Adoption of XRM for e- municipality tool: e- Janraj

Ridhima Jain1

Department of computer Science and Engineering

Geetanajali Institute of Technical studies

Udaipur, Rajasthan

Dr. Tarun Shrimali2

Principal

Career Point Technical Campus

Rajsamand, Rajasthan

Abstract

Enterprise applications are being rapidly employed in public sector and government. e- Janraj is a tool for e- municipality. E- Janraj will change the way the government interacts with the governed at the local level and hence improve their service delivery. Selecting and applying a suitable tool for e- Janraj implementation is a considerable task as it should consider number of challenges which will be faced in designing and implementing electronic governance. However for effective implementation of the model there are various approaches. This paper attempts to identify XRM ie extended Relationship Management which is actually applying CRM ie. Customer Relationship Management as a tool for the same. It will also highlight the benefits that will be faced in doing so.

Keywords: e- Janraj, e- Governance, RajSWAN, CRM, XRM, VRM, ULB, SAP

1. Introduction

ICT has changed the perspective of the governed as well as the administration. However, despite the efforts done in this field there is still so much that needs to be done. At local level the ULB's (Urban Local Bodies) ie Municipalities must transform government by making it more accessible, effective, efficient and accountable at local level.

A municipality is a political subdivision of a state within which a municipal corporation has been established to provide general local government for a specific population concentration in a defined area. Municipal corporations are organized under the applicable country constitution and laws, with powers of government expressly or implicitly conferred by that constitution and laws, and also by charter. Within the municipality, these powers are exercised by a governing body elected by the people. A municipality is basically the response of the state government to the need for certain public services (*i.e.,* waste disposal, police and fire protection, water supply, health services) in addition to what is available from the county or other local governments in the area A municipality is responsible for the civic and infrastructure needs of the city including maintenance of roads, streets, flyovers, water supply and purification, hospitals, street lighting, maintenance of parks and open local spaces, sewage treatment and disposal, garbage disposal, registering of births and deaths in the city etc.

E- Janraj includes range of activities from providing greater access to government information, better accountability, promoting civic engagement to providing development opportunities. It will change the way a municipality interacts with the citizens. E- Janraj is a model for municipality using e- government.

In Hernon, Reylea, Dugan, and Cheverie (2002), e-government is defined as a technology, particularly the Internet, which is used to enhance the access to and delivery of governmental information and services to citizens, businesses, government employees, and other agencies. A broader definition is given in Gil-Garcia and Pardo (2005), where e-government has been conceptualized as the intensive use of information technologies for the provision of public services, the improvement of managerial effectiveness and the promotion of democratic values and mechanisms. In Beynon-Davies (2005), the term e-government denotes the use of information and communications technology (ICT) to change the structures and processes of government organizations.

In 2001 Doug Laney developed the concept and coined the term 'Extended Relationship Management' (XRM). He defined XRM as the principle and practice of applying CRM disciplines and technologies to all core enterprise constituents, including primary customers, partners, employees, and suppliers, as well as other secondary allies such as government, press, and industry consortia. Adoption of CRM in the public sector in India has now got established. However at Government Organizations at State and Local Bodies level there is still a gap. Example: Greater Mumbai has implemented its e- Municipality model using enterprise application called SAP. *Customer relationship management* (*CRM*) is a widely implemented model for managing a company's interactions with Customers. Here Customers are essentially the citizens of the city as well as the local business Units.

. We recommend XRM for implementing e- Municipality in Udaipur in particular and various other state municipalities in general. There are many products of CRM available like Oracle CRM, CRMnext, Microsoft dynamics etc. We suggest Microsoft dynamics CRM.

Microsoft Dynamics CRM is a customer relationship management software package developed by Microsoft. Out of the box, the product focuses mainly on Sales, Marketing, and Service (help desk) sectors, but Microsoft has been marketing Dynamics CRM as an XRM platform with .NET based framework to customize it to meet many different demands. Dynamics CRM is a server-client application, which, like Microsoft SharePoint, is primarily an IIS-based web application which also supports extensive web

services interfaces. Clients access Dynamics CRM either by using Microsoft Internet Explorer 6 or later web browser or by a thick client plug-in to Microsoft Outlook.

An Extended Relationship Management system may be chosen because it is thought to provide the following advantages:

- Quality and efficiency
- Decrease in overall costs
- Increase profitability

By implementations of Enterprise Applications are also expected to benefit Organizations by providing Best Practices for their various Processes. There's a whole lot more to public sector CRM than just cutting costs and streamlining services. It represents a new way to define the interactions between democracies and their citizens, and drive new models of constituent relations and civic culture. And a little uptick in civic culture is long overdue.

2. Problem statement

Despite various officers putting their hard work into Governance the perception amongst citizens is a cause of concern. They lack of citizen service delivery, inaccessibility, corruption, ineffective approach, inefficient budget utilization, non-uniformity of development etc are some of the causes that forces us to reconsider our approach to governance and service delivery to citizen. We need to facilitate better performance of the delivery of municipal services like birth and death registration, building plan, primary health and education, city cleanliness, water supply, sewage, road, street-lights, parks and garden through e-governance to citizens of the city. However the citizen today unlike past is aware of his rights, is educated, knows that there is a re-course through courts and is even empowered with Right to Information. Therefore, a model is required which would effectively take care of the above issues.

Improving interactions between citizens and government has long been a goal of politicians, civil servants, and their constituents, but the ability to provide efficient and cost-effective service to constituents while empowering them to have a stake in their government has remained elusive. As the complexity of government service and the bureaucratic process has increased in the last century, the ability of citizens to feel as though they have a stake has diminished and engendered a growing disconnect with their governments.

We need to consider the following challenges before developing a solution:

1. How to gain a holistic view of citizen interactions across multiple communication channels?
2. How to create a single window to view end-to-end processes that span across systems and enforce TAT/ SLA adherence?
3. How to ensure optimal service quality to citizens?
4. How to assist workforce in reducing manual tasks, non-core workloads, coordination efforts and provide actionable intelligence?
5. How to provide real-time insights into processes with intelligent reports & dashboards for proactive follow-ups?

These issues play out in the context of a global need to streamline government and render it more efficient while lowering taxpayer costs. These requirements have been ignored at best, and more often than not, the cost of new technology that might help address them has been high. Now, the global recession has made cost cutting essential for the preservation of much-needed public services.

In recent years, a new class of constituent relationship management systems has been deployed and is changing this discussion. Public sector XRM, long promoted as to cut costs, is emerging as a tool that can help reverse the trend towards disaffection and disempowerment, provide a bridge between government and citizens that promises a more effective civic culture, and do so in an extremely cost-effective manner.

3. Public Sector: enterprise applications and Market Trends

Enterprise Applications solutions will help achieve the goal of transforming their environments from an internal resource optimization to a process integration and external collaboration focus. Enterprise Application is expected to significantly increase efficiency, improve information access, reduce total cost of ownership, and help public sector and government achieve the highest levels of accountability and constituent service. For the past several decades, Multinational organizations continue to streamline their business processes enabled by ERP systems like SAP, CRM, XRM, JDEdwards, Peoplesoft etc. Despite the downturn in the global economy, there has been a growing trend of new ERP implementations in the public sector around the world. As a result the public sector has emerged as a key initiative for the top ERP vendors and consulting partners alike, with some having established new divisions dedicated to the public sector. These vendors are primarily targeting public sector and government agencies

including Federal, State, and Local/Municipal Governments

Earlier, most of the public sector implementations have been on a small-scale, focusing on a few ERP modules within a department or agency. However, lately, there have been attempts to integrate several agencies of one public sector organization into one single ERP package .Enterprise Applications have the potential to improve information management and the quality of governmental services. However, to take full advantages of IT, it requires organizations to understand and to overcome several challenges. Technological complexity and incompatibility are neither the only, nor the most difficult challenges to overcome. One of the major challenges is to develop credible business processes for enterprise information management (Williams, Scifleet, & Hardy, 2006).

Improving service delivery without increasing costs poses many challenges. Competing budget priorities, information integration difficulties and the process of change itself can be daunting. Considering the lack of funds and need for reliable Enterprise solutions more and more governments are moving towards CRM/ XRM. A well-designed and well-implemented public sector XRM provides two key benefits: First, it can greatly improve the efficiency and cost-effectiveness of government services by facilitating, automating, and streamlining interactions among citizens, government employees, service providers, and other stakeholders.

Like most technologies, CRM was overhyped in the early days, but has now matured to XRM to become a trusted and critical delivery element of competitive enterprise strategies. Today, XRM applications are witnessing reinvigorated growth, underpinned by multi-dimensional data, extended via web services, and driven by the fundamental business need to acquire, serve and grow customers.

This market grew by 12.5 percent in 2008, from revenue of $8.13 billion in 2007 to $9.15 billion in 2008. The following table lists the top vendors in 2006-2008 (figures in millions of US dollars) published in Gartner studies.

Vendor	2008 Revenue	2008 Share (%)	2007 Revenue	2007 Share (%)	2006 Revenue	2006 Share (%)
SAP AG	2,055	22.5 (-2.8)	2,050.8	25.3	1,681.7	25.6
Oracle	1,475	16.1	1,319.8	16.3	1,016.8	15.5
Salesforce.com	965	10.6	676.5	8.3	451.7	6.9
Microsoft CRM	581	6.4	332.1	4.1	176.1	2.7
Amdocs	451	4.9	421.0	5.2	365.9	5.6
Others	3,620	39.6	3,289.1	40.6	2,881.6	43.8
Total	9,147	100	8,089.3	100	6,573.8	100

Source: Gartner Studies

In addition, CRM provides public sector workers with better tools to perform daily tasks, improving interactions inside government. Microsoft is one of the leading vendors in this sector closely followed by Oracle.

4. E- Janraj and XRM

The objective of the e- Janraj is to provide efficient service to citizens, administrators and corporations by implementing IT systems to enable Municipal processes and workflows. Better IT systems are required to integrate all the workflows/processes seamlessly for a faster and efficient service to the citizens, employees, administrators and corporations. A key requirement during the implementation of the systems is that they must all be tightly and seamlessly integrated such that:

1. Any item of data needs to be entered only once and is then made available as often as necessary to all the systems that need to use it,
2. Disparate information can be consolidated from a number of systems as required to produce reports and carry out ad hoc analysis and reporting;
3. All systems can be orchestrated into a business process by exposing applications as web services.
4. The gap between revenue and taxes could be bridged
5. The law and order of the city could be monitored and public safety could be ensured
6. To provide a single window for all departments of the municipality. Single sign-on for all elements of all systems that can be accessed - subject to authorization - from any single user workstation
7. Database must be consolidated.
8. Effective planning and implementation of social services could be done.

The implementation of the business solution is for the following functionality:

1. Finance and Accounts
2. Human Resources
3. Materials Management (which includes procurement, inventory and stores)
4. Water work management
5. Citizen's Portal with Ward Management
6. Project Systems
7. Building and Town Planning :Open Space and Civic department
8. Advertisement hoardings/ Licenses and Permits
9. IT departments
10. Waste management

11. Health care services
12. Municipality event management

Before proceeding towards the choice of the best enterprise package criteria's must be identified which include the business solution, people, administration competence, bidder's competence, infrastructure and cost. Each criterion must be attached with a particular weight and upon evaluation the package that offers best weighted average could be chosen.

SAP has been a dominant ERP package that has shown considerable presence in the Public sector as well. Using technology to improve government effectiveness doesn't necessarily mean spending more to do more. However, we recommend the use of XRM for reasons mentioned in the sectioned below.

5. Why XRM for e- Janraj

The objective of the e- Janraj is to provide efficient service to citizens, administrators and corporations by implementing IT systems to enable Municipal processes and workflows. Better IT systems are required to integrate all the workflows/processes seamlessly for a faster and efficient service to the citizens, employees, administrators and corporations. A key requirement during the implementation of the systems is that they must all be tightly and seamlessly integrated such that:

9. Any item of data needs to be entered only once and is then made available as often as necessary to all the systems that need to use it,
10. Disparate information can be consolidated from a number of systems as required to produce reports and carry out ad hoc analysis and reporting;
11. All systems can be orchestrated into a business process by exposing applications as web services.
12. The gap between revenue and taxes could be bridged
13. The law and order of the city could be monitored and public safety could be ensured
14. To provide a single window for all departments of the municipality. Single sign-on for all elements of all systems that can be accessed - subject to authorization - from any single user workstation
15. Database must be consolidated.
16. Effective planning and implementation of social services could be done.

The implementation of the business solution is for the following functionality:

13. Finance and Accounts
14. Human Resources
15. Materials Management (which includes procurement, inventory and stores)
16. Water work management
17. Citizen's Portal with Ward Management
18. Project Systems
19. Building and Town Planning :Open Space and Civic department
20. Advertisement hoardings/ Licenses and Permits
21. IT departments
22. Waste management
23. Health care services
24. Municipality event management

Before proceeding towards the choice of the best enterprise package criteria's must be identified which include the business solution, people, administration competence, bidder's competence, infrastructure and cost. Each criterion must be attached with a particular weight and upon evaluation the package that offers best weighted average could be chosen.

SAP has been a dominant ERP package that has shown considerable presence in the Public sector as well. Using technology to improve government effectiveness doesn't necessarily mean spending more to do more. However, we recommend the use of XRM for reasons mentioned in the sectioned below.

6. Conclusion

At the core of the complexity and trust problems is the inability of many governments to optimize the services they deliver to citizens in ways that benefit the many stakeholders. In addition to citizens, these stakeholders include employees, such as call center and field service employees, who work directly for government agencies, as well as third-party contractors who provide services on behalf of the government or interact with governments on behalf of citizens. All the stakeholders must interact to accomplish the many processes that inform civic life, and they must do so in an optimal way. Whether it's providing a permit or license, garbage services, support for visitors and tourists, or processing parking tickets and voter registration, efficient execution is key in the defining the perception of effective government. Inefficient and wasteful processes that frustrate people are part of a government "performance" problem

In the public sector, Government XRM systems capture service request details, route the request to the proper agency, track workflow progress, and measure performance. This coordinated approach helps to improve agency efficiency and bridge

municipal silos. In the private sector, commercial XRM systems use a consumer-centric approach, focusing on acquiring and retaining customers through data capture to enhance customer retention with the goal of a 360-degree view of the consumer. Successful XRM is much more than just a one off project activity; it is a way of thinking and operating that evolves over time as customer needs and organizational capabilities change.

7. References

(1) Shaw, Robert, Computer Aided Marketing & Selling (1991) Butterworth Heinemann ISBN 978-0-7506-1707-9

(2) Gartner, Inc. (6 June 2009) What's 'Hot' in CRM Applications in 2009

(3) DestinationCRM.com (2002) What Is CRM?

(4) Shaw, Robert, Measuring and Valuing Customer Relationships (2000) Business Intelligence ISBN 978-1-898085-33-1

(5) Desbarats, Gus. 1995. "Usability: form that says function." *Industrial Management & Data Systems* 95, no. 5:3-6.

(6) Hart-Davidson, William, Grace Bernhardt, Michael McLeod, Martine Rife, and Jeffrey T. Grabill. 2008. "Coming to Content Management: Inventing Infrastructure for Organizational Knowledge Work." Technical Communication Quarterly 17, no. 1: 10-34

(7) Desbarats, Gus. 1995. Usability: form that says function. Industrial Management & Data Systems 95, no. 5:3-6.

(8) Kostelnick, Charles. "Conflicting Standards for Designing Data Displays: Following, Flouting, and Reconciling Them." Technical Communication 45, no. 4 (November 1998): 473

(9) Pennington, Lori L. 2007. "Surviving the Design and Implementation of a Content-Management System." *Journal of Business & Technical Communication* 21, no. 1:62-73.

(10) Joachim, David. "CRM tools improve access, usability." (cover story). *B to B 87*, no. 3 (March 11, 2002): 1.

(11) Mei Lin Fung, "You can learn from Dell Hell, Dell did" customerthink.com

(12) Goldberg, Harold. "10 ways to avoid CRM pitfalls." *B to B* 86, no. 17 (September 17, 2001): 11.

(13) Ka-Ping, Yee. "User Interaction Design for Secure Systems." *Information and Communication Security* 2513, no. (2002): 278-290.

(14) Cieslak, David, and Bob Gaby. "Programs Provide Extensive Tools For Adaptability And Customization." *CPA Technology Advisor* 16, no. 8 (December 2006): 38.

(15) Whittemore, Stewart. "Metadata and Memory: Lessons from the Canon of Memoria for the Design of Content Management Systems." *Technical Communication Quarterly* 17, no. 1 (Winter 2008): 88-109.

(16) SAP Insider (15 November 2007) Still Struggling to Reduce Call Center Costs Without Losing Customers?

(17) Strativity Group, Inc. (2009) Global Customer Experience Management Benchmark Study

(18) InsideCRM (2007) Get It Together with Collaborative CRM

(19) DestinationCRM.com (2009) Who Owns the Social Customer?

(20) Clara Shih, DestinationCRM.com (2009) Sales and Social Media: No One's social (Yet)

(21) Lior Arussy (2005). "Understanding the Fatal Mistakes". *Passionate and Profitable*. John Wiley & Sons, Inc.. ISBN 0-471-72134-4.

(22) "Avoid the Four Perils of CRM". *Harvard Business Review*.

(23) SAP white paper (2003) CRM Without Compromise

(24) Jim Dickie, *CSO Insights* (2006) Demystifying CRM Adoption Rates

(25) Joachim, David. "CRM tools improve access, usability." (cover story). *B to B* 87, no. 3 (March 11, 2002): 1

(26) David Sims, TMC.net (2007) CRM Adoption 'Biggest Problem' in 83 Percent of Cases

(27) Cappel, James J., and Huang Zhenyu. "A Usability Analysis of Company Websites." *Journal of Computer Information Systems* 48, no. 1 (Fall2007 2007): 117-123.

(28) Gefen, David, and Catherine M. Ridings. "Implementation Team Responsiveness and User Evaluation of Customer Relationship Management: A Quasi-Experimental Design Study of Social Exchange Theory." *Journal of Management Information Systems* 19, no. 1 (Summer 2002): 47-69.

(29) Roy, Marie Christine; Dewit, Olivier; Aubert, Benoit A. 2001. "The impact of interface usability on trust in Web retailers." *Internet Research* 11, no. 5:388-398.

(30) Grayling, Trevor. "Fear and loathing of the help menu: A usability test of online help." *Technical Communication* 45, no. 2 (May 1998): 168.

(31) Gellevij, Mark, and Hans Van Der Meij. "Empirical Proof for Presenting Screen Captures in Software Documentation." *Technical Communication* 51, no. 2 (May 2004): 224-238.

(32) Grayling, Trevor. "If We Build It, Will They Come? A Usability Test of Two Browser-based Embedded Help Systems." *Technical Communication* 49, no. 2 (May 2002): 193.

(33) Desbarats, Gus. 1995. Usability: form that says function. Industrial Management & Data Systems 95, no. 5:3-6

(34) Whittemore, Stewart. "Metadata and Memory: Lessons from the Canon of Memoria for the Design of Content Management Systems." Technical Communication Quarterly 17, no. 1 (Winter2008 2008): 88-109

(35) Mirel, Barbara, and Leslie A. Olsen. "Social and cognitive effects of professional communication on software usability." Technical Communication Quarterly 7, no. 2 (Spring98 1998): 197

(36) Pennington, Lori L. 2007. Surviving the Design and Implementation of a Content-Management System. Journal of Business & Technical Communication 21, no. 1:62-73

(37) Høegh, Rune Thaarup, and Janne Jul Jensen. "A case study of three software projects: can software developers anticipate the usability problems in their software?." Behaviour & Information Technology 27, no. 4 (July 2008): 307-312.

(38) Høegh, R. Th. "Case study: integrating usability activities in a software development process." Behaviour & Information Technology 27, no. 4 (July 2008): 301-306.

(39) Iivari, N. "'Representing the User' in software development—a cultural analysis of usability work in the product development context." Interacting with Computers 18, no. 4 (July 2006): 635-664

(40) DestinationCRM.com (2009) CRM Market Grows for Fifth Straight Year

(41) "Gartner Says Worldwide Customer Relationship Management Market Grew 23 Percent in 2007" (Press release). Gartner, Inc. 2008-09-12.

http://www.gartner.com/it/page.jsp?id=715308. Retrieved 2008-08-15.

(42) "Gartner Says Worldwide CRM Market Grew 12.5 Percent in 2008" (Press release). Gartner, Inc. 2009-06-15.
http://www.gartner.com/it/page.jsp?id=1074615. Retrieved 2009-10-27.

(43) Buys Cloud-based Customer Service Company RightNow For $1.5 Billion *Techcrunch*: October 24, 2011

(44) Challenges Oracle With $3.4 Billion SuccessFactors Purchase *Bloomberg Businessweek*: December 07, 2011

(45) *The Great Enterprise Balancing Act: Extended Relationship Management (XRM)*, Doug Laney, META Group publication, December 10, 2001

(46) DeGregor, Dennison (2011). *Customer-Transparent Enterprise: Beyond 20th Century CRM*. Motivational Press. ISBN 1-935723-23-5.

(47) Niraj Prakash, Umesh Gulla (Adoption of enterprise Applications towards e- Government- A Select case study of Mumbai municipal corporation, www.csi-sigegov.org

(48) http://www.informationweek.com/software/enterprise-applications/the-public-sector-crm-opportunity/232600608?pgno=2