Guide to the Aguardio business case for hotel customer.

General

All prices are excl. VAT and can be specified in any currency.

All cells with input variables are green.

Input variables

B5:   Specify currency.

B9:   Number of hotels. This number has no implications for the calculations.

B10:   Number of hotel rooms / bathrooms for the calculations.

B11:   As a standard each showerhead is assumed to use 9 litres of water per minute. Otherwise specify actual consumption.

B12:   Number of baths per bathroom per day. It is assumed that on average 1,6 persons occupy a hotel room per night and the take 1 shower each.

B13:   Aguardio assumes a 15% saving in water time. This can be substantially higher over time. Other devices with nudging have demonstrated long term savings of over 20%.

Case 1 input

This case shows the savings regarding consumption of hot water when Aguardio has been installed.

B19:   Specify the average shower length (water time) before nudging. In Denmark the average time has been measured at 6 minutes in a hotel test.

B20:   The cost for water, heating of the water and sewage per m^3. The average for Denmark is app. 7 EUR, but will vary significantly from country to country and also locally within a specific country.

Case 2 input

This case illustrates the savings by extending the time period between refurbishment of the bathrooms in a hotel, due to better data concerning humidity supplied by Aguardio.

B32:   Specify the current number of years between refurbishment of the bathroom (grouting/joints between tiles). A Danish hotel has indicated this to be 5 years.

B33: Specify the future number of years between refurbishment of the bathroom due to better data concerning humidity supplied by Aguardio. A Danish hotel indicates the time could be extended by 1 year, so the total time will be 6 years.

The halo effect of prolonged lifetime of any equipment in the bathroom and the hotel room, due to better ventilation control of the humidity due to data supplied by Aguardio, has not been taken into consideration.

B35: Specify the number of days a room will be out operation due to refurbishment. 2 days is assumed to be the standard.
B36: Specify the number of labour hours needed to refurbish the bathroom. 6 hours is assumed to be the standard.
B37: Average labour cost per hour. In Denmark this assumed to be 70 EUR.

In addition to the cost of the refurbishment the hotel will miss a potential revenue from renting out the room for the days it is under refurbishment.

Case 3 input
This case shows the impact of reduced power consumption, due to optimisation of the operational time of the ventilation system based on data supplied by Aguardio.

B49: Specify the number of peak hours the ventilation is operation per day based on peaks for showers (morning and late afternoon). The standard is assumed to be 8 hours.
B51: Specify the reduction of power consumption for the ventilation system during off peak hours. As a standard the value is assumed to be 50%.
B53: Specify the average power consumption in kWh per day per hotel room during peak hours. Based on data from a Danish hotel the value is set to be 10 Watt per hour = 0,24 kWh per day.
B55: The average cost of power per kWh. In Denmark the value is 0,20 EUR.

Case 4 input
This case shows the branding value of a more sustainable profile for a hotel due to Aguardio compared to a hotel without Aguardio. The case shows the branding effect of the occupancy rate.

B64: Specify the average net revenue per hotel room per night.
B65: Specify the gross margin for a hotel room compared to the hotel room not being rented out for the night. Estimate.

B67:   Specify the value for the change in occupancy rate due to Aguardio. As a standard we have assumed a change in occupancy rate of 0.1% (very conservative).

Case 5 input

This case shows the branding value of a more sustainable profile for a hotel due to Aguardio compared to a hotel without Aguardio. The case shows the branding effect of price erosion.

B75:   Specify the current occupancy rate.
B76:   Specify the change in the net price per night for a hotel room due to Aguardio. As a standard we assumed a change in price of 0.1% (very conservative).

Investment

The table shows the list price per Aguardio unit.

Overview economic effects

The overview shows the individual effect of the 5 cases described above and split on operations and branding effects plus the payback period for the complete project.

Overview environmental effects

The table shows the savings in power consumption (kWh), water (m³), tons CO_2.