

UBIQUITOUS THINGS WORLDWIDE

UTW Smart Technology

June 2021
V1.4





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Introduction

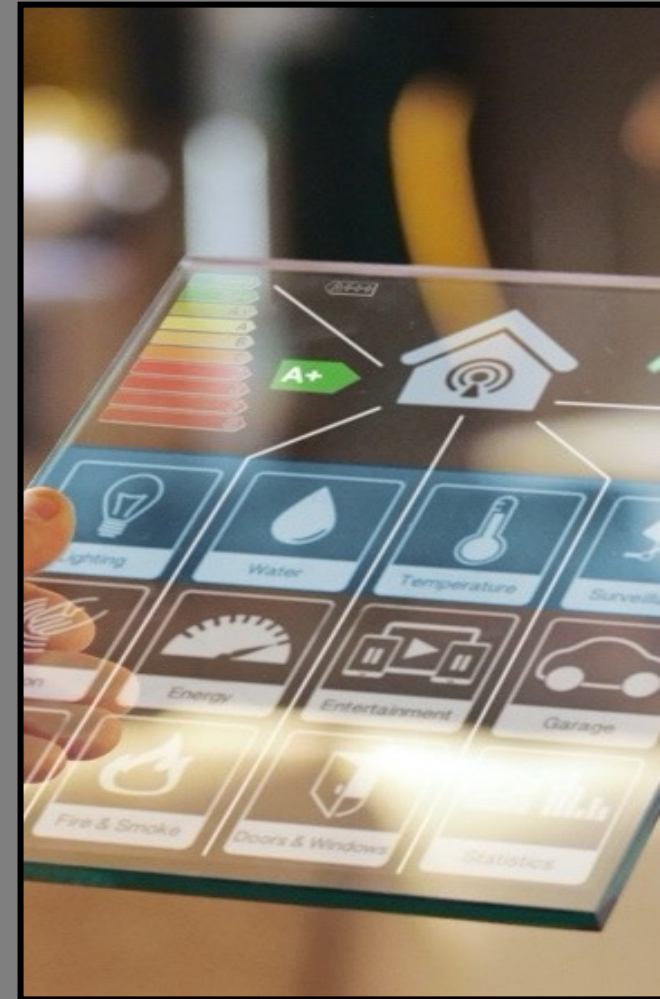
UTW with its Ocean Technology deploys the latest technologies and engineering to deliver comprehensive framework-based building management solution (BMS) that takes all aspects of the building and occupant needs into consideration to maximise energy efficiency and make management of facility simpler and more user-friendly.

Add the power of ocean and Tridium controllers and the versatility to select from a collection of best-in-class control products ready to evolve and meet all of HVAC, lighting and security needs. UTW's scalable solutions are designed to meet current and future demand.

We reduce the energy expenses of the building, improve indoor air quality, leading to increased overall value of the asset.

With technology becoming increasingly more flexible, mobile and connected, business priorities are changing. Hence UTW are building seamless digital business models and facilitating new ecosystems and channels all while enhancing the user experience and staying on track to continuously deliver with rapid application development and deployment of solutions.

We enable client capabilities to be delivered faster to fully embrace digital and extract value from data, hence IoT integration is fast becoming the silent enabler of digital business. Being able to integrate to innovate from app to edge, allows the fluid flow of data for clients to see, decide and act.



"Making Client Decisions Easier"



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Our People

Our highly trained team of professionals will offer transparent, insightful technical support from start to finish. our experience in a wide range of sectors has given our professionals an unbeatable level of technical knowledge.

We offer a fully integrated service, working with our clients and their partners, utilising our in-house workflow and management processes to ensure the project is designed, on programme and to budget, from feasibility through to handover and onto operation.

- In collaboration with our partners, UTW are inspired across all sectors, forming partnerships among multiple Stakeholders to create and sustain a vibrant market for building Management Systems, IoT Technology and energy efficiency.
- We maximise synergies and economies of scale to deliver the most effective and efficient services and solutions
- We are committed to supporting environmental initiatives, and to actively pursuing the latest technology and Innovated solutions, and systems.
- Our team has a wealth of experience across many sectors. With our clear focus on building long-term partnerships and providing service excellence, we pride ourselves on the level of service we provide.
- Our dedicated team guarantees we provide the best possible service without exception.



"Its The Small Things That Matter"



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Advanced Building Management System

Whether running a cooling plant or an office building, a way is needed to keep track of and control the various systems. Traditionally, facilities managers have turned to building management systems (BMS), to manage their facilities' cooling plants, air handling units, lighting control, and other core elements. BMS's are designed to control the main energy-consuming systems in a facility as well as fire and safety equipment.

Looking for a more granular building management strategy that provides insight into all aspects of operations? Talk to us about our smart building solutions

A building management systems typical use a combination of hardware and software to monitor and manage, including a central server, monitoring stations and remote sensors.

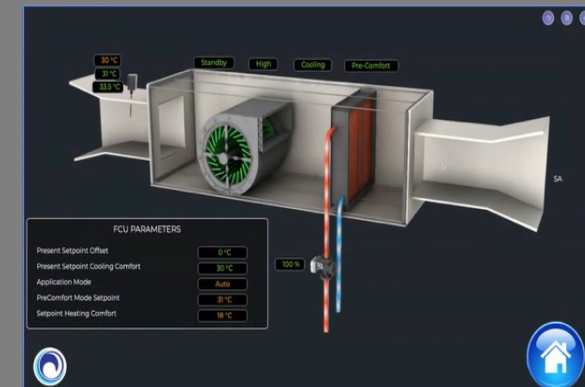
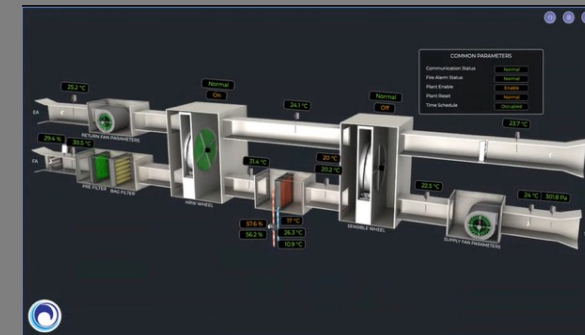
A Better Option: Advanced Building Management With The Internet Of Things

Today there's a better way to manage a building than with a building management system: an advanced data gathering, monitoring, and control system made possible by the Internet of Things (IoT).

UTW's advance solutions make it possible to collect detailed data on just about every aspect of the building, big or small, giving a level of visibility not possible from a simply BMS.

Rather than just maintaining temperature, smart IoT sensors can be placed on the HVAC equipment to detect anomalies in its operation (excessive vibration, for instance), alerting problems *before* a costly failure occurs. By monitoring real-time energy use, giving more actionable data.

Interested in learning about something different? UTW's approach to building management, one that unifies the building management components and makes a management strategy more effective. Our solutions will benefit whether the current building has active BMS system or not.





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Integrated Energy Services – SAVE UPTO 40%



Site Visit

Assess systems compatibility & identify opportunities



Installation

Install energy saving equipment & Ocean software with BMS gateway



Calibration

Model a reference baseline to monitor energy savings



Operation

Ocean Software optimises based on AI analytics



Savings

Receive monthly report with detailed savings breakdown

Generally most energy consumed within a building is through the HVAC which on average, is about 80% of the total load

- Chillers and Cooling Towers
- Pumps
- Air Handling Units
- Fan Coil Units

Today we know just adding Variable Speed Drives to induction type motors or adding EC/DC motors can reduce electrical energy, however this alone is not enough. Applying **Ocean Software** will optimise equipment control and increase energy savings, adding more value.

Locating sensors correctly, with the correct valves, optimising energy when its needed and not just stop/start the system, can cause hunting (constant operating condition) to achieve the desired space temperatures, all consume vast amounts of energy due to poor controlled.

Systems poorly set up, can cause many other issues like Low Delta T Syndrome or causing chillers and pumps to cycle more often, all consuming much more electrical energy than required or District cooling companies penalising the owners for not achieving the agreed return temperatures. All adding up to unnecessary costs.

Applying a holistic approach to the building systems and Utilising Ocean Algorithms will provide energy savings – **Up to 40%**



This is where the **Ocean Technology Platform** comes into its own



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Smart Technology - Intelligent Systems

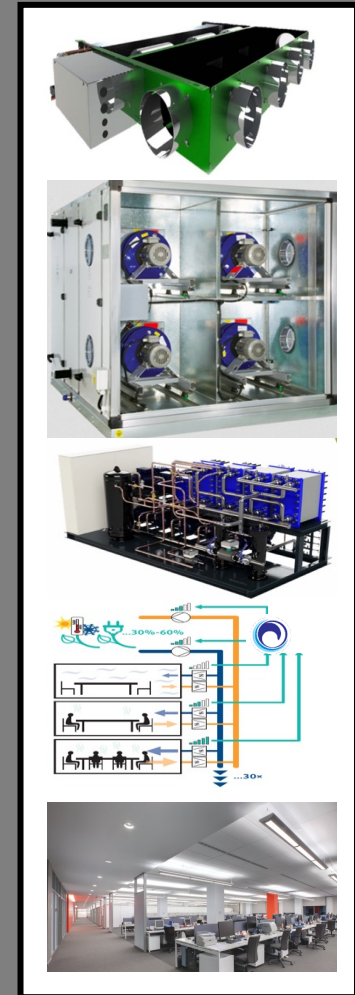
UTW with Ocean Smart building technology is a new and powerful source of competitive advantage.

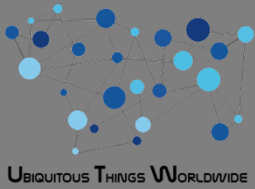
UTW implement the latest advances in HVAC equipment, building systems and controls technology including the following;

- Chiller (Magnetic bearings - oil-less technology)
- Fan Coil Unit
- Air Handling Unit
- CO₂ Heat Pump
- Ocean Atmosphere (Smart Variable Air Volume)
- EC/DC Fans
- Smart Lighting
- Indoor Air Quality
- External Air Quality
- Air Filtration

Energy efficiency has widespread impact, although this is often measured only in terms of greenhouse gas reduction and energy savings. Some **indirect benefits** are:

- Operation and maintenance savings
- Compliance costs avoidance
- Capital cost avoidance (both future and immediate)
- Increased wellbeing and employee productivity
- Increased competitiveness





IoT Connected Network Solution

Smart Air Quality Monitoring

Indoor Air Quality sensors with real-time monitoring of temperature, humidity, and VOCs, displaying the measured levels in easy-to-read dashboard, and aggregating these results into an overall air-quality score of good, fair, or poor. An alarm can be generated to alert of poor air quality.



Building Fire Panel Interface

The fail-safe IoT fire alarm interface transmits an alarm signal from the fire control panel to the command centre and emergency dispatch centre. This system is suitable for fire alarm signal transmission and alarm system monitoring. With a simple installation, the existing fire alarm panel can be upgraded for signalling via the IoT network.



Wireless Chilled Water on/off valve

With its ultra-low-power consumption, the valve can operate on batteries during 10+ years and through extreme long distances with an exceptional obstacles penetration, even inside buildings or urban areas.



Smart Streetlighting

The smart streetlighting is fully integrated into a IoT platform. Sensor-generated insights provide in depth grid awareness and real-time feedback that is used to optimise management and efficiency of streetlighting systems. The IoT platform will allow energy monitoring, control, programming of a series of complicated, time sensitive instructions.



Asset Management

An RFID IoT Platform based asset management solution designed for simple installation and scale-able implementations. It is easily installed across a network of locations allowing assets to be tracked across multiple sites and for the life of the asset.



The System operates seamlessly within an organisation, identifying assets during its life and use and tracks their location in real time



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Smart Metering Solution

UTW believe that the answers can be found through digitalisation and intelligent use of data. The potential of smart metering goes far beyond the enablement of accurate billing. IoT smart metering solves problems like:

Data collect, analyse, store & transmit

- Instant/total usage of meters
- Summary instant/total water usage from meters
- Total consumption in different modes

Anomaly detect & alert

- Leaks as analytical patterns
- Anti-tampering system
- Self-diagnostics

Smart features

- Day, month, year usage statistics
- Minimum, nominal and overload energy or flow detection
- Customised alerts
- Support various pulse or analogue values

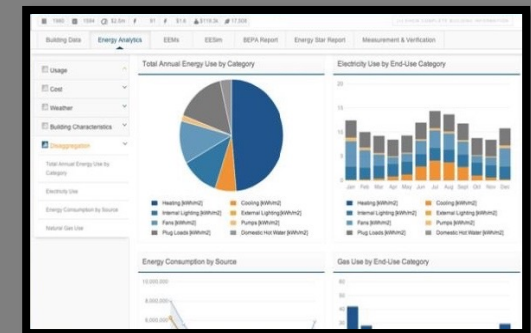
Ocean Integrated Energy Platform

The Ocean IoT Platform Offers a transparency for energy and water data. Easy to set and understand alarms provide an integrated management and monitoring system.

Whether the a landlord, commercial energy user or in the maintenance sector, all data properties can be seen when required and drill into individual meter points.

Instant access to all data

Ocean gives complete visibility and control of all sites energy data 24/7 and in real-time





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Central Monitoring - Command Centre

Normally only larger buildings have a Building Management System (BMS) installed. The Ocean IoT technology enables UTW to connect all buildings and assets to a remote Command Centre. This is a great advantage to reduce facility and asset maintenance and costs.

The centralised Command Centre is provided with a main operational room and a separate room where the servers and associated equipment including rack mounted uninterruptible power supply is located.

Utilising over IP technology in the Command centre for video, audio, and control data distribution and extension offer's more flexibility and scalability for centralised command centre operation. The solution utilise's TCP/IP for the communication protocol, this allows the command room operators to monitor, access and troubleshoot assets from any networked system with the data from secondary sites or anywhere else on the network being displayed on the main video wall. This enables a faster response to mission critical information.





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ORACLE

مجموعة التزام
لإدارة الأصول
eltizam group
asset management

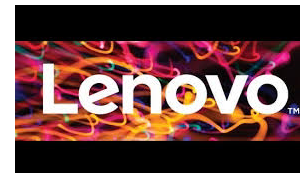
Microsoft

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Ability

Sontay®

software AG



Honeywell

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framework®

TRIDIUM

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SIEMENS



Projects

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Expo 2020 - Dubai



Masdar - Abu Dhabi



Emaar - Dubai



Various GEMS schools - KSA



Marriott Hotel - KSA



Microsoft - Dubai



Oracle - Dubai



Marina Square - Abu Dhabi



Data Centre - Abu Dhabi



Palace Hotel & Residence - Dubai

* Some of the project we have been involve with



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