



BIG DATA IN SMART BUILDINGS: MARKET PROSPECTS 2015 - 2020

Published: Q2 2015

Big Data in
Smart
Buildings:
Market
Prospects
2015-2020



Synopsis

This report will help all stakeholders and investors in Big Data Software to identify trends and business opportunities in the market for Smart Buildings.

© 2015 Memoori Business
Intelligence Ltd

Introduction

This report is the new 2015 definitive resource for understanding the market prospects & investment opportunities for Big Data Software in Smart Buildings.

The report focuses on market sizing and opportunities for Smart Commercial Buildings, providing a fresh market assessment based on the latest information. It contains original analysis & forecasts as well as a comprehensive assessment of the competitive landscape and crucial insights into what is driving M&A and investments into the market.

It is based on interviews with BAS manufacturers, technology firms, software providers, middleware companies, consultants and end users of building systems to achieve a complete & rounded view of the market. See more at: <http://www.memoori.com/portfolio/big-data-smart-buildings-2015-2020/>

What This Report Will Tell You

Within its **209 pages** and **33 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 the global Smart Building Software market.

- This report will help stakeholders and investors interested in Big Data software to identify emerging trends and business opportunities in the market.
- It documents the current size of the market in terms of enablement hardware, networking, software, discovery & analytics, and cloud services as well as providing forecasts of demand to 2020.
- Understand competitive threats with our detailed market analysis, gain a broader understanding of what drives investments in the market and plan your corporate strategy with our expert qualitative analysis and growth projections.

In order to properly segment and analyze the market for Big Data in Smart Buildings, we must first understand the IOT and Big Data Supply Chain. At Memoori we have divided this supply chain into 4 separate contracts. The focus for this report will be the range of big data software and value add services that make up contract 4 – “Big Data & Cloud Based Services”.

Our previous report, published in Q3 of 2014 entitled “The Internet of Things in Smart Buildings 2014 to 2020” focused on contracts 3 and 4 in the supply chain, and our forthcoming annual report on BAS market forecasts will focus on contract 1.

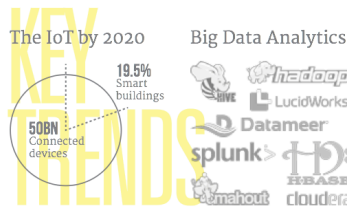
To assess the market potential of the elements and services that make up the Building Internet of Things (BIOT) and Big Data, both the cost requirement of adding connectivity through sensors to existing or newly installed building systems, as well as projecting the growth in related network hardware and IoT data services have been assessed. Of the 3 markets that make up the BIOT, we expect enablement hardware (sensors, actuators, switches etc) to grow at the slowest rate, from a value of \$8.38 Billion in 2015, to \$14.25 Billion in 2020, which represents a CAGR of 12%.

BIG DATA FOR SMART BUILDINGS



Emerging Solutions

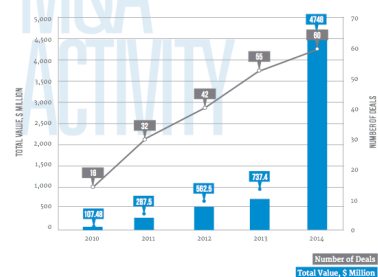
- DASHBOARDS & DATA VISUALISATION
- FAULT MONITORING & DETECTION
- PREDICTIVE ANALYTICS
- BUILDING OPTIMIZATION



- ### Big Data Analytics
- Energy Efficiency
 - Operational Efficiency
 - Tenant Satisfaction
 - \$75BN market by 2020



BIOT and Building related Big Data Deals Completed from 2010 to 2014



Mobile access to big data



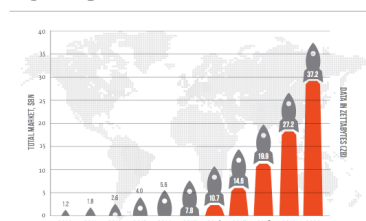
Top Big Data Challenges



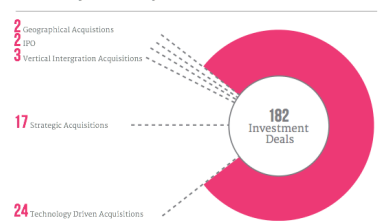
The Protocol Soup

- LEGACY BUILDING PROTOCOLS**: BACnet / LonWorks / ModBus / KNX / DALI / C-Bus
- COMMUNICATIONS PROTOCOLS**: 6LoPan / Wifi / Zigbee / Bluetooth / ZWave / RFID / Wired
- IOT MESSAGING PROTOCOLS**: MQTT / CoAP / DDS / AMPQ / XMPP
- ALLIANCES & CONSORTIA**: AllSeen / Open Interconnect Consortium / Industrial Internet Consortium / Wi-Sun Alliance / Thread Group

Exploding Data Volumes



Deals by Primary Driver



As the huge volumes of data generated by the IoT increase, investments in network services and related hardware will be critical to successful IoT and Big Data deployments for most companies. We see this market growing from a 2015 value of \$13.35 Billion in 2015 to over \$32 Billion by 2020, an impressive CAGR of 22.6%.

Whilst the market for Big Data and Cloud Based Software and Services is still nascent, and in 2014 was the smallest of our 3 segments at only \$5.2 Billion, we see growth in this area being the most pronounced; driven by falling technology costs, improved confidence in the emerging solutions and improving ROIs.

Therefore we estimate that the market for Big Data and Cloud Based Software and Services in Smart Buildings will grow to over \$9.17 Billion in 2015 and at a rate of 33.2% CAGR to nearly \$30 Billion by 2020.

Starting from only USD \$999 this report provides valuable information into how Big Data software companies can develop business in the Smart Building Industry through Merger, Acquisition and Alliance.

Fig 6.2
DEALS BY PRIMARY DRIVER - 2010 TO 2014

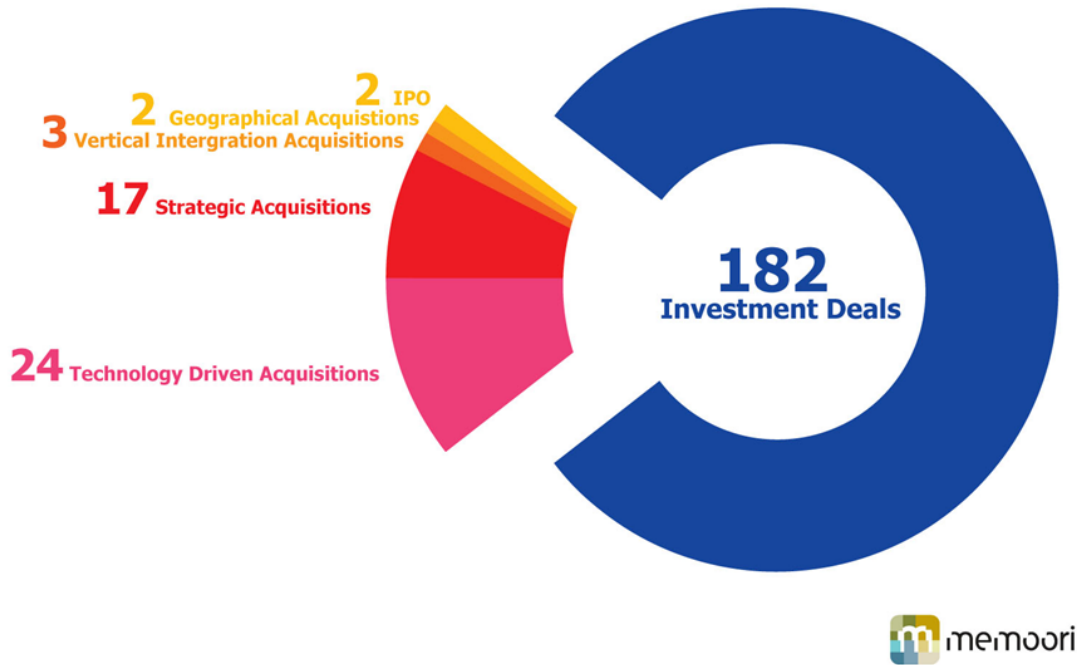


Table of Contents

Preface

The Executive Summary

1. Introduction: Big Data, Buildings & the IoT

1.1 An Introduction to Big Data

1.2 Enabling Technologies

1.2.1 The IoT & BIoT

1.2.2 Cloud

1.2.3 Big Data Analytics

1.2.4 Mobility

1.3 Big Data for Smart Buildings

1.3.1 Data Sources

1.4 Market Structure

- 1.4.1 BAS without IoT Connectivity
- 1.4.2 Enablement Hardware
- 1.4.3 Network Services & Related Hardware
- 1.4.4 Big Data & Cloud Based Software Service

1.5 The Opportunity at Stake

- 1.5.1 Investments & Opportunities by Industry

2. The Global Market – Sizing & Growth Projections

3. Market Analysis by Region

- 3.1 North America
- 3.2 Latin America
- 3.3 Asia Pacific
- 3.4 Europe
- 3.5 The Middle East & Africa

4. Drivers, Challenges & Trends

4.1 Market Drivers

- 4.1.1 Economic & Business Drivers
- 4.1.2 Energy Efficiency & Environmental Drivers
- 4.1.3 Standards & Regulatory Drivers

4.2 Barriers & Challenges

- 4.2.1 Retrofit vs New Build
- 4.2.2 Diverse Networking Technologies, Standards & Protocols
- 4.2.3 Security & Privacy
- 4.2.4 Data Ownership & Control
- 4.2.5 Network & Hardware Capacity
- 4.2.6 Data Volume & Complexity
- 4.2.7 Skills & Talent
- 4.2.8 Budget Constraints

5. Routes to Market & Competitive Offerings

5.1 Industry Convergence Trends

5.2 Big Data Start Ups

5.3 Industry Specific Solutions

5.3.1 Dashboards & Data Visualization

5.3.2 Energy Management (BEMS)

5.3.3 Building Automation, including Asset Performance, Utilization & Fault Detection

5.3.4 Lighting Management & Control

5.3.5 Sustainability, Environmental Management & Compliance

5.3.6 Water management

5.3.7 Space, Occupancy & Workplace Management

5.3.8 Building Security & Access Control

5.3.9 Vertical Market Targeted Offerings

5.3.10 Additional Areas

5.4 The Wider Big Data Market

5.5 Systems Integration

5.6 Delivery Mechanisms

5.6.1 In House

5.6.2 SaaS

5.6.3 Edge Software & Processing

5.6.4 Everything else “as a service”

5.7 Emerging Value Add Solutions

5.8 Critical Success Factors

5.8.1 For Systems Vendors & Systems Integrators

5.8.2 For Businesses, Building Owners & Operators

5.8.3 For Both

6. The Investment Market

6.1 Mergers & Acquisitions

6.2 BioT & Big Data Investment Deals

6.3 BloT & Big Data Deals Analysis

6.4 Private Equity & Venture Capital Analysis

6.5 Investment Market & M&A Forecast

Appendix

A1 – Company Profiles – Big Data Players

A2 – Company Profiles – Building Market Players

A3 – M&A and Investments in BloT & Big Data Companies – 2013 to Date

A4 – Venture Capital Companies & Their BloT & Big Data Investments

List of Figures

Fig 1.1 – An Explosion in Data Volumes – Data in Zettabytes (ZB)

Fig 1.2 – Data Stored in 2010 – Selected Regions (PetaBytes)

Fig 1.3 – An Overview of the Internet of Things Market by Vertical, 2015 and 2020, \$B

Fig 1.4 – Mobile Access to Building Data

Fig 1.5 – Big Data Investments by Industry, % of Respondents

Fig 1.6 – The Value Potential of Big Data Investment by Industry

Fig 2.1 – The Global Market for BloT & Big Data in Buildings 2015 to 2020, \$B

Fig 2.2 – Big Data & Cloud Based Software & Services – Market Prospects, \$B

Fig 3.1 – Big Data Investments by Region, % of Respondents

Fig 3.2 – Construction Output Growth Forecasts, 2015 – 2020 (Average % PA Rates of Change)

Fig 3.3 – The Market for Big Data in Buildings by Region, 2015 – 2020, % of Global Market, Revenue \$B

Fig 4.1 – Internet Enabled Devices in Buildings Currently Connected to Networks (Selected Systems)

Fig 4.2 – Building Energy Demand – Combined Residential Commercial & Industrial (Quadrillion BTUS)

Fig 4.3 – Top Challenges Facing Big Data Initiatives, % of Respondents selecting this as the Top Challenge

Fig 5.1 – Perceptions of Who will be Making Money with the IoT

Fig 6.1 – BIoT and Building Related Big Data Deals Completed from 2010 to 2014

Fig 6.2 – Deals by Primary Driver – 2010 to 2014

Fig 6.3 – Private Equity and Venture Capital Investments, \$M, 2010 to 2014

Fig 6.4 – BIoT and Building Related Deals Projection to 2020

List of Tables

Table 1 – Industry Alliances and Consortia

Table 2 – Government Big Data Support Programs

Table 3 – Building Related Open Big Data Initiatives

Table 4 – Comparison of Key Wireless Standards

Table 5 – Common Dashboard & Data Visualization Functionality

Table 6 – Vertical Market Opportunities

Table 7 – Additional Market Opportunities

Table 8 – Everything else “as a Service”

Table 9 – Major M&A investors 2010 to Date

Table 10 – Leading VC Investments and Investors

How to Order

The report is priced at **\$1,499 USD** for an Enterprise License & **\$999 USD** for a Single User 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 / +44 207 193 1004

Alternatively you can order through our Website – <http://www.memoori.com/portfolio/big-data-smart-buildings-2015-2020/>