

Can locational intelligence help improve energy efficiency

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Brief Intro to Energy Efficiency

66% of enterprises rank Location Intelligence as either critical or very important to revenue growth strategies.

Governments & utilities allocate billions of dollars toward energy efficiency initiatives. End users too spend their own money on energy efficiency improvements to their homes and facilities

Energy efficiency can be enhanced with the help of IoT devices and smart platforms that facilitates better monitoring and response times

The IoT is not just enabling remote monitoring & control solutions, it is a major disruption for energy efficiency applications in many aspects

Growth in the use of remote monitoring, control, and data analytics is enabling new business models and service solutions for energy efficiency

IoT Utilities Market size was valued at over USD 4 billion in 2016 and is forecast to grow at a double-digit CAGR.

Benefits with Energy Efficiency

Environmental sustainability

Industrial Productivity

Energy Prices

Energy Savings

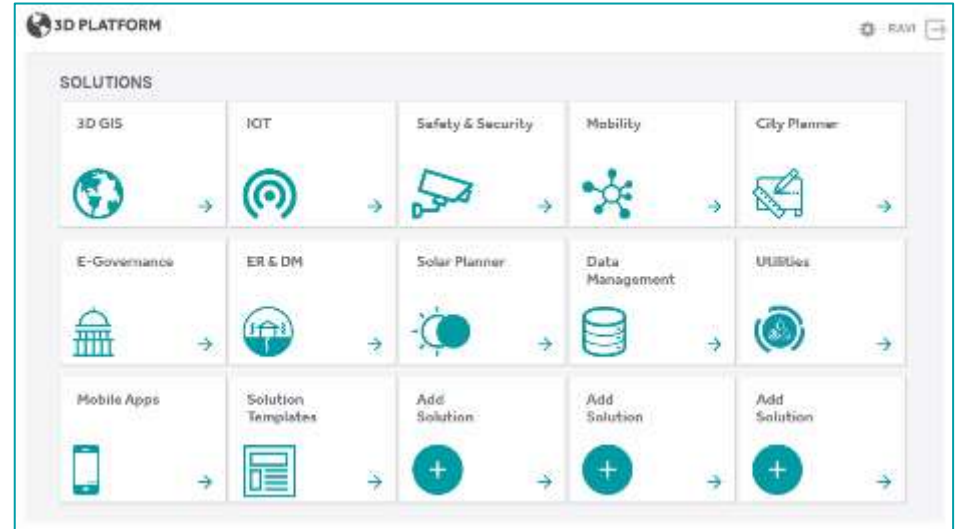
Energy Access

Public Budgets



Locational Intelligence - Sample Use Cases

- Feasibility study of solar potential from rooftops
- Monitor consumption patterns in pockets / clusters across the service area
- Leverage sensor locations to improve data accuracy of related assets in existing systems
- Track EV (Electric Vehicle) concentrated areas



Solar Planning

Shadow Analysis

- Based on the Geography, Date & Time, Shadows of the object will be rendered. These shadows acts as a part of solar irradiance calculation.

Solar Potential Calculation

- Based on the roof pitch and azimuth for each roof plane of the buildings, solar potential along with suitability can be derived.



Solar Planning

Solar Panel Simulator

- Solar Panels for the roof planes can be simulated based on the planned/future consumption.
- Geographical variables such as orientation angle, solar irradiance can be applied for calculating Impact on Solar Potential

Roof Installation

Monthly Electricity (KWh) :

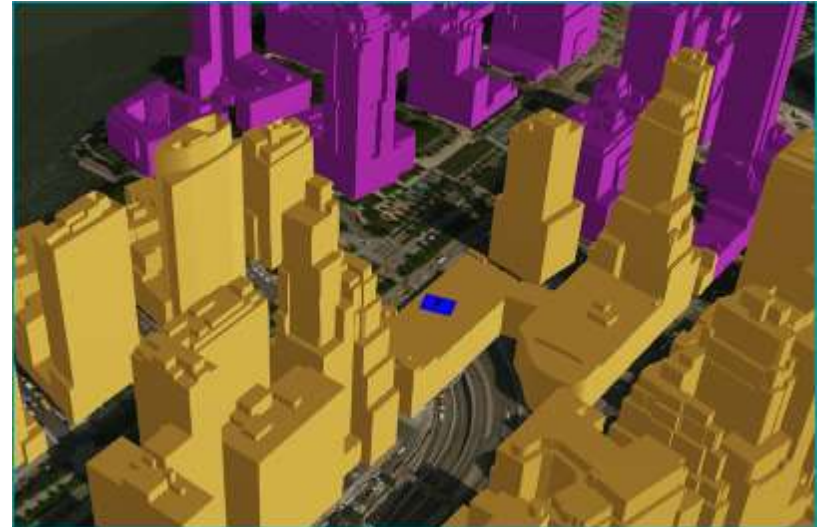
Roof Shade : Yes No

Note : Solar panel systems can last for 25-40 years so you'll want to make sure that your roof is in good shape and won't need to be replaced in the near-term.

Results :

Approximate number of panels required : 58

Roof size required for these Panels : 1023.6999999999999



3D Platform with Locational Intelligence



- Dashboard view derived through simulated sensor data.
- Provides real time data feed of the environmental factor (Noise, Gas Emission, Rainfall etc) along with the device level functional information.
- Automatic triggers to send notifications on feed threshold violation and an intelligence on device functions.



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