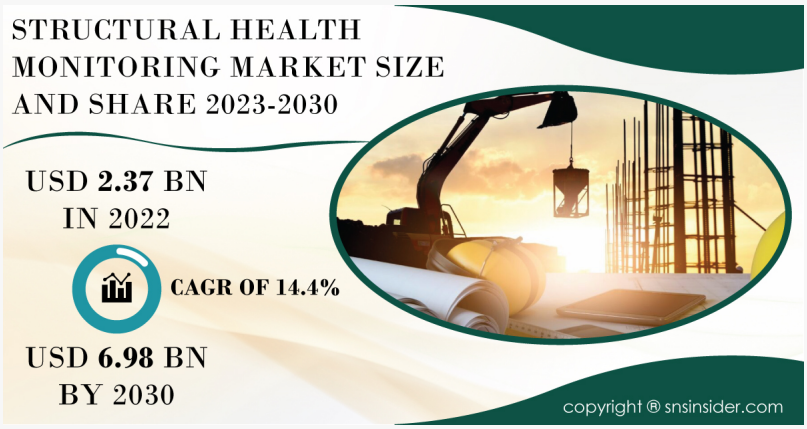
Structural Health Monitoring Market Set to Surpass USD 6.98 Billion by 2030, Driven by Expansion and Safety Measures

Market attained a value of USD 2.37 billion in 2022 and is anticipated to exhibit a compound annual growth rate (CAGR) of 14.4% from 2023 to 2030.



Structural Health Monitoring Market was valued at USD 2.37 billion in 2022, and is predicted to increase at a CAGR of 14.4% from 2023 to 2030,

AUSTIN, TEXAS, UNITED STATES, January 16, 2024 /EINPresswire.com/ -- Increasing government initiatives towards SHM system standardization and public safety also boosts Structural Health Monitoring Market growth. The SNS Insider report indicates that the Structural Health Monitoring Market was valued at □□□ □.□□ □□□□□□□□ □□ □□□□ □□□ □□ □□□□□□□□□ □□ □□□□□ □□□ □.□□ □□□□□□□□ □□ □□□□ □□ □ □□□□ □□ □□.□% □□□□□□ □□□ □□□□□□□□□ □□□□□□ □□ □□□□-□□□□.

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>
> *SNS Insider Research*

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• The relevance of automated vital infrastructure repair and maintenance has grown.
• Structure failures have cascading implications, like loss of life and money.
• Major infrastructure investments are being made.
• Government restrictions requiring the construction of long-lasting structures are strict.
• The advantages of structural health monitoring for ageing infrastructure
• Costs of structural health monitoring systems are less expensive.

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• Costs of installation and monitoring are high.
• Due to reading problems, the results are inaccurate.
• In poorer nations, structural health monitoring systems are being adopted slowly.

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Structural health monitoring (SHM) involves the collection and analysis of data through connected sensors during the service life of structures. It is a non-destructive method for identifying and quantifying deterioration to predict the necessity of repair and maintenance. The market's growth is driven by increased focus on SHM, obsolete infrastructure in Europe and North America, and advances in wireless sensor networks. However, challenges such as high implementation costs and data normalization hinder market growth.

SHM in civil structures is gaining global popularity in construction management, reducing inspection costs and research time. It provides real-time data for a better understanding of structure behavior under dynamic loads and seismic protection. Despite challenges related to static and dynamic stress monitoring of dams, SHM remains essential for ensuring safety. The technology is widely used in aerospace, civil, and mechanical engineering applications to guarantee the safety and reliability of structures.

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The structural health monitoring system ensures the functionality and safety of structures, embedding sensors during construction for lifelong monitoring. It evaluates integrity post-natural calamities, reducing maintenance costs and time through real-time monitoring. Increasing real estate infrastructure globally, the emergence of smart cities, and the construction of complex infrastructure contribute to market growth.

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□□ □□□□□□□□□ □□□□□: The hardware segment dominates (60% revenue share in 2022) due to the high cost of integral elements like sensors and data acquisition systems.
□□ □□□□□□□□□□□ □□□□□: Wired SHM leads (62% revenue share in 2022) as it offers reliable connectivity for continuous monitoring of various structures worldwide.
□□ □□□□□□□□□□□□:The bridges & dams segment holds the highest revenue share (35% in 2022) due to the growing number of functionally obsolete structures, necessitating monitoring.

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• Hardware

• Software & Services
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• Bridges & Dams
• Building & Stadiums
• Vessels & Platforms
• Airframes & Wind Turbines
• Large Machines & Equipment
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• Wired
• Wireless

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North America dominates with a 36% revenue share in 2022, driven by increased attention on civil infrastructure repair, aging infrastructure, and investments in airframes & wind turbines. The region relies on SHM systems for safety and security, with aging infrastructure prompting the adoption of monitoring methods.
Asia Pacific is expected to grow at the fastest CAGR of 18.5% during the forecast period. Rapid urbanization, infrastructure projects, and the urgent need for high-quality structures contribute to the demand for SHM systems. Countries like China and India are investing in bridges and buildings to support economic growth.

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• The Structural Health Monitoring Market is predicted to reach USD 6.98 billion by 2030.
• Growing focus on infrastructure, safety measures, and government initiatives are driving market expansion.
• Hardware, wired SHM, and bridges & dams application segments dominate the market.

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• □□ □□□□□ □□□□, Geokon launched the GeoNet 8900 Series data acquisition system, a wireless, low-power system for secure internet-based data access.
• □□ □□□□□ □□□□,Campbell Scientific, Inc. introduced the GRANITE line with remarkable applications in the structural health monitoring market.
• □□ □□□□□ □□□□,Sherborne Sensors introduced the LSOC-D Servo series sensor, an inclinometer with an integrated display, designed for monitoring bridges.

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Some of the major key players are as follows: □□□□ □□□□□□, □□□□□□□, □□□□□□□□, □□□□□□□□ □□□□□□□□□□, □□□ □□□, □□□□,Geo comp, Pure Technologies, Digitexx, Structural Monitoring Systems.

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1. Introduction
2. Research Methodology

3. Market Dynamics
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5. Value Chain Analysis
6. Porter’s 5 forces model Textile Chemicals Market
7. PEST Analysis
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11.Regional Analysis
12. Company Profiles
13. Competitive Landscape
14. Conclusion

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