The Crystal Soyak Tower is a 35-floor high rise tower, made up of asymmetrical sloping surfaces, making it an instantly recognisable addition to the skyline in the Levent Commercial District in Istanbul, Turkey.

This dynamic and striking building features an intelligent lighting control system which was commissioned by Elekon Enerji Systemleri, a long-standing Helvar Partner who operate in Turkey and the surrounding countries.

The Elekon team developed a system which including automatic solar tracking, to ensure that the occupants of the building did not have to continually manage the hundreds of Venetian blinds as the sun rose and set throughout the day.

This shading control system is made possible by the Tridium Niagara Framework, a universal software infrastructure which enables real-time access,
automation and control of smart devices via a local network or over the Internet. The system calculates the positioning of the sun according to sunrise and sunset values and accompanied by daylight sensors; it then automatically controls the blinds to provide optimal levels of daylight throughout the day.

A range of 311 PIR sensors and 312 ceiling multisensors are installed throughout the 10,000m² tower. These monitor current occupancy and the daylight levels, ensuring that luminaires are only active when required. The 312 multisensor contains a light sensor, which measures the ambient light level in the room, and a PIR detector which enables the system to detect when the space is occupied. The Helvar 303 infrared remote control then sets the required light levels and basic system programming, which means users do not necessarily need to access the computer software to make system changes.

Near the end of the working day, luminaires are scheduled flash at 5 minutes before the end of business hours - this is to inform all staff that the end of the overtime shift if approaching.

Luminaires are then programmed to automatically turn off after 15 minutes for Night mode, to provide maximum energy savings - however, the lighting in corridors will work according to the 311 presence detectors. In the event staff wish to continue working, they will be able to manually control the lights using the Helvar touch panels located throughout the office.

These 13xx touch panels can be found in all meeting rooms and managerial spaces. These are programmed to create several different lighting scenes, ranging from brightness control to specific presentation modes, and these can also control the blinds manually.

The system even provides full reporting information from all DALI ballasts and connected devices, so that in the event of failures or errors, alarms generate automatically, and the relevant individuals receive live notifications.

Now, that is a smart building.