Global Geotechnical Instrumentation and Monitoring Market: Component (Hardware, Software, Services), Technology (Wired Networking, Wireless Networking), Application (Tunnels and Bridges, Buildings, Dams, Others), Industry Vertical - Forecast Till 2023

Market synopsis

Geotechnical instrumentation benefits the engineers and construction workers by providing data in every stage of a project. Geotechnical instrumentation and monitoring are essential for the effective completion of construction projects. The prominent reasons for deploying instrumentation is its capability of providing quality control, construction control, monitoring in-service performance, design verification, and many others. Geotechnical instrumentation enhances the quality of work and makes it easy to document the work done, with greater accuracy.

The rising awareness and various advantages of geotechnical instrumentation and monitoring and increasing investments across the developing countries like China and India are driving the market. The technological advancements in the field of sensors and prominence of instrumentation in untapped economies are expected to drive the market through the forecast period. However, high deployment costs of monitoring solutions are hampering the market growth.

Segmentation

On the basis of the component, the market is segmented into hardware, software, and services. The hardware is further sub-segmented into sensors, piezometers, inclinometers, extensometers, and others. The service is further sub-segmented into installation and designing service, monitoring services, and others.

On the basis of technology, the market is segmented into wired networking and wireless networking.

On the basis of application, the market is segmented into tunnels and bridges, buildings, dams, and others.

On the basis of industry vertical, the market is segmented into construction and infrastructure, energy & power, oil & gas, agriculture, and other.

On the basis of region, the market is segmented into North America, Europe, Asia Pacific, and rest of the world.

Global Geotechnical Instrumentation and Monitoring Market, USD Billion
Regional analysis

The global geotechnical instrumentation and monitoring market is estimated to grow at a significant rate during the forecast period. The geographical analysis of geotechnical instrumentation and monitoring market marks the study for regions like North America, Europe (including Russia), Asia Pacific (including Australia and New Zealand) and rest of the world (including the Middle East, Africa, and South America). Among these, the market is led by North America. The reason for this robust growth in North America is due to the increasing number of projects that are deploying geotechnical instrumentation and monitoring solutions. This also includes the initiatives by the government to implement this technology for the safety of the infrastructure in this region. Another major factor contributing to the growth of geotechnical instrumentation and monitoring in North America is the advancement in positioning systems.

However, the high cost of installation and a slower rate of adoption restrain the growth of the market in the developing countries like China, India, and the Middle East & Africa. On the other hand, Europe comprises most of the key players that operate in the geotechnical instrumentation and monitoring market. This higher concentration of key players permits the European region to compete closely with North America in terms of the market share. Asia Pacific is expected to be the fastest growing region in geotechnical instrumentation and monitoring market.

Key players

Some of the major players in global geotechnical instrumentation and monitoring market include Deep Excavation LLC (U.S.), Geocomp Corporation (U.S.), DST Consulting Engineers Inc (Canada), Fugro (Holland), Monitoring Solution Providers Pte Ltd (Singapore), S. W. Cole Engineering, Inc (U.S.), Coffey International (Australia), WJ Groundwater Limited (U.K), EKO Instruments (Japan), Geotechnics Limited (U.K), among others.

Other vendors include GaiaComm Ltd. (Greece), M.A.E. Advanced Geophysics Instruments (Italy), Innovative Geotechnical Instrumentation (India), Geotechnics Ltd. (New Zealand), Quantum Geotechnical (U.K), Geotechnical Services, Inc (U.S.), Petra Geotechnical, Inc. (U.S.), American Geotechnical, Inc.(U.S.), Wardle Drilling & Geotechnical Ltd. (U.K), Land-Drill Geotechnics Ltd (U.K.), Cascade Geotechnical Inc. (Canada), Canterbury Seismic Instruments Ltd (New Zealand), Ace Instrument Co., Ltd (South Korea), HMA Geotechnical Systems Australia Pty (Australia), Geotest Instrument Corporation (U.S.), Marton Geotechnical Services Ltd (MGS) (U.K), among others.

The prominent players constantly keep innovating and investing in research and development to present a cost-effective portfolio. There have been recent mergers and acquisitions among the key players, where the business entities expect to strengthen their reach to their customers.

Intended Audience

- Enterprise AI service providers
- Enterprise AI solution vendors
- Application developers
- System developers and integrators
- Government agencies
- Application end-user
- Research Firms

Contents:

TABLE OF CONTENTS

1 Executive Summary

2 Scope of the Report
  2.1 Market Definition
  2.2 Scope of the Study
  2.2.1 Research Objectives
  2.2.2 Assumptions & Limitations
  2.3 Markets Structure

3 Market Research Methodology
  3.1 Research Process
  3.2 Secondary Research
  3.3 Primary Research
  3.4 Forecast Model

4 Market Landscape
  4.1 Porter’s Five Forces Analysis
    4.1.1 Threat of New Entrants
    4.1.2 Bargaining power of buyers
    4.1.3 Threat of substitutes
    4.1.4 Bargaining power of Suppliers
    4.1.5 Segment rivalry
  4.2 Value Chain/Supply Chain of Global Geotechnical Instrumentation and Monitoring Market

5 Overview of Global Geotechnical Instrumentation and Monitoring Market
  5.1 Introduction
  5.2 Growth Drivers
  5.3 Impact analysis
  5.4 Market Challenges

6 Market Trends
  6.1 Introduction
  6.2 Growth Trends
  6.3 Impact analysis

7. Global Geotechnical Instrumentation and Monitoring Market by Component
  7.1 Introduction
  7.2 Hardware
    7.2.1 Market Estimates & Forecast, 2017-2023
    7.2.2 Market Estimates & Forecast by Region, 2017-2023
  7.3 Software
    7.3.1 Market Estimates & Forecast, 2017-2023
    7.3.2 Market Estimates & Forecast by Region, 2017-2023
  7.4 Services
    7.4.1 Market Estimates & Forecast, 2017-2023
    7.4.2 Market Estimates & Forecast by Region, 2017-2023
8. Global Geotechnical Instrumentation and Monitoring Market by Technology

8.1 Introduction
8.2 Wired Networking
  8.2.1 Market Estimates & Forecast, 2017-2023
  8.2.2 Market Estimates & Forecast by Region, 2017-2023
8.3 Wireless Networking
  8.3.1 Market Estimates & Forecast, 2017-2023
  8.3.2 Market Estimates & Forecast by Region, 2017-2023

9. Global Geotechnical Instrumentation and Monitoring Market by Industry

9.1 Introduction
9.2 Construction and Infrastructure
  9.2.1 Market Estimates & Forecast, 2017-2023
  9.2.2 Market Estimates & Forecast by Region, 2017-2023
9.3 Energy and Power
  9.3.1 Market Estimates & Forecast, 2017-2023
  9.3.2 Market Estimates & Forecast by Region, 2017-2023
9.4 Oil & Gas
  9.4.1 Market Estimates & Forecast, 2017-2023
  9.4.2 Market Estimates & Forecast by Region, 2017-2023
9.5 Agriculture
  9.5.1 Market Estimates & Forecast, 2017-2023
  9.5.2 Market Estimates & Forecast by Region, 2017-2023
9.6 Others
  9.6.1 Market Estimates & Forecast, 2017-2023
  9.6.2 Market Estimates & Forecast by Region, 2017-2023

10. Global Geotechnical Instrumentation and Monitoring Market by Application

10.1 Introduction
10.2 Tunnels and Bridges
  10.2.1 Market Estimates & Forecast, 2017-2023
  10.2.2 Market Estimates & Forecast by Region, 2017-2023
10.3 Buildings
  10.3.1 Market Estimates & Forecast, 2017-2023
  10.3.2 Market Estimates & Forecast by Region, 2017-2023
10.4 Dams
  10.4.1 Market Estimates & Forecast, 2017-2023
  10.4.2 Market Estimates & Forecast by Region, 2017-2023
10.5 Others
  10.5.1 Market Estimates & Forecast, 2017-2023
  10.5.2 Market Estimates & Forecast by Region, 2017-2023

11. Global Geotechnical Instrumentation and Monitoring Market by Region

11.1 Introduction
11.2 North America
  11.2.1 Market Estimates & Forecast, 2017-2023
  11.2.2 Market Estimates & Forecast by Component, 2017-2023
  11.2.3 Market Estimates & Forecast by Technology, 2017-2023
  11.2.4 Market Estimates & Forecast by Application, 2017-2023
  11.2.5 Market Estimates & Forecast by Industry, 2017-2023
  11.2.6 U.S.
11.2.6.1 Market Estimates & Forecast, 2017-2023
11.2.6.2 Market Estimates & Forecast by Component, 2017-2023
11.2.6.3 Market Estimates & Forecast by Technology, 2017-2023
11.2.6.4 Market Estimates & Forecast by Application, 2017-2023
11.2.6.5 Market Estimates & Forecast by Industry, 2017-2023
11.2.7 Mexico
11.2.7.1 Market Estimates & Forecast, 2017-2023
11.2.7.2 Market Estimates & Forecast by Component, 2017-2023
11.2.7.3 Market Estimates & Forecast by Technology, 2017-2023
11.2.7.4 Market Estimates & Forecast by Application, 2017-2023
11.2.7.5 Market Estimates & Forecast by Industry, 2017-2023
11.2.8 Canada
11.2.8.1 Market Estimates & Forecast, 2017-2023
11.2.8.2 Market Estimates & Forecast by Component, 2017-2023
11.2.8.3 Market Estimates & Forecast by Technology, 2017-2023
11.2.8.4 Market Estimates & Forecast by Application, 2017-2023
11.2.8.5 Market Estimates & Forecast by Industry, 2017-2023
11.3 Europe
11.3.1 Market Estimates & Forecast, 2017-2023
11.3.2 Market Estimates & Forecast by Component, 2017-2023
11.3.3 Market Estimates & Forecast by Technology, 2017-2023
11.3.4 Market Estimates & Forecast by Application, 2017-2023
11.3.5 Market Estimates & Forecast by Industry, 2017-2023
11.3.6 Germany
11.3.6.1 Market Estimates & Forecast, 2017-2023
11.3.6.2 Market Estimates & Forecast by Component, 2017-2023
11.3.6.3 Market Estimates & Forecast by Technology, 2017-2023
11.3.6.4 Market Estimates & Forecast by Application, 2017-2023
11.3.6.5 Market Estimates & Forecast by Industry, 2017-2023
11.3.7 France
11.3.7.1 Market Estimates & Forecast, 2017-2023
11.3.7.2 Market Estimates & Forecast by Component, 2017-2023
11.3.7.3 Market Estimates & Forecast by Technology, 2017-2023
11.3.7.4 Market Estimates & Forecast by Application, 2017-2023
11.3.7.5 Market Estimates & Forecast by Industry, 2017-2023
11.3.8 U.K
11.3.8.1 Market Estimates & Forecast, 2017-2023
11.3.8.2 Market Estimates & Forecast by Component, 2017-2023
11.3.8.3 Market Estimates & Forecast by Technology, 2017-2023
11.3.8.4 Market Estimates & Forecast by Application, 2017-2023
11.3.8.5 Market Estimates & Forecast by Industry, 2017-2023
11.4 Asia Pacific
11.4.1 Market Estimates & Forecast, 2017-2023
11.4.2 Market Estimates & Forecast by Component, 2017-2023
11.4.3 Market Estimates & Forecast by Technology, 2017-2023
11.4.4 Market Estimates & Forecast by Application, 2017-2023
11.4.5 Market Estimates & Forecast by Industry, 2017-2023
11.4.6 China
12.2.1 Company Overview
12.2.2 Product/Business Segment Overview
12.2.3 Financial Updates
12.2.4 Key Developments
12.3 DST Consulting Engineers Inc (Canada)
12.3.1 Company Overview
12.3.2 Product/Business Segment Overview
12.3.3 Financial Updates
12.3.4 Key Developments
12.4 Fugro (Holland)
12.4.1 Company Overview
12.4.2 Product/Business Segment Overview
12.4.3 Financial Updates
12.4.4 Key Developments
12.5 Monitoring Solution Providers Pte Ltd (Singapore)
12.5.1 Company Overview
12.5.2 Product/Business Segment Overview
12.5.3 Financial Updates
12.5.4 Key Developments
12.6 S. W. Cole Engineering, Inc (U.S.)
12.6.1 Company Overview
12.6.2 Product/Business Segment Overview
12.6.3 Financial Updates
12.6.4 Key Developments
12.7 Coffey International (Australia)
12.7.1 Company Overview
12.7.2 Product/Business Segment Overview
12.7.3 Financial Updates
12.7.4 Key Developments
12.8 WJ Groundwater Limited (U.K)
12.8.1 Company Overview
12.8.2 Product/Business Segment Overview
12.8.3 Financial Updates
12.8.4 Key Developments
12.9 EKO Instruments (Japan)
12.9.1 Company Overview
12.9.2 Product/Business Segment Overview
12.9.3 Financial Updates
12.9.4 Key Developments
12.10 Geotechnics Limited (U.K)
12.10.1 Company Overview
12.10.2 Product/Business Segment Overview
12.10.3 Financial Updates
12.10.4 Key Developments
13 Conclusion

LIST OF TABLES
Table 1: World Population by Major Regions (2017 To 2030)
Table 2: Global Geotechnical Instrumentation and Monitoring Market: By Region, 2017-2023
Table 3 North America Geotechnical Instrumentation and Monitoring Market: By Country, 2017-2023
Table 4 Europe Geotechnical Instrumentation and Monitoring Market: By Country, 2017-2023
Table 5 Asia Pacific Geotechnical Instrumentation and Monitoring Market: By Country, 2017-2023
Table 6 The Middle East & Africa Geotechnical Instrumentation and Monitoring Market: By Country, 2017-2023
Table 7 Latin America Geotechnical Instrumentation and Monitoring Market: By Country, 2017-2023
Table 8 Global Geotechnical Instrumentation and Monitoring by Component Market: By Region, 2017-2023
Table 9 North America Geotechnical Instrumentation and Monitoring by Component Market: By Region, 2017-2023
Table 10 Europe Geotechnical Instrumentation and Monitoring by Component Market: By Region, 2017-2023
Table 11 Asia Pacific Geotechnical Instrumentation and Monitoring by Component Market: By Region, 2017-2023
Table 12 The Middle East & Africa Geotechnical Instrumentation and Monitoring by Component Market: By Region, 2017-2023
Table 13 Latin America Geotechnical Instrumentation and Monitoring by Component Market: By Region, 2017-2023
Table 14 Global Geotechnical Instrumentation and Monitoring by Component Market: By Region, 2017-2023
Table 15 North America Geotechnical Instrumentation and Monitoring Market, By Country
Table 16 North America Geotechnical Instrumentation and Monitoring Market, By Component
Table 17 North America Geotechnical Instrumentation and Monitoring Market, By Technology
Table 18 Europe: Geotechnical Instrumentation and Monitoring Market, By Service
Table 19 Europe: Geotechnical Instrumentation and Monitoring Market, By Component
Table 20 Asia Pacific: Geotechnical Instrumentation and Monitoring Market, By Country
Table 21 Asia Pacific: Geotechnical Instrumentation and Monitoring Market, By Component
Table 22 Asia Pacific: Geotechnical Instrumentation and Monitoring Market, By Technology
Table 23 The Middle East & Africa: Geotechnical Instrumentation and Monitoring Market, By Country
Table 24 The Middle East & Africa Geotechnical Instrumentation and Monitoring Market, By Component
Table 25 The Middle East & Africa Geotechnical Instrumentation and Monitoring Market, By Technology
Table 26 Latin America: Geotechnical Instrumentation and Monitoring Market, By Country
Table 27 Latin America Geotechnical Instrumentation and Monitoring Market, By Component
Table 28 Latin America Geotechnical Instrumentation and Monitoring Market, By Technology

LIST OF FIGURES
FIGURE 1 Global Geotechnical Instrumentation and Monitoring market segmentation
FIGURE 2 Forecast Methodology
FIGURE 3 Porter’s Five Forces Analysis of Global Geotechnical Instrumentation and Monitoring Market
FIGURE 4 Value Chain of Global Geotechnical Instrumentation and Monitoring Market
FIGURE 6 Global Geotechnical Instrumentation and Monitoring Market, 2017-2023,
FIGURE 8 Global Geotechnical Instrumentation and Monitoring Market size by Component, 2017
FIGURE 10 Global Geotechnical Instrumentation and Monitoring Market size by Technology, 2017