

**Company:**

A manufacturer (The Company)

**Industry:**

Semiconductor manufacturer

**Location:**

Multiple facilities around the world

The Company is a Semiconductor factory with a number of facilities around the world. All the facilities are maintained and managed in parallel to one another. The Company is run in a top-down business model where all decisions are strictly determined by headquarters with minimum or no flexibility for localization. The process is highly guarded with security and secrecy a major priority. The factories are all very modern with state of the art high tech equipment and are continually upgraded. The company prides itself in maintaining its high standard in quality assurance while investing in the environment.

**Business Need:**

Recently, The Company received water bills which exceeded its projection and in-house metering system. The discrepancy between the municipality and the factory came to a deadlock with accusations flying from both sides. The municipality claimed its turbine meters are completely reliable and would not budge from its position while The Company claimed their magnetic meters were accurate.

**Solution:**

In seeking a resolution to the dispute between The Company and the municipality, The Company considered installing parallel meters in the entrance of the factory in order to match the readings. However, this option was rejected by the municipality who claimed its precedence to additional claims. The factory was forced to seek other options or take the municipality to court. Since The Company is well liked in the community and 70% of its employees are local residents of the city, going to court was not a viable option.

Seeking an alternative solution, an in house consultant contacted IOSight to facilitate. After devising a strategy, we installed i-Green and collected data from a number of resources, analyzed the input and presented traceable conclusions. Unable to access all the resources needed, IOSight developed additional analytic steps to make up for the lack of direct information.

Data was collected from eight meters within the factory, from their waste water facility and from other controllers in different areas of the facility. Using the collected data, it was possible to calculate and analyze how much water was being used, was recycled back to the sewage and was wasted in leakage or inefficient water management.



## Case Study (continue)

In addition, i-Green enabled the analysis of pressure points and changes in the water path to pinpoint trouble spots. Four parameters were tracked to find leakage– flow rate, pressure, levels, and qualities of PH and chlorine.

Using time series data and trend data - two types of statistic components - i-Green also enabled the analysis of trouble spots. By comparing data collected over a designated period of time, for example every Sunday for a year, i-Green presented an in-depth view at the facility's water habits and trends. i-Green's trend data capabilities analyzed flow rates, pressure and energy consumption trends in order to determine irregularities.

Furthermore i-Green tracked the meter readings which were taken periodically. To overcome the known issue with meters resetting themselves, i-Green was able to calculate the sum by identifying the change in the sequence of the meter reading and automatically adding the number before the change and the number at change.

### **Result:**

i-Green monitored every step of the process and reported all trouble spots. The results showed indisputably that the meters at The Company were accurate and the municipality was now responsible for solving the issue. We can only guess that the municipality will reimburse The Company and a new municipality meter will be installed