.bead technologies

BEAD

Digitizing your Building

BEAD

ABOUT

Founding year 2014

- 10 FTE * 5 software 3 hardware 2 Data Engineer
- 10+ year experience in Energy, IoT and AI
- 128 Locations with BEAD
- 1800 BEAD sensors on the field
- Energy analysis in over 120.000m2 Building
- Projects in İstanbul, Oslo, Berlin, Munchen
- Innovation awards from USA, UAE , Turkey and EU

BEAD

Track the real time condition of your energy assets, monitor energy performance of your facilities and obtain data driven notifications from anywhere and anytime you need.

Based on proven industrial communications standards, our platform is fluent in most building management and industrial control system protocols including: KNX, LonWorks, BACnet, OPC, Modbus, Pulse, ODBC, CSV, DDE, SQL and has custom drivers for most building automation systems, sensors, energy analyzers, gateways, smart meters, etc.

3rd Party Application Integration: RESTful APIs for 3rd party application integration or to share data with other departments internally. BEAD IoT Platform supports Data ETL Tools: Easily onboard & maintain data integrity; built-in features for the unique needs of different sensor, system and equipment data

BEAD APPLICATONS

Applications

Energy Monitoring and Performance Analysis

Portfolio Management

Alarm & Notification Management

Utility Bill Management

Measurement & Verification

Predictive Maintenance

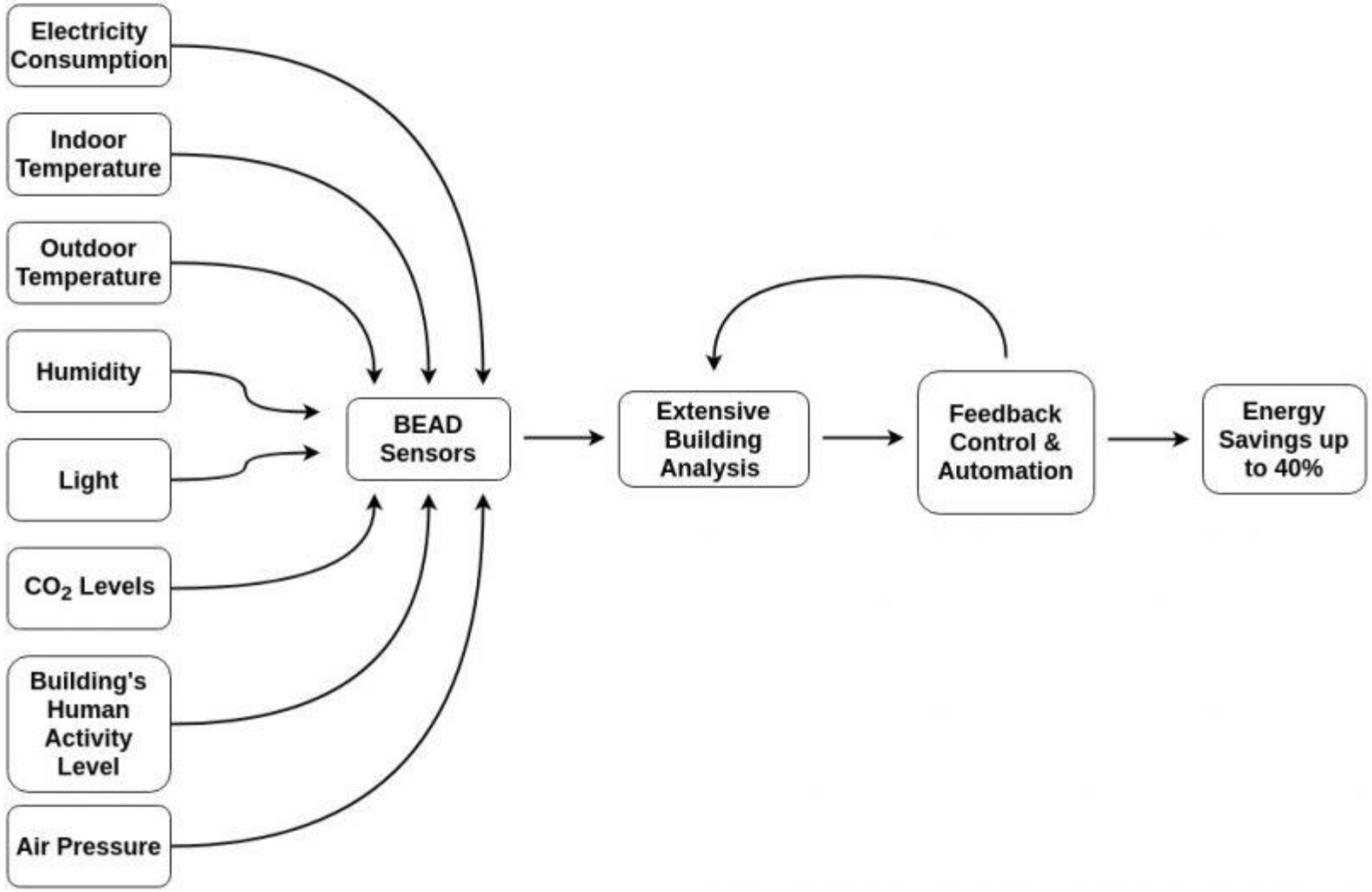
Customized Reporting

Solar Plant Monitoring & Management

Critical Power Infrastructure Monitoring

BEAD AI

Empowering energy efficiency and sustainability with real-time data and AI

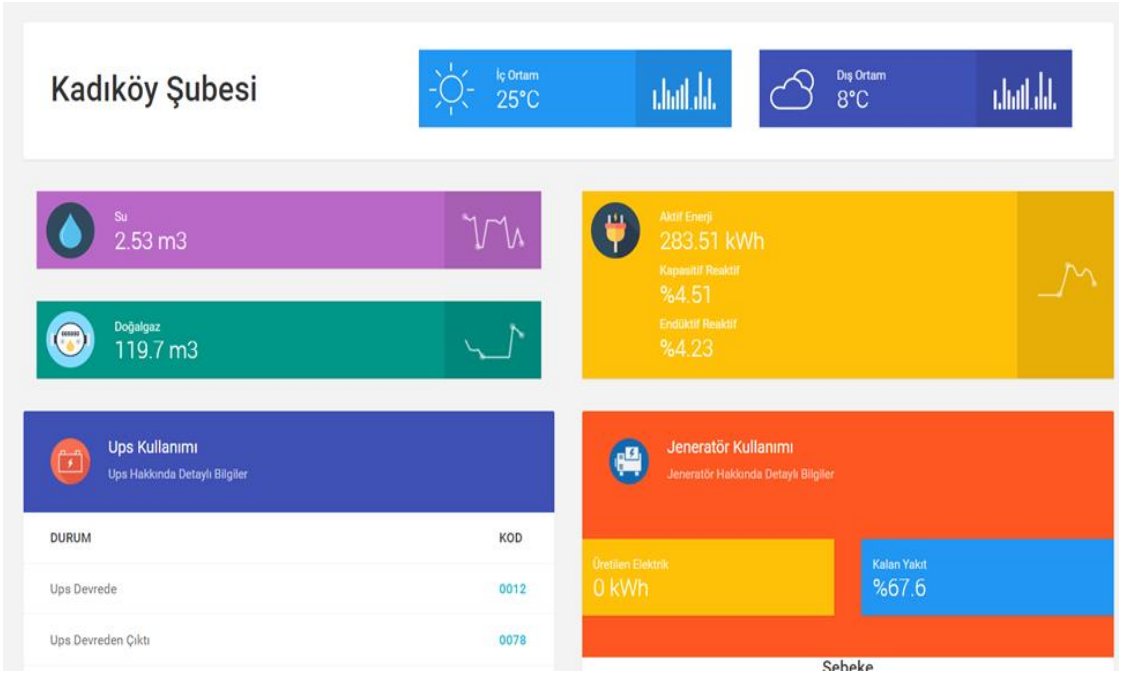


SOFTWARE

ONE DASHBOARD FOR ALL

One dashboard which can show you all the details of your buildings, locations and production facilities
You will compare your locations according to

- Energy consumption
- Indoor temperature changes
- Indoor air quality
- Energy profiles
- Financial expenses
- Inventory list
- Occupancy trends
- Trending zones and density flow
- Heat map



CARBON FOOT PRINT AND SUSTAINABLE REPORTING

CARBON NEUTRALITY
Become Carbon Neutral By Offsetting Your Emissions To The Highest Standards And Support Local Communities

- Suitable for small organizations
- Easy to use
- Government approved calculations
- Get ready for mandatory reporting
- Save your results - return and update whenever you want
- Track your emissions
- Covers buildings and transport
- Option to download your results in a pdf report format
- Options to offset your emissions to become carbon neutral

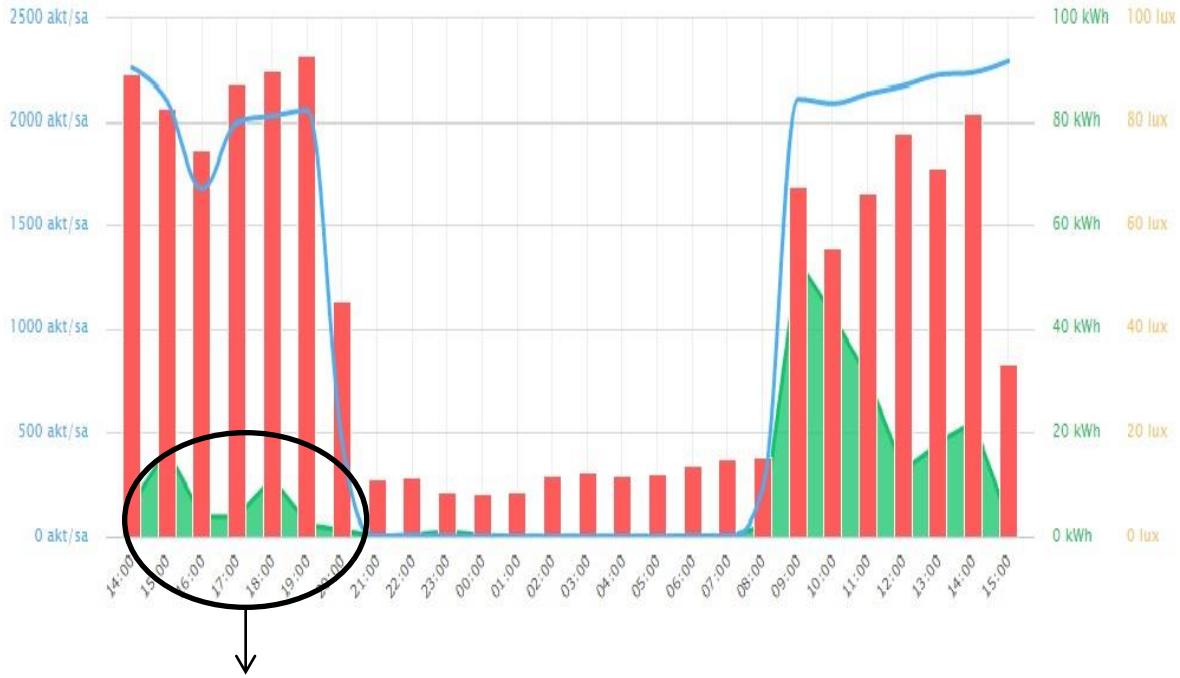
OCCUPANCY TRENDS

Human Occupancy Trends

The most important missing point in smart buildings and building automation systems are HUMAN and OCCUPANCY trends.

Despite achieved advances, automation systems have not been widely adopted by building occupants. Occupants are responsible for 20% energy consumption in buildings but automation systems are working of fixed schedules and without a connection with the occupant

BEAD will give you the opportunity to track, analyse and connect the occupancy changes, ratios and zones in real time with your building and with your management team.



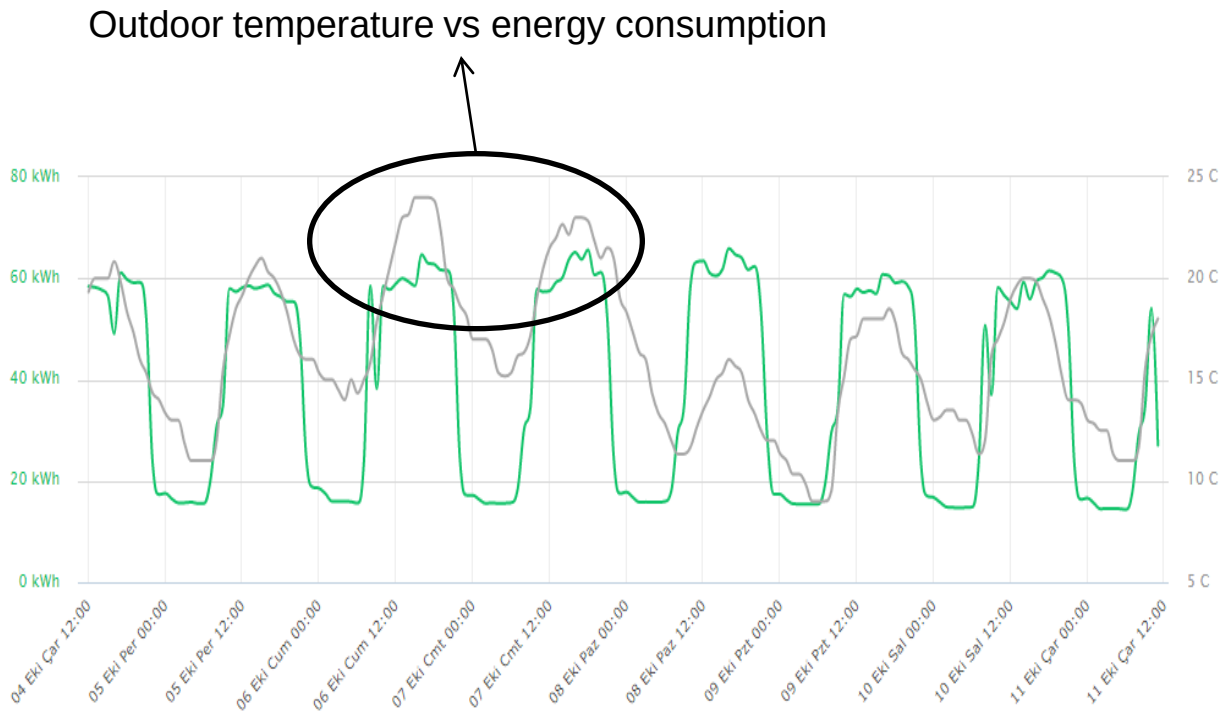
Red is the energy consumption – green occupancy and blue İnside air temperature

OUTDOOR TEMPERATURE VS INDOOR TEMPERATURE

Outdoor temperature analysis

BEAD will track in real time outdoor temperature and weather forecast and compare it with your energy consumption and indoor temperature

With that data your building will have the optimised indoor temperature level and you will not try to overcool or overheat your building



BEAD

HEAT
Voltage Input: 2.7 V to 5.5 VDC
10 mV/°C scale factor
±2°C accuracy over temperature
±0.5°C linearity
Operating Range: −40°C to +125°C

HUMİDİTY
3.3-6V Input
1-1.5mA measuring current
40-50 uA standby current
Humidity from 0-100% RH
-40 - 80 degrees C temperature range
+-2% RH accuracy
+-0.5 degrees C

LİGHT
Operating Voltage: 3.3V
Operating Current: 56µA
0.1 - 40k+ Lux

CO2
DC 5V
100mA
350-10000ppm

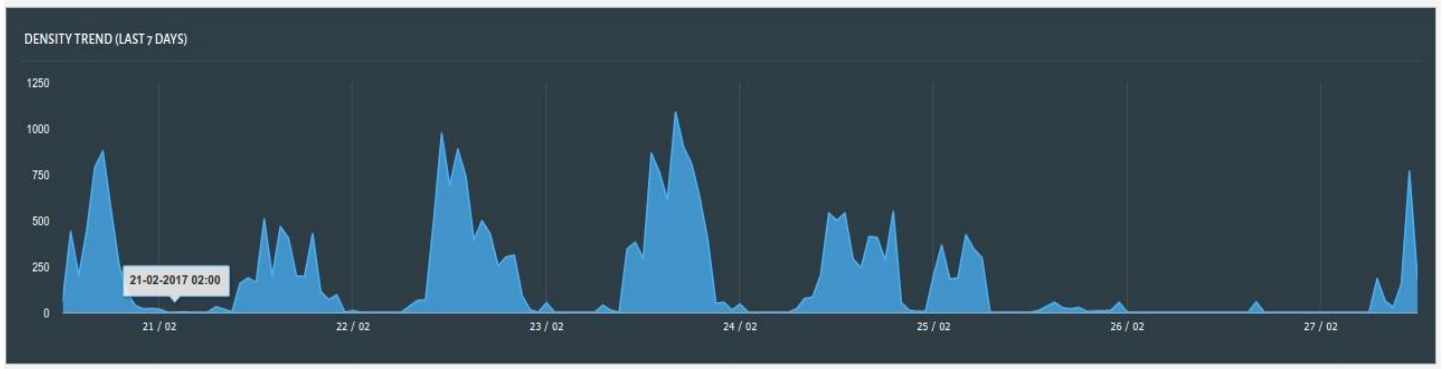
PRESSURE
3.3-6V Input
1-1.5mA
-40°C to 105°C
50kPa - 115kPa

PIR
5-12V
3,3V
3-5 mt
140º

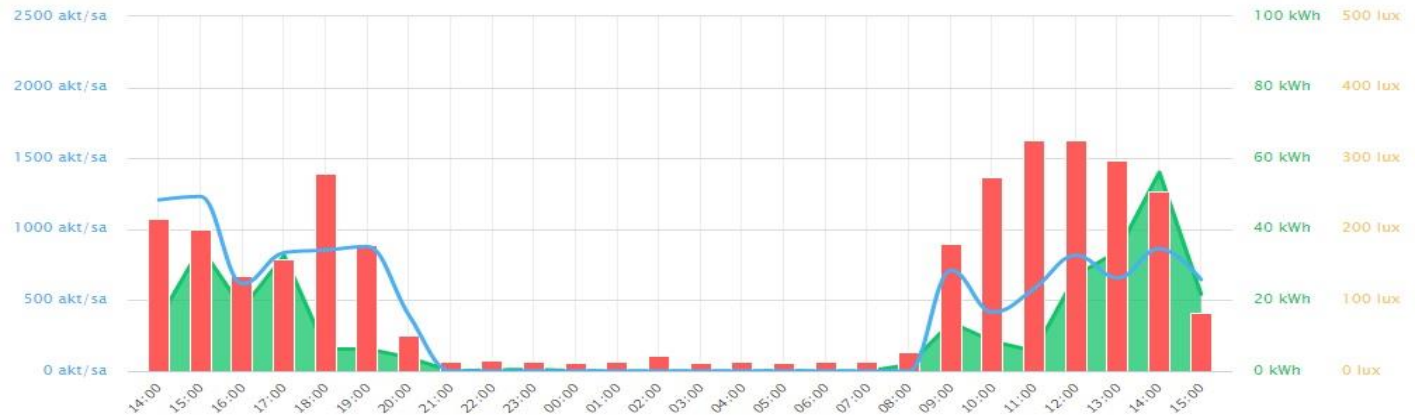
BEAD GATEWAY

The BEAD
Gateway allows systems integrators to add BEAD Sensors and wireless I/O into 3rd party BMS systems that are BACnet® IP compatible
The modules and sensors communicate to the
Gateway using the BEAD protocol, the information sent is translated by the Gateway and communicated back to your BMS via BACnet® IP, where all I/O appears as BACnet® objects.

SCREENSHOTS OF SYSTEM

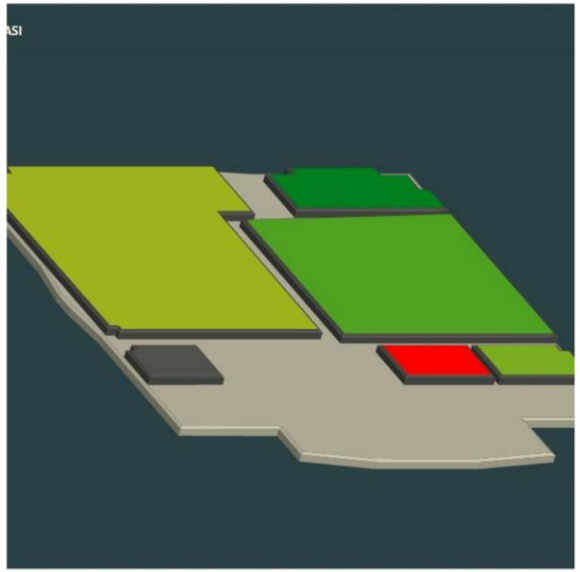


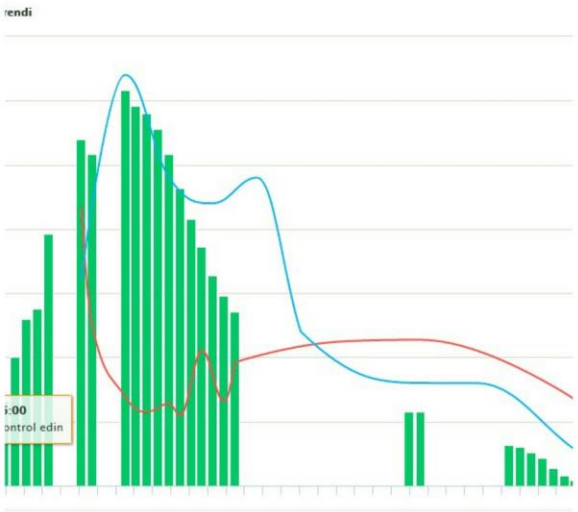
Occupancy analysis hourly- daily and weekly

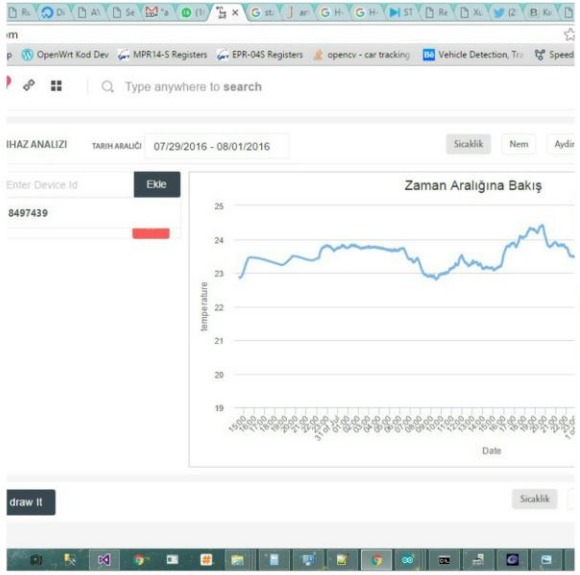


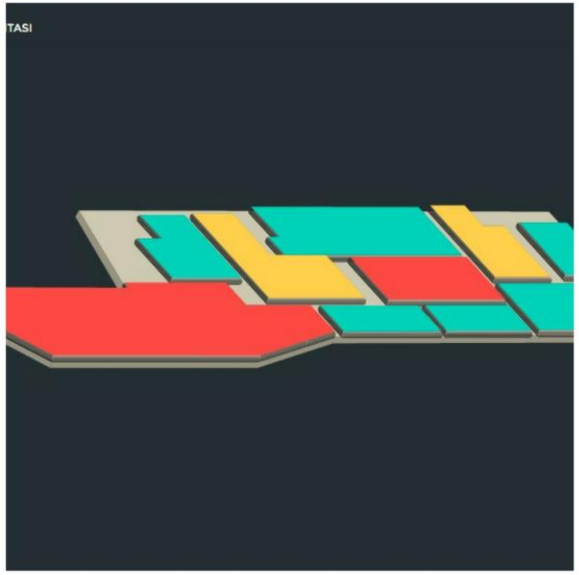
Occupancy vs energy consumption trends

SCREENSHOTS OF SYSTEM







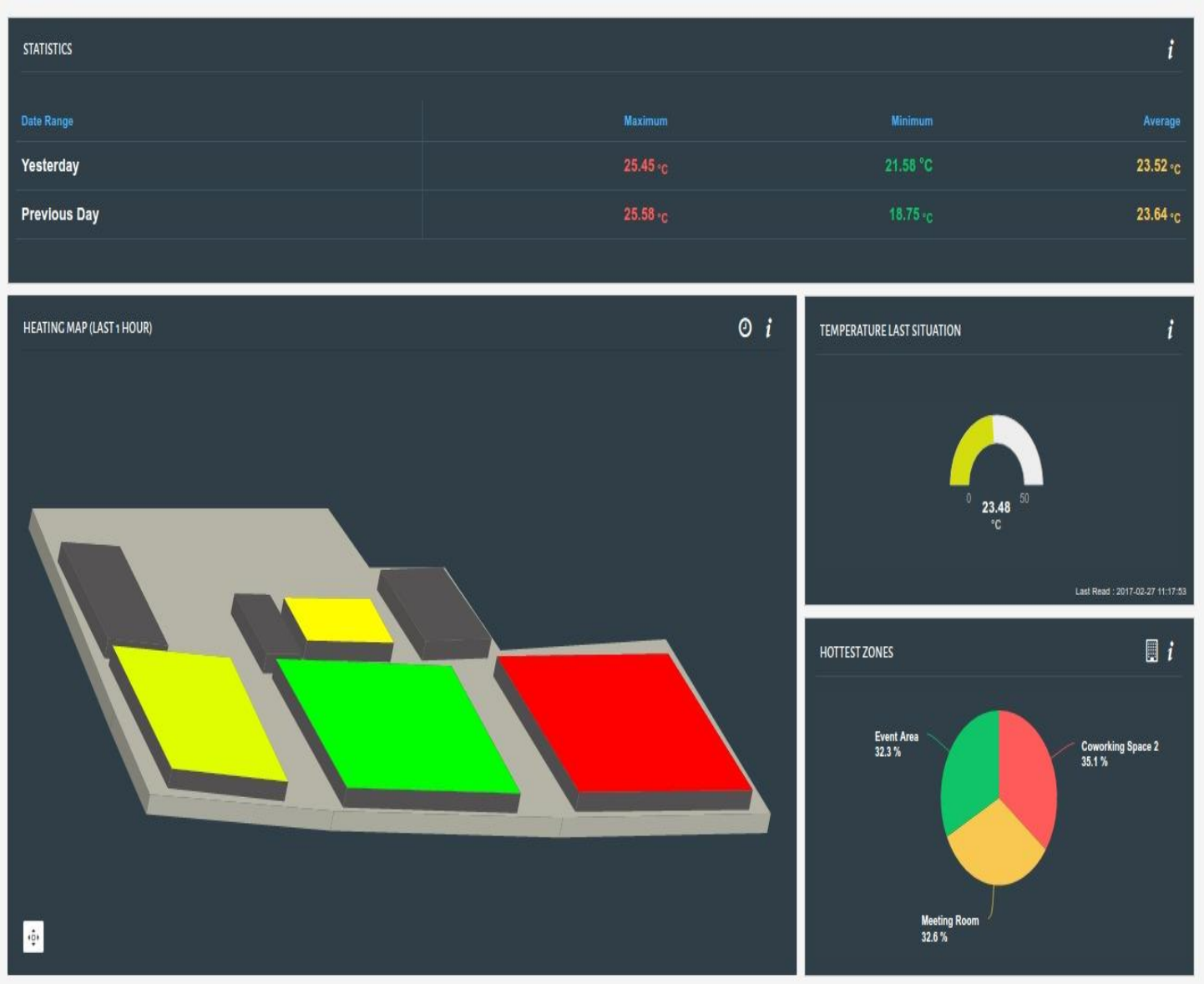


We gather data and analyse correlation between sensor data, building electricity consumption and human-building interaction.

We integrate BEAD sensors into your building and map out the entire technical and social life-cycle of your building.

We work with you to adopt your buildings' day-cycle and occupancy with your building automation system and improve energy efficiency.

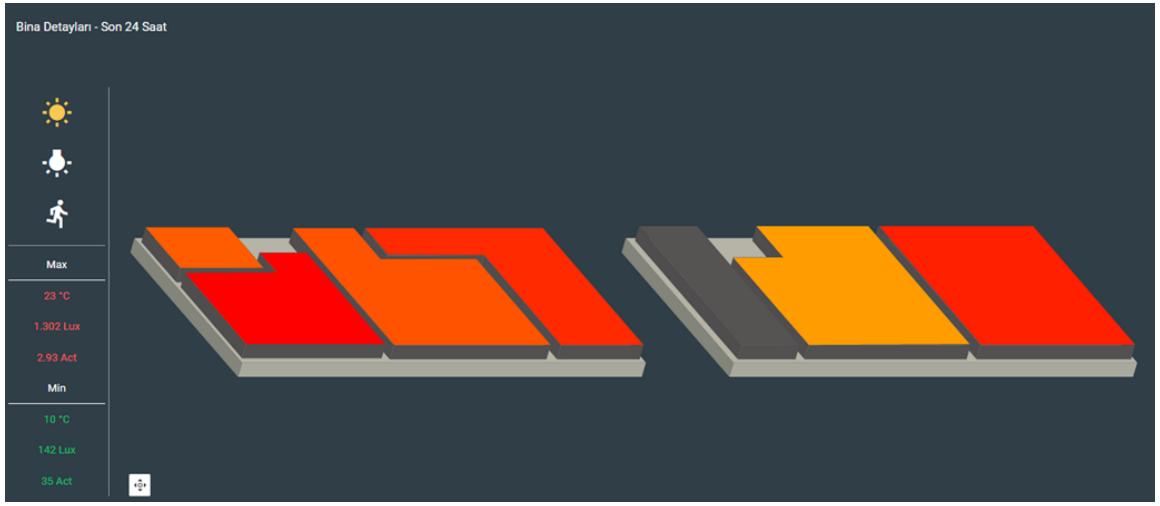
SCREENSHOTS OF SYSTEM

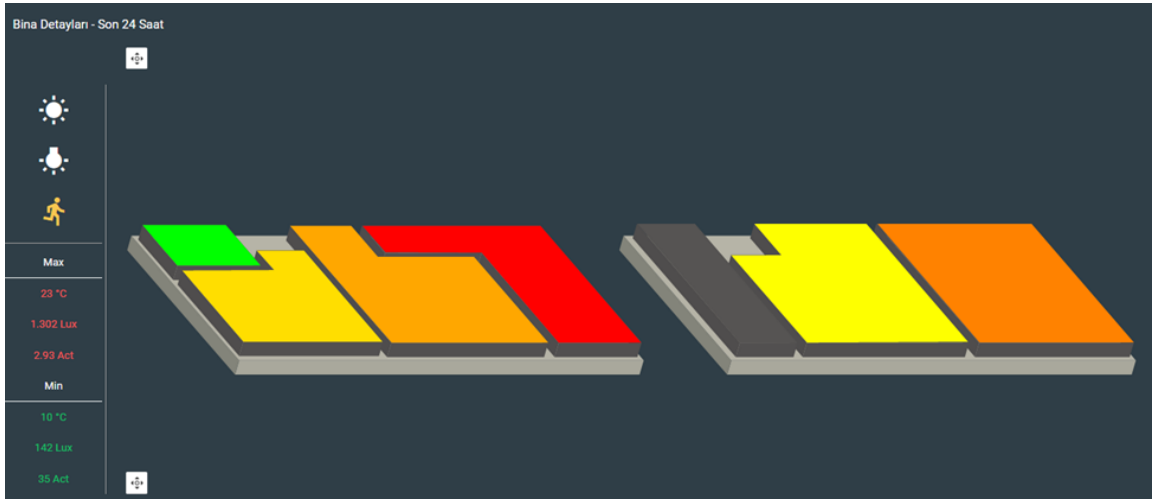


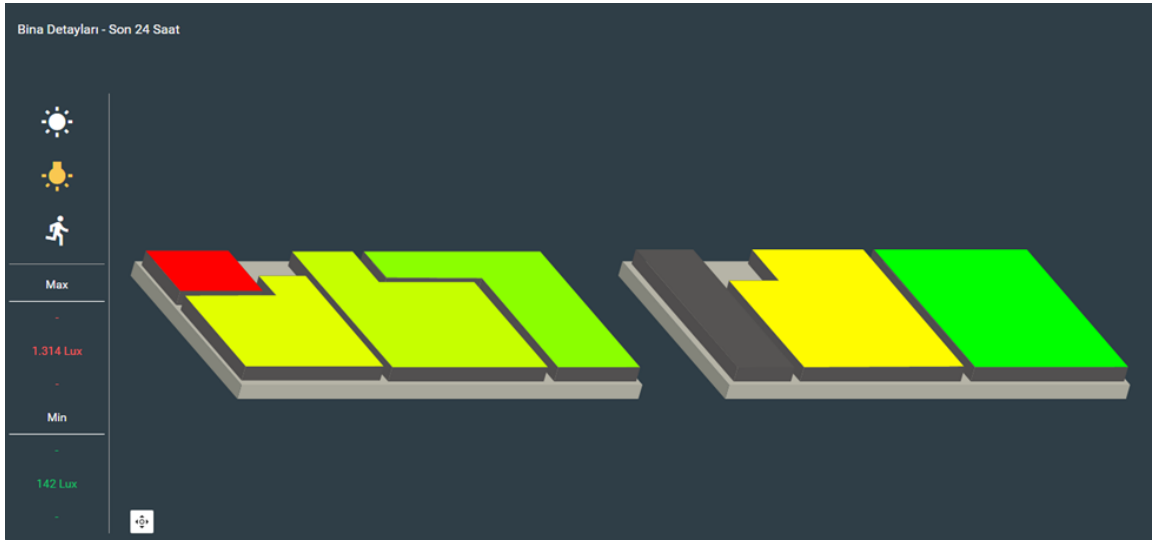
BEAD analyses the real-time daily cycle of occupancy and human activity level, tracks changes in circumstances of the building from multiple points and thus learns how the building is operated in the most intelligent manner.

With the feedback of BEAD the building is connected with its automation system.

2D MAPS OF YOUR BUILDING







3D Analiz

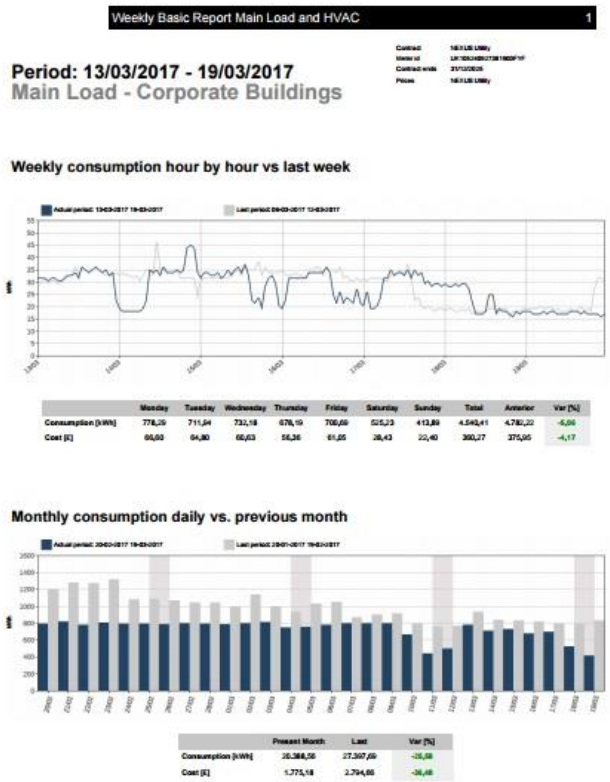
2D MAPS will show you how

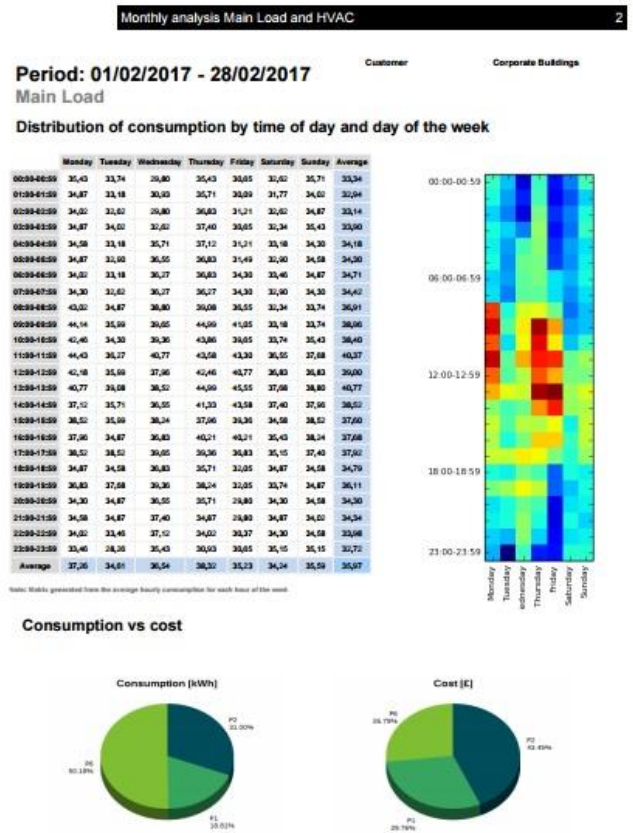
- heating and cooling zones change during the day

- lighting levels change during the day

- occupancy trends ,zones and ratios change during the day

SAMPLE REPORTS





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THANK YOU

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