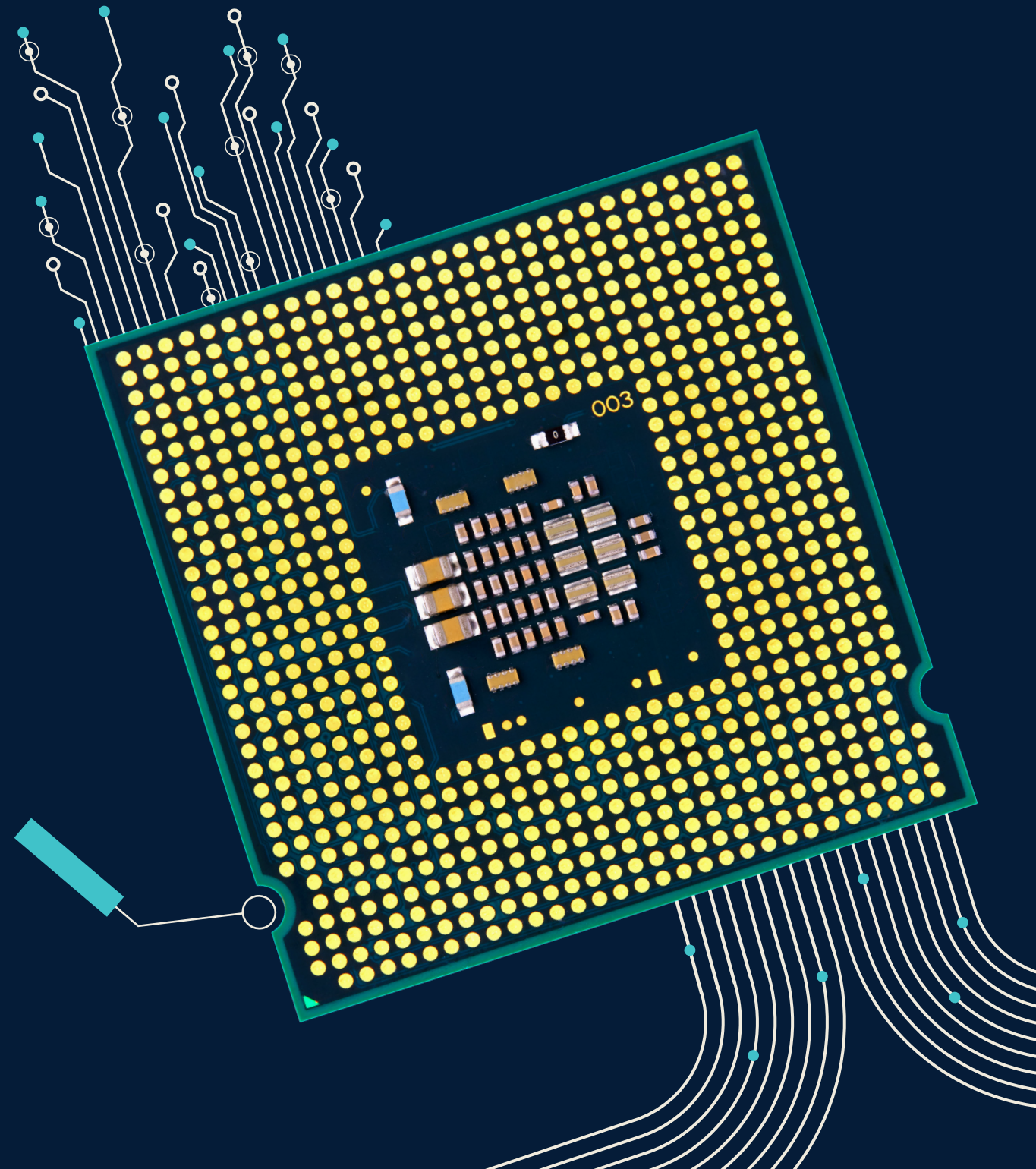
VC trends, industry overview, and market landscape

2024

REPORT PREVIEW

The full report is available through the PitchBook Platform.

Published January 2, 2024





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Institutional Research Group

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Executive summary

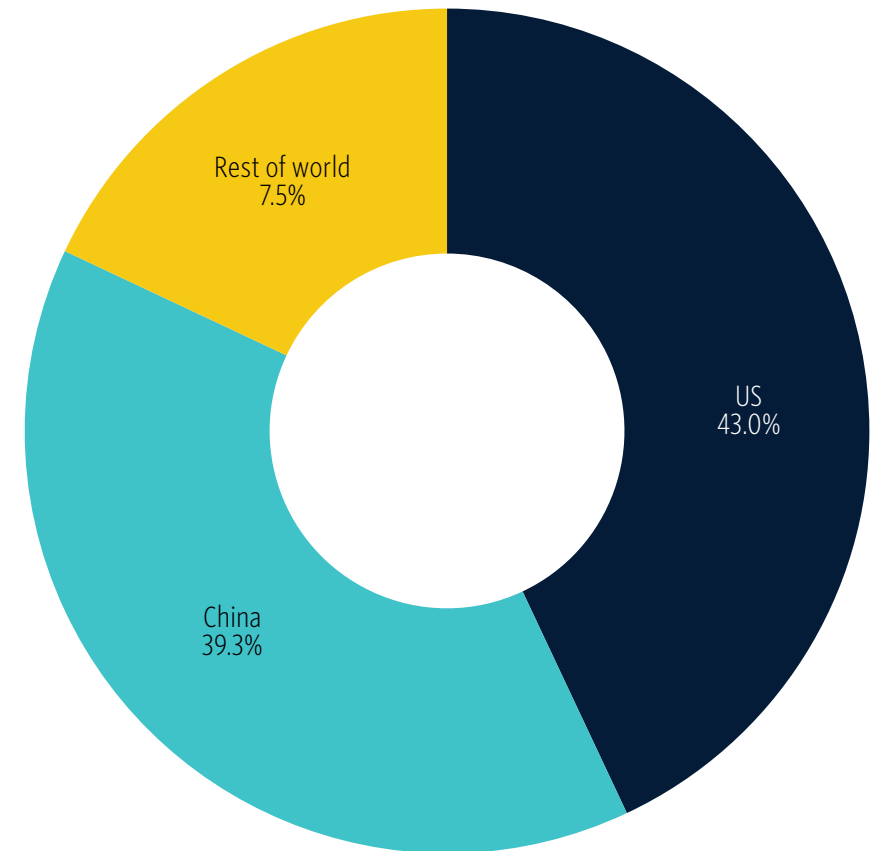
The semiconductor industry, a linchpin in modern technology, faced declining investment along with the rest of the VC market from 2018 to 2023. Historically, VC has played a critical role in semiconductor research & development (R&D), leading us to focus on the startup ecosystem in this report. Given that the average early-stage deal size for semiconductor startups has been around \$36.0 million over the past three years, we focus on the cohort of companies with current or former VC backing that have raised at least \$50.0 million, reflecting the high capital demands of the industry. Accordingly, this cohort will primarily be referred to a “scale-ups,” as they have secured the requisite funding to focus on scale. Some have even gone public, but we sought to capture historical funding as well.

2023 marked a downturn in VC investments in semiconductor scale-ups, decreasing to \$10.3 billion from the previous year’s \$12.8 billion, and significantly lower than the 2021 peak of \$16.1 billion. This decline happened despite pro-semiconductor policy shifts such as the Creating Helpful Incentives to Produce Semiconductors (CHIPS) Act. It may have been part of the broader VC downturn, but market challenges, including higher interest rates, supply-demand cycles, competitive pressures, and talent shortages, persist.

This downturn could be mitigated by a changing policy landscape. Despite the CHIPS Act’s primary focus on semiconductor manufacturing funding, the \$11 billion allotted for R&D also includes investment funds to support startups.¹ Furthermore, the trend toward regional supply chains poses both challenges and opportunities, particularly for smaller companies in the materials and manufacturing equipment sectors.

¹: “Chips for America,” CHIPS Research and Development Office, April 25, 2023.

Share of semiconductor company count by headquarter country*



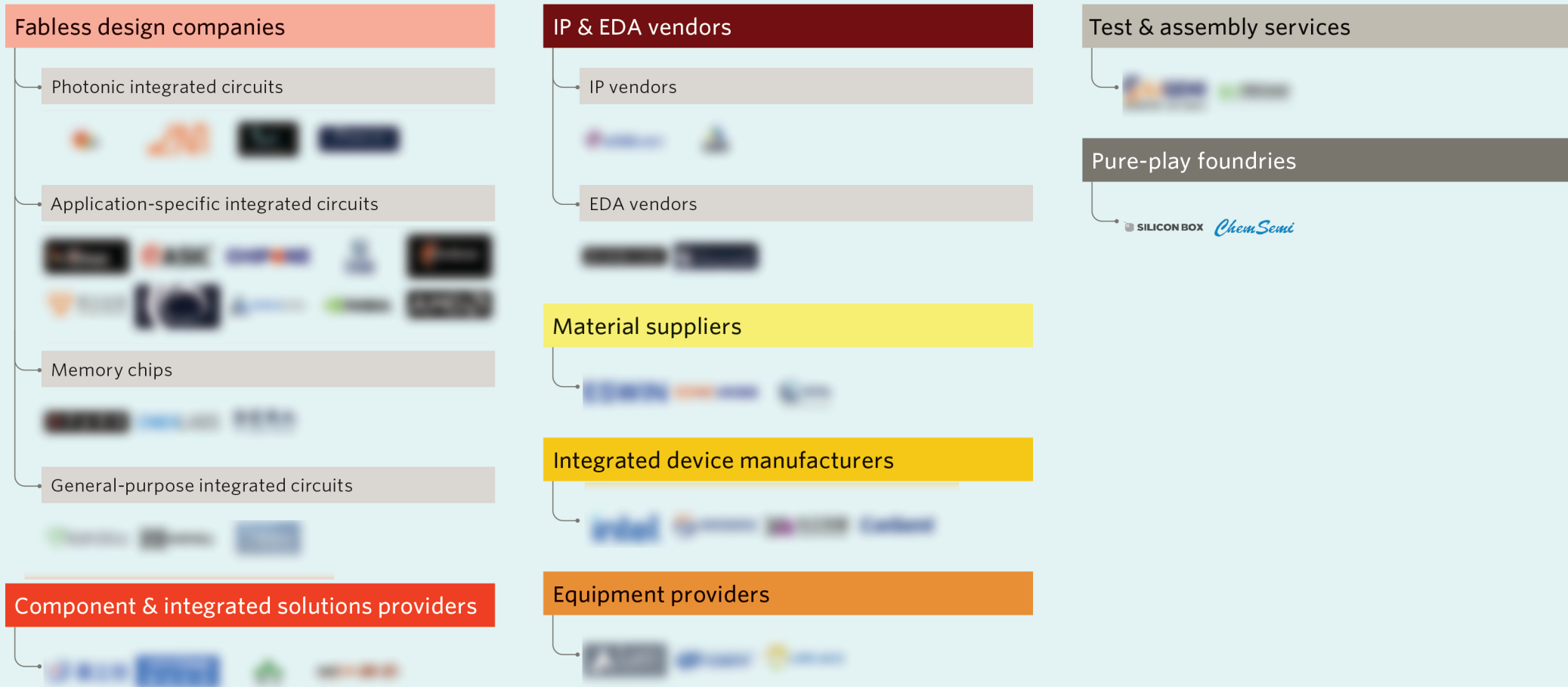
Source: PitchBook • Geography: Global • *As of November 29, 2023



Semiconductor market map

Click to view the interactive market map on the PitchBook Platform.

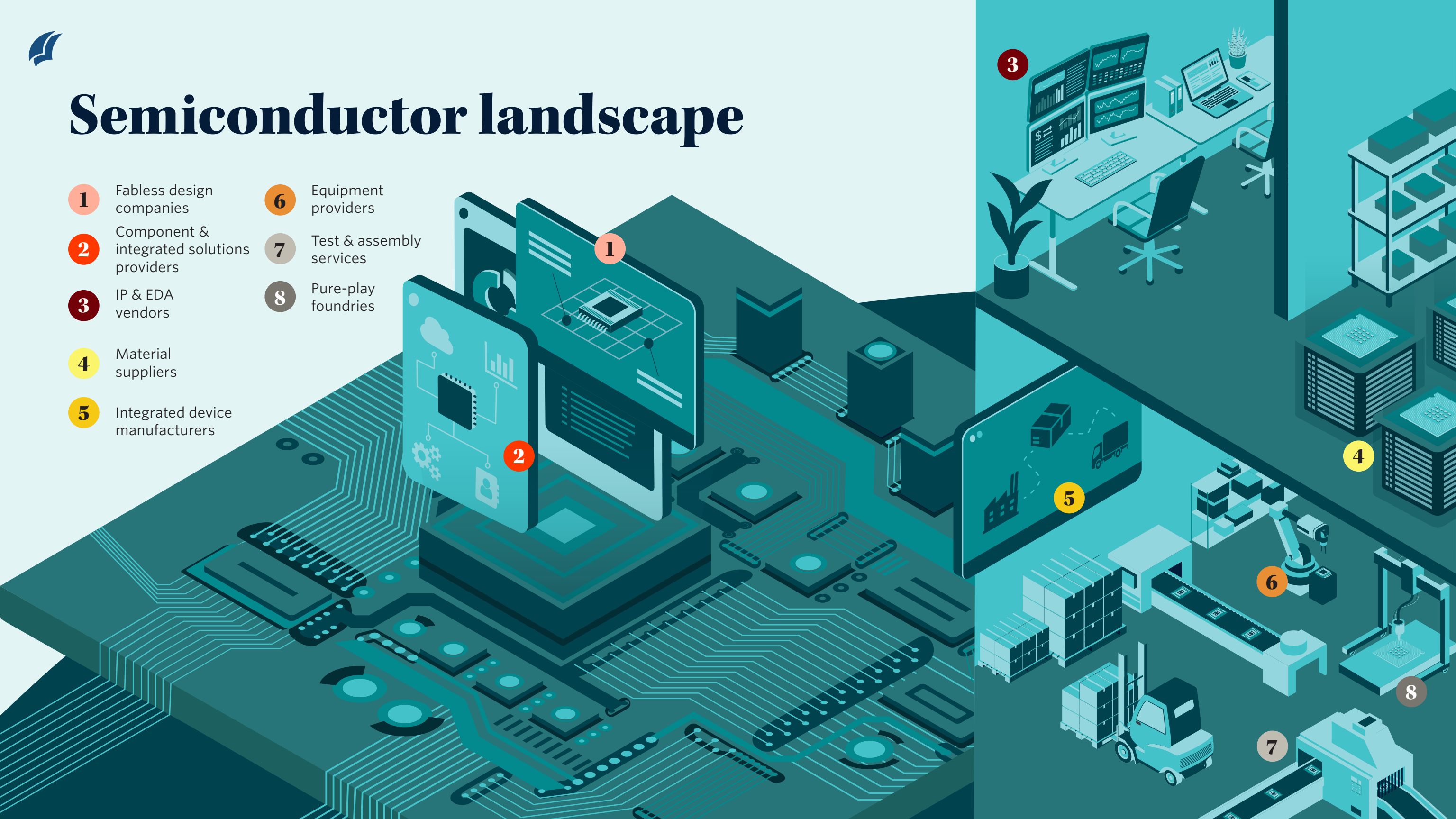
Market map is a representative overview of venture-backed or growth-stage providers in each segment. Companies listed have received venture capital or other notable private investments.





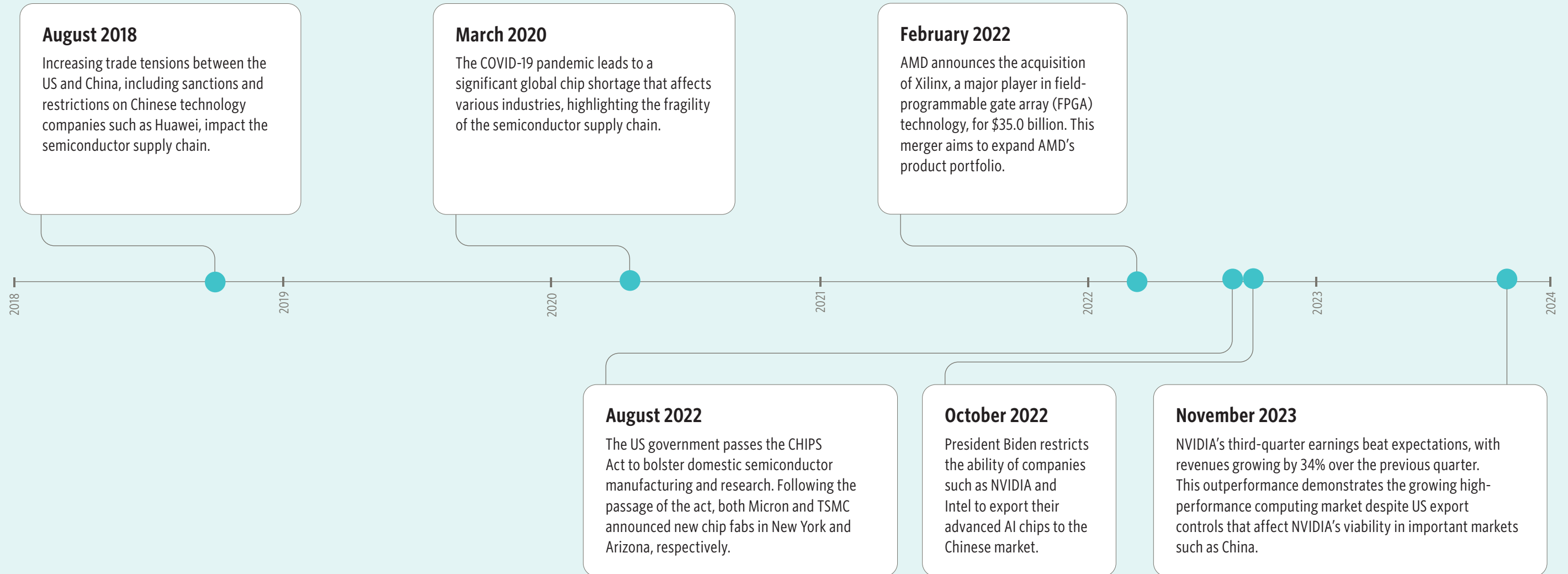
Semiconductor landscape

- 1** Fabless design companies
- 2** Component & integrated solutions providers
- 3** IP & EDA vendors
- 4** Material suppliers
- 5** Integrated device manufacturers
- 6** Equipment providers
- 7** Test & assembly services
- 8** Pure-play foundries





Semiconductor timeline



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