SEVA

Simplifying Energy Readings

Indian Defence Sector (Garrisons Unit). One of India's largest organizations in terms of manpower, selected ConnectingDots Infotech as their technology provider as part of the Digital India initiative. Electricity Meters Data Reading was identified as the area of focus. The plan was to take a smaller geographic location as a pilot project, and then move to a PAN India based implementation. Objective was to increase efficiency and reduce time taken for the entire process of Energy Meters Billing, from collecting readings to delivering bills.

Challenges
about existing system

Readings Collection: The current process of collecting energy meter readings was manual, time consuming and error prone. A single person (a runner) would personally visit around 400 households to capture readings.

Prepare Data for Billing: In order to begin billing calculations, data had to be collated from multiple vectors, like, current Slabs imposed by the State Govt, Actual begin date of the Officer, Previous Billing Details etc.

Billing Calculations: This process was achieved using primitive Excel based formulas.

Time: The entire cycle was to run once each quarter. And because of the inefficient manual approach, 100% of the cycles were delayed by more than 2 Months on an average.

Cost: Replacing all the existing 10K+ meters with smart meters was an extremely costly and time consuming solution.

OUR
APPROACH

Phase 1
Partial Automation

- Achieved partial automation by introducing Inversion of Control which enabled the consumers to capture and submit their own readings using a consumer friendly mobile app.

- Consumer App : A simplified and consumer friendly 3 step process Scan, Capture and Submit.

- Admin Panel: Highly customized and yet simplified Admin Control Panel, with minimum learning curve needed to operate.

- Staff Android Application: To enable Staff to onboard/offboard consumers and take readings on their behalf.

- Automated and timely notifications to consumers to remind them to send meter readings.

- Automated monthly batch processes to enable monthly billing and identify defaulters if any.

- Targeted Notifications to defaulting consumers to increase user interaction.

- Customizable workflow, with options to induce a review and override option for the admin.

- Cost Effective: With no need to modify existing meter and yet achieve a certain level of automation, this was one of the most cost effective way to begin automation.

Phase 2
Total Automation

- After successfully executing phase 1 for 3 quarterly cycles, the foundation was laid to move to total automation.

- Smartify existing Meters: With our proprietary LPWAN DOT-1 Optic Module we could use the existing meters and yet capture readings from them programmatically.

- Integrated this hardware module as input for Phase 1, replacing the dependency on human interaction to capture readings.

- Simplified workflow eliminated multiple human interactions at the admin end too, making the complete process totally automated.

- Cost: LPWAN DOT-1 Optic Module is compatible with energy meters from various popular brands. And a Single module can connect upto 16 Energy Meters, making it further cost effective.

SEVA
IMPACT

1 Zero Delays and Zero Errors for consecutive 4 quarters and running.

2 Reduced the entire Billing Cycle from 3 Months to mere minutes.

3 Reduction in man hours, human errors, delays, etc. effectively resulted in direct savings of thousands of dollars per cycle.
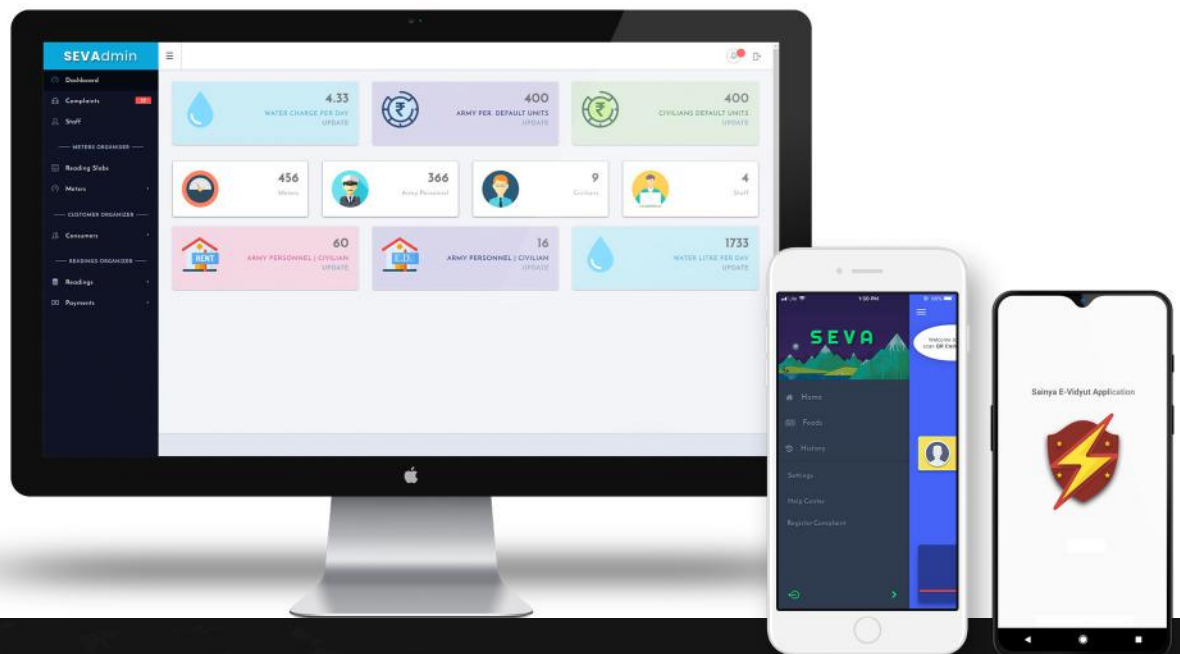
4 Successful implementation of SEVA in Pune, has initiated the process to deploy the same services PAN India. With the next geographic location being Mumbai and Goa.

5 The Idea was awarded as the Top Cost Saving Effort Award for Year 2017 across 11 states (under Southern Command).

6 Achieved 100% Tranparency in entire billing workflow.

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