Solution Brief

Digital Reach

Energy monitoring solution

IoT-connected Energy Monitoring

Executive summary

In this energy intensive world, electricity requirement is ubiquitous. We source our energy from the electricity grid to run our commercial, industrial and household premises. There are power outages, load shedding and other anomalies from the main supply which lead to intermittent breaks in the electricity supply. A better knowledge of how energy is used within a facility allows us to identify an array of prospects to improve efficiency, minimize waste, and reduce energy consumption.

Assessment of data from the monitoring system can reveal existing or imminent issues that can adversely affect the operation and product within a facility. Historical data from power monitoring systems can help locate and correct both acute and chronic problems, resulting in increased productivity.

Data trends can forecast and notify the appropriate people. The trends can enable the personnel to take preventive actions and plan the energy needs for the future.

"In God we trust. All others must bring data."

Parameters

- Voltage
- Current
- KWh

Digital Reach employs IoT (Internet of Things) to further enrich the functionality and efficiency of the utilities in your premises.

Data is the currency of the digital world. We help customers to aggregate the important data points. Data analytics can further help its customers understand how to operate their devices more energy efficiently.

Please refer the diagram in the next page to get an overview of our scope of activities in the Project.

Make data-driven decisions.

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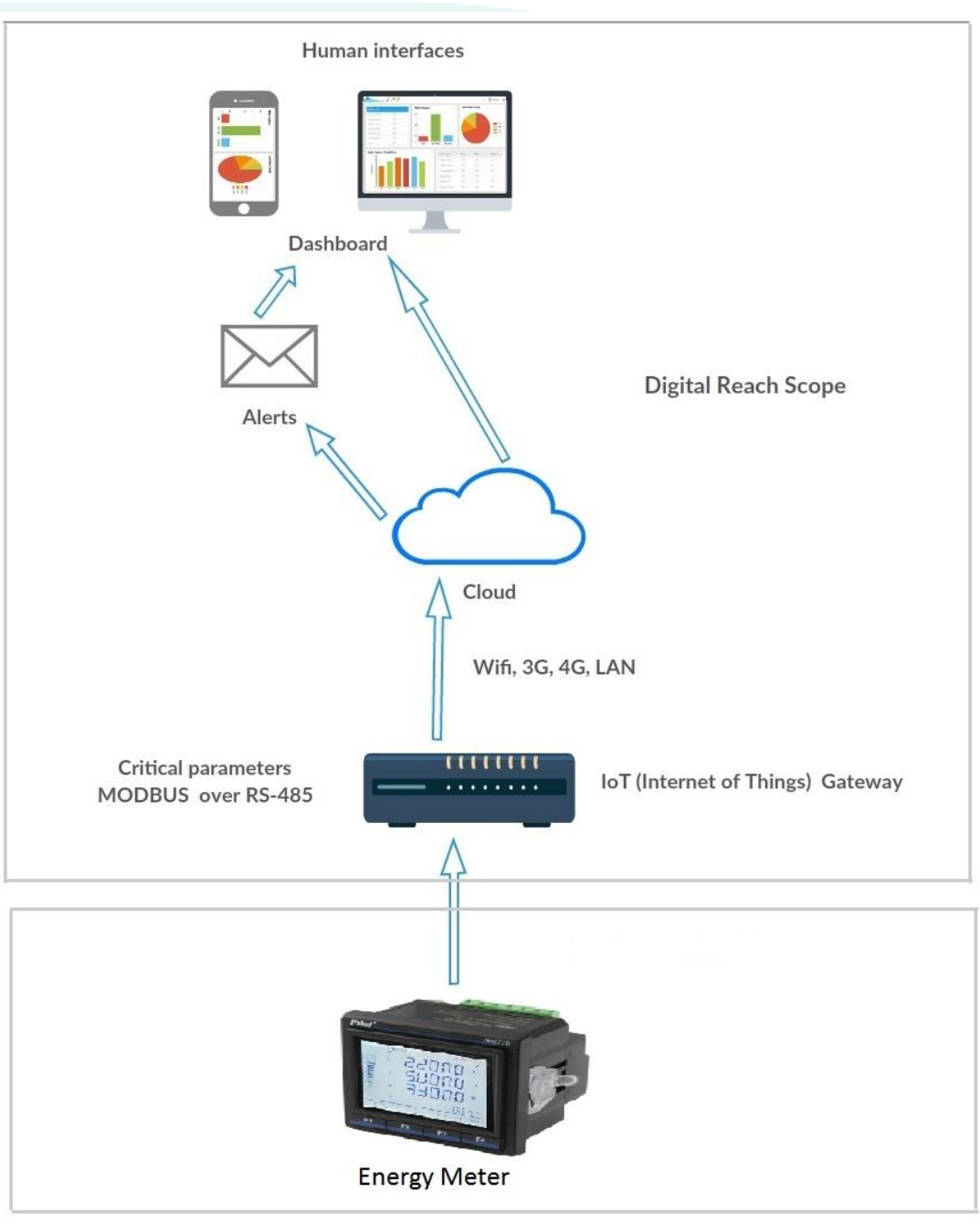

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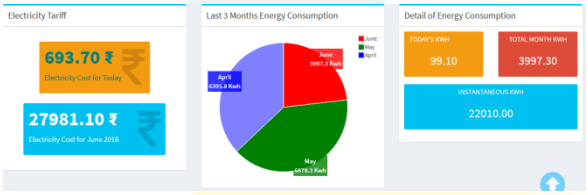
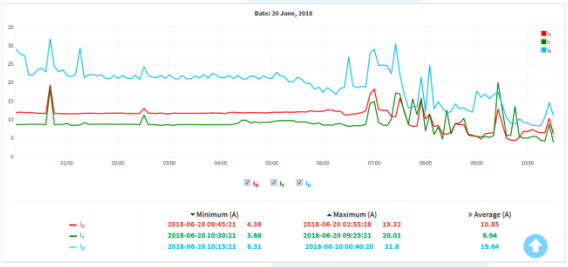
Reduce downtime and increase efficiency

Energy is an important financial component in any and every industry. Energy usage is ubiquitous in most of the modern industries. The production and manufacturing activities are to a large extent dependent on proper functioning of the supply. Regular servicing and replacement of worn-out parts ensures there is smooth functioning of the manufacturing premises. This ensures reduced downtime which is an integral part of any institutional/ factory set-up.





What can be done better? The above mentioned examples are of preventive maintenance. The care and servicing by personnel for the purpose of maintaining equipment in satisfactory operating condition by providing for systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects.

But, preventive maintenance is solely based on regular maintenance cycles. As of now, it is not based on equipment condition data. This leads to too much or untimely preventive maintenance. What if you can keep track of equipment condition and their impending failures? This can help in determining timely intervention of equipment and replacement of worn-out parts so that downtime can be brought to nil or reduced. Production will not be affected in such a case which will result in effective continuous operation of the production facility.

The above example is of predictive maintenance. How can we make this a reality? The answer is data. There are various parameters of your energy consumption which can be tracked on a real-time basis. This can promptly identify the trends of energy usage in your premises. The consumption can be later tweaked to conform to regulatory or financial requirements. Identify the gaps and wastage of energy.

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How can Digital Reach help?

Data. Insights. Action.

Digital Reach gives you an end-to-end solution to collect valuable data metrics. Graphs and patterns pertaining to these metrics can be charted for visual display and easy identification of fault-lines so that predictive maintenance can be initiated. Timely predictive maintenance on pre-set trigger or alarm points can prevent untimely shutdown and wastage of energy which lead to inflated electricity bills.

At Digital Reach, we identify the customer's pain points and select the appropriate end-nodes (sensors) to monitor the **data**. The IoT gateway which are optimally selected according to the data throughput and storage needs acts as a intermediary device before they get sent to the cloud. The data which is sent to the cloud is then represented in functionality-specific dashboards. These dashboards can be viewed on multiple viewing devices like desktop, tablet, and smartphone.

The trends which are collected in the cloud can then be utilized to get **insights** on the electricity usage in your premises. The insights into these trends can further optimize the usage cycle. Historian will help plan the future production output. **Action** can be taken based on robust data rather than on gut-instinct.

Move towards a data-based action world:

- Data acquisition
- Predictive maintenance
- Optimize Equipment performance
- Optimize Energy management

Solution overview

Insights driven from data form an integral part of IoT enabled Energy monitoring solutions (EMS). The remote monitoring feature enables the user to constantly monitor and keep tabs on the status of the energy consumption and momentarily send alerts and notifications when anomalies arise.

We provide dashboards with periodical reports and graphs for the same on a periodic basis (daily/ weekly/ monthly) as per your requirement

Make data-driven decisions.