



When Samudra LED got Azure

Company: Samudra Electronic System Pvt. Ltd.
Website: <http://www.samudraled.com/>
Company Size: 75
Country or Region: India
Industry: Design and Manufacturing

Company Profile

Samudra Electronic System Pvt. Ltd. is an ISO 9001: 2008 Certified Company and the manufacturing arm of SMC (Infrastructure) Pvt. Ltd. Incorporated in the year 1987, Samudra has been into designing and manufacturing custom built power back-up systems. This business, since 2009, has transformed into designing and manufacturing High Efficacy Energy Saving LED fixtures. An ESCO company registered with BEE, Samudra LED partners with various government & non-governmental institutions to implement energy saving projects in the lighting segment. With over 25 years of experience in Power Electronics and Engineering, Samudra has the expertise, technology and resources needed to exceed customer expectations.

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Today, India is in the mission to achieve 100 percent electrification. Generating enough electricity and creating the power distribution infrastructure is only half the battle; the rest remains in the country's ability to optimize the usage and curb wastage. So, when a city like Jaipur decides to move in the energy saving lighting direction, by replacing its existing streetlamps with LED lights, it should not come as a surprise. This daunting task, to bring the energy consumption of the streetlamps down by at least 77.13 percent, was taken up by Samudra LED, a consortium partner of EIPL. The company decided to upgrade the street lighting with smart LED lighting. Smart-lighting meant that they could analyse the data in real time and improve efficiency while eliminating wastage; it also meant that they needed to have the ability to warehouse the data and analyse it.

This led them to Microsoft; here we understand why.

Business Situation

Incorporated in the year 1987, Samudra built a business in designing and manufacturing custom built power back-up systems. It was during the late 2000s that the company transformed into designing and manufacturing of energy saving lighting solutions.

In a short span, the company carved themselves a recognition and name in the industry. Having successfully designed, implemented, and managed several private and public projects, Samudra is amongst the most sought-after companies in the industry today. Over the years, the company has successfully ventured into the smart LED lighting business. So, it was not a surprise when they won the Jaipur Nagar Nigam tender for energy saving city lighting solutions.

The Jaipur Nagar Nigam project, was an enormous undertaking. The scale was vast, so was the task; replace over two lakh streetlights, reduce the energy consumption of the streetlamps by at least 77.13 percent, and manage it for a period of 10 years. This scale and scope made it a project unlike any Samudra LED had handled before. In addition, the replaced streetlights had to be controlled and monitored centrally. For Samudra LED it was more than just another business undertaking. The company understood the economic, social, and environmental impact the project would have. When they successfully bagged the contract, the company wanted to ensure the best solution possible.

The project began with an independent baseline audit. An independent engineer jointly appointed by the state government and Samudra LED conducted the baseline audit, asset marking and lux measurement (measuring the illumination of the existing street lamps). This baseline audit became the reference point on which Samudra LED had to establish the energy savings. The company decided to deploy smart LEDs in the city. Smart LEDs would constantly gather information about their working conditions. This data is then collected and analyzed to gain actionable insights, based on which the adjustments are done; ultimately saving electricity and optimizing usage.

As the LEDs generate an enormous amount of data, the need for efficient data storage and analytic capability arose. The implementation of Energy Conservation Measure (ECM) was based on this analysis. Since the bid was for very high energy savings, 77.13 percent reduction from the baseline, and included a penalty clause, Samudra LED had absolutely no margin for error. Another key necessity was the ability to manage the streetlights from one centralized location, this could essentially be considered as the backbone of the project since they would not be able to prove the efficiency target without it. It was clear that Samudra LED needed a robust IT infrastructure in Jaipur to pull this project off successfully. The company started looking for appropriate solutions.

The initial idea was to build a data center with rented servers and then hire programmers and develop the essential software. Though viable, this plan was investment heavy. Additionally, there were challenges associated with seamless programming capability and data security. It became clear that if the company is to take the route of rented servers, they were not compatible for over-the-air-programming. The company would have to go to each location and do the programming there; not a practical or efficient approach. With the local server setup, availability was also a challenge. "We needed a solution, rather a partner who could address these challenges; someone who had in-depth expertise and experience in this field, some we could completely rely on," says Mr. Prafulla Thote, MD Samudra LED.

What Samudra LED needed was a platform that would have high availability, best in class computing and analytics capabilities, seamless over-the-air-programing ability, and industry best security features, while being affordable. They reached out to Precimetrix for guidance in this regard. Precimetrix, being a pioneer in IoT and analytics solutions for the manufacturing industry, worked closely with Samudra LED to understand their needs. After this systematic evaluation, Precimetrix concluded that Microsoft would be a perfect partner for Samudra LED and could help them bring the Jaipur Nagar Nigam project to a reality.



Solution

Precimetric have had years of experience working with firms enabling real-time process management and actionable analytics to improve productivity, efficiency, and compliance. The company also has experience drafting Industry 4.0 roadmaps. They understood the importance of the platform and knew immediately that Azure would be best for Samudra LED. Azure is an open and flexible, enterprise-grade cloud computing platform which offers high levels of security, and comes with high availability, in a pay-as-you-go model. After understanding the capabilities of Azure, Samudra LED decided to go with it. Additionally, Azure was being used by various Government of India departments as well, this helped validate the trust in the platform. The partner support infrastructure of Microsoft also weighed heavily in its favour.

On Azure, Samudra LED had the computing capability they needed at an affordable price. Azure complies with international security standards and protocols, and hence is among the most secure cloud platforms available in the industry. Samudra LED's management no longer had to worry about the security of their data. The service level agreement (SLA) of Azure in terms of availability is 99.99 percent. This essentially meant that the platform would be available round the clock; another challenge Samudra LED had, thus efficiently tackled. Finally, Azure suite includes one of the best analytics platform, Power BI. This meant that Samudra LED could have all the actionable insights that would be required in ensuring that the Energy Conservation Measures (ECM) are rightly developed and implemented.

The adoption of Azure platform went smoothly, without glitches. Microsoft team always stood by to support. Upon the completion of adoption, all the software's were developed, and the pilot run is being conducted now. The results so far, attest that the decision to adopt Azure was the right one. Samudra LED managed to leap over the agreed 77.13 percent reduction in energy usage and set a world record by exceeding 80 percent savings.



Benefits

Benefits that Samudra LED witnessed post the implementation of Azure includes:

High Availability: Azure offers 99.99 percent uptime as part of the service level agreement (SLA) itself; a critical requirement for Samudra LED.

High Security: Azure is built keeping security at its core. It complies with most of the international security protocols; Samudra LED no longer has to worry about the security of their data.

Analytics: Azure suite comes with some of the best analytics tools in the market and hence Samudra LED can now gain actionable insights without any trouble.

Affordability: Azure comes with pay-as-you-go model and hence is highly affordable, add the lack of initial investment to this and the money Samudra LED saved is enormous.