Real-time Access to Utilities Data Saves Resources, Saves Money

Challenge

The University of Alaska Fairbanks (UAF) places high priority on energy conservation and sustainability. In the past, all combined heat and power data was buried in stacks of paper files, and required manual entry into spreadsheets prior to widespread sharing. UAF needed a way to make utilities data widely accessible to students, facilities staff and consultants to track usage patterns, encourage the right behavior and get real-time feedback on conservation efforts.

Experience

UAF turned to Transpara's Visual KPI mobile BI software to monitor and intuitively display real-time energy consumption for 40 buildings across campus. With Visual KPI, a myriad of users – from the highly technical engineer who wants to analyze every minute piece of data, to students, consultants and academic faculty and staff – can see different views of the same data as it's happening and get instant feedback on electrical, water and heat consumption.

Visual KPI automatically reads and aggregates OSIsoft PI System data from 12 different sources (e.g. building automation, metering and power plant control systems) and displays the metrics on any web-enabled device, including smartphones, tablets and PCs. Metrics like kilowatt hours of electricity, steam output, and gallons of water can all be viewed as KPIs, trends, or alerts on any device.

In addition to providing critical operations data, Visual KPI also serves as the primary monitoring tool for UAF's 'pay for utilities' model, where the university bills individual users for utilities. Visual KPI offers visibility into data that was otherwise inaccessible, allowing students to examine their usage patterns. Not only does this reduce the number of billing issues, but it also is a catalyst for changing consumer behavior.

Easy to implement and use, Visual KPI requires almost no training. It allows even the casual user at the university to look at data and ask *why*: Why is this building's energy usage peaking at noon on Wednesdays? Why is the chiller cycling on and off every hour when it shouldn't be? Why was my bill higher this month?

Visual KPI's intuitive user experience, mobile accessibility and geo-location features enable UAF users to quickly identify problem areas or best practices and make an immediate impact on consumption.

Results with Visual KPI

"Visual KPI is a window into the process that drives behavior," said Charles Ward, Director of Utilities at UAF. "If Visual KPI helps people ask why something is behaving strangely and modify their behavior accordingly, then it will drive down energy usage and ultimately save us money."

> *"Visual KPI was so easy to get going. We had data on the web in less than two hours."*
>
> - Charles Ward, Director of Utilities, University of Alaska Fairbanks

For people who are "visual by nature", according to Ward, this real-time, mobile BI tool is a perfect fit for providing immediate visual feedback on energy consumption. It helps to:

- Change behavior, thereby driving cost and resource savings;
- Drive down energy usage;
- Support sustainability efforts; and
- Increase awareness for role of utilities operations at university.

Visual KPI Implementation

What's Next?

Visual KPI has the potential to reach thousands of UAF users. In one potential use case, the university will use Visual KPI's GeoMaps and 'Near Me' features to provide car owners with mobile data about parking lot capacity. By knowing how full a lot is, students will be better able to determine the availability of engine block heaters (a necessary feature that keeps car engines functioning in prolonged subzero temperatures).

"Visual KPI is a way to meet all of our needs for publishing data, whether it's for billing purposes or high-end engineering. Ultimately, it will help us lower energy usage."

Jedediah Lowell, Electrical Engineering Assistant, University of Alaska Fairbanks

Visual KPI will also enable the university to bill individual departments based on energy usage instead of lumping all academic facilities together. If the School of Engineering department could have a clear view into their power usage, "that may encourage them to shut off the lights and free up funds that can be used elsewhere," said Ward.

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