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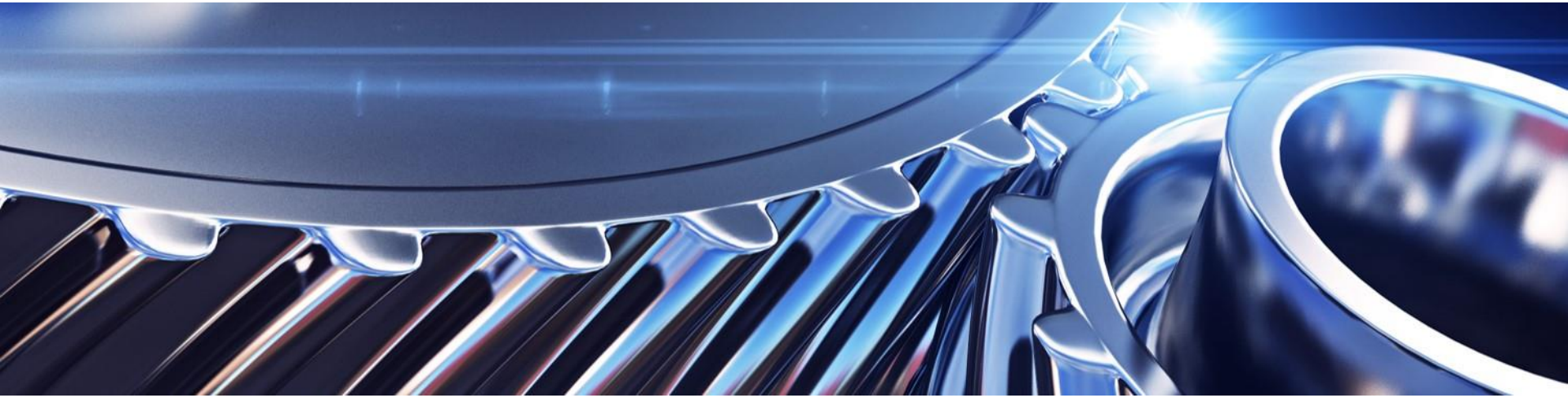

Leading the Pack: Trends for the Top 200 Engineering Research & Development (ER&D) Enterprises

Engineering Services
Market Report – May 2018: Complimentary Abstract

EGR-2018-40-CA-2637

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- Locations | Cost, skills, sustainability, portfolio – plus a tracking tool
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- Other | Market intelligence, service provider capabilities, technologies, contract assessment

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Background of the research

Background of the research

- In today's world of continuously evolving technology landscape and intensifying competition, Research and Development (R&D) activities are playing a more significant role than ever for businesses to stay innovative, sustainable, and ready for the challenges of future
- The global spend on R&D activities grew at a Compound Annual Growth Rate (CAGR) of ~3.5% during 2010-2017
- The widespread proliferation of software across verticals is leading to a shift in "core vs. context" for enterprises, and is driving enterprise R&D investments in new areas over and above the conventional investments for product development and upgrades
- Themes such as Artificial Intelligence (AI), Internet of Things (IoT), Machine to Machine (M2M) communication, Augmented Reality (AR) / Virtual Reality (VR), and Blockchain are finding use-cases across verticals and are enabling enterprises to innovate on both products and services while also realizing operational efficiencies. At the same time, industry-specific technology themes such as 5G, Software-Defined Everything (SDx), electric automotive powertrains, and additive manufacturing are also gaining significant traction
- In this research, Everest Group assesses the R&D expenditure across key industries in terms of growth trends and key technology themes driving enterprise spend. It also provides enterprise-level insights for leading R&D spenders in terms of their R&D spend growth, R&D intensity (R&D spend as a percentage of revenue), and key focus areas and investments
- The research was conducted for the top 200 companies (in terms of R&D spend) across nine broad sectors, factoring in their R&D spend growth trends and key investment areas over the last five years
- The focus of this research is only on business-financed Engineering R&D (ER&D) spend. It excludes non-ER&D spend (e.g., clinical R&D expenditure in pharmaceuticals and biotechnology, and molecular development R&D expenditure in chemicals) as well as government-sponsored ER&D spend

Scope of this report

- **Services:** Engineering services
- **Geography:** Global

Summary of key messages

1. Among the top 200 R&D spending enterprises, the automotive sector witnessed the highest R&D spend of US$101 billion in 2017, while software products space witnessed the highest Year-on-Year (YOY) growth of 16.6%

2. Themes such as enhanced user experience, AI, and connected ecosystems are witnessing investments across industries and sectors in some form or the other

3. Enterprises in automotive and telecom sectors are making significant investments in software-centric themes, as they witness disruption with the increasing penetration of software

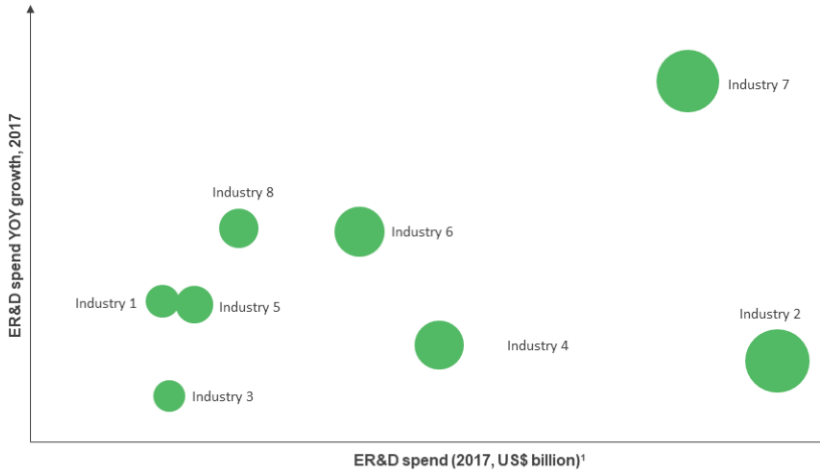
4. In terms of R&D intensity, the software products industry is closing the gap with the traditionally R&D-heavy semiconductor industry that has a high R&D intensity of 25%

5. IBM, which also held the top position for the number of U.S. patents granted in 2017, witnessed significantly higher R&D efficiency (patents per R&D dollar spend)

This report includes ER&D spend analysis across seven key verticals along with enterprise-level insights for leading R&D spenders

ER&D spend and growth trend by industry

ER&D spend and growth snapshot by industry[1, 2]



1 Based on industry-wise aggregated figures for players featuring among the top 200 ER&D firms based on R&D spend
2 Size of the bubble represents number of players of a particular industry featuring among the top 200 ER&D firms
Source: Everest Group (2018)

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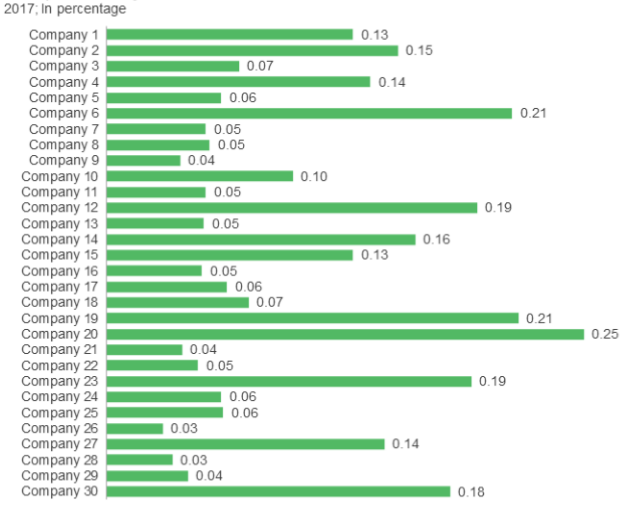
R&D spend intensity for top 30 R&D spenders

R&D spend intensity
2017; In percentage



- R&D spend intensity for a firm is defined as its expenditures on R&D activities divided by the sales
- Players in the software products and semiconductors industries witnessed the highest levels of R&D spend intensity in 2017
- The semiconductor industry has traditionally been among the most R&D- intensive industries; on the other hand, large investments by enterprises in the software space indicate their inherent nature of being the frontrunners in adopting the latest technology themes

Source: Everest Group (2018), IFI Patents

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Research calendar – Engineering Services (ES)

Published | Planned | Current release

Flagship engineering services reports	Release date
Leading the Pack: Trends for the Top 200 Engineering R&D Enterprises	**May 2018**
Embedded System Engineering Services – Service Provider Landscape with PEAK Matrix™ Assessment 2018	Q2 2018
Verification and Validation (VaV) Services – Service Provider Landscape with PEAK Matrix™ Assessment 2018	Q2 2018
Engineering Services for Medical Devices – Service Provider Landscape with PEAK Matrix™ Assessment 2018	Q4 2018
Manufacturing Engineering Services – Service Provider Landscape with PEAK Matrix™ Assessment 2018	Q4 2018

Thematic engineering services reports	
Top 20 Software Engineering Trailblazers – The DevOps Enablers	January 2018
Additive Manufacturing – Defining New Frontiers in Digital Manufacturing	March 2018
Supply Chain Excellence – Demystifying the Digitalization Journey	April 2018
A Guide to Industry 4.0 – Industrial Revolution and the Making of Smart Solutions	Q2 2018
Software-Defined "Suite of Things" – Blurring the Boundaries of the Technology Ecosystem	Q3 2018
How to Build a Superior Engineering Services Sourcing Model	Q3 2018
Global Engineering Services Talent Overview	Q3 2018

Note: For a list of all ES reports published by us, please refer to our website page

Additional Engineering Services research references

The following documents are recommended for additional insight into the topic covered in this report. The recommended documents either provide additional details or complementary content that may be of interest

1. **Additive Manufacturing – Defining New Frontiers in Digital Manufacturing** (EGR-2018-40-R-2590); 2018. This report presents an assessment of additive manufacturing in terms of its key enterprise benefits, emerging applications, industry maturity & use-cases, and growth potential. It also includes recommendations for both enterprises and service providers to leverage additive manufacturing in order to accelerate growth
2. **Digital Vortex in the Mobility World – Automotive Engineering Services PEAK Matrix™ Assessment 2017 and Profiles Compendium** (EGR-2017-15-R-2446); 2017. This report comprises an analysis of the capabilities of 19 leading engineering service providers in the automotive vertical. These providers are mapped on the Everest Group PEAK Matrix. The report also focuses on key automotive engineering services market trends
3. **Software Product Engineering Services – Market Trends and Services PEAK Matrix™ Assessment: Adapting to the New Normal** (EGR-2017-15-R-2441); 2017. This report presents fact-based trends impacting the software product engineering services market, along with the assessment and detailed profiles of 18 software product engineering service providers featured on the software product engineering services PEAK Matrix

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