BWSSB

Bangalore Water Supply and Sewerage Board is an autonomous body formed by the State legislature under Bangalore Water supply and Sewerage Board Act on 10-09-1964 for Water Supply & Sewage disposal. It is one of the first Water supply & Sanitation Utilities in India with jurisdiction of entire Bruhat Bengaluru Mahanagara Palike Area consisting of 7 City Municipal Corporation and 1 Town Municipal Corporation and 110 Villages.It has the following mandates: adequate water supply to meet demand; creation of sewerage network & safe disposal of sewage; Preparation, implementation of plans & schemes for augmenting water supply & safe disposal of sewage; Levy and collection of water charges on 'no loss no profit basis' for sustainability of the system.

Bangalore, the capital city of Karnataka is the third largest city and the fifth largest metropolitan area in India and is one of the fastest growing metropolitan cities. It is a centre for education, IT & BT industries, sophisticated high tech health care and many MNC industries which are attracting people to the city. As per Census 2011, the population of Bangalore city was about 8.5 million. The Bangalore Water Supply and Sewerage Board (BWSSB) is responsible for providing water supply to BBMP area of 800 sq. km.

Government of Karnataka allocated 19 TMC of water from Cauvery River for the water supply requirements of Bangalore City. In the year 2012, with the commissioning of the CWSS Stage IV, Phase II, the allocated water from Cauvery River has been exhausted. At present BWSSB is supplying treated Cauvery Water to Bangalore City under the Cauvery Water Supply Scheme (CWSS) Stage I, II, III & Stage IV Phase I & II with total installed capacity of 1310 MLD. This quantity of water provided to the core areas of BBMP including the erstwhile 7 CMC's and 1 TMC area covering total area of 575 sq.km but excluding 110 village areas of BBMP covering 225 sq.km. In order to provide water supply to the newly added 110 villages which are part of BBMP, BWSSB is finding it difficult to meet the water requirements even after implementation of CWSS Stage IV, Phase II scheme.

THE REQUIREMENT:
Back then, technology was never prevalent so everything was manual for a good long period of time. Consumers had to approach the BWSSB office, buy and fill in an application and so on and the entire process was quite long and tedious for both BWSSB and the consumers. With the advancement in technology over the years, they decided to go digital and make this long process more convenient for everyone, focusing on reducing the time spent in manual data updating.
In order to be able to access data instantly and make the entire process, starting from buying the application up until payment and the work order for the engineers, every step has been made just one click away for both the consumers, the plumbers and the engineers. With the technical support of Globals, we have made sure of the ease of access to information and Online Water Connection application online, which was always the primary focus of this project.

Ideally BWSSB required Design & Development of Online Water Connection Application System, which is a web based application used for managing following primary components:

❑ Connections sanctioned report

❑ Online Water Connection that can be applied by Users in any of the following categories

- Domestic Connections

- Non Domestic Connections

- Apartment Connections

THE SOLUTION:

Since, they were looking for a more standardized procedure online to bring an order to the work and an option that supersedes manual labour, they approached Globals, a company with high knowledge and expertise in terms of digital transformation. Being technically sound, BWSSB approached Globals to for effective solutions related to web designing and remote server hosting to manage and monitor the server form backend. They created a website that primarily focused on Online Water Connection- Sajala wherein: Consumers will be able to apply to a new water connection online and be able to view the stages at which the processes stand. An equally organized architecture was designed for the internal admins, creating a systematic work flow within the system. Thus, it becomes easier to track the internal progress on a daily basis under one single platform or roof.

A clear flow was presented, wherein, from a consumer's point of view, they can buy the application online from our website after registering and creating a login for themselves, after which they upload their documents and complete the payment through a secured integrated payment gateway. From here, the engineers take up the work once the work order is issued and assign the registered plumbers to fast track work progressively. So each stage is very meticulously planned, incorporated and executed online to make the process as convenient as possible for all the parties involved and for the internal team as well. Globals has an eye for details and comes up with very lucrative ideas, which is the very reason why the current process for OWC has become much more effective, orderly and hassle-free.

The technology used to develop the website was **Codeigniter framework-PHP 5.4v** MySql (backend)**,** with UI/UX design JavaScript, JQuery, Ajax, REST API, CSS, hosted using CentOS 6.9 v with Apache 2.2.15v and MySql 5.1.73v. These above mentioned technologies helped created and responsive and dynamic website that supported:

- In connecting web application with the DataBase
- Instant internal updation for users.
- Supports all cross-platforms such as Windows, Linux, Ubuntu, etc.
- The data security used is MD5 which is one of the most secure cryptographic algorithms.
- REST API is used as an interface between HTTP or HTTPS to share data securely.

RESULT:

- 100% manual intervention has been eliminated as every single procedure has been brought to the digital plat form, equally, time consumption has been considerably reduced when compared to the time taken when filing documents manually.
- There is complete transparency for consumers where they can view every step of the stages and if any glitches or delay occurs, they can directly communicate online with the respective engineers and understand the reason for the same. Even if an application has been rejected, the reason for the same can be viewed online under messages by the engineers. This way, the consumer will never face the issue of miscommunication and will always remain up to date.
- Applications are recorded swiftly.
- There is also an SMS integration for consumers and plumbers on updates post submitting the application.