

Big Data in Oil & Gas Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented By Components (Hardware, Software, Service), By Application (Upstream, Midstream, Downstream), By Data Type (Structured, Unstructured, Semi-Structured), By Region

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Abstracts

Global Big Data in Oil & Gas Market is expected to grow at a steady pace in the forecast period, 2024-2028.

Big Data, also known as Big Data analytics, is a relatively new technology that can be utilized to manage enormous datasets that have six key characteristics: volume, variety, velocity, veracity, value, and complexity. The processors in these reliable technologies must be very quick and accurate. The oil and gas sector has recently undergone a significant data intensive transformation because of the widespread use of data recording devices in exploration, drilling and production processes. Applications of big data in the oil and gas industry include improving reservoir characterization / simulation, reducing drilling time, increasing drilling safety, optimizing the performance of production pumps, improving petrochemical asset management, improving shipping and transportation, and improving workplace safety. Additionally, Big Data offers oil and gas companies a number of advantages, including the potential to extract more oil and gas from hydrocarbon reserves, lower capital and operating costs, boost the speed and accuracy of investment choices, enhance worker safety and health, and reduce environmental concerns.

Large Amount of Data Handling Feature of Big-Data Analytics Driving the Market Growth

Numerous industries are still adjusting to the concept of big data and analytics. However, the oil and gas industry has been one of the biggest users of these services since it uses a lot of data to reach technical decisions. To comprehend dynamics and present new technologies to the market, various energy corporations have heavily invested in visualization tools, seismic software, and other digital technologies during the past few years.

As big data analytics is one of the top goals for more than 88% of the companies, only about one-third of the businesses are prepared to provide the service. Large amounts of data are one of the main factors driving the global big data industry. Companies need big data solutions to automatically record the behavior and performance of the data kept in their information technology systems. The majority of businesses utilize big data analytics to monitor their assets and equipment, identify operational problems, and facilitate repair. Over 60% have enforced network automation to assemble a large amount of data in diffused environments such as along pipelines or remote farms.

Oil and gasoline firms can transition from traditional real-time monitoring to quicker real-time prediction with the right technological solutions. They also produce tactical insights that aid in boosting production and drilling performance while averting problems by quickly reviewing incoming technical and business data and implementing that information to complex models in real-time. Owing to above mentioned reasons, the market is expected to grow further during the forecast period.

Growing Environmental & Public Safety Concern

As mentioned above, the oil and petrol business generate a significant amount of data from daily operations. There are many challenges in the oil & gas optimization process. For instance, finding oil below the surface is a very difficult process, reservoirs are generally 5,000 to 35,000 feet below the Earth's surface. The only ways to locate and describe the reservoirs are through low-resolution imagery and pricey well logs (after the wells are drilled). While fluids themselves are intricate with a variety of chemical and physical characteristics, moving via rock to the wellbore is a difficult challenge. To eliminate this problem, companies & governments of various nations are moving toward big data technology. Owing to these factors, the market is expected to register a high CAGR during the forecast period.

It costs a lot to generate oil from the sub-surface area. Cost, quantity, and market accessibility must all be considered while producing a barrel of oil, which requires a

significant amount of science, equipment, and labor. Concerns about the environment and public safety may arise during oil exploration. Hence, to resolve this issue people are adopting big data technology owing to which the market is expected to register a high CAGR during the forecast period.

Big Data dramatically lowers risk and optimizes cost associated with operations and health, safety, and environment: Help Avoid undesirable outcomes while drilling, such as kicks, predicting drill maintenance/downtime, improving drill parameters, avoiding blowouts, ducking produced hazardous working conditions and reducing environmental hazards by using weather data or workforce scheduling information.

Growing Investment in Oil & Gas Sector Fueling the Market Growth

As of now, growing demand for oil and increasing investment in the oil & gas sector is gaining traction due to which need of Big Data in oil field is also growing rapidly. For instance, for the current financial year, Indian Oil Corp., and Bharat Petroleum (BPCL) have exceeded their capital spending goals. According to data from the oil ministry, between April and February, India Oil spent USD 152.4 million (Rs 31,800 crore) compared to the entire year's capital plan of USFD 3476 million, and BPCL spent USD 1251.6 million, exceeding its aim of (USD 1217.5 Million) Rs 10,000 crore. Moreover, even though OPEC (Organization of the Petroleum Exporting Countries) is restricting its output, Abu Dhabi will invest 448 billion dirhams (USD 122 billion) in oil and natural gas in order to increase production capacity, over the next five years. Abu Dhabi is the first major investment by Aramco since its listing in late 2019 when the Saudi government sold a minority stake in the firm for USD 29.4 billion in the world's biggest initial public offering. Owing to which, the global need of big data analytics is growing in the oil & gas sector.

Market Segmentation

The Global Big Data in Oil & Gas Market is divided into component, application, data type, and region. Based on component, the market is further divided into hardware, software and service. Based on application, the market is further split into upstream, midstream and downstream. Based on data type, the market is further divided into Structured, Unstructured, Semi-Structured. Based on region, the market is divided into North America, Asia-Pacific, Europe, South America, Middle East & Africa.

Market Players

Major market players in the Global Big Data in Oil & Gas Market are Accenture PLC, Cisco Systems, Inc, Dell EMC, Hewlett-Packard Enterprise, IBM, Microsoft, Oracle Corporation, SAP Group, SAS Institute Inc, Teradata, and Hitachi Vantara.

Report Scope:

In this report, the Global Big Data in Oil & Gas Market has been segmented into following categories, in addition to the industry trends which have also been detailed below:

Big Data in Oil & Gas Market, By Component:

Hardware

Software

Service

Big Data in Oil & Gas Market, By Application:

Upstream

Midstream

Downstream

Big Data in Oil & Gas Market, By Data Type:

Structured Unstructured

Semi-Structured

Big Data in Oil & Gas Market, By Region:

North America

United States

Canada

Mexico

Asia-Pacific

China

India

Japan

South Korea

Indonesia

Europe

Germany

United Kingdom

France

Russia

Spain

South America

Brazil

Argentina

Middle East & Africa

Saudi Arabia

South Africa

Egypt

UAE

Israel

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Big Data in Oil & Gas Market.

Available Customizations:

With the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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