Best practice: Saving water with EDI-Net

Background

This is a best-practice example from the use of the EDI-Net smiley faces dashboard in the daily routine for energy managers. As an energy manager, you have to keep an eye on the energy consumption of many buildings. Since the numbers of housekeepers for buildings have been reduced recently, it is even more important to be able to recognise excessive consumption of resources from the outside.

This use-case is dealing with two cases of wasting water. One of the buildings is a large school of more than 10,000 sqm, the other building is a hostel for the homeless with a floor area of about 3,000 sqm.

On May 3rd, the energy manager performed, as a daily routine, a check of all smiley faces. The smiley faces are sorted in a descending order, to have all red faces at the top. In this list, the virtual meters with red and orange faces were checked in detail . The meter details of the school ("PVS Wasser") and the hostel ("Männerwohnheim Wasser") clearly showed an unusual water consumption.

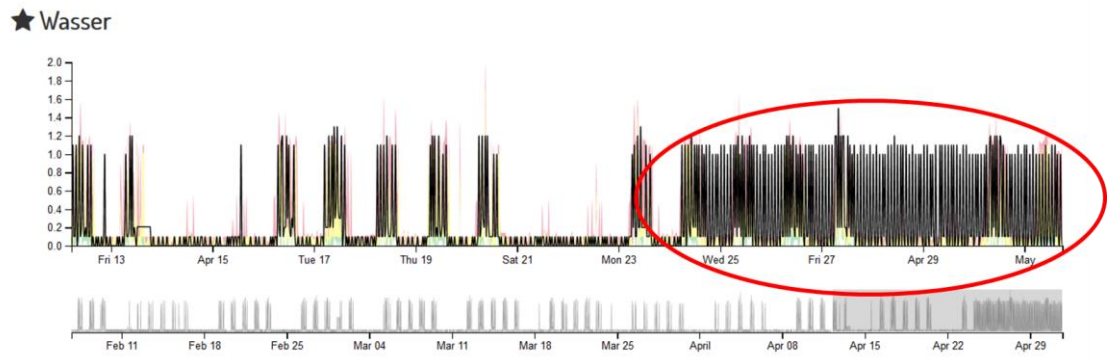

Figure 1: Water consumption school

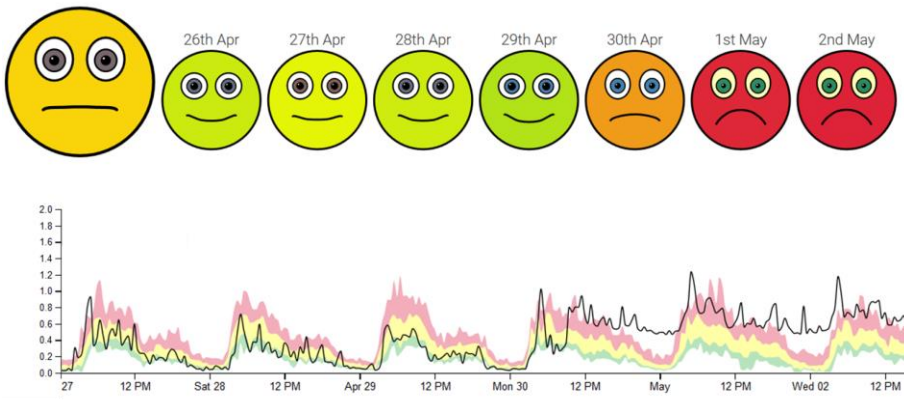

Figure 2: Water consumption hostel

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Actions taken

The responsible housekeepers / facility managers of the two buildings were informed. Both did not know about this issue until then and immediately started to look for the cause. The hostel immediately found the reason: a small garden pond had been filled with water, the hose which was used was not shut off after the pond was full. As a result, water was continuously spilled into the garden and drained away.

In the school, however, the search for the source of the problem was more difficult. It took the facility managers until May 6th to find the cause. The reason was the automatic flushing settings for the school's toilets. For the occasion of special school event, these had been set to continuous mode, so the toilets were rinsed every 30 minutes, 24 hours a day.

Results

After the mentioned reasons for the high water consumption had been eliminated, consumption went back to normal in both properties.

In the school, per day 15 cbm of water was wasted, over a time of 12 days i.e. 180 cbm overall. Without EDI-Net, the mistake would have been recognised only by chance. From experience of the energy managers, this could have taken up to three months. Therefore, EDI-Net saved about 1,200 cbm of water.

In the case of the hostel, the water hose was switched off immediately after the housekeeper had been informed. Presumably, the spilling water would have been recognised sooner or later. If you estimate a time of another seven days, in this case EDI-Net saved another 140 cbm of water.

All in all, in both cases EDI-Net helped saving more than 1,300 cbm of water.

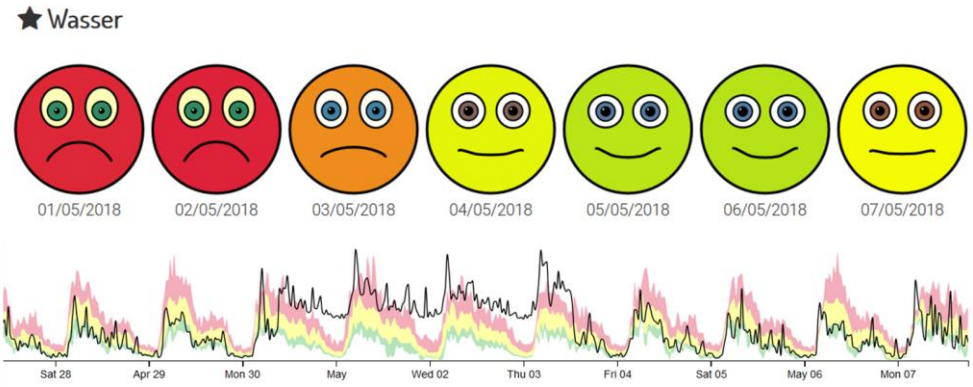

Figure 3: water consumption of the hostel - back to normal!

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Financial information

Presumably, the use of EDI-Net saved an amount of about 6,000 EUR in the school and about 100 EUR per day in the case of the hostel. With an estimated time of seven days before the water draining in the garden would have been recognised without EDI-Net, the hostel saved about 700 EUR.

Replication and plans

The energy managers frequently check all virtual meters by looking at the smiley faces on the dashboard. In case of a red face, the details are checked and the facility managers are informed.

In the future it is planned to have the facility managers themselves look at the dashboards of the buildings they are responsible for. This even speeds up the process of finding leaks or other reasons for high consumption.

This is a good reason why smiley faces dashboards should be presented on public screens in the buildings. In this case, every building user would have recognised there is something wrong, and could have informed the facility managers.

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