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A City Unified

Bhopal Turns to SAP Software to Automate Public Services

by **Ken Murphy**, Features Editor

A long-standing tradition for newly married couples in Bhopal, India, the capital of Madhya Pradesh, has been to spend a good deal of their valuable post-nuptial time in a municipal office waiting around to obtain a marriage registration. Obviously, this is not a very romantic way for a new couple to enjoy wedded bliss, but it's a necessary step nevertheless, because India has some rather complicated customs and regulations.

The Bhopal Municipal Corporation (BMC), which issues marriage certificates in the capital city, is the governing body for most civic functions in Bhopal. In addition to marriage certificates, the organization handles birth and death registrations; road, park, and open space management; infrastructure development including roads, parking, traffic signals, community halls, and schools; and permits, health services, water supply, lake conservation, and tax collection, among other functions.

For many of the city's 1.8 million residents, receiving a marriage registration was an arduous and frustrating process. Strict regulations stipulate that couples — and their parents or guardians — must appear before the Registrar within 30 days of the wedding ceremony, and also that couples have to publicly post intention of vows no less than 30 days before the ceremony. With all these stipulations, it's a safe guess that for many couples, registration stress — which included showing up at a BMC office for multiple appointments — was responsible for their first argument as husband and wife.

This assumption is no longer true because of an ambitious project by BMC to implement SAP for Public Sector solutions as a single SAP ERP instance, integrating municipal services across BMC's 70 wards. The innovative project led to BMC, in partnership with Deloitte, being recognized with the 2013 SAP Ace Award for Public Services, which recognizes BMC's groundbreaking steps to make Bhopal



The Sadar Manzil, a graceful heritage building of Bhopal, presently serving as the headquarters of Bhopal Municipal Corporation

the first municipality in India to automate and centralize end-to-end public service offerings through SAP software. (For more information about Deloitte's involvement in the project, refer to the sidebar at the end of the article.)

The Way It Was

Because BMC has a complex organizational structure, the organization had to carefully and thoughtfully explore the idea of updating its software and hardware landscape. A third tier of government, BMC is governed by the elected Mayor and Council of Corporators. The administrative head — the Commissioner who is a civil service officer — is appointed by the state. BMC has deputed ward officers — each individually governing a particular area of the 285-square kilometer city limits, which is divided into several zones with each containing a number of ward offices where citizens go for services. Historically, zonal officers were responsible for laws within their zones — similar to how ward officers

At a Glance

Goal: Integrate all municipal services onto a single web-based platform and provide efficient, automated services to the city's 1.8 million residents

Strategy: Implemented SAP for Public Sector solutions

Outcome: Enabled online transparent delivery of all municipal services; created visibility into citizen account history; ended time-consuming manual processes for tax computations, assessment, and account reconciliations; and more efficiently managed back-office services (including procurement, inventory management, accounting, and HR)

govern their individual wards — which included implementing all regulations regarding the distribution of municipal services. This separation of power meant forms, policies, and processes for a service — tax assessment, for example — could differ completely from one zone to the next.

This dissimilarity created significant inefficiencies and difficulties, both internally and for the Bhopal citizens BMC serves. “Each ward had its own style of working that citizens would have to follow for certificates to be issued and availing BMC services,” says BMC Commissioner Vishesh Garhpale. “Every year, we would collaborate to try to find ways to manage these services cohesively. We considered developing a software solution for each function, such as finance, but with each office having its own style of working, the complexity just grew and grew.”

Additionally, each ward collected and stored data for citizens in its jurisdiction. Sharing this data with other wards was often a challenge, mostly because there was little-to-no automation; records were paper-based. So, for instance, a citizen with properties in multiple wards would have multiple accounts, and this situation is complicated further because utility services are tied to the property. So a citizen could have multiple sanitation, water, and other service accounts. With no integration for its services, BMC could potentially have several paper trails for one citizen, and no true visibility into that citizen's account history.

“All the data was segregated and kept by the ward officer. So accessing and sharing data was very challenging,” says Garhpale. “And this had an unfavorable impact for taxpayers; for property, it was very difficult to manage all of these taxpayers and their accounts. We couldn't monitor it sufficiently. This was the primary motivation for us to move to a centralized database.”

Making the Change and Adapting to It

Once the decision was made to undertake an automation project, BMC's first step was to map all of its manual

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— **Vishesh Garhpale**, BMC Commissioner

services to a standard process within each SAP for Public Sector solution, which necessitated discarding many time-honored processes along the way. Deloitte was instrumental in helping BMC complete this arduous task, as well as helping to combat one of BMC's main challenges — achieving buy-in from ward officers. It was at this point of the project that ward officers realized that their old ways of doing things were going away.

Buy-in was also a key challenge from a citizenry that was familiar with in-person interactions with BMC, however cumbersome those processes may have been at times. Months of intensive training helped allay the concerns of BMC personnel, but it was still difficult to convince accountants, for example, that phasing out manual general ledger posts in favor of automation would make their jobs easier and more efficient.

“There was a huge mental barrier both at BMC and among the public,” says Garhpale. “To break this mental barrier was a tremendous endeavor; we began by gathering and collecting all of our SAP data and starting with the solutions one by one. With each solution, we encountered resistance from whichever department was affected.”

From the citizen perspective, acceptance came about when Bhopal residents understood how much time they could save by transitioning to online interactions, such as payments, downloading and submitting forms, and accessing account history. To facilitate customer ease of use, BMC opened several Citizen Facilitation Centers (CFCs) throughout the city. Citizens could go to these facilities to apply for any of the services or to access BMC computer terminals to conduct business. Prior to the automation, the only option was to go to a ward office, which often involved a lot of waiting and long queues for the various interactions — for example, one queue for birth certificates, one for commercial licenses, one for water tax, and so forth. Today, with the SAP for Public Sector solutions, all BMC services, summarized here, can be completed from home:

- *Citizen-facing services (G2C)*: Property tax, water charges, birth and death registration, marriage registration, commercial license, user charges, building permission, grievance, and common services

BMC Snapshot

Bhopal Municipal Corporation

Headquarters: Bhopal, India

Industry: Public services

Employees: 10,000

Population: 1.8 million

Area: 285 square kilometers

City details:

- Bhopal is the capital of Madhya Pradesh
- Hindi is the official language

SAP solutions:

- SAP for Public Sector solutions (including functionality for financials, controlling, funds management, HR, project system, plant maintenance, and sales and distribution)
- SAP NetWeaver Portal
- Employee self-service (ESS) add-on for SAP ERP

Deloitte: Improving on Tradition

Even everyday transactions — like paying water bills — were complicated ordeals for the 1.8 million citizens of Bhopal, India. But for a population steeped in tradition, change is difficult. Bhopal Municipal Corporation (BMC) officials recognized the benefits of simplifying municipal services, but they needed a team with a deep understanding of the public sector and Indian culture, as well as the technical know-how to help them integrate diverse, manual processes across the city's more than 100 offices (including zones, wards, and other offices). That's where Deloitte came in.

Deloitte helped BMC implement SAP for Public Sector solutions, providing seamless integration from citizen-facing services to back-office functions. While the technical aspects were complex, gaining buy-in from a large number of users was an even bigger challenge. The team worked with each department, offering training and overcoming resistance. Citizens were skeptical about the changes, too; but now they can quickly conduct business online, rather than in person. Bhopal became the first city in India to automate and centralize end-to-end public services on SAP software. Now BMC is working toward launching a mobile platform to provide even more convenience.

BMC, in partnership with Deloitte, was recognized with the 2013 SAP Ace Award for Public Services. Deloitte is a world leader in SAP strategy and implementation. With more than 9,600 dedicated SAP practitioners in more than 135 countries, the firm is uniquely prepared to help with the most complex SAP-related initiatives. To see how Deloitte's combination of strategic vision and hands-on experience could be of use in your next SAP initiative, visit www.deloitte.com/sap.

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Other Benefits

The SAP for Public Sector solutions have provided BMC with a host of benefits, essentially changing every way in which the organization interacts with the citizens it serves. In addition to the benefits explored in this article, BMC has used SAP for Public Sector to:

- Phase out manual receipts
- Enable tax collection through handheld devices, providing mobility in the field
- Link with Madhya Pradesh's ABPAS system, which files, tracks, and grants citizen requests for housing
- Institute online payments and electronically transferred salaries
- Monitor works/projects/schemes through the Works module (including budget creation, booking, work estimates, measurement books, bill submission, and bill payments)
- Improve procurement and inventory management
- Integrate HR records and processes
- Implement accrual-based Double Entry Accounting System (DEAS) as per MP Municipal Accounting Manual
- Improve budget control and monitoring

- *Back-office functions (G2G):* HR and payroll, financial accounts (including accounts receivable, accounts payable, general ledger, treasury, asset, etc.), fund (budget) management, court case management, material management (procurement and inventory management), fleet management, and project system

Paying for services is also considerably easier; with automation enabling account consolidation, citizens now receive one itemized invoice for each service. And with account statements available online, citizens can self-assess their property tax bill, ending another formerly time-consuming visit to a municipal office.

The Innovation Continues

In addition to the self-services features the automation project provides to its customers, there are other new capabilities the software provides that have changed BMC processes dramatically. "Now, every user, every customer, can access all of these services in Hindi, which is our official language, and this has never been done before," Garhpale says. "We have also included text and email alerts, so customers can elect to be notified when a bill is due. We have received an overwhelmingly positive response from this and from having the CFCs and other offices serve as the point of contact."

And how has the marriage registration process improved and become less of a chore for happily engaged or newlywed couples? "All the forms are available online, and everything can be done through the CFC," says Jolly Jain, Project Coordinator at BMC. "And there's now an appointment system that has improved the wait time. The bride and groom still need to physically come in to give their fingerprints, but that process only takes five minutes today."

BMC is exploring taking the step of extending all of its services to a mobile platform for even greater access. "Back when this project started, the goal was to design a system so that everyone would be able to work on a computer," says Jain. "Now, the aim is to enable everyone to interact with BMC on a smartphone. That's the goal, and we are excited to achieve it." ■