

Startups and Their Impact on Smart Buildings 2019

A COMPREHENSIVE EVALUATION OF STARTUP COMPANIES IN THE SMART BUILDING SPACE

Published: Q1 2019

StartUps in Smart Buildings 2019



Synopsis

This report helps all stakeholders and investors to assess the impact and range of Startups in all growth sectors of the Smart Buildings Space and to identify business opportunities through strategic alliances, funding and M&A.

© 2019 Meemori Research
AB

Introduction

This Report is a New 2019 Definitive Resource for Evaluating Startup Companies in the Smart Buildings space.

Memoori has identified 482 private companies founded between 2009 and 2018 in the smart buildings sector, which comply with our definition of being a Startup (See below). In addition to this Memoori identified 109 startups that been acquired and 13 firms that filed for an IPO since 2009, **amounting to over 600 active new entrants in the smart commercial buildings sector.**

2018 has proved to be a record year for investment in the global smart buildings sector, with over \$2.4 billion invested in startups; showing increased confidence by investors in the sector and indicating the positive response companies are receiving for their products and services in the market.

Our definition of a Startup is **"A private company formed no earlier than 2009 that is focused on the commercial and industrial buildings market, is not a subsidiary or an acquisition of a larger company and is often financed by venture capital or private equity funding."**

What This Report Will Tell You

Within its **255 Pages and 64 Charts and Tables**, The Report Sieves out all the Key Facts and Draws Conclusions, so you can understand how Startup Companies are Shaping the Future of the Smart Building Industry.

Fig 2.2

Top 5 segments by Number of Startups



The first Unicorn in the smart buildings space was created by the massive \$1.1 billion investment in View Glass by Softbank Vision Fund. Even discounting the View investment, **2018 attracted total funding of over \$1.3 billion in the commercial and industrial buildings space, still a record level of investment to date.**

The number of funding rounds has risen to 184 in 2018. The capital invested in the global smart buildings sector has increased more than 6 times since 2012 with the sector attracting around \$6.8 billion during this period.

We identified 109 acquisitions of startup companies over the last 7 years. 2018 accounted for over 37% of these emerging player deals confirming the consolidation trend and increasing recognition by potential acquirers of the benefits of closer collaboration with startups.

The information and analysis in this report is based on research and interviews with emerging players in the Smart Building Space. It benefits from Memoori's previous reports over the last 2 years on subjects such as the Building Internet of Things (BIoT), Big Data, Security and Occupancy Analytics.

It demonstrates the critical contribution that Startups are making to the introduction of innovation in the Smart Buildings space.

Fig 6.2
Top 15 Startups by Total Funding (\$m)

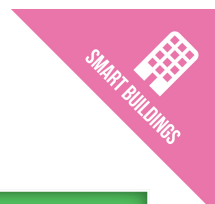
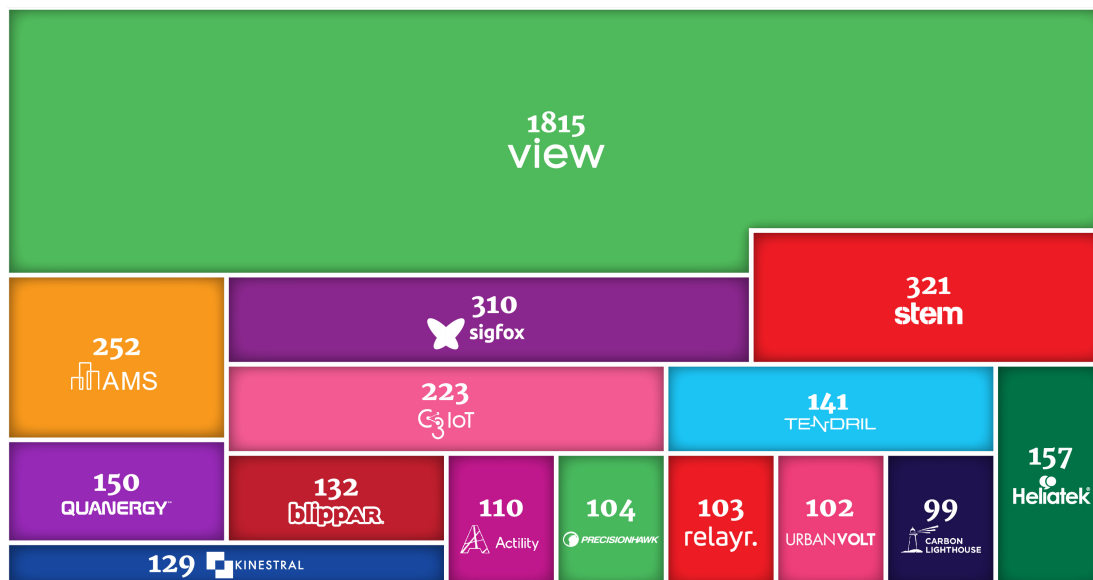


Table of Contents

Preface

Executive Summary

1. Introduction, Scope and Definitions

- 1.1 Introduction
- 1.2 Scope and Definitions
- 1.3 Focus and Categorization of Startups

2. Overview of New Entrants

- 2.1 Distribution of Startup Companies by Primary Category
- 2.2 Distribution of Startup Companies by Region

3. Smart Building Applications

- 3.1 The Building Internet of Things (BIoT)
 - 3.1.1 Platforms
 - 3.1.2 Enablement Hardware and Networking & Connectivity
 - 3.1.3 Smart Lighting
 - 3.1.4 Cyber Security
- 3.2 Building Energy Management
 - 3.2.1 Application Layer
 - 3.2.2 Analytics Layer
 - 3.2.3 Energy Services
- 3.3 PropTech
 - 3.3.1 The Influence of PropTech on the Smart Buildings Space
 - 3.3.2 Workplace Management and Space Utilization
 - 3.3.3 Indoor Mapping, Location Services and People Counting
 - 3.3.4 Asset and Maintenance Management
 - 3.3.5 Occupant Engagement Platforms
 - 3.3.6 BIM and Digitization of Buildings
 - 3.3.7 Smart Water Management
 - 3.3.8 Data Center Infrastructure Management (DCIM)

3.3.9 Drones & Robotics

3.4 Building to Grid (B2G)

3.4.1 Distributed Energy Storage

3.4.2 Distributed Energy Resource Management Systems (DERMS)

3.4.3 Microgrids

3.4.4 Demand Response

3.4.5 Virtual Power Plants (VPP)

3.5 Physical Security

3.5.1 Access Control, Perimeter Protection and PIAM

3.5.2 Electronic Locking

3.5.3 Video Surveillance, Video Management Software and Video Analytics

3.5.4 Biometrics and Facial Recognition

3.5.5 Mass Notification and Critical Incident Management

3.5.6 Drones & Robotics

3.6 Building Fabric

3.6.1 Smart Glass and Dynamic Windows

3.6.2 Smart Roofing

3.6.3 Smart Flooring and Walls

4. The Global IoT Market – Size and Growth Projections

4.1 The IoT Market

5. Trends Reshaping the Smart Buildings Marketplace

5.1 The Journey Towards Data-Driven Buildings

5.2 Artificial Intelligence and Machine Learning

5.2.1 Predictive Analytics in Smart Operations and Maintenance

5.3 Occupant-Centric Buildings, Wellness and Productivity

5.3.1 Occupant-Centricity

5.3.2 Wellness & Productivity

5.4 Blockchain and Decentralized Ledger Technology

5.4.1 Distributed Energy Trading

- 5.4.2 Identity Verification
- 5.4.3 Video Surveillance
- 5.4.4 BIM
- 5.4.5 Smart Building Data Notarization
- 5.5 As-a-Service Business Models
- 5.6 Trends in Vertical Markets and Building Types
 - 5.6.1 Co-Working and Flexible Offices
 - 5.6.2 Retail
 - 5.6.3 Hospitality
 - 5.6.4 Healthcare
 - 5.6.5 Multiple Occupancy Residential

6. Venture Capital and Private Equity Funding

- 6.1 Analysis of Funding Rounds and Investments
- 6.2 Top Startups by Total Funding
- 6.3 Range of Investors
 - 6.3.1 Venture Capital and Private Equity
 - 6.3.2 Corporate Venture Capital
 - 6.3.3 Honeywell Ventures
 - 6.3.4 Schneider Electric Ventures and Aster Capital
 - 6.3.5 Siemens Venture Capital and next47
 - 6.3.6 JLL Spark Fund and JLL Technology Ventures
 - 6.3.7 JCI Ventures
 - 6.3.8 Investors from the Insurance Sector
 - 6.3.9 Investors from the Utilities Sector
- 6.4 Accelerators and Incubators

7. Acquisitions of Emerging Players

- 7.1.1 PropTech
- 7.1.2 Building Energy Management
- 7.1.3 BioT

8. Partnerships and Alliances

8.1 Collaboration between Startups and Incumbent Players

8.2 Building Systems Players

8.2.1 Honeywell

8.2.2 Johnson Controls

8.2.3 Schneider Electric

8.2.4 Siemens

9. Gaining Traction and Scaling Up

9.1 Exits and IPOs

9.1.1 Recent IPOs

9.1.2 Forthcoming IPOs

9.2 Disappearing and Inactive Startups

9.3 Startups to Watch in 2019

9.3.1 Apana

9.3.2 Aquicore

9.3.3 Carbon Lighthouse

9.3.4 Civic Technologies

9.3.5 CriticalArc

9.3.6 Disruptive Technologies

9.3.7 Igor

9.3.8 Invicara

9.3.9 IoTium

9.3.10 Jibestream

9.3.11 Mapiq

9.3.12 Reactive Technologies

9.3.13 Sensoro

9.3.14 Shepherd

9.3.15 Smarten Spaces

List of Charts & Figures

Fig 1.1 Core and Adjacent Markets in Smart Commercial Buildings

Fig 2.1 482 Smart Building Startups Founded between 2009 and 2018

Fig 2.2 Top 5 Segments by Number of Startups

Fig 2.3 Geographic Distribution of Startups

Fig 3.1 New Entrants in BIoT Platforms

Fig 3.2 New Entrants in Enablement Hardware, Networking and Connectivity

Fig 3.3 New Entrants and Acquisitions in Smart Lighting

Fig 3.4 New Entrants in Cyber Security for Smart Buildings

Fig 3.5 New Entrants in Building Energy Management

Fig 3.6 Acquisitions of Building Energy Management Startups 2012 - 2018

Fig 3.7 The Proptech Category Dominates with over 180 Startups

Fig 3.8 New Entrants in Workplace Management Platforms and Space Utilization

Fig 3.9 New Entrants in Indoor Mapping and Location Services

Fig 3.10 New Entrants in Asset and Maintenance Management

Fig 3.11 New Entrants offering Occupant Engagement Platforms

Fig 3.12 New Entrants in BIM and Digitization of Buildings

Fig 3.13 New Entrants in Smart Water Management

Fig 3.14 New Entrants in Drones & Robotics for Facility Management

Fig 3.15 New Entrants in Building to Grid Applications

Fig 3.16 New Entrants in Electronic Locking, Access Control and Perimeter Protection

Fig 3.17 New Entrants in Biometrics and Video Surveillance

Fig 3.18 New Entrants in Mass Notification Systems and Critical Incident Management

Fig 3.19 New Entrants in Building Fabric Applications

Fig 4.1 Global Market for IoT in Smart Commercial Buildings 2017 - 2020 \$Bn

Fig 5.1 Smart Building Big Data Solution Maturity

Fig 5.2 Startups Addressing Specific Vertical Markets and Building Types

Fig 6.1 VC and PE Funding for Smart Building Startups 2012 to 2018

Fig 6.2 Top 15 Startups by Total Funding

Fig 6.3 Examples of Investors from Core and Adjacent Markets

Fig 6.4 Leading VC and PE Firms Investments in Smart Building Startups 2010 to 2018

Fig 6.5 Corporate Venture Funding by Leading Players in the Built Environment

Fig 6.6 Insurance Investors in Smart Building Startups

Fig 6.7 European Utilities Acquisitions and Investments 2015 - 2018

Fig 7.1 Consolidation of Smart Building Startups: Acquisitions 2012 to 2018

Fig 8.1 Johnson Controls Partnerships and Investments in Smart Building Startups

Fig 8.2 Schneider Electric Partnerships and Investments in Smart Building Startups

Fig 8.3 Siemens Partnerships and Investments in Smart Building Startups

Fig 9.1 Startups to Watch in 2019

List of Tables

Table 1.1 Definition of a Startup

Table 1.2 Categories and Business Segmentation of Smart Building Startups

Table 3.1 Acquisitions of Connected Lighting Startups 2013 – 2018

Table 3.2 Acquisitions of Building Energy Management Startups in 2018

Table 3.3 New Entrants Addressing Energy Management for Specific Markets

Table 3.4 Building to Grid Interface Segmentation

Table 3.5 Major B2G Startup Acquisitions 2014 - 2018

Table 5.1 New Entrants Applying Predictive Analytics

Table 5.2 New Entrants in the Co-Working and Flexible Offices Sector

Table 5.3 New Entrants in the Retail Sector

Table 5.4 New Entrants in the Hospitality Sector

Table 5.5 New Entrants in the Healthcare Sector

Table 5.6 New Entrants in the Multiple Occupancy Residential Sector

Table 6.1 Highest Funded Startups in 2017 and 2018

Table 6.2 Leading Investors in Startups 2008 - 2018

Table 6.3 Honeywell Ventures Investments in the Smart Buildings Space 2017 - 2018

Table 6.4 Investments of Schneider Electric and Aster Capital in the Smart Buildings Space 2016 - 2018

Table 6.5 Investments of Siemens Venture Capital and next47 in the Smart Buildings Space 2016 - 2018

Table 6.6 JLL Investments in the Smart Buildings Space 2016 - 2018

Table 6.7 JCI Investments in the Smart Buildings Space 2016 - 2018

Table 6.8 Accelerators Supporting Innovation in Real Estate and Building Technologies

Table 7.1 Major PropTech Acquisitions in 2018

Table 7.2 Major Building Energy Management Acquisitions in 2018

Table 7.3 Major BloT Acquisitions in 2018

Table 8.1 Johnson Controls Open Innovation: Recent Selected Participants

Table 9.1 IPOs of Smart Building Startups since 2012

Table 9.2 Examples of Startup Inactivity or Failures

How to Order

The report is priced at **\$1,995 USD** for a Single User License, and **ONLY \$2,250 USD** for an Enterprise License. It is delivered as an electronic PDF download, via email.

To order, or if you require further information please contact;

Jim McHale - jim@memoori.com / +46 8 501 64 177

Alternatively you can order through our Website – <https://www.memoori.com/portfolio/startups-and-their-impact-on-smart-buildings-2019>