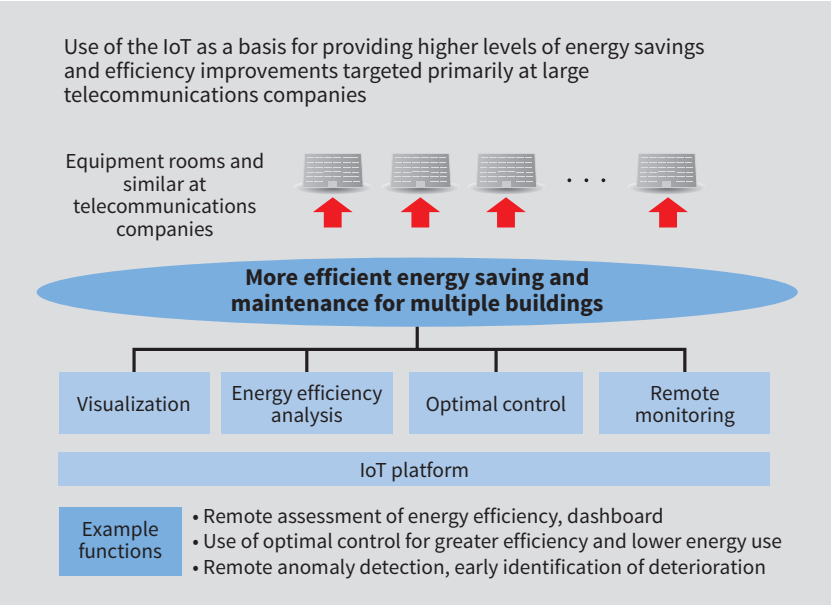
Urban Solutions



1 Overview of Total Building Optimization

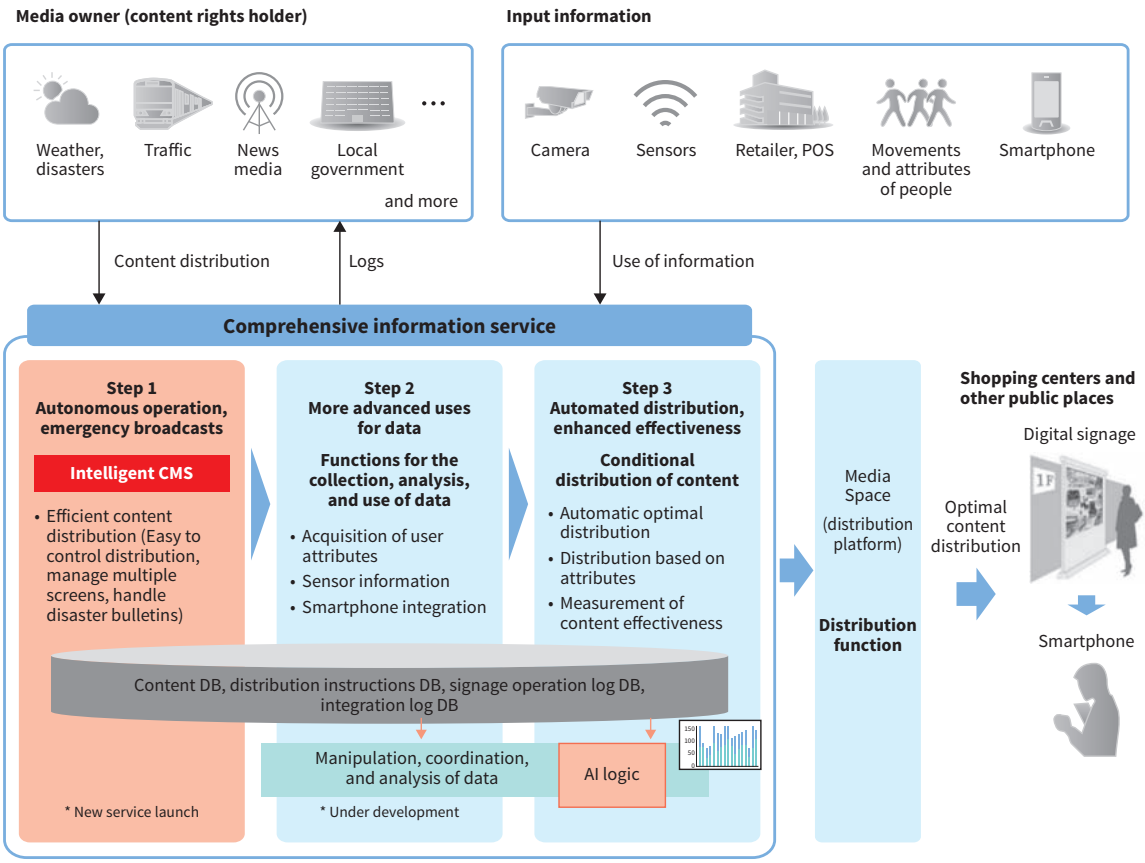
1 Total Building Optimization in North America

Hitachi is developing Total Building Optimization as an energy efficiency solution for customers with large numbers of small to medium-sized facilities. Many companies, especially large corporations, have been looking in recent years to make energy savings as a way to cut costs and to take action on the global environment. Unfortunately, when these companies have a large number of small to medium-sized facilities and equipment scattered across a large country, the size of each facility is small when put against their high overall energy consumption and this acts as a drag on progress toward energy efficiency measures that have high cost-benefit barriers.

Drawing on technology and know-how in the use of modeling for equipment diagnosis and energy efficiency analysis for large numbers of small buildings, as well as energy efficiency solutions built up through collaborative creation with numerous customers, including large North American telecommunications companies, Hitachi is developing systems that use the Internet of Things (IoT) for the collection of information on energy use and for advanced control, and also systems for the centralized management of this information. As part of this, Hitachi has plans to launch services for North America in 2018 that include the use of optimal control for efficiency improvement and energy-efficient operation; the promotion of energy efficiency through measures that include remote anomaly detection, the early identification of deterioration, and more efficient maintenance work; and the optimization of operating costs.

2 Comprehensive Information Service for Digital Signage

To satisfy new requirements for digital signage, a mechanism for information delivery that



POS: point of sale DB: database

2 Overview of comprehensive information service

has come to have an essential role at shopping centers and other public facilities, Hitachi is developing a comprehensive information service that works by collecting details of the changing surroundings and the diverse information that fills public places and then using artificial intelligence (AI) to analyze this information. The potential benefits of the system include resolving issues, developing new services, and adding value.

The first step in introducing this service was the launch of an intelligent content management system (CMS) that reduces the workload associated with operating digital signage and significantly enhances content delivery flexibility. The signage operator or the advertisers and agencies to whom rights have been granted can use the intelligent CMS to ensure that the right content is shown on each display, based on factors such as its location and the time of day, by specifying the content they want in program schedule tables. The system also makes it simple to integrate externally sourced material such as news and weather reports and to arrange for its automatic transmission, with features that include delivering high-impact public displays through the skillful coordination of multiple signage units.