

# OPIT Solutions AG

OPIT Infrastructure Management (OIM) The solution for sophisticated energy, asset and contract management



## Big Data

### Automatic detection of anomalies

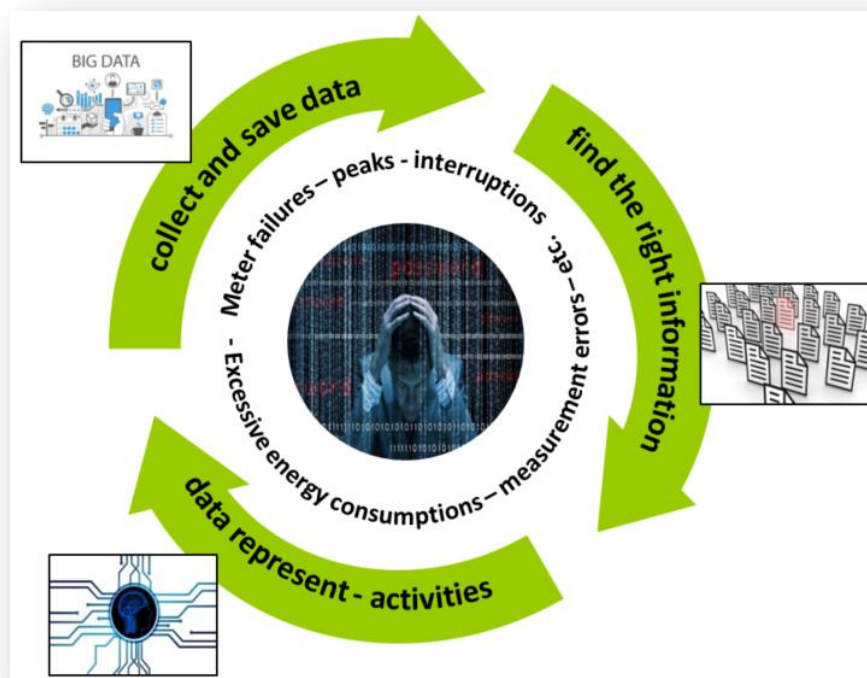
Automatic system suggestions will alert you to anomalies and will be able to initiate the necessary measures promptly.

## "Find the needle in the haystack"

Finding anomalies ("outflowers") in large amounts of data is time-consuming. First, it must be understood what to look for. Finding the defined anomaly within these amounts of data corresponds in many cases to a search for the "needle in a haystack".

Anomalies can have a wide variety of properties. A total failure of a consumer or a meter is superficially easy to find. But how plausible is the prognosis of "failure"? What distinguishes a "failure" from a regulated on and off? It becomes even more difficult if instead of a total failure a reduced or increased consumption is measured? Is this an anomaly or is there an explainable connection with the reduced or increased consumption, such as a fluctuating cooling energy due to meteorological conditions?

Such anomalies are automatically detected in the OPIT Infrastructure Management System (OIM), categorized and displayed in tabular as well as graphical form. With a full integration into energy management (e3m), the expenses for finding anomalies and faults are significantly facilitated.



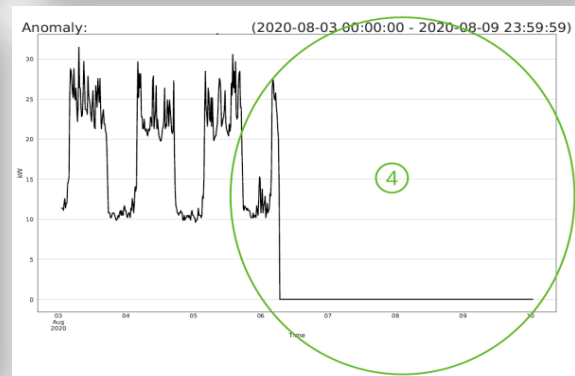
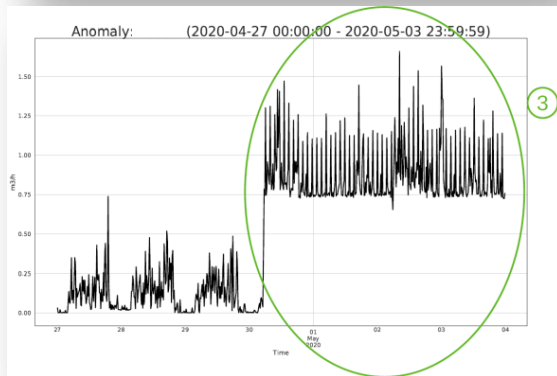
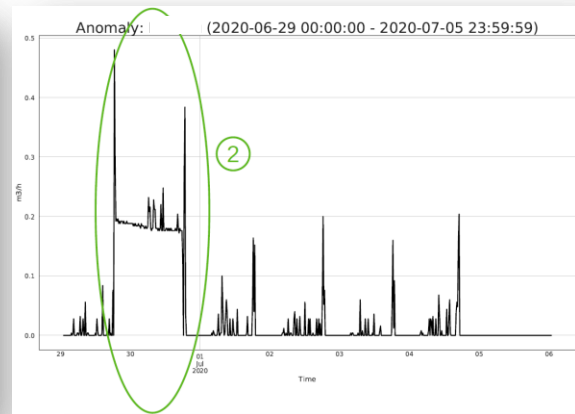
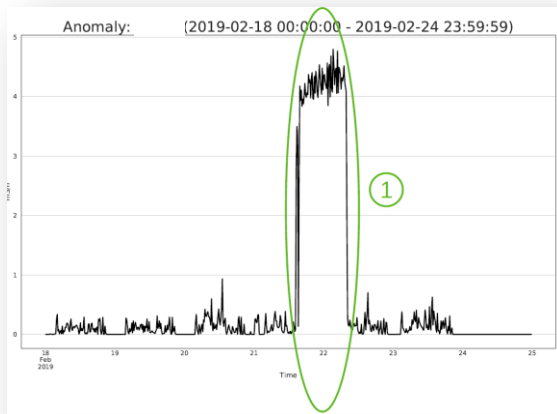
## Asking the right questions

- How can be found relevant information from large amounts of data?
- How can intelligent systems help us in our search?

OPIT Solutions AG has been working on the topic of "Automatically detecting anomalies" for several years, has found answers in close cooperation with EPFL Lausanne and integrated the resulting solution into the "OPIT Infrastructure Management (OIM)" system.

## Examples for anomalies

Standort	Messpunkt	Datum	Bemerkung	Auswertung
Location 1	D01	21.02.2019	Emergency cooling put into operation after malfunction at GWK	Anomaly 1 found
Location 2	D10	30.06.2020	increased water consumption	Anomaly 2 found
Location 3	D3000	30.04.2020	Very high consumption because system separator of booster defective	Anomaly 3 found
Location 4	E01	16.08.2020	Counter failure	Anomaly 4 found



1. A spontaneous increase in the power consumption of an emergency cooling system indicates a defect in the cooling system.
2. A spontaneously increased water consumption could indicate a leakage in the water pipe system.
3. Very high consumption of the supplied fresh water indicates a defect of the system separator.
4. A total failure of a counter value indicates a defect of the counter.



## Sustainable, efficient and cost-saving

With the experience of more than 20 years, OPIT Solutions AG takes on the topics of efficient, environmentally friendly and sustainable use of our energy resources (energy management e3m) as well as efficient planning and operation of infrastructures (asset management a3m) and the professional billing of ancillary costs (contract management c3m).




Using state-of-the-art technologies, OPIT Solutions AG has developed a web and app application that supports our customers in efficient handling in energy, asset and contract management. With a sustainable further development, OPIT Solutions AG responds to the wishes and valuable suggestions of our customers and partners and thus ensures the fulfillment of the constantly growing market needs.

Despite the rapidly growing regulatory provisions, cost reductions are generated by identifying potential savings. In addition to lower costs, this also leads to a sustainable economic and ecological approach to the management of infrastructures.

Through our project and trading partners, we work together to find the optimal solution for your company tailored to your needs. We are happy to advise you personally and make our more than twenty years of experience available to you.

### Ihr OPIT-Team

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	<b>Energy-Management</b> <ul style="list-style-type: none"><li>▪ Measure and optimize</li></ul>
	<b>Asset-Management</b> <ul style="list-style-type: none"><li>▪ Operate and maintain</li></ul>
	<b>Contract-Management</b> <ul style="list-style-type: none"><li>▪ Manage and bill</li></ul>