

Intelligent Building Automation Technologies Market by Offering (Solutions, Services), Technology (Sensor Technology, Connectivity Technology, Computing Technology), End Use (Residential, Industrial, Commercial) and Region - Global Forecast to 2028

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Abstracts

The intelligent building automation technologies market is estimated at USD 90.2 billion in 2023 to USD 152.4 billion by 2028, at a Compound Annual Growth Rate (CAGR) of 11.0%. The increasing emphasis on indoor air quality (IAQ) as a critical factor in occupant health and well-being has emerged as a significant driver fueling the adoption of intelligent building automation technologies. Recognizing the profound impact of air quality on human health, building owners and operators are prioritizing solutions that actively monitor, control, and optimize ventilation systems to ensure optimal IAQ. Intelligent building technologies, equipped with advanced sensors and real-time monitoring capabilities, offer a proactive approach to managing indoor air conditions. These systems can automatically adjust ventilation rates, humidity levels, and air filtration based on occupancy, external environmental factors, and IAQ parameters. By providing a healthier and more comfortable indoor environment, intelligent building automation technologies contribute to increased occupant satisfaction, productivity, and overall well-being. As awareness of the importance of IAQ continues to grow, the integration of these technologies becomes not just a preference but a necessity, driving their widespread adoption and fostering the sustained growth of the intelligent building automation market.

"The sensor technology segment is expected to hold the largest market size during the forecast period." Advances in wireless sensor networks represent a transformative force in the realm of sensor technology for intelligent buildings, significantly contributing to the sector's growth and evolution. The adoption of wireless sensors introduced a



paradigm shift by offering unprecedented flexibility in installation, mitigating the challenges associated with traditional wired systems. With the elimination of extensive wiring requirements, wireless sensors reduce installation complexities and associated costs, enabling a more streamlined and rapid deployment process. This newfound flexibility not only facilitates the integration of sensors into diverse building elements but also allows for easy retrofitting of existing structures, supporting the upgrade of conventional buildings into intelligent, connected spaces. Moreover, wireless sensors enhance scalability, adapting effortlessly to the changing needs of the built environment. The absence of physical constraints imposed by wired connections fosters a dynamic and adaptable sensor infrastructure, aligning seamlessly with the ever-evolving requirements of intelligent building automation systems. Consequently, the integration of wireless sensor networks stands as a cornerstone for the deployment of efficient, cost-effective, and scalable building automation solutions, laying the groundwork for a more responsive and interconnected intelligent building ecosystem.

"The services segment to register the fastest growth rate during the forecast period." The evolution of building codes and standards, particularly driven by a heightened focus on sustainability and energy efficiency, has become a significant catalyst for the demand for intelligent building automation services. As regulatory frameworks place greater emphasis on environmentally responsible construction practices, organizations seek expert consulting services to navigate the complex landscape of evolving requirements. Consulting services play a pivotal role in ensuring that building automation systems align seamlessly with the latest codes and standards, guaranteeing compliance with stringent sustainability benchmarks. This involves strategic planning, comprehensive audits, and the development of tailored solutions that not only meet current regulations but also anticipate future advancements. Concurrently, deployment and training services become instrumental in the practical implementation of these strategies, ensuring that organizations can effectively integrate and operate systems that adhere to the latest regulatory mandates. In a rapidly changing regulatory environment, intelligent building automation services provide a crucial bridge between evolving standards and the practical application of compliant, energy-efficient, and sustainable building systems.

"Asia Pacific's highest growth rate during the forecast period."

The rollout of 5G networks and the concurrent expansion of connectivity infrastructure are catalyzing a transformative shift in the deployment of intelligent building automation technologies in the Asia Pacific region. The advent of 5G introduces unprecedented levels of speed, reliability, and low-latency communication, creating a robust foundation



for the seamless integration of intelligent systems within buildings. This high-speed connectivity empowers real-time data exchange between diverse devices and sensors, forming the backbone for responsive and agile intelligent building solutions. As the Internet of Things (IoT) ecosystem flourishes, 5G becomes instrumental in facilitating the interconnectivity of a myriad of sensors, actuators, and automation devices spread across buildings. This synergy between 5G and intelligent building technologies not only enhances the efficiency of existing systems but also enables the implementation of more sophisticated applications, such as advanced analytics, AI-driven decision-making, and immersive occupant experiences. The accelerated deployment of intelligent building automation technologies, fueled by the 5G revolution, not only elevates the overall performance and responsiveness of building systems but also positions the Asia Pacific region at the forefront of smart infrastructure development.

In-depth interviews have been conducted with chief executive officers (CEOs), Directors, and other executives from various key organizations operating in the intelligent building automation technologies market.

By Company Type: Tier 1 – 35%, Tier 2 – 45%, and Tier 3 – 20%

By Designation: C-level –35%, D-level – 25%, and Others – 40%

By Region: North America – 30%, Europe – 30%, Asia Pacific – 25%, Latin America- 5%, and Middle East & Africa – 10%,

The major players in the intelligent building automation technologies market Honeywell International Inc. (US), Johnson Controls International plc (US), Siemens AG (Germany), Schneider Electric SE (France), ABB Ltd. (Switzerland), Eaton Corporation (US), Trane Technologies plc (Ireland), Carrier Global Corporation (US), Rockwell Automation, Inc. (US), Azbil Corporation (Japan), Ingersoll Rand (US), Emerson Electric co. (US), Robert Bosch GmbH (Germany), Hubbell Incorporated (US), Lutron Electronics Company (US), Cisco Systems, Inc. (US), Cushman & Wakefield plc (US), Jones Lang LaSalle Incorporated (US), CBRE Group, Inc. (US), Current Lighting Solutions, LLC (US), Verdigris Technologies, Inc. (US), 75F (US), BuildingIQ (US), KMC Controls (US), Spaceti (Netherlands), eFACiLiTY (India), Softdel (US). These players have adopted various growth strategies, such as partnerships, agreements and collaborations, new product launches, enhancements, and acquisitions to expand their intelligent building automation technologies market footprint.



Research Coverage

The market study covers the intelligent building automation technologies market size across different segments. It aims at estimating the market size and the growth potential across different segments, including solutions (facility management system, security & access control system, fire detection, prevention system, energy management system, other solutions), services (professional services, managed services), by technology type (sensor technology, actuator, connectivity technology, computing technology, other technologies) end use (residential, commercial, industrial) and Region (North America, Europe, Asia Pacific, Middle East & Africa, and Latin America). The study includes an indepth competitive analysis of the leading market players, their company profiles, key observations related to product and business offerings, recent developments, and market strategies.

Key Benefits of Buying the Report

The report will help the market leaders/new entrants with information on the closest approximations of the global intelligent building automation technologies market's revenue numbers and subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. Moreover, the report will provide insights for stakeholders to understand the market's pulse and provide them with information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

1. Analysis of key drivers (Increasing adoption of advanced energy-efficient systems in buildings, rising deployment of Building Automation Systems (BAS), advancements in wireless protocols and wireless sensor technologies), restraints (High implementation costs, concerns regarding cyberattacks and data breaches), opportunities (Increasing government initiatives for developing connected infrastructure, increasing focus on integrated BIM solutions), and challenges (Lack of skilled manpower for operating building automation system, lack of standardized communication protocols) influencing the growth of the intelligent building automation technologies market.

2. Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the intelligent building automation technologies market.



3. Market Development: Comprehensive information about lucrative markets – the report analyses the intelligent building automation technologies market across various regions.

4. Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the intelligent building automation technologies market.

5. Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading Honeywell International Inc. (US), Johnson Controls International plc (US), Siemens AG (Germany), Schneider Electric SE (France), ABB Ltd. (Switzerland), Eaton Corporation (US), Trane Technologies plc (Ireland), Carrier Global Corporation (US), Rockwell Automation, Inc. (US), Azbil Corporation (Japan), Ingersoll Rand (US), Emerson Electric co. (US), Robert Bosch GmbH (Germany), Hubbell Incorporated (US), Lutron Electronics Company (US), Cisco Systems, Inc. (US), Cushman & Wakefield plc (US), Jones Lang LaSalle Incorporated (US), CBRE Group, Inc. (US), Current Lighting Solutions, LLC (US), Verdigris Technologies, Inc. (US), 75F (US), BuildingIQ (US), KMC Controls (US), Spaceti (Netherlands), eFACiLiTY (India), Softdel (US).



Contents

1 INTRODUCTION

1.1 STUDY OBJECTIVES
1.2 MARKET DEFINITION
1.3 STUDY SCOPE
1.3.1 MARKET SEGMENTATION
1.3.2 REGIONS COVERED
1.3.3 INCLUSIONS & EXCLUSIONS
1.3.4 YEARS CONSIDERED
1.4 CURRENCY CONSIDERED
1.4 CURRENCY CONSIDERED
TABLE 1 USD EXCHANGE RATES, 2021–2023
1.5 STAKEHOLDERS
1.6 SUMMARY OF CHANGES
1.6.1 IMPACT OF RECESSION

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA

FIGURE 1 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: RESEARCH DESIGN

2.1.1 SECONDARY DATA

2.1.2 PRIMARY DATA

- 2.1.2.1 Primary interviews with experts
- 2.1.2.2 Breakdown of primary profiles

FIGURE 2 BREAKDOWN OF PRIMARY INTERVIEWS: BY COMPANY TYPE, DESIGNATION, AND REGION

2.1.2.3 Key insights from industry experts

2.2 MARKET SIZE ESTIMATION

FIGURE 3 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: TOP-DOWN AND BOTTOM-UP APPROACHES

2.2.1 TOP-DOWN APPROACH

FIGURE 4 MARKET SIZE ESTIMATION METHODOLOGY – APPROACH 1 (SUPPLY SIDE): REVENUE OF VENDORS IN INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET

2.2.2 BOTTOM-UP APPROACH

FIGURE 5 MARKET SIZE ESTIMATION METHODOLOGY – APPROACH 2 (DEMAND SIDE): INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET



FIGURE 6 MARKET SIZE ESTIMATION USING BOTTOM-UP APPROACH 2.3 DATA TRIANGULATION FIGURE 7 DATA TRIANGULATION AND MARKET BREAKUP 2.4 RISK ASSESSMENT TABLE 2 RISK ASSESSMENT 2.5 RESEARCH ASSUMPTIONS TABLE 3 RESEARCH ASSUMPTIONS 2.6 LIMITATIONS 2.7 IMPLICATIONS OF RECESSION

3 EXECUTIVE SUMMARY

FIGURE 8 INTELLIGENT BUILDING AUTOMATION MARKET TO WITNESS SIGNIFICANT GROWTH DURING FORECAST PERIOD FIGURE 9 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: REGIONAL SNAPSHOT

4 PREMIUM INSIGHTS

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET FIGURE 10 ONGOING SMART INFRASTRUCTURE PROJECTS IN DEVELOPING ECONOMIES TO DRIVE MARKET 4.2 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TOP-**GROWING SEGMENT** FIGURE 11 TOP-GROWING SEGMENTS IN 2023 4.3 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY FIGURE 12 SENSOR TECHNOLOGY SEGMENT ESTIMATED TO LEAD MARKET IN 2023 4.4 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE FIGURE 13 CONSULTING SEGMENT ESTIMATED TO HAVE FASTEST GROWTH RATE DURING FORECAST PERIOD 4.5 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET. BY OFFERING FIGURE 14 SERVICES SEGMENT ESTIMATED TO HAVE FASTEST GROWTH RATE DURING FORECAST PERIOD 4.6 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END



USE

FIGURE 15 COMMERCIAL SEGMENT TO LEAD MARKET DURING FORECAST PERIOD

4.7 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET,

BY OFFERING AND END USE

FIGURE 16 SOLUTION AND COMMERCIAL SEGMENTS ESTIMATED TO HOLD LARGEST MARKET SHARES IN 2023

5 MARKET OVERVIEW AND INDUSTRY TRENDS

5.1 INTRODUCTION

5.2 MARKET DYNAMICS

FIGURE 17 DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET

5.2.1 DRIVERS

5.2.1.1 Increasing adoption of advanced energy-efficient systems in buildings

- 5.2.1.2 Rising deployment of building automation systems
- 5.2.1.3 Advancements in wireless protocols and wireless sensor technologies

5.2.2 RESTRAINTS

5.2.2.1 High implementation costs

- 5.2.2.2 Concerns regarding cyberattacks and data breaches
- 5.2.3 OPPORTUNITIES
- 5.2.3.1 Increasing government initiatives for developing connected infrastructure
- 5.2.3.2 Increasing focus on integrated building information modeling solutions 5.2.4 CHALLENGES

5.2.4.1 Lack of skilled manpower for operating building automation systems

5.2.4.2 Lack of standardized communication protocols

5.3 BRIEF HISTORY OF INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET

FIGURE 18 BRIEF HISTORY OF INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET

- 5.3.1 1600-1990
- 5.3.2 1999-2009
- 5.3.3 2010-2019

5.3.4 2020-PRESENT

5.4 ECOSYSTEM/MARKET MAP

FIGURE 19 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: KEY PLAYERS IN ECOSYSTEM



TABLE 4 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: ECOSYSTEM

5.5 CASE STUDY ANALYSIS

5.5.1 CASE STUDY 1: ABB'S SMART TECHNOLOGY SOLUTION HELPED ELAB REDUCE COSTS AND ENERGY CONSUMPTION

5.5.2 CASE STUDY 2: ABB'S SMART BUILDING TECHNOLOGY ENSURED BUSINESS CONTINUITY, REDUCED ENERGY USAGE, AND IMPROVED COMFORT

5.5.3 CASE STUDY 3: EATON'S EMERGENCY LIGHTING SYSTEM WITH REMOTE MONITORING ENSURED SAFETY FOR NEW RESEARCH CENTER AT THE UNIVERSITY OF WARWICK

5.5.4 CASE STUDY 4: ECOSTRUXURE BUILDING OPERATION HELPED MOORFIELDS EYE HOSPITAL ACHIEVE OPERATIONAL RESILIENCY

5.5.5 CASE STUDY 5: DESIGO CC SOLUTION MADE BUILDINGS SMARTER USING INTEGRATED AUTOMATION PLATFORM AND HIGH-PERFORMING INFRASTRUCTURE

5.6 VALUE CHAIN ANALYSIS

FIGURE 20 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: VALUE CHAIN ANALYSIS

5.7 TARIFF RELATED TO BUILDING AUTOMATION DEVICES

TABLE 5 TARIFF RELATED TO PARTS AND ACCESSORIES FOR REGULATING OR CONTROLLING INSTRUMENTS AND APPARATUS

5.7.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 6 NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 7 EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 8 ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 9 REST OF THE WORLD: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

5.7.1.1 North America

- 5.7.1.1.1 US
- 5.7.1.1.2 Canada
- 5.7.1.2 Europe

5.7.1.2.1 Germany

- 5.7.1.2.2 UK
- 5.7.1.3 Asia Pacific
- 5.7.1.3.1 China



5.7.1.3.2 India

5.7.1.3.3 Japan

5.7.1.4 Rest of the World

5.7.1.4.1 Qatar

5.7.1.4.2 Mexico

5.8 PATENT ANALYSIS

FIGURE 21 LIST OF MAJOR PATENTS FOR INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET

5.8.1 LIST OF MAJOR PATENTS

5.9 TECHNOLOGY ANALYSIS

5.9.1 BUILDING INFORMATION MODELING

5.9.2 BIOMETRIC TECHNOLOGY

5.9.3 AR

5.10 PRICING ANALYSIS

5.10.1 AVERAGE SELLING PRICE TREND OF KEY PLAYERS, BY HARDWARE FIGURE 22 AVERAGE SELLING PRICE TRENDS OF KEY PLAYERS, BY HARDWARE

TABLE 10 AVERAGE SELLING PRICE TRENDS OF KEY PLAYERS, BY HARDWARE 5.10.2 INDICATIVE PRICING ANALYSIS OF KEY PLAYERS, BY SOLUTION TABLE 11 INDICATIVE PRICING ANALYSIS OF INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION (USD)

5.11 PORTER'S FIVE FORCES ANALYSIS

TABLE 12 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET:

PORTER'S FIVE FORCES ANALYSIS

FIGURE 23 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: PORTER'S FIVE FORCE ANALYSIS

5.11.1 THREAT OF NEW ENTRANTS

5.11.2 THREAT OF SUBSTITUTES

5.11.3 BARGAINING POWER OF BUYERS

5.11.4 BARGAINING POWER OF SUPPLIERS

5.11.5 INTENSITY OF COMPETITIVE RIVALRY

5.12 TRENDS AND DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES FIGURE 24 TRENDS AND DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES 5.13 KEY STAKEHOLDERS & BUYING CRITERIA

5.13.1 KEY STAKEHOLDERS IN BUYING PROCESS

FIGURE 25 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR END-USE SEGMENT

TABLE 13 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR END-USE SEGMENT (%)



5.13.2 BUYING CRITERIA FIGURE 26 KEY BUYING CRITERIA FOR TOP THREE END USERS TABLE 14 KEY BUYING CRITERIA FOR TOP END USERS **5.14 KEY CONFERENCES & EVENTS** TABLE 15 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: DETAILED LIST OF CONFERENCES & EVENTS, 2023-2024 5.15 BEST PRACTICES IN INTELLIGENT BUILDING AUTOMATION **TECHNOLOGIES MARKET** 5.15.1 COMPREHENSIVE BUILDING ASSESSMENT 5.15.2 ENGAGE STAKEHOLDERS 5.15.3 SCALABLE AND FLEXIBLE INFRASTRUCTURE 5.15.4 INTEROPERABILITY AND STANDARDIZATION 5.15.5 USER TRAINING AND CHANGE MANAGEMENT 5.15.6 USER-CENTRIC DESIGN 5.15.7 REGULAR MAINTENANCE AND UPDATES 5.15.8 ENERGY EFFICIENCY AND SUSTAINABILITY 5.15.9 PERFORMANCE MONITORING AND BENCHMARKING 5.15.10 COMPLIANCE WITH REGULATIONS 5.16 CURRENT AND EMERGING BUSINESS MODELS 5.16.1 SUBSCRIPTION-BASED MODELS 5.16.2 PAY-AS-YOU-GO MODELS **5.16.3 INTEGRATED SERVICE MODELS 5.16.4 DATA MONETIZATION MODELS** 5.17 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: TOOLS, FRAMEWORKS, AND TECHNIQUES 5.18 FUTURE LANDSCAPE OF INTELLIGENT BUILDING AUTOMATION **TECHNOLOGIES MARKET** 5.18.1 SHORT-TERM ROADMAP (2023-2025) 5.18.2 MID-TERM ROADMAP (2025-2028) 5.18.3 LONG-TERM ROADMAP (2029–2030) 5.19 HS CODE ANALYSIS: REGULATING OR CONTROLLING INSTRUMENTS AND APPARATUS (9032) 5.19.1 EXPORT SCENARIO OF REGULATING OR CONTROLLING INSTRUMENTS AND APPARATUS (9032) FIGURE 27 REGULATING OR CONTROLLING INSTRUMENTS AND APPARATUS EXPORT, BY KEY COUNTRY, 2015–2022 (USD BILLION) 5.19.2 IMPORT SCENARIO OF REGULATING OR CONTROLLING INSTRUMENTS AND APPARATUS (9032)

FIGURE 28 REGULATING OR CONTROLLING INSTRUMENTS AND APPARATUS



IMPORT, BY KEY COUNTRY, 2015–2022 (USD BILLION)

6 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET,

BY OFFERING

6.1 INTRODUCTION

FIGURE 29 SERVICES SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

6.1.1 OFFERING: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS

TABLE 16 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION)

TABLE 17 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION)

6.2 SOLUTIONS

FIGURE 30 ENERGY MANAGEMENT SYSTEM SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

TABLE 18 SOLUTIONS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 19 SOLUTIONS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 20 SOLUTIONS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2017–2022 (USD MILLION)

TABLE 21 SOLUTIONS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY TYPE, 2023–2028 (USD MILLION)

6.2.1 FACILITY MANAGEMENT SYSTEMS

6.2.1.1 Predictive analytics and initiative-taking monitoring to drive market TABLE 22 FACILITY MANAGEMENT SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 23 FACILITY MANAGEMENT SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

6.2.2 SECURITY & ACCESS CONTROL SYSTEMS

6.2.2.1 Multi-layered security systems and centralized management to accelerate market growth

TABLE 24 SECURITY & ACCESS CONTROL SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 25 SECURITY & ACCESS CONTROL SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION) 6.2.3 ENERGY MANAGEMENT SYSTEMS



6.2.3.1 Reduction in energy costs and increase in resource utilization efficiency to foster market growth

TABLE 26 ENERGY MANAGEMENT SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 27 ENERGY MANAGEMENT SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

6.2.4 FIRE DETECTION & PREVENTION SYSTEMS

6.2.4.1 Smart algorithms and fire prevention mechanisms to propel growth TABLE 28 FIRE DETECTION AND PREVENTION SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 29 FIRE DETECTION AND PREVENTION SYSTEMS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

6.2.5 OTHER SOLUTIONS

TABLE 30 OTHER SOLUTIONS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 31 OTHER SOLUTIONS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

6.3 SERVICES

FIGURE 31 MANAGED SERVICES SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

TABLE 32 SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 33 SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 34 SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2017–2022 (USD MILLION)

TABLE 35 SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2023–2028 (USD MILLION)

6.3.1 PROFESSIONAL SERVICES

FIGURE 32 CONSULTING SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

TABLE 36 PROFESSIONAL SERVICES: INTELLIGENT BUILDING AUTOMATIONTECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 37 PROFESSIONAL SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 38 PROFESSIONAL SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2017–2022 (USD MILLION)



TABLE 39 PROFESSIONAL SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2023–2028 (USD MILLION)

6.3.1.1 Consulting

6.3.1.1.1 Efficient optimization of intelligent building automation technology and customized strategies to boost market

TABLE 40 CONSULTING: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 41 CONSULTING: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

6.3.1.2 Deployment & integration

6.3.1.2.1 Efficient building automation system to optimize resource utilization and enhance operational efficiency

TABLE 42 DEPLOYMENT & INTEGRATION: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 43 DEPLOYMENT & INTEGRATION: INTELLIGENT BUILDING AUTOMATION

TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

6.3.1.3 Support & maintenance

6.3.1.3.1 System reliability and optimization of energy efficiency to propel market growth

TABLE 44 SUPPORT & MAINTENANCE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 45 SUPPORT & MAINTENANCE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

6.3.2 MANAGED SERVICES

6.3.2.1 Predictive capabilities of managed services to ensure responsive and optimized building environment

TABLE 46 MANAGED SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 47 MANAGED SERVICES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

7 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET,

BY TECHNOLOGY

7.1 INTRODUCTION

FIGURE 33 COMPUTING TECHNOLOGY SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

7.1.1 TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS



TABLE 48 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 49 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION)

7.2 SENSOR TECHNOLOGY

7.2.1 ADVANCEMENTS IN SENSOR TECHNOLOGY LEADING TO IMPROVED SAFETY AND FASTER RESPONSES TO FOSTER MARKET GROWTH TABLE 50 SENSOR TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 51 SENSOR TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

7.2.2 AMBIENT SENSORS

7.2.3 SAFETY & SECURITY SENSORS

7.2.4 ENERGY MONITORING SENSORS

7.2.5 HOME AUTOMATION SENSORS

7.2.6 OTHER SENSOR TECHNOLOGIES

7.3 ACTUATORS

7.3.1 INTEROPERABILITY AND MAXIMIZED ENERGY EFFICIENCY TO DRIVE GROWTH

TABLE 52 ACTUATORS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 53 ACTUATORS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

7.4 CONNECTIVITY TECHNOLOGY

7.4.1 ADVANCEMENTS IN CONNECTIVITY TECHNOLOGIES AND SUPPORTIVE DEVICES TO DRIVE GROWTH

TABLE 54 CONNECTIVITY TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 55 CONNECTIVITY TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 56 CONNECTIVITY TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2017–2022 (USD MILLION)

TABLE 57 CONNECTIVITY TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2023–2028 (USD MILLION)

7.4.2 WIRED TECHNOLOGY

TABLE 58 WIRED TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 59 WIRED TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)



7.4.2.1 Building automation and control networks (BACnet)

7.4.2.2 KNX (KONNEX)

7.4.2.3 LonWorks

7.4.2.4 Other wired technologies

7.4.3 WIRELESS TECHNOLOGIES

TABLE 60 WIRELESS TECHNOLOGIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 61 WIRELESS TECHNOLOGIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

7.4.3.1 Wi-Fi

7.4.3.2 Bluetooth Low Energy (BLE)

7.4.3.3 ZigBee

7.4.3.4 Other wireless technologies

7.5 COMPUTING TECHNOLOGY

7.5.1 INTEGRATION OF AI/ML AND ADVANCEMENTS IN CLOUD TECHNOLOGY TO ACCELERATE MARKET GROWTH

TABLE 62 COMPUTING TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 63 COMPUTING TECHNOLOGY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

7.5.2 AI/ML

7.5.3 CLOUD COMPUTING

7.5.4 OTHER COMPUTING TECHNOLOGIES

7.6 OTHER TECHNOLOGIES

TABLE 64 OTHER TECHNOLOGIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 65 OTHER TECHNOLOGIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

8 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE

8.1 INTRODUCTION

8.1.1 END USE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS

FIGURE 34 INDUSTRIAL SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

TABLE 66 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION)



TABLE 67 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION)

8.2 RESIDENTIAL

8.2.1 INCREASING DEMAND FOR SMART HOMES AND SUSTAINABLE LIVING SOLUTIONS TO FOSTER GROWTH

TABLE 68 RESIDENTIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 69 RESIDENTIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION) 8.3 INDUSTRIAL

8.3.1 SMART FACTORIES AND INTEGRATION OF AUTOMATION WITHIN PRODUCTION PROCESSES TO BOOST MARKET

TABLE 70 INDUSTRIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 71 INDUSTRIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

8.4 COMMERCIAL

8.4.1 CENTRALIZED MONITORING, PREDICTIVE MAINTENANCE, AND DATA-DRIVEN INSIGHTS TO DRIVE MARKET GROWTH

FIGURE 35 HOTEL BUILDINGS SEGMENT TO GROW AT HIGHER CAGR DURING FORECAST PERIOD

TABLE 72 COMMERCIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 73 COMMERCIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 74 COMMERCIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2017–2022 (USD MILLION)

TABLE 75 COMMERCIAL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TYPE, 2023–2028 (USD MILLION)

8.4.2 OFFICE BUILDINGS

TABLE 76 OFFICE BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 77 OFFICE BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

8.4.3 RETAIL BUILDINGS

TABLE 78 RETAIL BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 79 RETAIL BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)



8.4.4 HEALTHCARE FACILITIES

TABLE 80 HEALTHCARE FACILITIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 81 HEALTHCARE FACILITIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

8.4.5 HOTEL BUILDINGS

TABLE 82 HOTEL BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 83 HOTEL BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

8.4.6 OTHER COMMERCIAL BUILDINGS

TABLE 84 OTHER COMMERCIAL BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION) TABLE 85 OTHER COMMERCIAL BUILDINGS: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

9 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION

9.1 INTRODUCTION

TABLE 86 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 87 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY REGION, 2023–2028 (USD MILLION)

9.2 NORTH AMERICA

9.2.1 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS

9.2.2 NORTH AMERICA: RECESSION IMPACT

FIGURE 36 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET SNAPSHOT

TABLE 88 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION) TABLE 89 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 90 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 91 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023–2028 (USD MILLION) TABLE 92 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TABLE 92 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023–2028 (USD MILLION) TABLE 92 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION



TABLE 93 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 94 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION)

TABLE 95 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION)

TABLE 96 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION) TABLE 97 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION) TABLE 98 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 99 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 100 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 101 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION) TABLE 102 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION) TABLE 103 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION) TABLE 104 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 105 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 105 NORTH AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY COUNTRY, 2023–2028 (USD MILLION) 9.2.3 US

9.2.3.1 Robust financial ecosystem and major players to drive market TABLE 106 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION) TABLE 107 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 108 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 109 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET,



BY SOLUTION, 2023–2028 (USD MILLION)

TABLE 110 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION)

TABLE 111 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION)

TABLE 112 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION)

TABLE 113 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION)

TABLE 114 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 115 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 116 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 117 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 118 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION)

TABLE 119 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION)

TABLE 120 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION)

TABLE 121 US: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION)

9.2.4 CANADA

9.2.4.1 Government initiatives and immense participation from private players to accelerate market growth

TABLE 122 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION)

TABLE 123 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION)

TABLE 124 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION)

TABLE 125 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY SOLUTION, 2023–2028 (USD MILLION)

TABLE 126 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION)

TABLE 127 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES



MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 128 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION) TABLE 129 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION) TABLE 130 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017-2022 (USD MILLION) TABLE 131 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023-2028 (USD MILLION) TABLE 132 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION) TABLE 133 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023-2028 (USD MILLION) TABLE 134 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 135 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION) TABLE 136 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION) TABLE 137 CANADA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023-2028 (USD MILLION) 9.3 EUROPE

9.3.1 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS

9.3.2 EUROPE: RECESSION IMPACT

TABLE 138 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION)

TABLE 139 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION)

TABLE 140 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION)

TABLE 141 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023–2028 (USD MILLION)

TABLE 142 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION)

TABLE 143 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION)

TABLE 144 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION)



TABLE 145 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION) TABLE 146 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 147 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 148 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 149 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 150 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION)

TABLE 151 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION)

TABLE 152 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION)

TABLE 153 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION)

TABLE 154 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY COUNTRY, 2017–2022 (USD MILLION)

TABLE 155 EUROPE: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY COUNTRY, 2023–2028 (USD MILLION)

9.3.3 GERMANY

9.3.3.1 Comprehensive smart city initiatives to boost market TABLE 156 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017-2022 (USD MILLION) TABLE 157 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 158 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 159 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023-2028 (USD MILLION) TABLE 160 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION) TABLE 161 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 162 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION) TABLE 163 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES



MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION) TABLE 164 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 165 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 166 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 167 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 168 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION)

TABLE 169 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION)

TABLE 170 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION)

TABLE 171 GERMANY: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION)

9.3.4 UK

9.3.4.1 Government initiatives and availability of advanced connectivity to foster market growth

9.3.5 ITALY

9.3.5.1 Italy's emphasis on tourism and local government's active participation in endeavors to propel growth

9.3.6 FRANCE

9.3.6.1 Strategic investments and innovative solutions to fuel market growth

9.3.7 SPAIN

9.3.7.1 Spain's Zero Carbon drive and funding to drive market

9.3.8 NORDIC COUNTRIES

9.3.9 REST OF EUROPE

9.4 ASIA PACIFIC

9.4.1 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS

9.4.2 ASIA PACIFIC: RECESSION IMPACT

FIGURE 37 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION

TECHNOLOGIES MARKET SNAPSHOT

TABLE 172 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION

TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION)

TABLE 173 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION

TECHNOLOGIES, BY OFFERING, 2023–2028 (USD MILLION)



TABLE 174 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 175 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023–2028 (USD MILLION) TABLE 176 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION) TABLE 177 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 178 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 178 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION)

TABLE 179 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION)

TABLE 180 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION) TABLE 181 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION) TABLE 182 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 183 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 184 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 185 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION) TABLE 186 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION) TABLE 187 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION) TABLE 188 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 188 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 189 ASIA PACIFIC: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2022 (USD MILLION) 9.4.3 CHINA

9.4.3.1 Substantial investments and smart manufacturing to boost market TABLE 190 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES



MARKET, BY OFFERING, 2017-2022 (USD MILLION) TABLE 191 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 192 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 193 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023-2028 (USD MILLION) TABLE 194 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION) TABLE 195 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 196 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION) TABLE 197 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION) TABLE 198 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017-2022 (USD MILLION) TABLE 199 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION) TABLE 200 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017-2022 (USD MILLION) TABLE 201 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023-2028 (USD MILLION) TABLE 202 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 203 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION) TABLE 204 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017-2022 (USD MILLION) TABLE 205 CHINA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023-2028 (USD MILLION)

9.4.4 INDIA

9.4.4.1 Increasing demand for sustainable and affordable urbanization to accelerate market growth

9.4.5 JAPAN

9.4.5.1 Initiatives such as Society 5.0 and shift toward Zero Net Energy houses to drive growth

9.4.6 AUSTRALIA & NEW ZEALAND

9.4.6.1 Deployment of 5G and smart city initiatives to drive growth



9.4.7 SOUTH KOREA

9.4.7.1 Strategic focus on advancing intelligent building automation technologies to foster market growth

9.4.8 SOUTHEAST ASIA

9.4.8.1 Increased government focus on energy efficiency and prioritizing digital transformation to drive market

9.4.9 REST OF ASIA PACIFIC

9.5 MIDDLE EAST & AFRICA

9.5.1 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS

9.5.2 MIDDLE EAST & AFRICA: RECESSION IMPACT

TABLE 206 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION) TABLE 207 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 208 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 209 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY SOLUTION, 2023–2028 (USD MILLION)

TABLE 210 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION)

TABLE 211 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES, BY SERVICE, 2023–2028 (USD MILLION)

TABLE 212 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION)

TABLE 213 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION)

TABLE 214 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION) TABLE 215 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION) TABLE 216 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 217 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION) TABLE 218 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 219 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION) TABLE 220 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION) TABLE 221 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION) TABLE 222 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 223 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 223 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2028 (USD MILLION) 9.5.3 GCC COUNTRIES

TABLE 224 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION) TABLE 225 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 226 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 227 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023–2028 (USD MILLION) TABLE 228 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION) TABLE 229 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 229 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 230 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 230 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 230 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION)

TABLE 231 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION)

TABLE 232 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION) TABLE 233 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION) TABLE 234 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 235 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION



TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 236 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 237 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION) TABLE 238 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION) TABLE 239 GCC COUNTRIES: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION) TABLE 240 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY GCC COUNTRIES, 2017–2022 (USD MILLION) TABLE 241 MIDDLE EAST & AFRICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY GCC COUNTRIES, 2017–2022 (USD MILLION)

9.5.3.1 United Arab Emirates

9.5.3.1.1 Increasing adoption of smart architectural designs and green living initiatives to propel market

9.5.3.2 Kingdom of Saudi Arabia

9.5.3.2.1 Comprehensive approach toward environmentally friendly and energyefficient buildings to boost market

9.5.3.3 Rest of GCC countries

9.5.4 SOUTH AFRICA

9.5.4.1 Government's energy-saving initiatives to drive growth

9.5.5 REST OF MIDDLE EAST & AFRICA

9.6 LATIN AMERICA

9.6.1 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET DRIVERS

9.6.2 LATIN AMERICA: RECESSION IMPACT

TABLE 242 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION) TABLE 243 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 244 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 245 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023–2028 (USD MILLION) TABLE 246 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2023–2028 (USD MILLION) TABLE 246 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION) TABLE 247 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION



TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 248 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017–2022 (USD MILLION)

TABLE 249 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION)

TABLE 250 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017–2022 (USD MILLION) TABLE 251 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION) TABLE 252 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION)

TABLE 253 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023–2028 (USD MILLION)

TABLE 254 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 255 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023–2028 (USD MILLION) TABLE 256 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION) TABLE 257 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION) TABLE 258 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 259 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2022 (USD MILLION) TABLE 259 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COUNTRY, 2017–2028 (USD MILLION) 7ABLE 259 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION 7ABLE 259 LATIN AMERICA: INTELLIGENT BUILDING AUTOMATION

9.6.3.1 Robust framework for intelligent buildings and new construction mandates to drive growth

TABLE 260 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2017–2022 (USD MILLION) TABLE 261 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY OFFERING, 2023–2028 (USD MILLION) TABLE 262 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SOLUTION, 2017–2022 (USD MILLION) TABLE 263 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES



MARKET, BY SOLUTION, 2023–2028 (USD MILLION) TABLE 264 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2017–2022 (USD MILLION) TABLE 265 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY SERVICE, 2023–2028 (USD MILLION) TABLE 266 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2017-2022 (USD MILLION) TABLE 267 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY PROFESSIONAL SERVICE, 2023–2028 (USD MILLION) TABLE 268 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2017-2022 (USD MILLION) TABLE 269 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY TECHNOLOGY, 2023-2028 (USD MILLION) TABLE 270 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2017–2022 (USD MILLION) TABLE 271 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY CONNECTIVITY TECHNOLOGY, 2023-2028 (USD MILLION) TABLE 272 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2017–2022 (USD MILLION) TABLE 273 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY END USE, 2023-2028 (USD MILLION) TABLE 274 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2017–2022 (USD MILLION) TABLE 275 BRAZIL: INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET, BY COMMERCIAL USE, 2023–2028 (USD MILLION)

9.6.4 MEXICO

9.6.4.1 Increasing focus on public health and decarbonization of building sector to accelerate market growth

9.6.5 REST OF LATIN AMERICA

10 COMPETITIVE LANDSCAPE

10.1 INTRODUCTION

10.2 KEY PLAYER STRATEGIES/RIGHT TO WIN

10.2.1 OVERVIEW OF STRATEGIES ADOPTED BY KEY INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES PROVIDERS

10.3 REVENUE ANALYSIS

FIGURE 38 HISTORICAL REVENUE ANALYSIS OF KEY PLAYERS, 2020–2022 (USD BILLION)



10.4 MARKET SHARE ANALYSIS FIGURE 39 MARKET SHARE ANALYSIS, 2022 TABLE 276 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: DEGREE OF COMPETITION **10.5 COMPANY EVALUATION MATRIX** 10.5.1 STARS **10.5.2 EMERGING LEADERS 10.5.3 PERVASIVE PLAYERS 10.5.4 PARTICIPANTS** FIGURE 40 COMPANY EVALUATION MATRIX FOR KEY PLAYERS, 2022 **10.5.5 COMPANY FOOTPRINT FOR KEY PLAYERS** TABLE 277 COMPANY FOOTPRINT FOR KEY PLAYERS TABLE 278 OFFERING FOOTPRINT FOR KEY PLAYERS TABLE 279 END-USE FOOTPRINT FOR KEY PLAYERS TABLE 280 REGIONAL FOOTPRINT FOR KEY PLAYERS **10.6 STARTUP/SME EVALUATION MATRIX 10.6.1 PROGRESSIVE COMPANIES 10.6.2 RESPONSIVE COMPANIES 10.6.3 DYNAMIC COMPANIES 10.6.4 STARTING BLOCKS** FIGURE 41 COMPANY EVALUATION MATRIX FOR STARTUPS/SMES, 2022 **10.6.5 COMPETITIVE BENCHMARKING** TABLE 281 DETAILED LIST OF STARTUPS/SMES TABLE 282 COMPETITIVE BENCHMARKING OF STARTUPS/SMES TABLE 283 COMPETITIVE BENCHMARKING OF KEY PLAYERS **10.7 COMPETITIVE SCENARIO AND TRENDS 10.7.1 PRODUCT LAUNCHES** TABLE 284 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: PRODUCT LAUNCHES, JANUARY 2021–DECEMBER 2023 10.7.2 DEALS TABLE 285 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES MARKET: DEALS, JANUARY 2020-SEPTEMBER 2023 **10.8 INTELLIGENT BUILDING AUTOMATION TECHNOLOGIES: PRODUCT** BENCHMARKING

10.8.1 PROMINENT INTELLIGENT BUILDING AUTOMATION SOLUTIONS TABLE 286 COMPARATIVE ANALYSIS OF PROMINENT INTELLIGENT BUILDING AUTOMATION SOLUTIONS

10.8.1.1 Cisco Spaces

10.8.1.2 EcoStruxure Building Operation



10.8.1.3 Metasys

10.8.1.4 Tracer Concierge

10.9 VALUATION AND FINANCIAL METRICS OF KEY INTELLIGENT BUILDING AUTOMATION TECHNOLOGY PROVIDERS

FIGURE 42 VALUATION AND FINANCIAL METRICS OF KEY INTELLIGENT BUILDING AUTOMATION TECHNOLOGY VENDORS

11 COMPANY PROFILES

11.1 KEY PLAYERS

(Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats))* **11.1.1 SCHNEIDER ELECTRIC SE** TABLE 287 SCHNEIDER ELECTRIC SE: COMPANY OVERVIEW FIGURE 43 SCHNEIDER ELECTRIC SE: COMPANY SNAPSHOT TABLE 288 SCHNEIDER ELECTRIC SE: PRODUCTS/SOLUTIONS/SERVICES OFFERED TABLE 289 SCHNEIDER ELECTRIC SE: PRODUCT LAUNCHES/UPDATES TABLE 290 SCHNEIDER ELECTRIC SE: DEALS 11.1.2 ABB LTD. TABLE 291 ABB LTD.: COMPANY OVERVIEW FIGURE 44 ABB LTD: COMPANY SNAPSHOT TABLE 292 ABB LTD.: PRODUCTS/SOLUTIONS/SERVICES OFFERED TABLE 293 ABB LTD.: PRODUCT LAUNCHES/UPDATES TABLE 294 ABB LTD.: DEALS **11.1.3 HONEYWELL INTERNATIONAL INC.** TABLE 295 HONEYWELL INTERNATIONAL INC .: COMPANY OVERVIEW FIGURE 45 HONEYWELL INTERNATIONAL INC .: COMPANY SNAPSHOT TABLE 296 HONEYWELL INTERNATIONAL INC .: PRODUCTS/SOLUTIONS/SERVICES OFFERED TABLE 297 HONEYWELL INTERNATIONAL INC .: PRODUCT LAUNCHES/UPDATES TABLE 298 HONEYWELL INTERNATIONAL INC .: DEALS 11.1.4 SIEMENS AG TABLE 299 SIEMENS AG: COMPANY OVERVIEW FIGURE 46 SIEMENS AG: COMPANY SNAPSHOT TABLE 300 SIEMENS AG: PRODUCTS/SOLUTIONS/SERVICES OFFERED TABLE 301 SIEMENS AG: PRODUCT LAUNCHES/UPDATES TABLE 302 SIEMENS AG: DEALS



11.1.5 JOHNSON CONTROLS INTERNATIONAL PLC

TABLE 303 JOHNSON CONTROLS INTERNATIONAL PLC: COMPANY OVERVIEW FIGURE 47 JOHNSON CONTROLS INTERNATIONAL PLC: COMPANY SNAPSHOT TABLE 304 JOHNSON CONTROLS INTERNATIONAL PLC:

PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 305 JOHNSON CONTROLS INTERNATIONAL PLC: PRODUCT LAUNCHES/UPDATES

TABLE 306 JOHNSON CONTROLS INTERNATIONAL PLC: DEALS

11.1.6 EATON CORPORATION

TABLE 307 EATON CORPORATION: COMPANY OVERVIEW

FIGURE 48 EATON CORPORATION: COMPANY SNAPSHOT

TABLE 308 EATON CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 309 EATON CORPORATION: PRODUCT LAUNCHES/UPDATESTABLE 310 EATON CORPORATION: DEALS

11.1.7 ROCKWELL AUTOMATION, INC.

TABLE 311 ROCKWELL AUTOMATION, INC.: COMPANY OVERVIEW

FIGURE 49 ROCKWELL AUTOMATION, INC.: COMPANY SNAPSHOT

TABLE 312 ROCKWELL AUTOMATION, INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 313 ROCKWELL AUTOMATION, INC.: PRODUCT LAUNCHES/UPDATES TABLE 314 ROCKWELL AUTOMATION, INC.: DEALS

11.1.8 CISCO SYSTEMS, INC.

TABLE 315 CISCO SYSTEMS, INC.: COMPANY OVERVIEW

FIGURE 50 CISCO SYSTEMS, INC.: COMPANY SNAPSHOT

TABLE 316 CISCO SYSTEMS, INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 317 CISCO SYSTEMS, INC.: PRODUCT LAUNCHES/UPDATES

TABLE 318 CISCO SYSTEMS, INC.: DEALS

11.1.9 ROBERT BOSCH GMBH

TABLE 319 ROBERT BOSCH GMBH: COMPANY OVERVIEW

FIGURE 51 ROBERT BOSCH GMBH: COMPANY SNAPSHOT

TABLE 320 ROBERT BOSCH GMBH: PRODUCTS/SOLUTIONS/SERVICES

OFFERED

TABLE 321 ROBERT BOSCH GMBH: DEALS

11.1.10 AZBIL CORPORATION

TABLE 322 AZBIL CORPORATION: COMPANY OVERVIEW

FIGURE 52 AZBIL CORPORATION: COMPANY SNAPSHOT

TABLE 323 AZBIL CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED TABLE 324 AZBIL CORPORATION: DEALS



11.1.11 TRANE TECHNOLOGIES PLC

11.1.12 LUTRON ELECTRONICS COMPANY

11.1.13 CBRE GROUP, INC.

11.1.14 JONES LANG LASALLE INCORPORATED

11.1.15 CUSHMAN & WAKEFIELD PLC

11.1.16 CARRIER GLOBAL CORPORATION

11.1.17 HUBBELL INCORPORATED

11.1.18 INGERSOLL RAND INC.

11.1.19 EMERSON ELECTRIC CO.

11.2 STARTUPS/SMES

11.2.1 CURRENT LIGHTING SOLUTIONS, LLC

11.2.2 KMC CONTROLS

11.2.3 BUILDINGIQ

11.2.4 75F

11.2.5 VERDIGRIS TECHNOLOGIES, INC.

11.2.6 SPACETI

11.2.7 EFACILITY

11.2.8 SOFTDEL

*Details on Business Overview, Products Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

12 ADJACENT/RELATED MARKETS

12.1 INTRODUCTION

12.2 SMART BUILDINGS MARKET

12.2.1 MARKET DEFINITION

12.2.2 MARKET OVERVIEW

12.2.3 SMART BUILDINGS MARKET, BY COMPONENT

TABLE 325 SMART BUILDINGS MARKET, BY COMPONENT, 2017–2020 (USD MILLION)

TABLE 326 SMART BUILDINGS MARKET, BY COMPONENT, 2021–2026 (USD MILLION)

TABLE 327 SMART BUILDING SERVICES MARKET, BY TYPE, 2017–2020 (USD MILLION)

TABLE 328 SMART BUILDING SERVICES MARKET, BY TYPE, 2021–2026 (USD MILLION)

12.2.4 SMART BUILDINGS MARKET, BY SOLUTION

TABLE 329 SMART BUILDING SOLUTIONS MARKET, BY TYPE, 2017–2020 (USD



MILLION)

TABLE 330 SMART BUILDING SOLUTIONS MARKET, BY TYPE, 2021–2026 (USD MILLION)

12.2.5 SMART BUILDINGS MARKET, BY BUILDING TYPE

TABLE 331 SMART BUILDINGS MARKET, BY BUILDING TYPE, 2017–2020 (USD MILLION)

TABLE 332 SMART BUILDINGS MARKET, BY BUILDING TYPE, 2021–2026 (USD MILLION)

12.2.6 SMART BUILDINGS MARKET, BY REGION

TABLE 333 SMART BUILDINGS MARKET, BY REGION, 2017–2020 (USD MILLION) TABLE 334 SMART BUILDINGS MARKET, BY REGION, 2021–2026 (USD MILLION) 12.3 FACILITY MANAGEMENT MARKET

12.3.1 MARKET DEFINITION

12.3.2 MARKET OVERVIEW

12.3.3 FACILITY MANAGEMENT MARKET, BY OFFERING

TABLE 335 FACILITY MANAGEMENT MARKET, BY OFFERING, 2017–2022 (USD MILLION)

TABLE 336 FACILITY MANAGEMENT MARKET, BY OFFERING, 2023–2028 (USD MILLION)

12.3.4 FACILITY MANAGEMENT MARKET, BY SOLUTION

TABLE 337 FACILITY MANAGEMENT MARKET, BY SOLUTION, 2017–2022 (USD MILLION)

TABLE 338 FACILITY MANAGEMENT MARKET, BY SOLUTION, 2023–2028 (USD MILLION)

12.3.5 FACILITY MANAGEMENT MARKET, BY SERVICE

TABLE 339 FACILITY MANAGEMENT MARKET, BY SERVICE, 2017–2022 (USD MILLION)

TABLE 340 FACILITY MANAGEMENT MARKET, BY SERVICE, 2023–2028 (USD MILLION)

12.3.6 FACILITY MANAGEMENT MARKET, BY VERTICAL

TABLE 341 FACILITY MANAGEMENT MARKET, BY VERTICAL, 2017–2022 (USD MILLION)

TABLE 342 FACILITY MANAGEMENT MARKET, BY VERTICAL, 2023–2028 (USD MILLION)

12.3.7 FACILITY MANAGEMENT MARKET, BY REGION

TABLE 343 FACILITY MANAGEMENT MARKET, BY REGION, 2017–2022 (USD MILLION)

TABLE 344 FACILITY MANAGEMENT MARKET, BY REGION, 2023–2028 (USD MILLION)



13 APPENDIX

13.1 DISCUSSION GUIDE
13.2 KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL
13.3 CUSTOMIZATION OPTIONS
13.4 RELATED REPORTS
13.5 AUTHOR DETAILS



About

Major social, economic, technological and environmental trends are changing the way we work and learn. These changes will in turn create a rise in demand for commercial buildings. There would be an increase in personalized control of lighting, temperature, ventilation and other aspects of interior environment to enhance the productivity of knowledge workers. This has given rise to intelligent buildings. An intelligent building is the one that maximizes the efficiency of its occupants and allows effective management of resource with minimum costs.

The report quantifies the global intelligent building automation technologies market based on systems, services and information technology required to make a building intelligent. The study also includes the profiles and major developments of market players facilitating the development of intelligent buildings.

Some of the factors which are driving the intelligent building automation technology market are intelligent building reduces CO 2 emissions by buildings, reduces operational & energy costs. These technologies identify the problems in a building at a very early stage and enhance security and safety of the occupants as well as enhance the life span of the building.

The intelligent building automation technologies systems provide enterprise energy management, automated fault detection, central plant optimization, digital energy network, automated demand response, virtual power plant, microgrid management, and building data analytics. These technologies puts all the building systems in the hands of the operator via user-friendly and single interface software which can be accessed from anywhere using a laptop, tablet, or smart phone by the operator. The entire building's systems can be configured from the interface, such as air-conditioning, lighting, blinds, mass notification systems and energy usage.

The intelligent building automation solutions increase operational efficiency and the comfort of occupants and reduce energy as well as operational costs. The intelligent building automation technologies solutions will find more traction in the future. The prominent vendors in this market are developing solutions to integrate BAS and IP networks and making the BAS software more open to third party systems used in the building.

The intelligent building automation technologies market is finding an increased adoption



by end-users due to advancements in the automation technologies. The intelligent building automation technologies market is currently dominated by organizations like General Electric, Siemens Building Technologies, Schneider Electric, Azbil Corporation, Ingersoll Rand, Eaton Corporation, ABB, Honeywell, Johnson Controls, and Rockwell Automation.



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