

Aerospace and Defense State of the Market 2023

October 2023: Complimentary Abstract / Table of Contents



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Contents

1. Introduction and overview	5
• Research methodology	6
• Introduction	7
• How to read this document	8
• Summary of key messages	9
2. Market spending overview	10
• Commercial aviation	11
• Defense, space, and security	12
• Services	13
• Engineering Research and Development (ER&D) spending	14
• Top ER&D spenders	15
• Spend intensity of enterprises	16
3. Evolving trends for key investment priorities	17
• Key investment drivers shaping aerospace and defense priorities	18
• Enterprise – technology matrix	20
• Impact and challenge assessment	21
• Use cases	22
4. Outsourcing in the Aerospace and Defense (A&D) industry	36
• Outsourcing spend dynamics in A&D engineering	37
• A&D value chain – outsourced services and domain areas	38

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Contents

4. Outsourcing in the Aerospace and Defense (A&D) industry (continued)	
• Key global hubs for A&D Engineering Services (ES) service delivery	39
• Strategic investments made by service providers	41
5. Appendix	45
• Glossary	46
• Research calendar	47

Overview and abbreviated summary of key messages

This report examines the trends governing the aerospace and defense engineering services market by mapping the emerging business priorities with the key engineering focus areas, providing use cases, and discussing the outsourcing landscape.

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

Market spending overview

- Expenditure on aerospace and defense industry engineering research and development (ER&D) has gradually approached the elevated levels seen before the pandemic
- Commercial aviation focuses on backlog clearance, environmental responsibility, personalization, and future-ready factories
- Defense, space, and security prioritize capacity enhancement, cost reduction, secure communications, and innovative deterrents. Services units navigate talent crunch, fleet sustenance, and supply chain challenges

Evolving trends for key investment priorities

- Sustainability, autonomy, connectivity, directed energy, and certain disruptive concepts are key investment drivers shaping aerospace and defense priorities
- Enterprises place paramount importance on driving innovation in cutting-edge domains such as high-performance materials, Artificial Intelligence-Machine Learning (AI-ML), autonomous systems, and digital twin
- Analyzed technologies act as strong defense to threats and enable OEM cost savings, forming most of the impact. Regulatory compliance, safety assurance, data privacy concerns, and scaling complexities pose a majority of the challenges

Outsourcing in the A&D industry

- Outsourcing in the A&D industry accounts for ~5% of the enterprise spend, consistent with the broader ES market (4-5%)
- Enterprises often outsource their engineering and design functions to specialized firms to access expertise and lower talent costs while pacing the time-to-market
- Flat outsourcing spend intensity; however, marginally higher ER&D spend intensity is expected to lead to a bullish growth in 2023 – 2025 period

Introduction

Enterprises and service providers in the aerospace and defense sector are undergoing significant transformations, aligning themselves with emerging technologies and addressing the dynamic challenges in the industry. The industry is broadly divided into three segments – commercial aviation business units, defense, space, and security serving units, and the services Business Units (BU). Each business unit has its own business priorities laid out, which then translate into engineering priorities.

The report provides an overview of each BU's actionable and associated use cases merging with an overall view of the A&D ER&D resilience, followed by the top enterprise spenders in the space. Our study provides a detailed view of the key investment priorities, while highlighting each enterprise's degree of strategic focus in the respective technology-cum-spend area.

For each of the spend areas, focused, relevant, and latest use cases are provided to ensure 100% coverage of the ongoing work while delineating new business opportunities for the enterprises and service providers. A section is dedicated to the outsourcing market, which covers the market overview – size, outsourced services, key delivery locations, investments, and partnerships.

Scope of this report



Geography
Global



Industry
Aerospace and defense

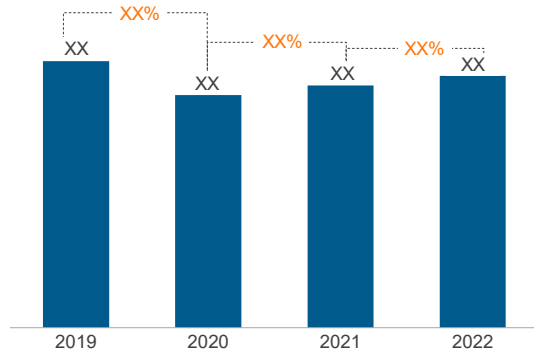


Services
Engineering services

This study offers 3 distinct chapters providing a deep dive into key aspects of aerospace and defense engineering services market; below are four charts to illustrate the depth of the report

ER&D enterprise spend dynamics in A&D engineering

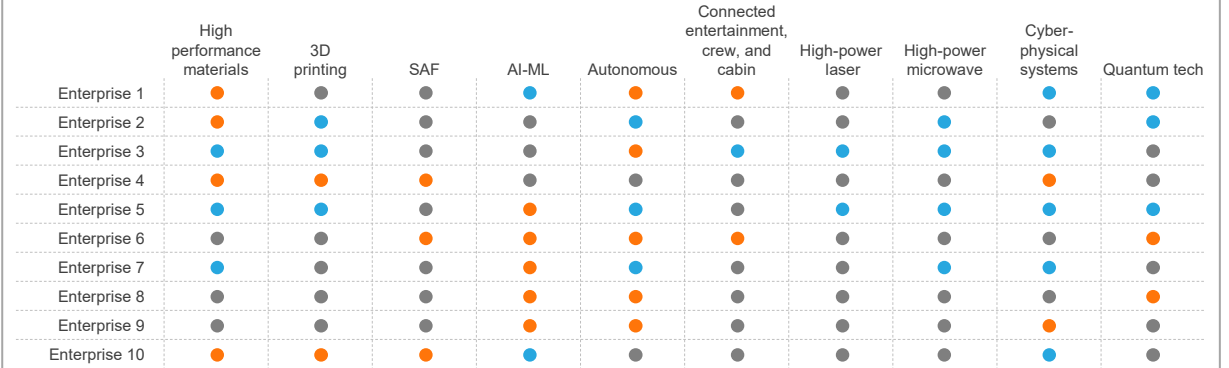
ER&D spending trend
2019-22; US\$ billion
XX% growth rate



Enterprise-technology prioritization matrix

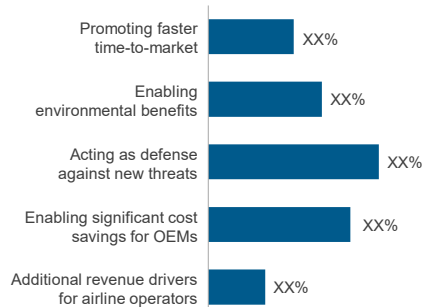
Enterprise – technology matrix

Relative degree of strategic focus: Low ● Medium ● High ●

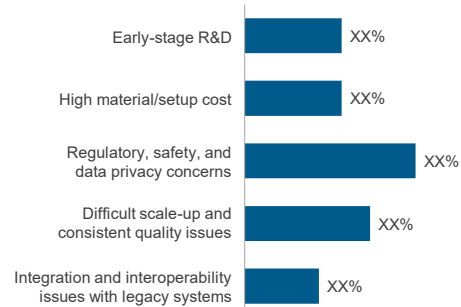


Impact and challenges across key technologies

Expected impact of analyzed technologies
Percentage of technologies contributing non-exclusively

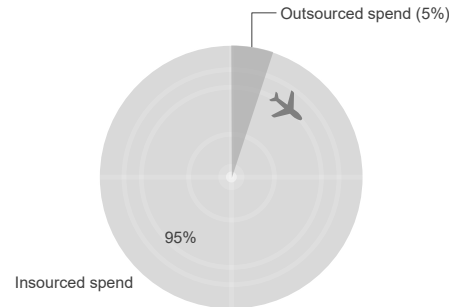


Expected challenges across analyzed technologies
Percentage of technologies contributing non-exclusively

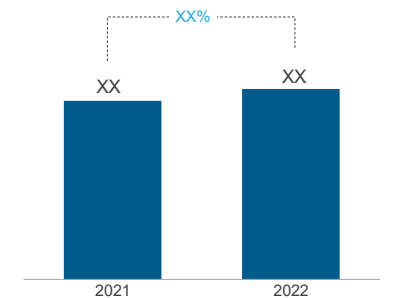


ER&D outsourcing spend dynamics in A&D engineering

A&D engineering overall spend
2022; US\$ billion
100% = US\$XX billion



A&D engineering outsourcing spending trend
2021-22; US\$ billion
XX% growth rate



Research calendar

Engineering Research and Development

Published Planned Current release

Reports title	Release date
Acing the Art of Platform-driven Growth: Software Product Engineering Services PEAK Matrix® Assessment 2023	December 2022
Software Product Engineering Services – Provider Compendium 2023	February 2023
Unleashing the Era of Phygital Manufacturing – Industry 4.0 State of the Market 2023	February 2023
Engineering R&D (ER&D) Outlook for 2023	February 2023
Engineering Services CXO Insights: Key Issues Report 2023	April 2023
5G Engineering Services PEAK Matrix® Assessment 2023: The Next Frontier in the Hyperconnected Era	June 2023
5G Engineering Services – Provider Compendium 2023	July 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	Q4 2023
Trends in the Top 200 Engineering Research & Development (ER&D) Enterprises 2023	Q4 2023
5G Engineering Services State of the Market 2023	Q4 2023

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