Summary

Executive summary

Building automation systems include a wide range of solutions for controlling, monitoring and automating functions in buildings such as commercial office spaces, retail stores, hotels, schools, hospitals and industrial buildings. These systems can be controlled in various ways, ranging from simple local controls and user interfaces to cloud-based Building Management System (BMS) that offer remote and centralized control of several building functions across multiple sites. In this report, building automation systems are grouped into six primary categories: HVAC and energy management; lighting and window control; fire safety, security and access control; elevator and escalator management; audio, video and entertainment; and water management.

Berg insight's definition of a connected building is one that includes one or several building automation systems that can be controlled and monitored from remote through a web portal or Internet-connected management system. A smart building is furthermore one that includes a system that combines and aggregates data from various building functions to provide insights on the overall building performance. In a smart building, the various systems are aware of each other and exchange data to optimize building operations and occupancy comfort. For example, the HVAC system can control the level of ventilation in a room or certain area of the building based on data from occupancy sensors or the access control system which knows who and how many people that enter the building.

Building automation has been around for many decades but there is a new urgency due to factors such as energy conservation as well as mandates for green construction. IoT offers the technologies for building owners to easily measure and conserve energy. A major change is starting to happen now especially in new construction, where the primary driver is changing from cost reduction to features that enhance the user experience and change how users and buildings interact. New use-cases are emerging which leverage the Internet of Things, sensors and connectivity. The technology enables customization of spaces in offices and conference rooms based on occupancy levels and occupant preferences as well as provide location and navigation throughout a building to help occupants find conference rooms and available work desks.

Berg Insight estimates that 3.23 million connected building automation systems were shipped in Europe and North America in 2019. Note that by connected systems we mean systems that are connected to the Internet and send data to a backoffice platform. Systems that can only be viewed and controlled locally on-premise is therefore not included. Shipments include installations in new constructions as well as in incumbent buildings. The total installed base of connected systems in Europe and North America reached an estimated 20.5 million systems in 2019. Berg Insight forecasts that the installed base will grow at a CAGR of 11.0 percent in the two regions to reach 34.4 million connected building automation systems in 2024. Berg Insight furthermore estimates that the building automation market in Europe and North America generated revenues of close to € 29.5 billion in 2019. The market will grow at a CAGR of 10.4 percent to € 48.4 billion in 2024. Developments within connectivity, interoperability, artificial intelligence and machine learning enabling new and improved services are expected to create growth in the marketplace. Due to the COVID-19 pandemic, revenues in 2020 are expected to be slightly lower compared to the previous year. In 2021, revenues are however expected to bounce back and exceed the 2019 figures.

The building automation market is served by a range of different actors, spanning from small start-ups to major corporations that operate globally in various industry sectors. The leading BMS providers include large companies such as ABB, Honeywell, Siemens, Johnson Controls and Schneider Electric. These players are also the leading actors in one or several of the building automation categories in this report. Leading providers of HVAC control products include Delta Controls, Distech Controls, KMC Controls and Danfoss. Major lighting and window control solution providers include Signify, Acuity Brands, Lutron and Somfy. The fire safety, security and access control market is led by Assa Abloy, Axis, Carrier and Tyco. The elevator and escalator management market is dominated by KONE, Otis, Schindler and ThyssenKrupp while the audio, video and entertainment segment is served by AMX/Harman, Crestron, Elan Home Systems and Extron. Water management is a smaller segment and includes market players such as Apana and Banyan Water.