

## IoT in Construction Market - Building the Future: Exploring the Revolutionary Impact of IoT on the Construction Industry

IoT in Construction Market by Application (Machine Control, Site Monitoring, Fleet Management, Wearables, and Others)

PORTLAND, UNITED STATES, March 27, 2023 /EINPresswire.com/ -- The Internet of Things (IoT) is transforming the construction industry by providing new ways to increase efficiency, safety, and productivity. IoT in construction refers to the integration of connected devices and sensors into construction equipment, machinery, and tools to collect and share data, automate processes, and improve decision-



making. In this blog, we will explore the benefits of IoT in construction and the latest trends and applications in this exciting field.

The global IoT in construction market size is expected to reach \$19,039.8 million in 2027, from \$8,179.9 million in 2019, growing at a CAGR of 14.0% from 2020 to 2027.

Internet of Things (IoT) has penetrated in nearly all industries, households, and offices, making human activities simpler. The inclusion of internet-connected devices in the construction industry also known as IoT in construction has benefitted the industry by reducing operational costs, enhanced productivities, and efficient project management. Smart technologies such as sensors, RFID tags, building information modelling, augmented reality, and others assist in recognizing potential risks on a construction site; thereby, optimizing resource requirement, avoiding accidents and fatalities, and wastage of time and money.

Benefits of IoT in Construction The use of IoT in construction offers several benefits that can help construction companies to complete projects faster, safer, and with greater precision. Some of

these benefits include:

Improved Safety: IoT sensors and devices can be used to monitor workers' safety and prevent accidents. For example, sensors can detect if a worker has fallen, alerting the site supervisor to send help immediately. IoT can also track the movement of heavy equipment and vehicles, ensuring they are used safely and do not cause any accidents.

Increased Efficiency: IoT can help construction companies to optimize their operations, reducing the time and resources required to complete projects. For example, IoT sensors can track the use of equipment, enabling contractors to schedule maintenance and repairs at optimal times, reducing downtime and increasing efficiency.

Enhanced Productivity: IoT can provide real-time data on project progress, enabling construction teams to make informed decisions and adjust their workflows accordingly. This can help to identify inefficiencies and bottlenecks in the construction process, improving productivity and reducing costs.

Improved Quality Control: IoT sensors can track the quality of materials and products used in construction, ensuring that they meet the required standards. This can help to reduce waste and prevent costly errors, ensuring that projects are completed to the highest standards.

Latest Trends and Applications in IoT in Construction The use of IoT in construction is still a relatively new field, but there are already several exciting trends and applications emerging. Here are some of the latest developments in IoT in construction:

Smart Tools and Equipment: IoT sensors can be integrated into construction tools and equipment, enabling them to collect and share data on their usage and performance. This can help contractors to schedule maintenance and repairs more efficiently and reduce downtime.

Wearable Technology: Wearable technology such as smart helmets, safety vests, and watches can be used to monitor workers' safety and health. For example, smart helmets can monitor workers' vitals and alert supervisors if there are signs of fatigue or illness.

Smart Buildings: IoT sensors can be used to monitor and control the performance of buildings, including temperature, lighting, and air quality. This can help to optimize energy usage, reduce costs, and improve the comfort of occupants.

Autonomous Vehicles and Drones: Autonomous vehicles and drones can be used in construction to perform tasks such as surveying, site inspections, and material delivery. This can help to reduce the time and cost of construction projects, while also improving safety and efficiency. Challenges and Risks of IoT in Construction While IoT in construction offers many benefits, there are also some challenges and risks that need to be addressed. One of the main challenges is the complexity of integrating different IoT devices and systems into existing construction workflows. This requires specialized skills and expertise, which can be a barrier to adoption for some construction companies.

Another challenge is data security and privacy. IoT devices and systems can collect and transmit sensitive data, including worker and project information. This data must be protected from unauthorized access and breaches, which requires robust cybersecurity measures.

Key Market Players : Advanced Opto-Mechanical Systems and Technologies Inc., Autodesk, Inc., CalAmp Corporation, HEXAGON AB, Hilti Corporation, Oracle Corporation, Pillar Technologies, Inc., Topcon Corporation, Triax Technologies, Inc., Trimble, Inc.

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Conclusion IoT in construction is a rapidly evolving field that offers many benefits for construction companies, including improved safety, efficiency, and productivity. The latest trends and applications in IoT in construction include smart tools and equipment, wearable technology, smart buildings, and autonomous vehicles and drones. However, there are also challenges and risks associated with IoT in construction, including

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