TAKING THE MOBILE ROUTE TO SERVICES

How the Maharashtra State Government has successfully leveraged the mobile revolution in the country to enable its departments to provide better services to the citizens

The Maharasthra State government in its endeavor to ensure that all citizens have quick and speedy access to information has extended a lot of its services over the mobile platform. Some of these services are either newly developed or extensions of services currently available through a web portal. These include:
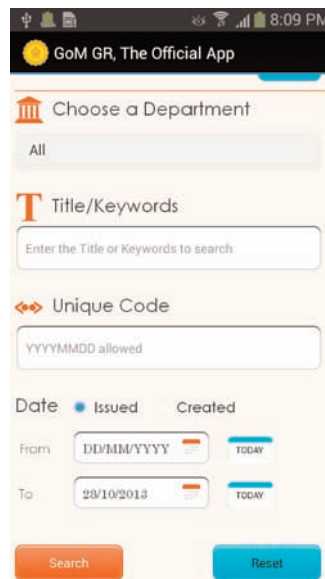
GOVERNMENT RESOLUTION (GR) APP

For the Government of Maharashtra, ensuring timely dissemination of the right information to the citizens of the state is of paramount importance. It was primarily using the Maharashtra State portal www.maharashtra.gov.in to provide the relevant information such as Goverment Resolutions (GR). Every department in the State of Maharashtra, creates a number of Government Resolutions (GR) and publishes on this website.

However, a lot of citizens today access information on their mobile devices, and therefore the Directorate of Information Technology (DIT), Government of Maharashtra decided to take one step further and made the all GRs available on the mobile platform. The DIT created the official mobile application for GR on the

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Android platform.

The app is designed to be easy to use, and the interface is bi-lingual – currently supporting English and Marathi. It connects to the Maharashtra State portal to search and retrieve all GRs. Users can search for any GR by giving department name, title/keywords, date-range or the Unique Code of GR etc. in search fields. They can also save downloaded GRs as PDF files. A smart notification feature alerts users of any new resolutions released since their last login.

This Mobile App is available for Android based mobile phones on Google Play store. Any citizen can download and use this app, free-of-cost on any android based mobile device. To download this app, the citizen can visit the Maharashtra government website at www.maharashtra.gov.in, or the Google Play store. This app requires a working internet connection (2G or 3G).

The app has already seen a good response and is quite popular among citizens. It has been downloaded by around 50,000 users in just one month. The mobile app is now being ported to other mobile operating system platforms, for Apple iPad as well as Windows 8 tablets. These versions also will be released soon.

MAHANEWS MOBILE APPLICATION

To provide real-time updates and news about the day to day functioning of Government, Government Resolutions, Hon. CM, DCM and other minister's program etc. the State Government has created an official news portal called Mahanews which not only offers news stories, but also features video clips and job opportunities for job aspirants.

The portal is source of information for newspapers, electronic media and citizens too, and therefore has become very popular among media professionals for getting updated news on the State Government. The portal sees around 5000 daily visitors and to provide further easier and real-time access, the DIT has also created a mobile app. The Mahanews App (beta version) is now live on the Google Play Store .

The app syncs news from the

website in real time and displays the latest news articles with photographs. It displays news articles from the 'Main News' section of the portal and also recruitment related news from the 'Find Jobs' section on the news portal.

The final version will allow users to select any district within the state to view news about that particular district. It will also have the facility to show most recent news, currently trending news, and allow users to bookmark or save news articles on mobile device.

Furthemore, it will also feature user feedback on news and allow them to share news over social networking website such as Facebook, Twitter and Google plus.

VISHWAS MOBILE APPLICATION

The Zilla Parishad of Nagpur wanted to ensure timely and effective monitoring and auditing of schools by on-field employees. It therefore was looking to develop an

online reporting system to provide regular and standardized reports and MIS to Senior Officials. The system would also report any damages to the school building that require repairs. The Zilla Parishad was looking to create an application to keep a track of the funding provided to the school, along with the monthly expenses occurred in the school and simultaneous reporting of the opening and closing balance.

False reporting from the on-field Kendra Pramukh is a major concern for the BEOs. The Zilla Parishad wanted a system that that is integrated and proxy-free, while simultaneously ensuring that the visits are effective and all the necessary data such as teachers or principal attendance, student attendance, mid-day meal menu, mid-day meal attendance etc. is captured. The ZP administration decided to get MIS report-ing done on-site which would give real time data back to the management.

Therefore, VISHWAS (Visiting

Information on Schools Handled with Attendance System) a unique mobile application, was developed by the Zilla Parishad, Nagpur to improve the performance of on-field employees of the education department of the Zilla Parishad and collect real time information on School activity through them.

The mobile app serves as target management and data verification system, which monitors and verifies the targets assigned to on-field employees using GPS-enabled Android phones. The app is used by all field employees of Nagpur Zilla Parishad.

Post deployment, details of 1400 schools was sent using the application and more than 1800 reports were produced on schools in 13 talukas. The Kendra Pramukh has been able to verify meal attendance for over 1200 schools. 1600 school toilets were maintained clean due to monitoring through VISHWAS. A highlight has been the marked improvement in the academic skills of 38 percent students due to regular teaching from the subject teacher.

At the other end, it has reduced false reporting of MIS data too. 158 show cause notices were issued by the education department on the basis of data and reports produced by VISHWAS. 12 Kendra Pramukhs were caught sending incorrect information from incorrect locations. 180 teachers were given first verbal warning for not providing daily notes. 1200 exams were conducted by the Kendra Pramukh in the visited schools.

AUDIT & SURVEY MOBILE APPLICATION

The different departments in the State Government need to regularly survey and inspect a variety of public services being provided the government or the third party entities. A mobile survey app created by the

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State Government in June 2012 that allows them to collect this data on a tablet device. A highlight of the project is that the app was rolled out in just 45 days and has been operational since.

The survey app can be customized to create a form consisting of pertinent questions and the same will be downloaded on tablet. The user can fill the eForm and upload the data to server. The data can be text, numbers, GPS tagged photo, selection list etc.

However, the app deployment came with its own set of challenges. There was no standardization of Location (Dist/Taluka/VTC) and DIT had to create the data for 45,000 locations. To force the authenticity of the survey location, GPS was built in to record latitude and longitude of the location. However, long use of GPS was causing battery drain and affected the number of surveys. As a solution, smart GPS use was implemented within the app.

Sometimes, the surveys would be conducted in remote locations that had limited connectivity. Therefore, the ability to create offline surveys was added. To ensure the security of the gathered data, it is stored in government data centers (DMZ data centers).

The app design is very flexible allowing any kind of a survey to be created and made available in just two days. Furthermore, the app can support many departments and can be extended to support other states. The GPS tagging feature ensures authenticity of survey performed on right place.

The app has helped maintain the quality of UID enrolment service when the survey app was used to have check on them. As the app is customizable, the cost of maintaining it is very low and it not just acts as a survey tool but also as a data gathering tool. It has evolved from a project to a product that can be extended not only to across departments, but also across other states.

FOREST OFFENCE MANAGEMENT

The State of Maharashtra covers a geographical area of 3,07,713 sq km, 61,939 sq km of which is occupied by forest area. The State's forest cover is estimated to be over 20 per cent. The dense forest area spans across parts of the Western Ghats, Amravati and Nagpur region.

A forest area as large as this makes it difficult to monitor forestry and other related operations in the State. Furthermore, considering that the forest reaches to farthest of locations in the state,

The POR app replaces the current practice of recording it manually on POR diaries. It records the GPS locations and Geo tagged images which can act as evidence. The application helps building a database of different forest offences and offenders.

it was very important to have system in place that could monitor field activities in real time or near real time.

But, due to lack of adequate information and a good communication infrastructure, it was challenging to manage and get reports of the day to day activities of Forest Offence and Plantations for monitoring and decision making. The inherent delays hampered the decision process required at a particular time.

Key challenges included efficient capturing of data at source of origin, recording field information with proper evidences such as Geo tagged images, GPS coordinates and boundaries. Another challenge would be to ensure a system that can scale to encompass information from all key stakeholders. Further, such a large geographical area would require a robust MIS leveraging Mobile and GIS Technologies. The system would also need to include business intelligence tools to assist in planning and decision making.

THE SOLUTION

Therefore, it was decided that the forest management activities would be automated and the staff and officials would be provided the necessary technology to track and report the details from the field.

The Maharashtra Forest Department started by looking at automating the Forest Offences Activities part for effective monitoring. It was proposed to develop work flow-based applications to serve the business purpose and operations related to Offence Management. The department decided to execute its technology initiatives.

Hence it is proposed that the MFD should execute its technology initiatives in a phased manner wherein all the key functions pertaining to Forest Offences would be accessible through web-based applications. These applications would allow each user to log into the departmental portal and enter his data. The field force on the other hand, would be equipped with smart phone and use a mobile app to push the field information securely into the MFD application systems.

This would enable every employee to remain in constant touch with the latest happenings in the department. It would not only enhance efficiency but also bring in transparency, responsibility and accountability into the process.

The solution proposed was a Forest Offence Management System that would leverage GIS and Mobile technology. The smart phone app would be used by over

7000 field users while the web-based system would be used by over 500 forest officials.

HOW IT WORKS

The Preliminary Offence Report (POR) System for Forest Offence Management is the first initiative in the sequence of activities for Forest Offence Management. POR is essentially analogous to the FIR that is recorded by Police in case of any offence is reported .The system would allow filing a POR directly from the field location using a smart phone with the POR mobile application installed.

The POR app replaces the current practice of recording it manually on POR diaries. It records the GPS locations and Geo tagged images which can act as evidence. The application helps building a database of different forest offences and offenders. It also outlines sensitive areas on digital maps. While on one hand it standardizes the practice of recording PORs, on the other it provides near real time reporting of the incidence.

To register an offence, the complete details of case have to be fed into the mobile application along with GPS location and Geo tagged images. The case would then be uploaded into the Web Application hosted at the State Data Center (SDC) over the GPRS/3G/WiFi network.

The uploaded cases are then accessed by the Range Office through the web-based Forest Offence Management System which synchronizes with the web application. The case details are reviewed and necessary action is initiated immediately.

Furthermore, the details on the action taken and the status of the case progress can be entered into the Forest Offence Management System by the respective authorities. All monitoring reports can be filtered based on the cases registered based on the type of offense, investigation status, compounding status, seized materi-al; losses etc. and be produced by the system through a query. The data captured can then be integrated with spatial data going further.

The mobile app captures the following data from the POR form during the during the registration of an offence:

◗ Preliminary Case Report – Contains data related to offence locations, POR issuing authority, related forest areas (Compt, beat etc) and date of offence.
◗ Violation of Act & Rules with section / sub section under the case is registered.
◗ Offenders & witness.
◗ Loss / damage of forest produce, material or wildlife.
◗ Stump details in case of illicit felling.
◗ Geo tagged Photographs related to offence.
◗ Geo-Boundaries and GPS coordinates of the site

The mobile app offers several benefits. The app is designed to be user intuitive and offers combo boxes and validations at most places to eliminate manual errors and eases data entry. Furthermore, data can be captured even in offline mode when the mobile connectivity is not avail-able. The app syncs the data with the web component once the connectivity is available. As the information is geo tagged, it helps create an information system that can be viewed directly on GIS Maps.