

The Internet of Things in Smart Commercial Buildings 2022 to 2027

MARKET PROSPECTS, IMPACTS & OPPORTUNITIES

Published: Q2 2022

The IoT in
Smart
Commercial
Buildings
2022 to
2027



meemori

Synopsis

This report helps all stakeholders in building IoT technology to identify business opportunities in all growth sectors of the market and forecasts demand to 2027.

©2022 Meemori
Research AB

Introduction

This Report is a new 2022 Study which Makes an Objective Assessment of the Market for Internet of Things Technologies, Networks and Services in Buildings 2022 to 2027

Our 5th edition of research into the market for the Internet of Things in Smart Buildings (BioT) focuses on market sizing and opportunities for Smart Commercial Buildings. It provides a completely fresh market assessment of the industry based on the latest information. New for 2022, it INCLUDES at no extra cost, a spreadsheet containing the data from the report AND a graphics pack with high-resolution charts.

The Internet of Things in Smart Commercial Buildings 2022 - v5.0



Key Questions Addressed:

What is the size and structure of the global BioT market? The report has an assessment of the global market size for hardware, software and services in 2021 and forecast to 2027. Market data is also broken down by geographic region, vertical and application type.

How many connected IoT devices have been installed in commercial smart buildings? The report estimates the installed base of IoT devices in commercial smart buildings from 2019 to 2027. This data is also broken down by geographic region, vertical and application type.

What are the main drivers for industry growth? The report assesses the main industry drivers, barriers to growth and key meta trends.

What does the competitive landscape look like? There is an analysis of the supply side structure of the market and commentary on M&A and investment trends.

The market sizing and forecasts presented in this report are based upon a custom market model and iterative research methodology. Our research builds on decades of experience in the evaluation of a wide variety of smart building related markets with a particular focus on tracking and evaluating the performance of a variety of technology markets and their impact on commercial buildings.

BloT Market recovery through 2021 was healthy, growing 21% to rise above the 2019 market total, at just over \$47 billion. We forecast that the market will continue to grow at a healthy 12% CAGR, rising from \$47.07 billion in 2021 to a forecasted \$92.88 billion by 2027.

Our latest forecast sees the number of **connected IoT devices installed in commercial smart buildings** grow at a healthy 11.1% CAGR for the forecast period, rising from an estimated 1.264 billion in 2021 to over 2.5 billion by 2027.

Within its 279 pages and 47 charts and tables, the report filters out all the key facts and draws conclusions, so you can understand exactly what is shaping the future of this global IoT market;

There is an increasing industry push towards improving the value of data generated by the BloT through improved systems integration, as opposed to limited siloed systems. To achieve this within buildings, a **layered horizontal systems architecture** is increasingly being advocated for, which is technology agnostic, by using open standards, open protocols, and non-proprietary solutions.

The BloT digital divide. The pandemic has gone on to validate the BloT investments of more forward-thinking building owners and operators. Effectively demonstrating the value of many previously existing BloT solutions to deliver more resilient and efficient business operations. For example, remotely accessing building system networks and devices to monitor and configure performance during the pandemic proved challenging for those without the pre-requisite systems already in place. In many cases this led to energy being wasted on heating virtually empty buildings. Whilst office building occupancy dropped to near zero in some countries, energy use only fell by 10-15%.

The competitive landscape for BloT remains incredibly complex and varied. The level of fragmentation we continue to observe in the market can act as a source of confusion and frustration for buyers, with many vendors of point solutions and platforms vying for attention. Leading platform solution providers are beginning to emerge, however, and the user base seems likely to coalesce around a more limited number of platform providers, with those unable to maintain a sustainable user base being forced to merge or withdraw from the market.

We are also seeing a greater degree of collaboration between the IT and OT worlds. A growing number of vendors are coalescing around cloud solutions provided by major IT companies such as Amazon and Microsoft. This should facilitate the development of “platform ecosystems”, where data exchange, innovation and supply chain partnering are simplified by common tools and means of data exchange.

Starting at only USD \$2,500 (Single User License) this report provides valuable information to companies so they can improve their strategic planning exercises AND look at the potential for developing their business through mergers, acquisitions and alliances.

Who Should Buy this Report?

The information contained in this report will be of value to all those engaged in managing, operating and investing in commercial smart buildings (and their advisers) around the world. In particular, those wishing to understand exactly how the Internet of Things is impacting commercial real estate will find it most useful.

The Global market for the Internet of Things in Smart Commercial Buildings (\$Bn, 2019–2027)

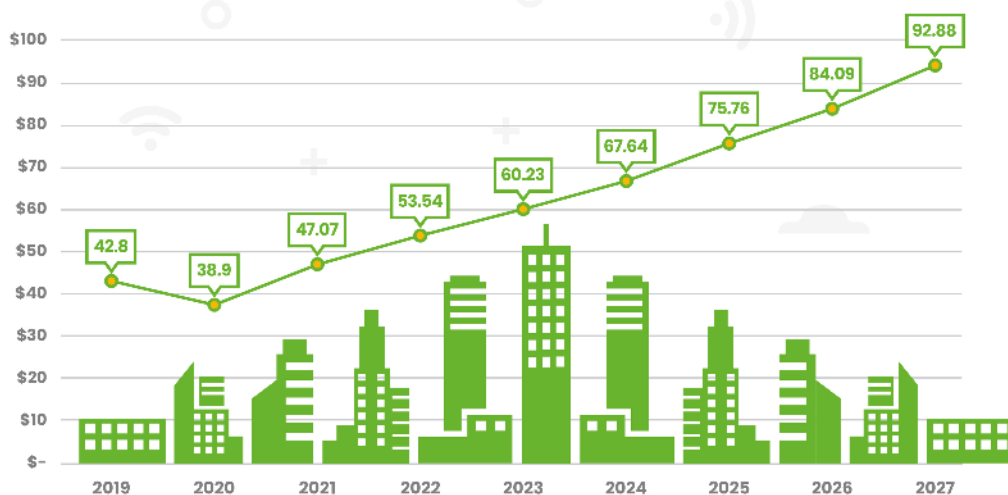


Table of Contents

Preface

Executive Summary

1. Key Elements of the IoT

- 1.1 Sensors & Connected Devices
- 1.2 Network Communications
- 1.3 Data Integration & Analytics
- 1.4 Data Processing (Cloud / Edge)
- 1.5 AI & Machine Learning

2. The Building Internet of Things (BIoT)

- 2.1 Mapping the BIoT
- 2.2 The BIoT Supply Chain
- 2.3 BIoT Solution Architecture
- 2.4 AI, Machine Learning, and the BIoT

3. The State of the Market

- 3.1 IoT Device Projections
- 3.2 IoT Devices in Smart Buildings
- 3.3 Market Adoption
- 3.4 BIoT Solution Maturity

4. Standards & Protocols

- 4.1 Integration, Interoperability & Legacy Building Systems
- 4.2 The Importance of Open Standards
- 4.3 Connectivity Standards
- 4.4 Smart Building Protocols
- 4.5 Building Data Management

5. BIoT Market Applications

- 5.1 Security & Access Control
- 5.2 Energy Management & Environmental Control
- 5.3 Air Quality

- 5.4 Smart Operations & Maintenance
- 5.5 Space, Occupancy & People Movement
- 5.6 Hygiene, Health & Wellness
- 5.7 Smart Lighting
- 5.8 Tenant & Workplace Experience
- 5.9 Fire & Safety
- 5.10 Digital Twin

6. Smart Building IoT Platforms

- 6.1 IoT Platforms
- 6.2 The Platform Eco-System
- 6.3 BioT Platform Offerings

7. Vertical Market Analysis

- 7.1 Commercial Offices
- 7.2 Retail
- 7.3 Hospitality
- 7.4 Other Buildings
- 7.5 New vs Existing Buildings
- 7.6 Unlocking the Market for Smaller Buildings

8. The Global BioT Market Forecasts

- 8.1 BioT Market Forecasts
- 8.2 Market Revenue by Hardware, Software & Services
- 8.3 Market Revenue by Vertical
- 8.4 Market Revenue by Application

9. BioT Market Analysis by Region

- 9.1 Regional Comparisons
- 9.2 North America
- 9.3 Latin America
- 9.4 Asia Pacific
- 9.5 Europe

9.6 Middle East & Africa

10. Meta Trend Analysis

10.1 COVID-19 Impacts

10.2 The War in Ukraine

10.3 Supply Chain Issues

10.4 Construction & CRE Investment Trends

11. BioT Market Drivers

11.1 Economic & Business Drivers

11.2 Technology Drivers

11.3 Energy Efficiency Drivers

11.4 Health & Wellbeing Drivers

11.5 Policy & Regulatory Drivers

11.6 Standards & Certification

12. BioT Challenges & Barriers

12.1 Cybersecurity & Data Privacy

12.2 Implementation Cost & ROI

12.3 Data Related Challenges

12.4 Knowledge & Skills

12.5 Cultural & Governance Challenges

12.6 Commissioning & Procurement Challenges

12.7 Incentive Alignment

13. BioT Challenges & Barriers

13.1 The Competitive Landscape

13.2 Partnering & Strategic Alliances

13.3 Investment & M&A

List of Figures

Fig 1.1 – The OSI Reference Model for the IoT

Fig 1.2 – Leading Cloud Infrastructure Service Providers

Fig 1.3 – Leading Drivers for Edge IoT Adoption

Fig 2.1 – The Internet of Things in Smart Commercial Buildings 2022 v5.0

Fig 2.2 – The BIoT Supply Chain

Fig 2.3 – AI and Machine Learning Offerings by Use Case

Fig 3.1 – Global IoT Device Projections, Installed Base of Connected Devices (Bn)

Fig 3.2 – Installed Base of IoT Devices in Commercial Smart Buildings 2019 – 2027 (Millions)

Fig 3.3 – Commercial Smart Building IoT Device Projections by Market Vertical 2022 – 2027 (Millions)

Fig 3.4 – Commercial Smart Building IoT Devices by Application 2022 – 2027 (Millions)

Fig 3.5 – Commercial Smart Building IoT Devices by Region 2022 – 2027 (Millions)

Fig 3.6 – IoT Adoption Rates, % of Decision Makers

Fig 3.7 – IoT Adoption Rates by Country, % of Projects in Use Phase

Fig 3.8 – Sensor & Control Technology Penetration

Fig 3.9 – Commercial Buildings, Energy Efficiency Related Smart Controls Penetration, % of US Commercial Building Stock by Number of Buildings & Floorspace

Fig 3.10 – Smart Building Solution Maturity

Fig 6.1 – IoT Platform Functionality

Fig 6.2 – Digital Workplace Platforms by Category

Fig 7.1 – Offices, First Quarter Gross Leasing Volumes by Region

Fig 7.2 – Global Hotel Room Occupancy (2018 – 2022)

Fig 8.1 – The Global Market for the Internet of Things in Smart Commercial Buildings, \$Bn, 2019 – 2027

Fig 8.2 – The Global Market for the Internet of Things in Smart Commercial Buildings, \$Bn, 2019 – 2027, Breakdown by Hardware, Software & Services

Fig 8.3 – Market Breakdown by Hardware, Software & Services (% of Total Market)

Fig 8.4 – The Market for the Internet of Things in Smart Commercial Buildings, Market by Vertical, \$Bn, 2021 – 2027

Fig 8.5 – The Market for the Internet of Things in Smart Commercial Buildings, Market by Application, \$Bn, 2021 – 2027

Fig 9.1 – The Market for the Internet of Things in Smart Commercial Buildings, Market by Region, 2022 & 2027

Fig 9.2 – The Market for the Internet of Things in Smart Commercial Buildings, North America, 2021 – 2027 (\$Bn)

Fig 9.3 – The Market for the Internet of Things in Smart Commercial Buildings, Latin America, 2021 – 2027 (\$Bn)

Fig 9.4 – The Market for the Internet of Things in Smart Commercial Buildings, Asia Pacific, 2021 – 2027 (\$Bn)

Fig 9.5 – The Market for the Internet of Things in Smart Commercial Buildings, Europe, 2021 – 2027 (\$Bn)

Fig 9.6 – The Market for the Internet of Things in Smart Commercial Buildings, The Middle East & Africa, 2021 – 2027 (\$Bn)

Fig 10.1 – Meta Trend Impact Analysis by Application & Vertical (2022 – 2027)

Fig 10.2 – The Economic Impact of COVID-19 on GDP Growth

Fig 10.3 – Average Peak Occupancy Rate in Global Offices Week by Week, August – November 2021

Fig 10.4 – Share of Transaction Volumes by Sector 2015 – 2021

Fig 10.5 – US Consensus Construction Forecasts

Fig 10.6 – Contribution to Global Construction Growth 2020 – 2030

Fig 10.7 – Share of Global Construction Markets 2020 – 2030

Fig 11.1 – Leading Drivers for IoT Adoption in Smart Places

Fig 11.2 – Average IoT Sensor Costs, 2004 – 2020, USD per Sensor

Fig 11.3 – Buildings Share of Global Final Energy & CO2 Emissions 2020

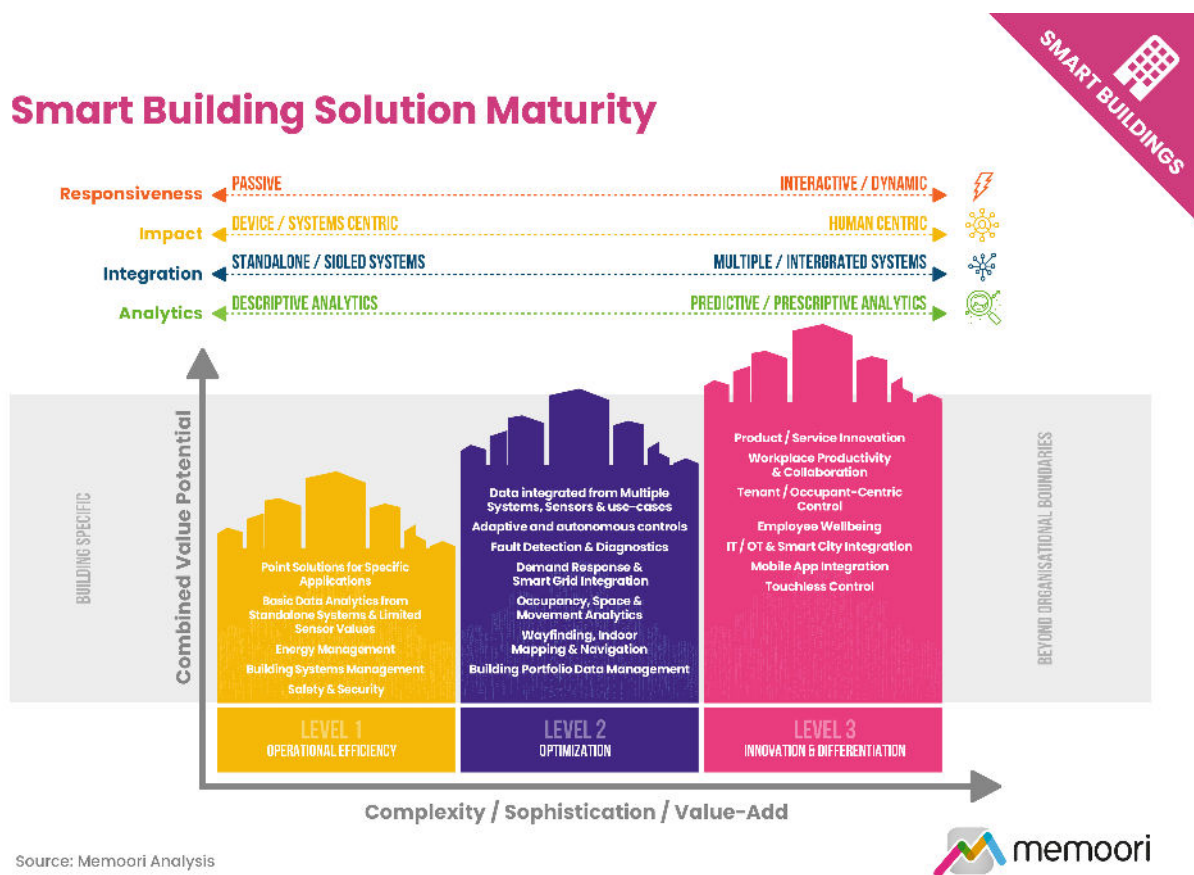
Fig 11.4 – Non-Residential Building Sector CO2 Emissions, Gigatonnes (Gt)

Fig 11.5 – Number of S&P 500 Companies Citing “ESG” on Earnings Calls

Fig 11.6 – Development of Electricity Prices for Non-Household Consumers, EU, 2008 – 2021

Fig 12.1 – Leading IoT Challenges

Fig 13.1 – Incumbent Smart Building Vendors and Their Partnerships with Startups



How to Order

The report is priced at **\$2,750 USD (Enterprise License) / \$2,500 USD (Single User License)**.

It is delivered as an electronic file download, via email.

To order, or if you require further information please contact; **James McHale** - jim@memoori.com / +46 8 501 64 177

Alternatively, you can order direct through our website -

<https://memoori.com/portfolio/the-internet-of-things-in-smart-commercial-buildings-2022-to-2027/>