



CASE STUDY

INDUSTRIAL SHIELDS



HOW TO AUTOMATE HOTEL ROOMS WITH INDUSTRIAL PLC

When people go to a hotel, they not only expect to spend the night and feel like home, but they also want to have a great experience. Thanks to Industrial Shields solutions, a brand-new technology can be implemented to provide room automation that puts guest in full control of their wishes.

CHALLENGE

In order to attract customers and compete with other rivals, a different service must be offered to stand out. Can there be a better option than offering a cutting-edge technology for your guests?

A client who runs a hotel chain came to us asking if it was possible to **automate the hotels** of his company. His main idea was to delight his guests with new options and find a way to **save some energy** by controlling the temperature and lights in the rooms and common places.

The goal was to implement a system capable of offering the latest technology to the customers. A monitoring system would be installed to obtain data from specific areas and help identify where the most energy is being spent.



SOLUTION

Each room is equipped with an **Arduino-based PLC** and a **touch screen**, which are used to control the area. They are set in each room to be controlled and connected to a central node that will host all the information about the hotel preferences.

Guests can adjust the temperature on their liking, regulate lights or make requests to the hotel staff without leaving the room.

In addition, the PLC receives information from sensors, which inform it of the temperature or if there is someone staying in the room. Thanks to this information, if nobody is detected, the room temperature can be lowered, the lights can be switched off or the cleaning staff can be sent to do their job.



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IMPLEMENTATION



To be implemented, this system requires:

- an industrial PLC,
- a connectable-touchscreen and
- some sensors and actuators.

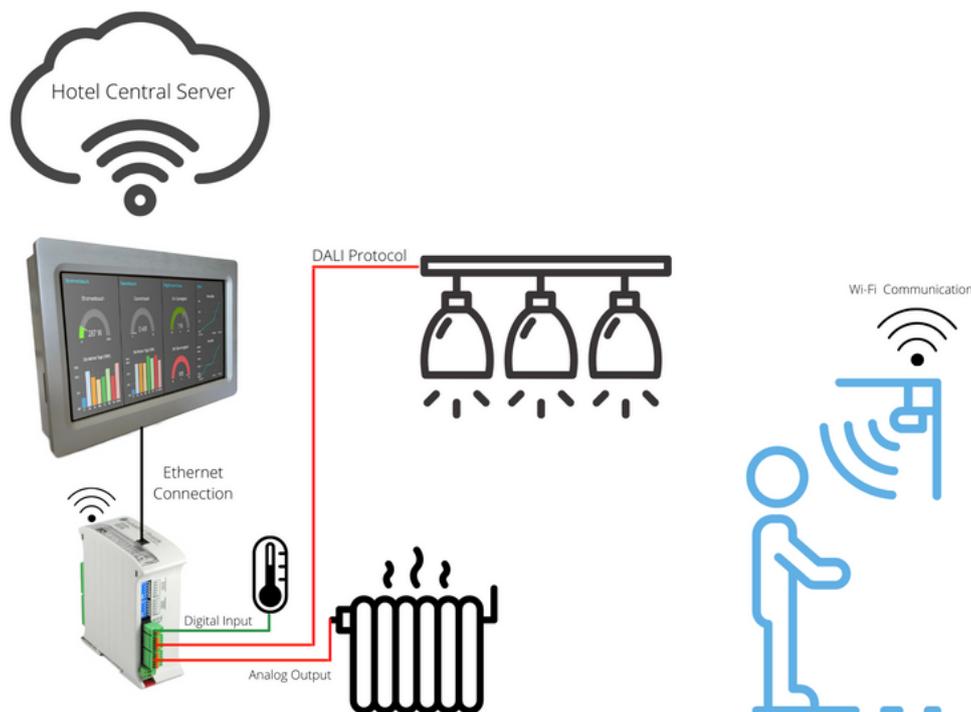
Our customer opted for an **Industrial Shields Ardbox Dali PLC** and a **TouchBerry Pi 10.1"** to set up the system at an affordable price.

The implementation has been done by placing the PLC together with the touch screen at the entrance of the room, where the guest can interact with the display. The touch screen has an interactive and user-friendly interface to control the room temperature, the lights and a request system to contact with hotel stuff in case of any problem.

On the other hand, to get information from the room, some sensors have been installed around the place where the system is implemented. A **presence sensor** has been installed via Wi-Fi to know if there are people in the room. In case the room is empty for a certain period of time, an **automatic temperature** is set to save energy. If the **lights** are accidentally left open, they will be switched off. In addition, a notification will be sent to the hotel staff to let them know that the cleaning service can be done without disturbing. Another temperature sensor is wired connected to control the heating systems and show the guest the actual temperature of the room.

As for the lights, **Industrial Shields PLCs** have the option to work with **DALI**, a very useful protocol to control different lights individually. This would be especially useful as the guests can set the lights to different modes, such as a reading mode, which sets a lower light to make a pleasant atmosphere for reading.

- Note: This case study can also be applied in **industries** or **offices** which need to set up an **automatic system for their daily needs**.



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BENEFITS



Improved sustainability

Automating the temperature and lights will save a considerable amount of money, as well as helping the environment.



Enhanced customer experience

Guests gain a greater level of personalisation by making adjustments to their room to get it the precise way they want it.



Remote room controls

Hotel staff can access a variety of room controls from a remote location. This is especially useful when preparing a hotel room for a new guest.



Saving time and resources: faster and more reliable repairs.

Thanks to room automation, hotel staff have the ability to anticipate technical problems with devices and make repairs quickly.

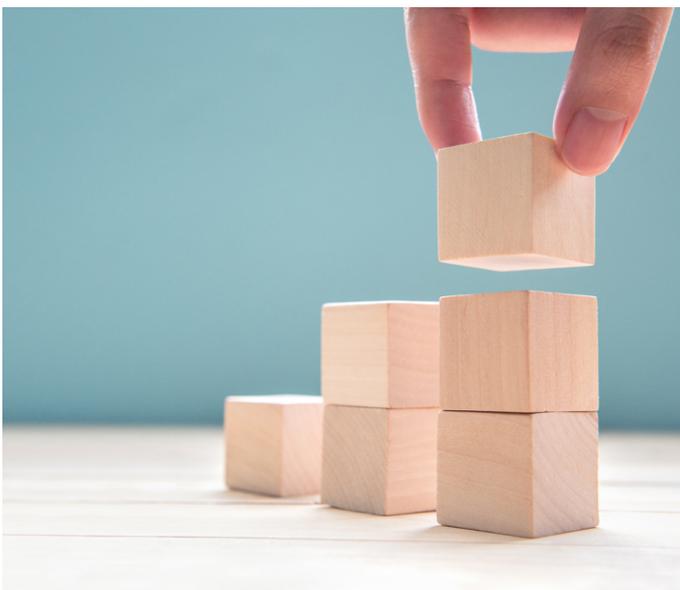


Scalable system

This system not only works for the rooms, but can be extended to all common areas of the hotel.

WHY INDUSTRIAL SHIELDS ?

Industrial Shields has won this project and beaten its main competitors thanks to the facts below:



Open solution. No license fees.



Modular solution: Product specifications can be expanded in the future.



24/7 technical support: Our team is available to help you 24/7 via phone, mail or WhatsApp.



Equipment designed and manufactured for **industrial use** at a **lower price** than competitive products.