

Leading the Pack: Trends for the Top 200 Engineering Research & Development (ER&D) Enterprises 2023

December 2023: Complimentary Abstract / Table of Contents



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Contract assessment

Peer analysis

Market intelligence

Tracking: providers, locations, risk, technologies

Locations: costs, skills, sustainability, portfolios

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Background and scope of the research

- While growth in global Engineering and R&D (ER&D) spending was impacted in 2022 by enterprises adopting a conservative approach in light of the recession, new themes of investments such as generative AI and sustainability emerged, as customer demand for smart, sustainable, and connected products drove R&D spending
- This shift in consumer demand toward AI has compelled enterprises to quickly repivot their ER&D investments and product offerings, while at the same time attempting to retain a competitive edge by not compromising on time-to-market
- This research was conducted for the top 200 ER&D enterprises, most of which (99%) fell into ten key verticals as mentioned below. The enterprises were analyzed by factoring in their ER&D spend growth trends and key investment areas for 2022
- This report captures the key investment areas of enterprises in 2022 across each of these ten verticals. The report also provides insights into ER&D spend intensity (ER&D spend as a percentage of revenue) for enterprises across these verticals
- This report also shares an outlook on the offshoring index (indicator used to measure and track the extent of offshoring activities undertaken by companies or industries)
- The focus of this research is only on business-financed ER&D spend. It excludes non-ER&D spend (e.g., clinical ER&D expenditure in pharmaceuticals and biotechnology and molecular development ER&D expenditure in chemicals) as well as government-sponsored ER&D spend
- Enterprises that do not specifically report ER&D expenditure in their annual reports have been excluded from this analysis. Enterprises cutting across more than one industry have been featured under the industry where the proportion of ER&D spend is the highest

Scope of this report



Geography
Global



Industry

Market trends across ten industries: software products & internet, automotive, consumer electronics, semiconductors, industrial products, Telecom Equipment Providers (TEPs), aerospace & defense, medical devices, compute & storage, and Telecom Service Providers (TSPs)



Services
Engineering services

Overview and abbreviated summary of key messages

In this research, we present a fact-based view of the global ER&D market, with a focus on the top 200 enterprises with the highest ER&D spend across 10 industry verticals. We also capture enterprises' key investment areas, ER&D spend growth, spend intensity (ER&D spend as a percentage of revenue), and prominent themes driving growth in the ER&D space

Some of the findings in this report, among others, are:

Enterprises spend

- The overall business ER&D spend in 2022 stood at US\$1.4 trillion, an increase of 5.1% from the previous year
- Enterprises in the ER&D top 200 list across the ten verticals spent US\$688.3 billion on ER&D in 2022, an increase of 15.7 % from 2021. The top 200 enterprises accounted for 49% of the total business ER&D spend
- Enterprises belonging to software products & internet vertical spent the highest on ER&D activities in 2022 (US\$270.4 billion), followed by enterprises from the automotive industry (US\$124 billion)
- The automotive vertical had the highest number of enterprises featuring in the ER&D top 200 list, followed by software products & internet.

Growth rate and spend intensity

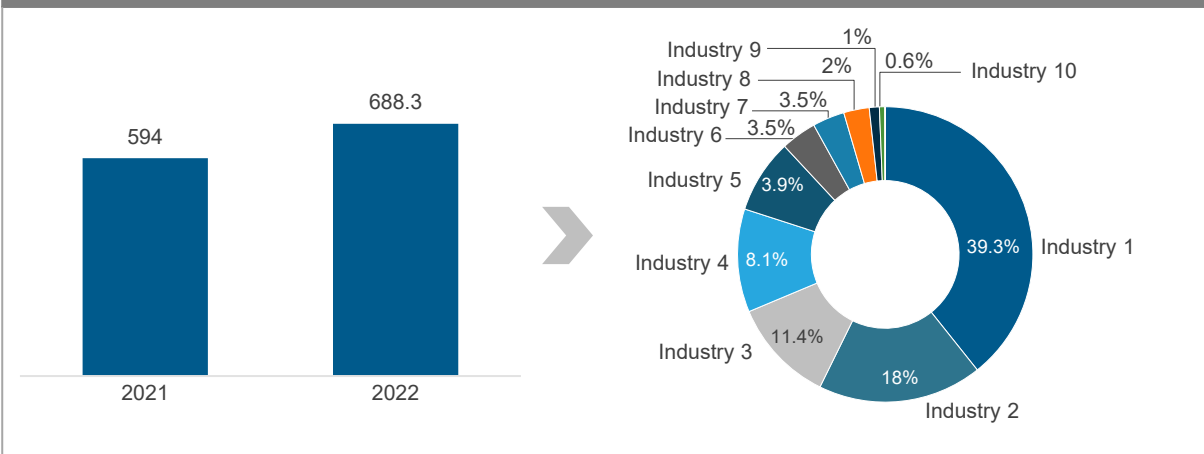
- In 2022, the software products & internet vertical recorded the highest ER&D spend with a year-on-year growth rate of 22.1%, the highest among all the industry verticals.
- The top 200 ER&D companies allocated an average of 9.7% of their revenues to R&D. Specifically, businesses in the software products and internet, TEPs, and semiconductor sectors showed an R&D spending intensity exceeding 13%, while those in the TSP, automotive, and industrial products sectors had a spending intensity of less than 6%

Investment themes

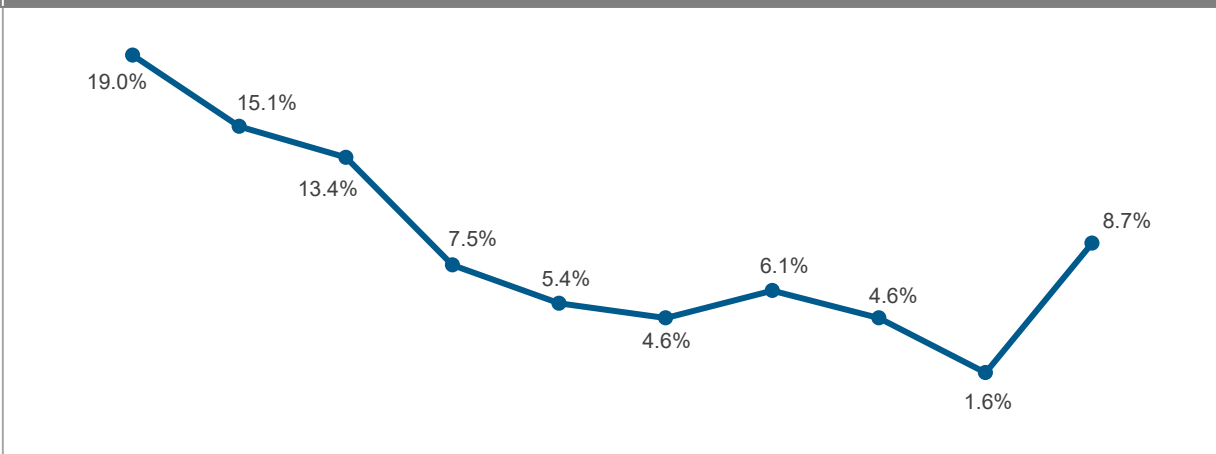
- Enterprises across the ten verticals increased their investments in digital technologies, such as generative AI, IoT, cloud, cybersecurity and digital twins, to develop next-generation products and improve customer experience.

This report includes ER&D spend analysis along with insights on key investment priorities for enterprises across 10 key industries

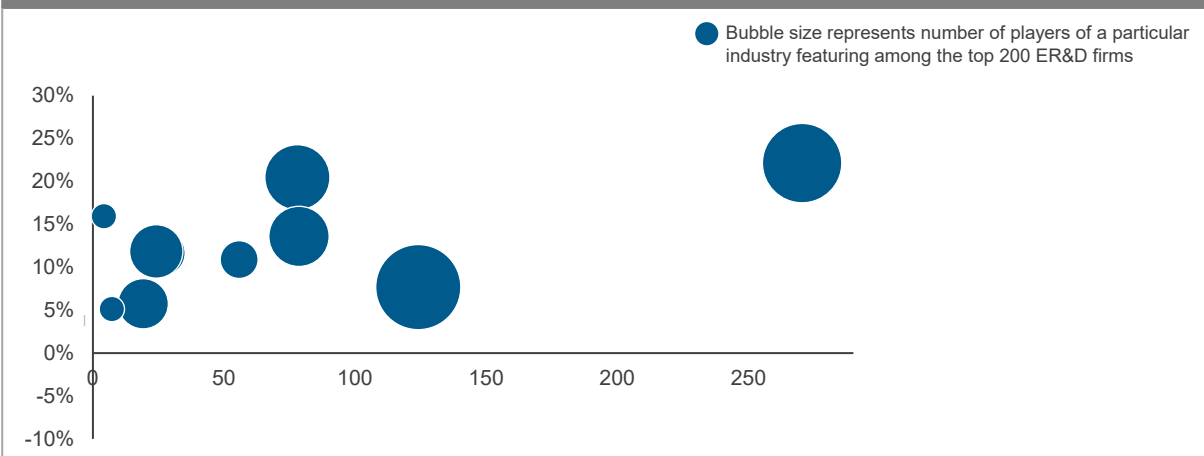
ER&D top 200 overview



Spend intensity across verticals



ER&D YoY growth and spend snapshot by industry



Key ER&D investment priorities across industry verticals



Research calendar

Engineering Research and Development & Software Product Engineering Services

Published Planned Current release

Reports title	Release date
5G Engineering Services – Provider Compendium 2023	July 2023
Navigating the Path to Digital Transformation: An Enterprise Guide to Undertaking the Platform Adoption Journey	August 2023
Unlocking the Growth Frontier through Software Product Innovation	August 2023
ACES Automotive Engineering Services PEAK Matrix® Assessment 2023: Navigating the Future of Automotive Landscape	September 2023
Navigating the Enterprise Adoption of Generative AI	September 2023
Engineering Services Top 50 2023	September 2023
Aerospace and Defense State of the Market 2023	October 2023
ACES Mobility Engineering Services – Provider Compendium 2023	October 2023
Leading the Pack: Trends for the Top 200 Engineering Research & Development (ER&D) Enterprises 2023	December 2023
The Silicon Shakedown – Unpacking the Impact of Technology and Geopolitics on Semiconductor Engineering	December 2023
Engineering R&D (ER&D) Outlook for 2024	Q1 2024
Connected Product Engineering Services PEAK Matrix® Assessment 2024	Q1 2024
5G Engineering Services State of the Market 2024	Q1 2024
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