

Smart Storage & Silos Market Forecasts to 2034 – Global Analysis By Offering (Hardware, Software and Services), Silo Type, Commodity Stored, Capacity, Technology, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Smart Storage & Silos Market is accounted for \$8.6 billion in 2026 and is expected to reach \$17.2 billion by 2034 growing at a CAGR of 9.2% during the forecast period. Smart storage and silos refer to hardware sensor systems, software analytics platforms, and managed services enabling IoT-connected monitoring and automated management of grain, seed, and agricultural commodity storage infrastructure including flat bottom silos, hopper bottom silos, bunker silos, tower silos, and portable smart silos through real-time temperature, humidity, CO2 concentration, and grain condition monitoring combined with automated aeration control and predictive quality management that minimize post-harvest storage losses and optimize commodity preservation through digital intelligence.

Market Dynamics:

Driver:

Post-Harvest Loss Reduction Economic Imperative

Global post-harvest grain storage losses estimated at 10 to 20 percent of stored commodity value from spoilage, pest infestation, and quality deterioration creating compelling economic motivation for smart storage investment that typically achieves investment payback within two to three years through documented storage loss reduction. Commodity price volatility amplifying financial impact of storage quality failures elevates smart storage ROI justification at commercial grain elevator and farm

storage operator investment decision levels.

Restraint:**Legacy Silo Retrofit Infrastructure Complexity**

Retrofitting existing grain storage infrastructure with IoT sensor networks, wireless communication systems, and automated aeration controls on aging silo construction that lacks conduit for cable routing, standard sensor mounting interfaces, and modern electrical infrastructure creates engineering customization requirements that increase smart retrofit cost substantially above new construction smart silo installation economics, discouraging older facility operators from smart conversion investment.

Opportunity:**Carbon Credit Grain Storage Quality Documentation**

Agricultural carbon credit program participation requiring documented on-farm grain storage management practice verification including optimized drying energy use and post-harvest food waste reduction creates new institutional demand for smart silo monitoring infrastructure enabling practice documentation for carbon program reporting that justifies monitoring investment through combined storage loss reduction and carbon revenue generation.

Threat:**Low Commodity Price Margin Compression**

Extended commodity price weakness compressing grain operator margin pools reduces capital available for discretionary smart storage technology investment, creating cyclical budget pressure on smart silo adoption programs during commodity market downturns despite sustained storage loss economic justification that provides positive ROI across commodity price cycles.

Covid-19 Impact:

COVID-19 supply chain disruptions creating food storage critical infrastructure designation elevated investment in smart grain storage monitoring as food security resilience infrastructure. Post-pandemic food security investment and supply chain

digitalization programs continue supporting smart storage market development.

The services segment is expected to be the largest during the forecast period

The services segment is expected to account for the largest market share during the forecast period, due to substantial managed monitoring service and professional installation revenue from smart silo deployment programs where specialist sensor network installation, calibration, and ongoing monitoring service subscriptions generate recurring revenue substantially exceeding hardware equipment sales within established smart storage operator commercial relationships.

The flat bottom silos segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the flat bottom silos segment is predicted to witness the highest growth rate, driven by commercial grain elevator investment in large-capacity flat bottom concrete and steel silo smart monitoring retrofitting programs at commercial storage scale facilities where the largest commodity volumes generate the highest smart monitoring return-on-investment justification per installed monitoring system, combined with new flat bottom silo construction incorporating smart monitoring from design inception.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, due to the United States hosting the world's largest commercial grain storage infrastructure with leading smart storage vendors including AGCO, GSI Group, and Sukup Manufacturing generating substantial North American grain storage equipment revenue, and strong commercial grain elevator operator investment in smart monitoring for quality assurance and commodity lending documentation.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, due to India, China, and Southeast Asian countries expanding national grain storage reserve infrastructure with smart monitoring requirements, government food security investment programs funding modern grain storage development, and rapidly growing commercial grain handling sector creating smart storage adoption demand.

Key players in the market

Some of the key players in Smart Storage & Silos Market include AGCO Corporation, AGI (Ag Growth International Inc.), CTB Inc. (Berkshire Hathaway), Sukup Manufacturing Co., GSI Group LLC, Symaga S.A., Brock Grain Systems, Silos C?rdoba, Sioux Steel Company, PRADO Silos, SCE Group, SCAFCO Grain Systems, Alvan Blanch Development Company Ltd, Perten Instruments AB (PerkinElmer), Buhler AG, and Chief Industries Inc..

Key Developments:

In April 2026, AGCO Corporation launched an integrated grain storage monitoring platform combining real-time temperature cable arrays with predictive quality deterioration AI models enabling automated aeration management and proactive spoilage prevention alerts.

In February 2026, GSI Group LLC introduced a new wireless smart silo sensor kit enabling rapid IoT monitoring retrofit on existing grain storage facilities without wiring infrastructure modification requirements at 40 percent lower installation cost versus wired sensor alternatives.

In December 2025, Buhler AG secured a major Asian grain terminal smart storage management contract deploying integrated monitoring across 500,000 metric ton storage capacity with automated blending and quality segregation management system.

In November 2025, Perten Instruments AB (PerkinElmer) expanded its grain quality monitoring portfolio with new continuous in-storage NIR protein and moisture analysis enabling real-time grain quality tracking without sample extraction across commercial grain elevator storage operations.

Offerings Covered:

Hardware

Software

Services

Silo Types Covered:

Flat Bottom Silos

Hopper Bottom Silos

Bunker Silos

Tower Silos

Portable Smart Silos

Commodity Stored Covered:

Grains & Cereals

Oilseeds & Pulses

Animal Feed

Fertilizers & Agri Inputs

Biomass & Pellets

Capacities Covered:

10,000 MT

Technologies Covered:

IoT-Enabled Silos

RFID & Barcode Integration

Automated Fumigation

Grain Spoilage Analytics

Applications Covered:

Post-Harvest Grain Management

Feed Mill Storage

Port & Terminal Storage

Food Processing Buffer Storage

Seed Storage

End Users Covered:

Commercial Farms

Grain Traders & Cooperatives

Food Processing Companies

Port Authorities

Government Storage Agencies

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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