

Finite Element Analysis Market Report by Component (Software, Services), Deployment (Cloud-based, On-premises), Enterprise Size (Large Enterprises, Small and Medium-sized Enterprises), Industry Vertical (Aerospace and Defense, Automotive, Electrical and Electronics, and Others), Region 2024-2032

<https://marketpublishers.com/r/F972F28457FBEN.html>

Date: March 2024

Pages: 147

Price: US\$ 2,999.00 (Single User License)

ID: F972F28457FBEN

Abstracts

The global finite element analysis market size reached US\$ 5.8 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 13.2 Billion by 2032, exhibiting a growth rate (CAGR) of 9.31% during 2024-2032. Increasing adoption of virtual prototyping across industries, the rising demand for lightweight and energy-efficient designs, the growing complexity of product designs, and the implementation of stringent regulatory standards by governments of various nations represent some of the key factors driving the market.

Finite element analysis (FEA) is a numerical method used to analyze the behavior of structures and systems under various physical conditions. It enables engineers to simulate real-world scenarios, predict how objects will respond to different forces and loads, and optimize designs for performance and durability. The technique is based on dividing a complex geometry into many small elements, allowing for the accurate representation of the object's behavior. Finite element analysis offers several advantages, such as providing engineers with a comprehensive understanding of structural behavior and allowing them to identify potential weaknesses, points of failure, and stress concentrations. This knowledge helps in improving designs, reducing material usage, and optimizing structural performance, leading to cost savings and enhanced product quality. FEA also enables virtual prototyping, reducing the need for physical prototypes and testing, which can be time-consuming and expensive. By

simulating different scenarios and conducting virtual tests, engineers can iterate designs rapidly and identify the most effective solutions. Currently, there are different types of product variants available, each suited for specific applications, such as structural, thermal, fluid, electromagnetic, fatigue, and field analysis.

Finite Element Analysis Market Trends:

The global finite element analysis market is mainly driven by the increasing adoption of virtual prototyping across industries such as automotive, aerospace, and manufacturing. Moreover, the rising demand for lightweight and energy-efficient designs and the growing complexity of product designs are bolstering the market growth. Furthermore, the implementation of stringent regulatory standards by governments of various nations has surged the demand for robust simulation techniques to ensure safety and reliability, which is creating a positive outlook for the market. Besides this, advancements in computing power and cloud-based solutions and the integration of FEA with other technologies, such as additive manufacturing and the internet of things (IoT), are providing an impetus to the market growth. Additionally, the expanding application areas of FEA across the healthcare, energy, and consumer goods industries and the availability of user-friendly software interfaces and improved visualization tools are driving the market growth. Other factors, such as the rising awareness about the benefits of FEA, including reduced product development costs, improved product performance, and enhanced competitiveness, and rapid technological advancements, are contributing to the market growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global finite element analysis market, along with forecasts at the global, regional, and country levels from 2024-2032. Our report has categorized the market based on component, deployment, enterprise size, and industry vertical.

Component Insights:

Software
Services

The report has provided a detailed breakup and analysis of the finite element analysis market based on the component. This includes software and services. According to the report, software represented the largest segment.

Deployment Insights:

Cloud-based
On-premises

A detailed breakup and analysis of the finite element analysis market based on the deployment has also been provided in the report. This includes cloud-based and on-premises. According to the report, cloud-based accounted for the largest market share.

Enterprise Size Insights:

Large Enterprises
Small and Medium-sized Enterprises

The report has provided a detailed breakup and analysis of the finite element analysis market based on the enterprise size. This includes large, and small and medium-sized enterprises.

Industry Vertical Insights:

Aerospace and Defense
Automotive
Electrical and Electronics
Others

A detailed breakup and analysis of the finite element analysis market based on the industry vertical has also been provided in the report. This includes aerospace and defense, automotive, electrical and electronics, and others. According to the report, automotive accounted for the largest market share.

Regional Insights:

North America
United States
Canada
Asia Pacific
China
Japan
India
South Korea

Australia
Indonesia
Others
Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

The report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, North America was the largest market for finite element analysis. Some of the factors driving the North America finite element analysis market included increasing advancements in computing power and cloud-based solutions, the integration of FEA with other technologies, and rapid technological innovations.

Competitive Landscape:

The report has also provided a comprehensive analysis of the competitive landscape in the global finite element analysis market. Detailed profiles of all major companies have been provided. Some of the companies covered include Altair Engineering Inc., Ansys Inc., Autodesk Inc., Ceetron AS, Dassault Systemes, Hexagon AB, etc. Kindly note that this only represents a partial list of companies, and the complete list has been provided in the report.

Key Questions Answered in This Report:

How has the global finite element analysis market performed so far, and how will it perform in the coming years?

What are the drivers, restraints, and opportunities in the global finite element analysis

market?

What is the impact of each driver, restraint, and opportunity on the global finite element analysis market?

What are the key regional markets?

Which countries represent the most attractive finite element analysis market?

What is the breakup of the market based on the component?

Which is the most attractive component in the finite element analysis market?

What is the breakup of the market based on the deployment?

Which is the most attractive deployment in the finite element analysis market?

What is the breakup of the market based on the enterprise size?

Which is the most attractive enterprise size in the finite element analysis market?

What is the breakup of the market based on the industry vertical?

Which is the most attractive industry vertical in the finite element analysis market?

What is the competitive structure of the global finite element analysis market?

Who are the key players/companies in the global finite element analysis market?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL FINITE ELEMENT ANALYSIS MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

6 MARKET BREAKUP BY COMPONENT

- 6.1 Software
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
- 6.2 Services
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast

7 MARKET BREAKUP BY DEPLOYMENT

7.1 Cloud-based

7.1.1 Market Trends

7.1.2 Market Forecast

7.2 On-premises

7.2.1 Market Trends

7.2.2 Market Forecast

8 MARKET BREAKUP BY ENTERPRISE SIZE

8.1 Large Enterprises

8.1.1 Market Trends

8.1.2 Market Forecast

8.2 Small and Medium-sized Enterprises

8.2.1 Market Trends

8.2.2 Market Forecast

9 MARKET BREAKUP BY INDUSTRY VERTICAL

9.1 Aerospace and Defense

9.1.1 Market Trends

9.1.2 Market Forecast

9.2 Automotive

9.2.1 Market Trends

9.2.2 Market Forecast

9.3 Electrical and Electronics

9.3.1 Market Trends

9.3.2 Market Forecast

9.4 Others

9.4.1 Market Trends

9.4.2 Market Forecast

10 MARKET BREAKUP BY REGION

10.1 North America

10.1.1 United States

10.1.1.1 Market Trends

10.1.1.2 Market Forecast

- 10.1.2 Canada
 - 10.1.2.1 Market Trends
 - 10.1.2.2 Market Forecast
- 10.2 Asia-Pacific
 - 10.2.1 China
 - 10.2.1.1 Market Trends
 - 10.2.1.2 Market Forecast
 - 10.2.2 Japan
 - 10.2.2.1 Market Trends
 - 10.2.2.2 Market Forecast
 - 10.2.3 India
 - 10.2.3.1 Market Trends
 - 10.2.3.2 Market Forecast
 - 10.2.4 South Korea
 - 10.2.4.1 Market Trends
 - 10.2.4.2 Market Forecast
 - 10.2.5 Australia
 - 10.2.5.1 Market Trends
 - 10.2.5.2 Market Forecast
 - 10.2.6 Indonesia
 - 10.2.6.1 Market Trends
 - 10.2.6.2 Market Forecast
 - 10.2.7 Others
 - 10.2.7.1 Market Trends
 - 10.2.7.2 Market Forecast
- 10.3 Europe
 - 10.3.1 Germany
 - 10.3.1.1 Market Trends
 - 10.3.1.2 Market Forecast
 - 10.3.2 France
 - 10.3.2.1 Market Trends
 - 10.3.2.2 Market Forecast
 - 10.3.3 United Kingdom
 - 10.3.3.1 Market Trends
 - 10.3.3.2 Market Forecast
 - 10.3.4 Italy
 - 10.3.4.1 Market Trends
 - 10.3.4.2 Market Forecast
 - 10.3.5 Spain

- 10.3.5.1 Market Trends
- 10.3.5.2 Market Forecast
- 10.3.6 Russia
 - 10.3.6.1 Market Trends
 - 10.3.6.2 Market Forecast
- 10.3.7 Others
 - 10.3.7.1 Market Trends
 - 10.3.7.2 Market Forecast
- 10.4 Latin America
 - 10.4.1 Brazil
 - 10.4.1.1 Market Trends
 - 10.4.1.2 Market Forecast
 - 10.4.2 Mexico
 - 10.4.2.1 Market Trends
 - 10.4.2.2 Market Forecast
 - 10.4.3 Others
 - 10.4.3.1 Market Trends
 - 10.4.3.2 Market Forecast
- 10.5 Middle East and Africa
 - 10.5.1 Market Trends
 - 10.5.2 Market Breakup by Country
 - 10.5.3 Market Forecast

11 DRIVERS, RESTRAINTS, AND OPPORTUNITIES

- 11.1 Overview
- 11.2 Drivers
- 11.3 Restraints
- 11.4 Opportunities

12 VALUE CHAIN ANALYSIS

13 PORTERS FIVE FORCES ANALYSIS

- 13.1 Overview
- 13.2 Bargaining Power of Buyers
- 13.3 Bargaining Power of Suppliers
- 13.4 Degree of Competition
- 13.5 Threat of New Entrants

13.6 Threat of Substitutes

14 PRICE ANALYSIS

15 COMPETITIVE LANDSCAPE

15.1 Market Structure

15.2 Key Players

15.3 Profiles of Key Players

15.3.1 Altair Engineering Inc.

15.3.1.1 Company Overview

15.3.1.2 Product Portfolio

15.3.2 Ansys Inc.

15.3.2.1 Company Overview

15.3.2.2 Product Portfolio

15.3.3 Autodesk Inc.

15.3.3.1 Company Overview

15.3.3.2 Product Portfolio

15.3.4 Ceetron AS

15.3.4.1 Company Overview

15.3.4.2 Product Portfolio

15.3.5 Dassault Systemes

15.3.5.1 Company Overview

15.3.5.2 Product Portfolio

15.3.6 Hexagon AB

15.3.6.1 Company Overview

15.3.6.2 Product Portfolio

Kindly note that this only represents a partial list of companies, and the complete list has been provided in the report.

List Of Tables

LIST OF TABLES

Table 1: Global: Finite Element Analysis Market: Key Industry Highlights, 2023 & 2032

Table 2: Global: Finite Element Analysis Market Forecast: Breakup by Component (in Million US\$), 2024-2032

Table 3: Global: Finite Element Analysis Market Forecast: Breakup by Deployment (in Million US\$), 2024-2032

Table 4: Global: Finite Element Analysis Market Forecast: Breakup by Enterprise Size (in Million US\$), 2024-2032

Table 5: Global: Finite Element Analysis Market Forecast: Breakup by Industry Vertical (in Million US\$), 2024-2032

Table 6: Global: Finite Element Analysis Market Forecast: Breakup by Region (in Million US\$), 2024-2032

Table 7: Global: Finite Element Analysis Market: Competitive Structure

Table 8: Global: Finite Element Analysis Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Finite Element Analysis Market: Major Drivers and Challenges

Figure 2: Global: Finite Element Analysis Market: Sales Value (in Billion US\$), 2018-2023

Figure 3: Global: Finite Element Analysis Market Forecast: Sales Value (in Billion US\$), 2024-2032

Figure 4: Global: Finite Element Analysis Market: Breakup by Component (in %), 2023

Figure 5: Global: Finite Element Analysis Market: Breakup by Deployment (in %), 2023

Figure 6: Global: Finite Element Analysis Market: Breakup by Enterprise Size (in %), 2023

Figure 7: Global: Finite Element Analysis Market: Breakup by Industry Vertical (in %), 2023

Figure 8: Global: Finite Element Analysis Market: Breakup by Region (in %), 2023

Figure 9: Global: Finite Element Analysis (Software) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 10: Global: Finite Element Analysis (Software) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 11: Global: Finite Element Analysis (Services) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 12: Global: Finite Element Analysis (Services) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 13: Global: Finite Element Analysis (Cloud-based) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 14: Global: Finite Element Analysis (Cloud-based) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 15: Global: Finite Element Analysis (On-premises) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 16: Global: Finite Element Analysis (On-premises) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 17: Global: Finite Element Analysis (Large Enterprises) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 18: Global: Finite Element Analysis (Large Enterprises) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 19: Global: Finite Element Analysis (Small and Medium-sized Enterprises) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 20: Global: Finite Element Analysis (Small and Medium-sized Enterprises)

Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 21: Global: Finite Element Analysis (Aerospace and Defense) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 22: Global: Finite Element Analysis (Aerospace and Defense) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 23: Global: Finite Element Analysis (Automotive) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 24: Global: Finite Element Analysis (Automotive) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 25: Global: Finite Element Analysis (Electrical and Electronics) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 26: Global: Finite Element Analysis (Electrical and Electronics) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 27: Global: Finite Element Analysis (Other Industry Verticals) Market: Sales Value (in Million US\$), 2018 & 2023

Figure 28: Global: Finite Element Analysis (Other Industry Verticals) Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 29: North America: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 30: North America: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 31: United States: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 32: United States: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 33: Canada: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 34: Canada: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 35: Asia-Pacific: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 36: Asia-Pacific: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 37: China: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 38: China: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 39: Japan: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 40: Japan: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 41: India: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 42: India: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 43: South Korea: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 44: South Korea: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 45: Australia: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 46: Australia: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 47: Indonesia: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 48: Indonesia: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 49: Others: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 50: Others: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 51: Europe: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 52: Europe: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 53: Germany: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 54: Germany: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 55: France: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 56: France: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 57: United Kingdom: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 58: United Kingdom: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 59: Italy: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 &

2023

Figure 60: Italy: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 61: Spain: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 62: Spain: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 63: Russia: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 64: Russia: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 65: Others: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 66: Others: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 67: Latin America: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 68: Latin America: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 69: Brazil: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 70: Brazil: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 71: Mexico: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 72: Mexico: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 73: Others: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 74: Others: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 75: Middle East and Africa: Finite Element Analysis Market: Sales Value (in Million US\$), 2018 & 2023

Figure 76: Middle East and Africa: Finite Element Analysis Market: Breakup by Country (in %), 2023

Figure 77: Middle East and Africa: Finite Element Analysis Market Forecast: Sales Value (in Million US\$), 2024-2032

Figure 78: Global: Finite Element Analysis Industry: Drivers, Restraints, and Opportunities

Figure 79: Global: Finite Element Analysis Industry: Value Chain Analysis

Figure 80: Global: Finite Element Analysis Industry: Porter's Five Forces Analysis

I would like to order

Product name: Finite Element Analysis Market Report by Component (Software, Services), Deployment (Cloud-based, On-premises), Enterprise Size (Large Enterprises, Small and Medium-sized Enterprises), Industry Vertical (Aerospace and Defense, Automotive, Electrical and Electronics, and Others), Region 2024-2032

Product link: <https://marketpublishers.com/r/F972F28457FBEN.html>

Price: US\$ 2,999.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/F972F28457FBEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:

Last name:

Email:

Company:

Address:

City:

Zip code:

Country:

Tel:

Fax:

Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below
and fax the completed form to +44 20 7900 3970