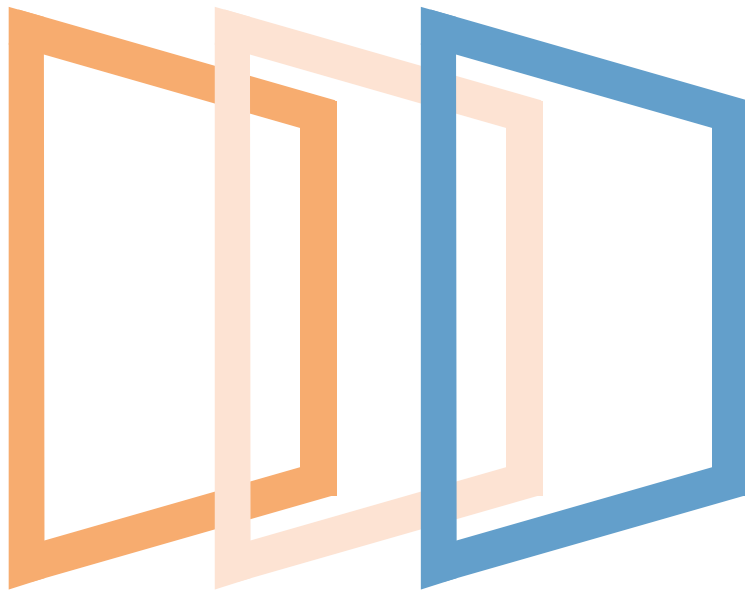


# References

Smart Energy - Onesait Efficiency

minsaït



An Indra company

# Index

- 01. Servicio Nacional de Aprendizaje (SENA) - Colombia
- 02. Banco de Occidente - Colombia
- 03. Endesa - España
- 04. BBVA Continental - Perú
- 05. Entel - Perú

# Servicio Nacional de Aprendizaje (SENA) – Colombia

01

# 01. Servicio Nacional de Aprendizaje (SENA) - Colombia

SENA is a public institution in Colombia. It offers free training to millions of Colombians who benefit from technical, technological and complementary programs focused on the economic, technological and social development of the country.

## Implantation of:

- ✓ Energy Management Software Platform
- ✓ Energy Management ISO50001

- Project duration: 3 years. Beginning December 2015
- No. of sites where it has been implemented: 28 sites (100 additional sites planned for the next phase)
- Monitoring and Control of Electricity, Water and Gas (243 points monitored)
- Implantation of IoT Technology
- Installation of Equipment and Platform Monitoring, Control and Performance Software
- Internal Audit and Accompaniment ISO 50001 Certification

## Benefits

- Average energy savings of 21%.
- Optimization of the installed powers
- Optimization of the use of equipment
- Many of the measures can be implemented in the short term
- Rates of return on investment in very short times. (1.7 years)

This project has received the Energy Efficiency Award in the category of Public Entities in Colombia, granted by the National Association of Public Services and Communications Companies (Andesco), as well as the enerTIC Awards in the category SMART International Projects.

# Banco de Occidente - Colombia

02

## 02. Banco de Occidente – Colombia



**Banco de Occidente**, is a Colombian financial entity belonging to “Grupo Aval Acciones y Valores”, with headquarters in the city of Cali, with a record of 53 years of experience and more than 200 branches throughout the territory.

### Plataforma Software de Gestión Energética



- Target: The goal is to conduct a 3-month test to verify the energy savings potential in a bank office and detect inefficiencies.
- Once the solution is implemented, the data and energy consumption are measured and analyzed during the three-month period.
- Maximum consumption and total demand data were measured for the period analyzed and baselines were established.
- Cooling Degree Day (CDD) is a measurement designed to quantify the demand for energy needed to cool a building. It is the number of degrees that a day's average temperature is the comfort temperature.

#### Resultados:

- Air-conditioning consumption constitutes 70% of the branch's consumption.
- Adjustment of 1°C in the office set temperature can result in an annual saving of about 10,800,000 COP (about 20,000 kWh/year).
- Regarding the lighting loads and the computation of the branch office, some night lighting consumptions have been identified for which it should be analyzed whether the hours of use can be **optimized**.
- Potential Energy savings of **10,66%**

Bank branches **consume energy** from three major ways: **lighting, air conditioning and installed equipment**, which means that the banking sector has great potential for **energy savings** and it is important to **identify sources of consumption** to implement **corrective measures** that induce energy and economic savings.

# Endesa - España

03

## 03. Endesa - España

**Endesa** is a leading company in the Spanish electricity sector and the second largest operator in Portugal. It belongs to the Enel group, a multinational company in the energy sector, particularly focused on the European and Latin American markets.



### Energy Management Software Platform

- Centralization of information on energy consumption (electricity, water and gas).
- More than 180,000 users uploaded to the platform
- Management of alarms and location of anomalous consumptions.
- Historical management, visualization of graphs and remote control in real time.
- Support to the achievement of targets for getting the most important Certifications such as: LEED®, BREEAM®, ISO 50001

#### Benefits

- Loyalty of existing customers and attraction of new ones
- Green marketing: environmental awareness
- Energy saving strategy and consumption management



### Smart Home

Control de consumos de dispositivos y sectores del hogar  
Gestión de alertas y control de reglas para confort de usuario  
Tranquilidad y confort con cámaras y sensores de movimiento

#### Benefits

- Offering high value-added solutions
- Future market strategy with the possibility of integrating with existing systems or future more advanced systems.

# BBVA Continental – Perú

04

## 04. BBVA Continental - Perú



**Banco Continental**, is a financial institution belonging to the BBVA group whose headquarters are located in Lima, Peru. It has a network of hundreds of offices located throughout the country and has been operating for 57 years.

After the implementation of the Minsait **Energy Management Software Platform**, the energy consumption of the branch was evaluated taking into account the general electrical circuit, the climate and the average bill expenditure, obtaining the following results:

- Some consumption is observed on weekdays between 06:00 and 08:00 lower than nightly base consumption. This consumption is of the order of 2kWh, and corresponds almost entirely to computer equipment, lighting and others. It is possible to reduce the base consumption during office closing hours by up to 2 kWh which would result in **energy savings of up to 6,500 kWh per year**, which would translate into savings of around 1,500 S/. per year.
- The weather programme is activated on Sundays as if it were a public opening hours, without taking into account that the office is closed on Sundays. The modification of the programming requires a zero or minimum investment and will result in **savings of approximately 1,750kWh per year**, which would be equivalent to approximately 410 S/. per year..
- According to the projection of expenditure in electrical invoice with the different tariffs during the 3 months duration of the PoC, the change to BT5A tariff would have resulted in savings of 3,074.13 S/. A **saving of 17.05 %** on the expenditure in invoice.



# Entel – Perú

05

## 05. Entel - Perú



**Entel** is one of the largest telecommunications companies with thousands of customers in Peru. Their interest in Minsait's Energy Efficiency solution is to sell it to their customers as a service for SMEs.

Energy Management Software  
Platform and Cloud Services  
and Communications



**Target:** The goal is to carry out a 3-month test for the Implementation of the Energy Management System with the aim of optimizing and reducing energy consumption and implementing best practices.

- Electricity Monitoring and Control
- Definition of Energy Policy
- Operational control
- Real-time monitoring, measurement and analysis

**Results:** Potential **savings on energy consumption of 12.2%**, reaching economic savings of 32.2% through:

- Suggested Tariff Change, with potential savings of 20% based on the rate already contracted.
- Optimization of the weather shutdown, which has an impact of 1.7% on total office consumption.
- Reduction of night-time base consumption, very high consumption is detected with a saving potential of 6.3%.
- Optimization of air conditioning in the service area, with potential savings of 4.2%.

# minsait

Mark Making the way forward

An Indra company