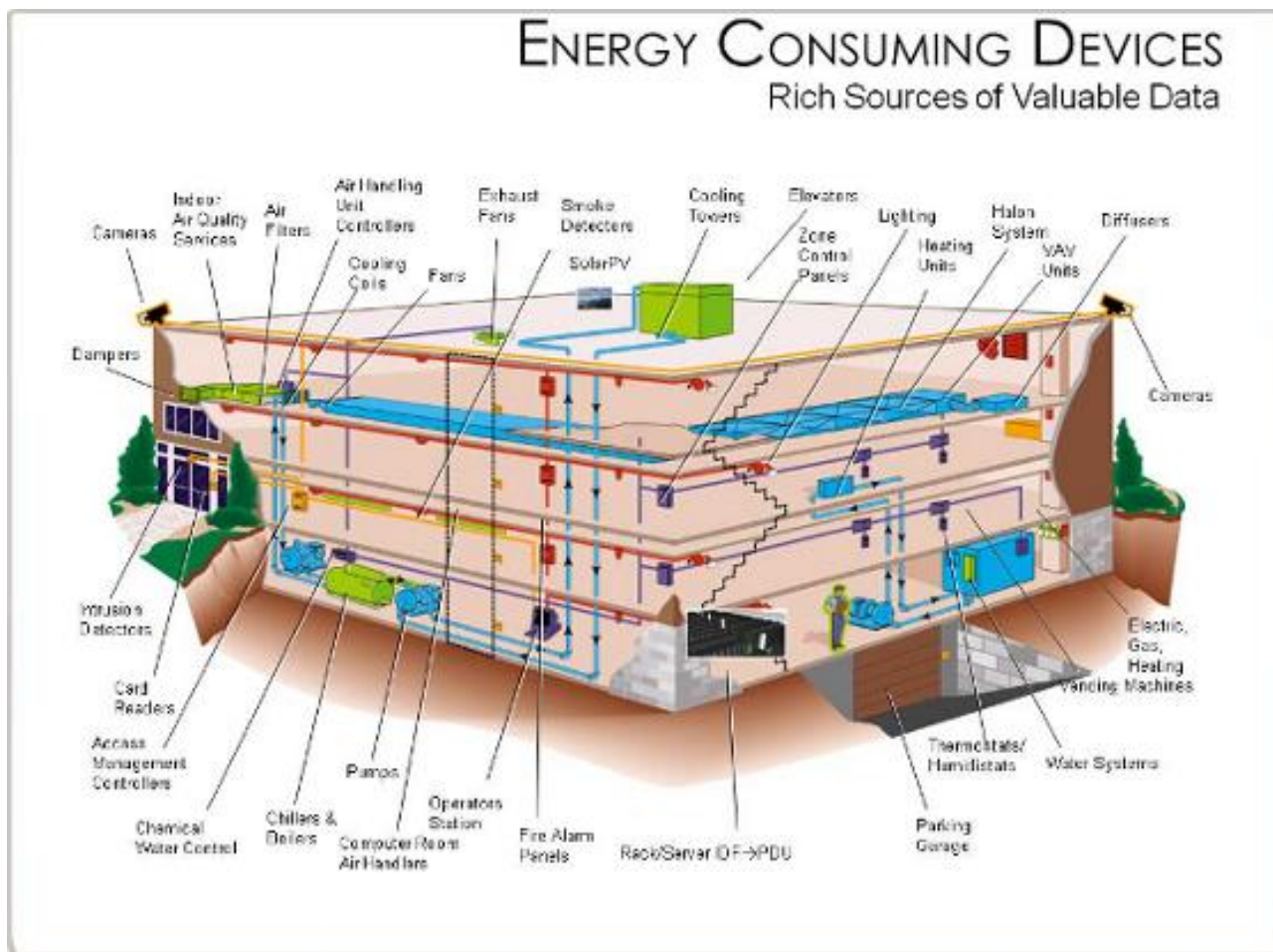


LEAN Construction, Building Energy Efficiency, & Cloud Technology

Increased energy use and a parallel rise in CO2 emissions have created an urgent need to improve energy efficiency and make more sustainable the buildings.

30% of worldwide energy is attributable to buildings¹ (40% in the United States), and will increase 1.5%/year through 2040 to almost 50%.² The United States is largest user of energy for commercial use.

The fastest growing energy consumer is the commercial building sector. Commercial sector energy is primarily used for heating and cooling systems, lights, refrigerators, computers, and other equipment in the buildings where businesses, institutions, and other organizations are located. Examples of commercial sector buildings include retail stores, office buildings, government buildings, restaurants, hotels, schools, hospitals, and leisure and recreational facilities. Non-building energy use is included in the commercial sector, where it contributes to public services such as traffic lights and water, sewer systems, etc.



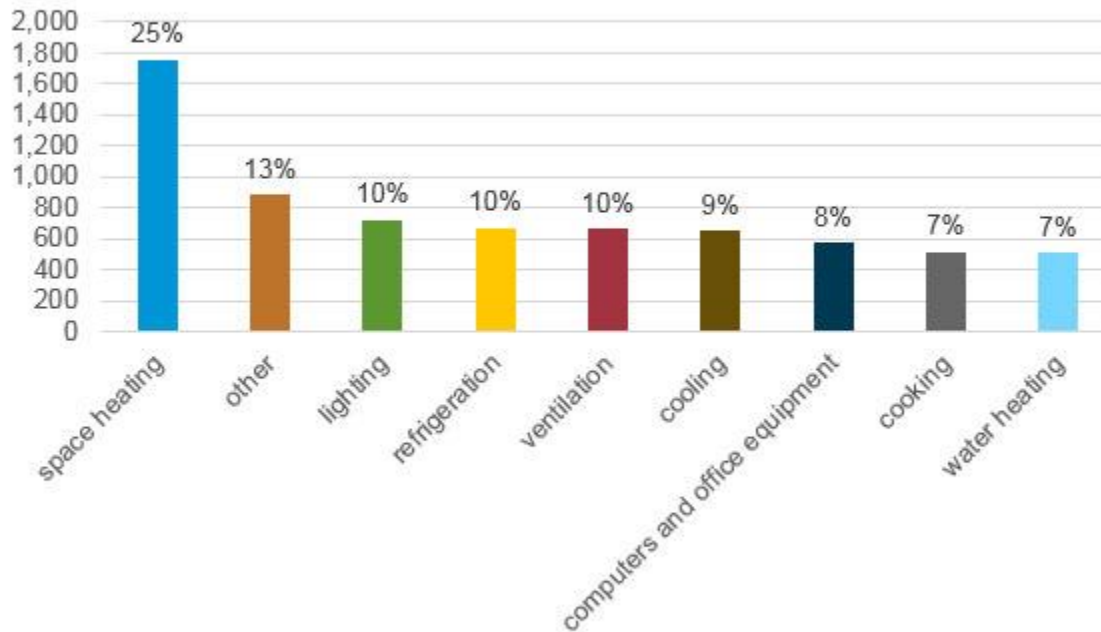
¹ International Energy Agency

² <https://www.eia.gov/outlooks/ieo/world.cfm> - INTERNATIONAL ENERGY OUTLOOK 2016

Technology, cost data, and services supporting the efficient renovation, repair, & sustainability of the built environment - buildings, transportation, utilities.

Energy use in U.S. commercial buildings by major end uses, 2012

trillion British thermal units



Source: U.S. Energy Information Administration, *2012 Commercial Buildings Energy Consumption Survey: Energy Usage Summary*, Table 5 (March 2016)

The top five commercial sector energy users are;

1. **Mercantile and Service** (15% of total energy consumed by commercial buildings) - Malls and stores, Car dealerships, Dry cleaners, Gas stations
2. **Office** (14% of consumption)-Professional and government offices, Banks
3. **Education** (10% of consumption)-Elementary, middle, and high school, Colleges
4. **Health care** (8% of consumption)- Hospitals, Medical offices
5. **Lodging** (6% of consumption)-Hotels, Dormitories, Nursing homes

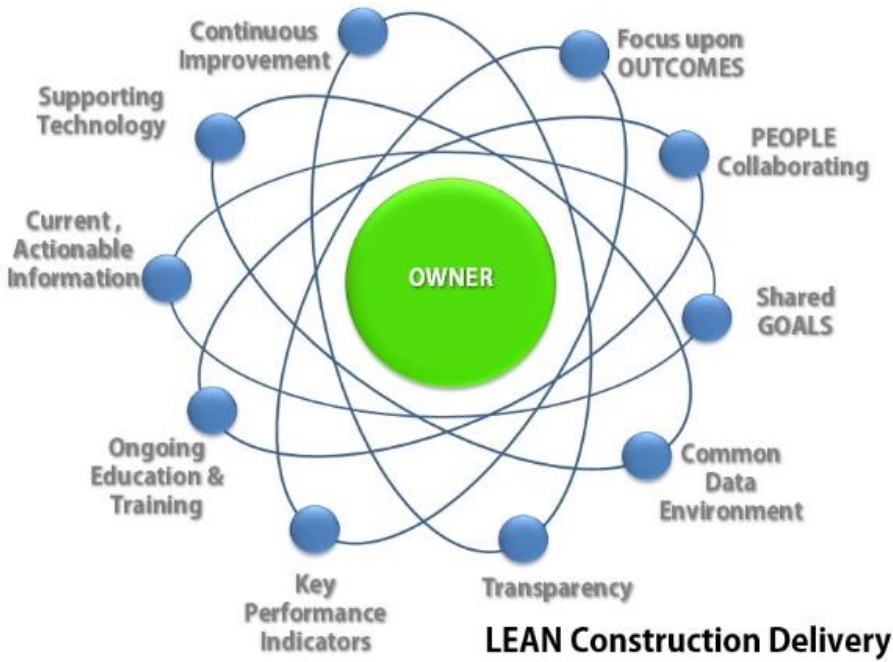
The use of technology: IoT - Internet of Things; Life-cycle Facilities Management, [LEAN Construction Delivery Methodologies](#), BIM - Building Information Modeling and the Cloud today allow to design, build and manage building smarter.

The ability to have real-time, current, and actionable information related to the need for and execution of sustainability renovation and repair projects, use of the energy consumed or what might be spared help to reduce energy costs in combination with CO2 emissions responsible for the greenhouse is a critical tool.

The energy manager and facilities management team is responsible for the proper use and energy management. They are tasked with eliminating waste through the data analysis, the identification of critical issues and implementation of LEAN best management practices at reducing energy consumption, and cost associate with associated tasks.

Four BT, LLC

Technology, cost data, and services supporting the efficient renovation, repair, & sustainability of the built environment - buildings, transportation, utilities.



LEAN Construction Delivery



Four BT, LLC
4BuildingTogether
www.4BT.us

Job Order Contract

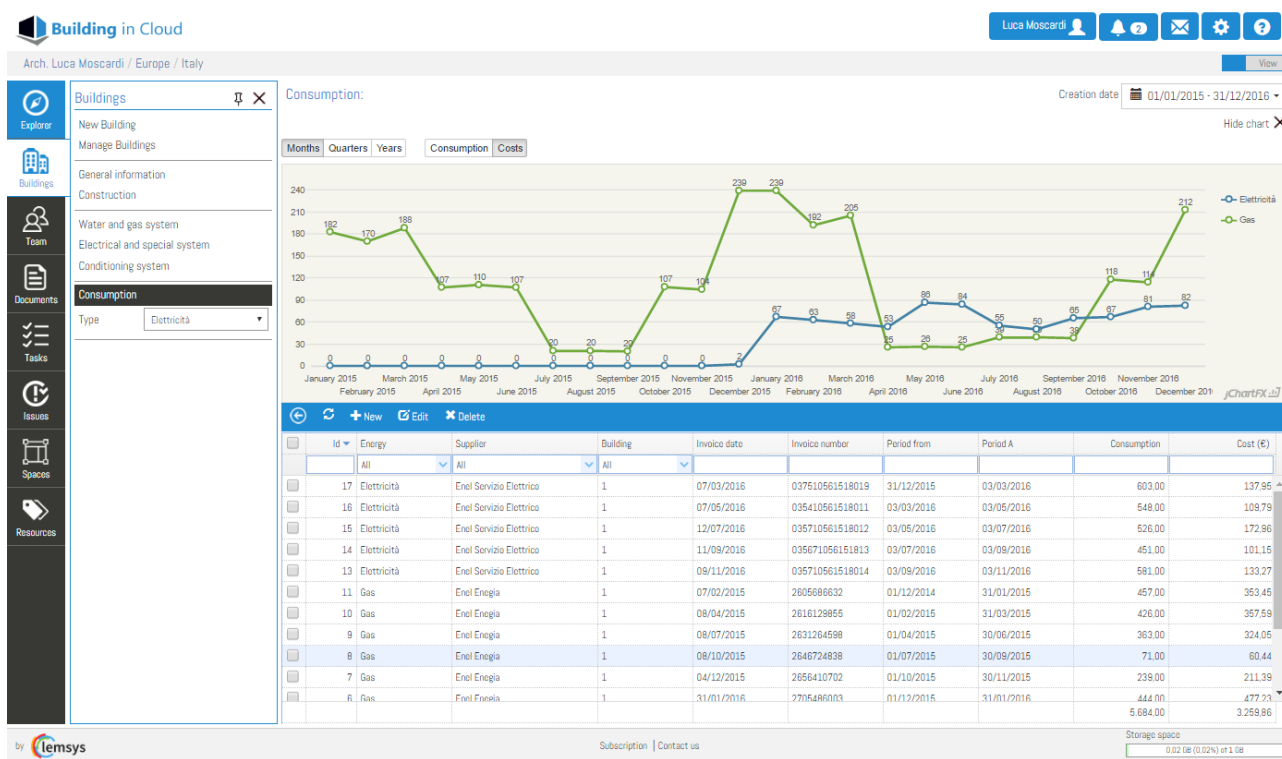
Operations Manual / JOC Execution Guide¹



The implementation of ICT - Information and Communication Technology - can contribute significantly to improving the quality of the overall performance of buildings in terms of greater energy efficiency without decreasing the quality of living.

Technology, cost data, and services supporting the efficient renovation, repair, & sustainability of the built environment - buildings, transportation, utilities.

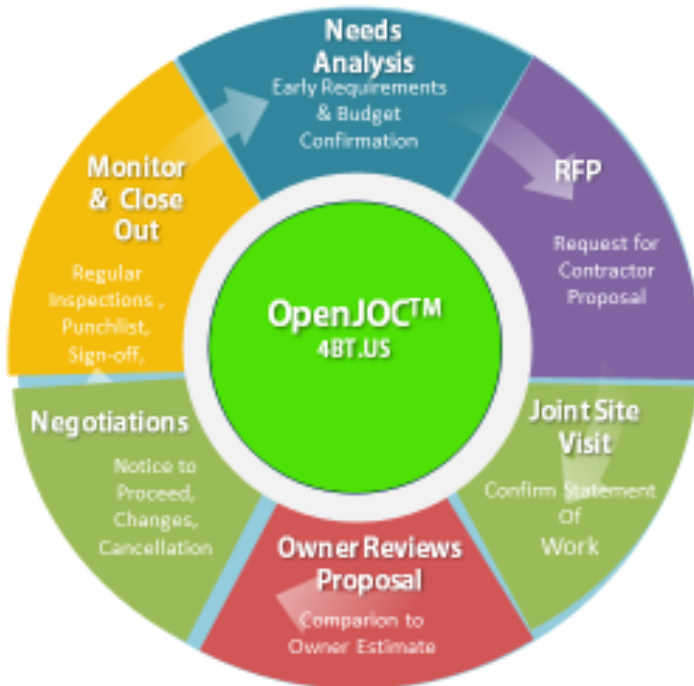
Building in the Cloud provides to the Owners and the Facility managers tools control and Energy's monitoring costs for buildings or groups of buildings, by providing analytical tools for the management and evaluation of possible interventions to improve the structures or the equipment.



Building in Cloud also has a module for LEAN Construction Delivery implementation, including locally researched construction line item costs.

Technology, cost data, and services supporting the efficient renovation, repair, & sustainability of the built environment - buildings, transportation, utilities.

Job Order Contracting The Life-cycle of a Task Order



Needs Analysis / Concept Phase

PM, User, Procurement, Pre-Proposal Meeting & Draft Task Order RFP. Signed by Contract Administrator

Joint site Visit – Confirm Scope of Work – PM, client, contractor

PM creates independent owner estimate

Contractor submits Proposals

Owner reviews contractor estimate/compares to internal estimate

Negotiations – Resulting in Notice to Proceed, Change Requests, or Cancellation of Task Order

Kick-off Meeting – Job site handed off to Contractor

PM weekly Site Visits/Progress Reports

Close-out

Building in the Cloud is an innovative service to create, share and manage all the information of a building.

The service is accessible via any standard web browser, regardless of any device type (PC, Tablet or Smartphone) without the need for any installation, by simply logging in.

By registering with the site you can use Building in Cloud without cost for one month; beyond which you can decide if you wish to continue our use for as low as \$26.90/Mo. for each concurrent user (unlimited number of named users). No credit card information is required for the free trial!

[Try Building in Cloud now for free.](#)