# LIGHTING CASE STUDY - LARGE BANK

Improving workplace energy efficiency and identifying savings opportunities with real-time energy monitoring & IoT control

**SimbleSense**

# BACKGROUND

## Summary

The SimbleSense solution was installed and used to complement a lighting upgrade at a large bank. The document describes the use case, the deployment, the expected outcomes, as well as the ROI achieved for the client.

## Scenario

The office spaces of a large bank had high energy consumption caused by occupation, comfort and lighting requirements. The lights in this space were often used in inefficient ways, presenting a great opportunity for the organisation to save money by leveraging smart energy data and IoT technology which monitors and automates electricity users such as LED lighting systems.

## Solution

Our client used an energy monitoring system to complement their energy efficiency upgrades. IoT devices and smart energy technology measured energy consumption, extracted patterns, provided detailed analysis, helped optimise usage and detected energy leaks.

## SimbleSense

SimbleSense allows organisations to zero in on projects and get a detailed understanding of energy usage across the board. The platform helps establish and monitor benchmarks to ensure all components of the workspace run as efficiently as possible.

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# PROJECT OVERVIEW

**Monitor, Identify, Control, Reduce**

## COLLECT DATA

Simble arranged the deployment and installation of Wattwatchers energy sub-meters & IoT devices to accurately monitor, visualise and analyse the energy consumption within the buildings. The SimbleSense analytics platform was used to manage and control the project.

## CONTROL CONSUMPTION

Using the solution, the client was able to remotely control and automate processes to improve efficiency.

## ACHIEVE GOALS

The main goal in this project was to monitor and reduce the energy consumption in private areas (used by staff), in small interview rooms, and in offices.

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# DATA & INSIGHT

## STEP 1 : COLLECT DATA

**Detailed energy data provided actionable insights.**
The project required an initial collection of consumption data in the buildings, which was used to identify areas to improve energy efficiency.

The baseline performance data was later used to measure and verify energy consumption savings by comparing the trends before and after.

## THE BENEFITS OF DATA COLLECTION

Accurate visualisation of energy usage

Detailed insight into areas for improvement

Clear demonstration of project ROI

*What people say...*

"Simble offers a clearly differentiated solution that allows us to work closely with clients as their trusted advisors... with detailed measurement and verification of the savings they can achieve through LED lighting."

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# STEP 2: CONTROL CONSUMPTION

**Following an analysis of the energy consumption,
the following actions were taken:**

- Switch off all the office devices after hours to reduce unnecessary consumption and stand-by loads.
- Schedule water heaters to start working two hours before opening times and one hour after close of business to reduce unnecessary consumption and stand-by loads.
- Set air conditioning temperatures to 22C to reduce unnecessary consumption.
- Switch off air conditioning after hours to reduce unnecessary consumption and stand-by loads.

# THE BENEFITS OF CONTROLLING ENERGY CONSUMPTION

Maximise effectiveness of efficiency upgrade
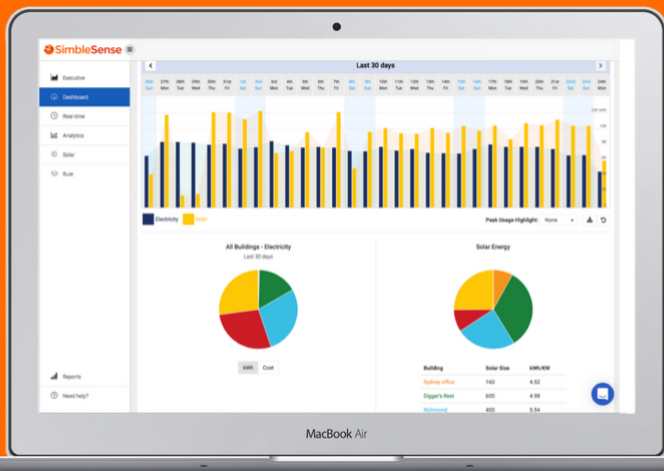
Minimise energy waste

Automate usage to suit business needs

*What people say...*

"We recognised the need for greater visibility and proactive cost management of energy consumption at a granular level. We needed to know where energy was being consumed within our building in order to minimise waste and clarify the proportional cost for shared resources."

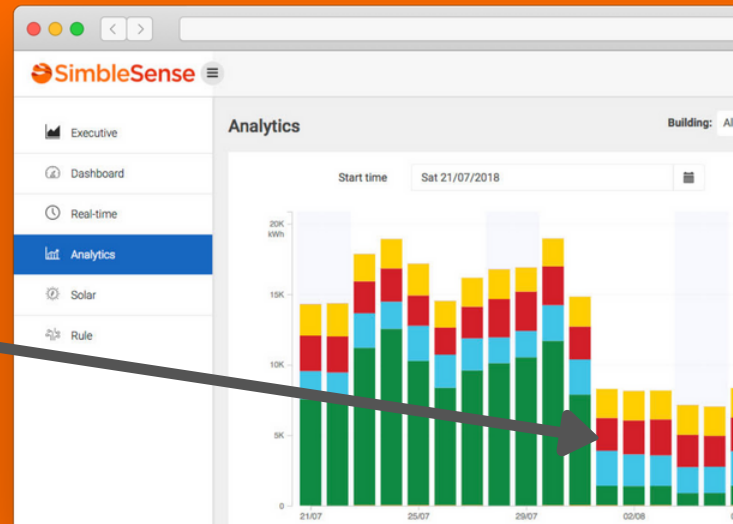SimbleSense

# OUTCOMES

## A quick payback



**BRANCH 1:**
Energy Consumption reduced 15.6% a week.
Energy Cost reduced 13.4% a week.
**BRANCH 2:**
Energy Consumption reduced 25.5% a week.
Energy Cost reduced 23.4% a week.

This graph shows a significant drop in energy consumption. Energy waste can be costly and is typically unnoticed due to lack of visibility and difficulties in ongoing monitoring and controlling.



**Source: SimbleSense Platform**

*What people say...*

"Installing an energy management system is a cost-effective solution that has helped my company reduce costs and improve the overall productivity of the business"

# FUTURE PLANS

Once the SimbleSense platform is installed and configured, the additional cost of adding new sensors is relatively low. Actions that can improve the reduction of energy consumption, costs and emissions are as follows:

### Occupancy sensors

Installing occupancy sensors gives the option of keeping lights off when offices and other areas are not in use. This action can achieve savings of up to 50% on lighting costs. These automatically turn lights on when a room is occupied and turn them off after a period of vacancy.

### Light sensors

Light sensors can be used to dim or turn off artificial lighting when there's sufficient natural daylight. As daylight hours vary throughout the year, sensors help to provide closer control and thus, substantial savings and often pay back their costs in less than a year.

### Thermostats scheduled

Interfacing with existing thermostats or installing new ones can help to improve the comfort of the branches according to the appropriate temperature needed. This action can achieve savings of up to 35% on climate costs.

### LED lighting

Replacing traditional lighting systems by LED lighting reduces significantly the energy consumption. Typical ROI for this improvement is 3 years.

# LET'S TALK ABOUT THE NEW ENERGY WORLD!

**hello@simble.io**

**simblegroup.com**

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