



UBUSO PROJECT

2005 COMPUTERWORLD HONORS CASE STUDY

ENVIRONMENT, ENERGY & AGRICULTURE

THE UTILITY COMPANY SUPPLYING MORE THAN HALF OF AFRICA'S ELECTRICITY IMPLEMENTS THE CONTINENT'S LARGEST ELECTRICITY UTILITY CUSTOMER RELATIONSHIP MANAGEMENT SYSTEM, EMPOWERING 350 FRONT OFFICE CONTACT CENTRE AGENTS TO SERVE MORE THAN 3.7 MILLION CUSTOMERS, IMPROVING CUSTOMER SATISFACTION AND GREATLY INCREASING BUSINESS EFFICIENCY. [20055429]

A Search for New Stories



SUMMARY

Eskom is one of the world's largest utility companies, previously being awarded the coveted Power Company of the Year award. Eskom is currently the largest provider of electricity within the South African market accounting for approximately 95% of all electricity supplied and more than half of Africa's electricity. Eskom has implemented Africa's largest electricity utility Customer Relationship Management system which empowers 350 front office Contact Centre service agents to provide excellent service to more than 3.7 million customers, and facilitates the workflow, monitoring and escalation of cases being actioned by over 1200 staff in remote back office locations, resulting in a "Win-Win" combination of improved customer satisfaction and greater business efficiency.

Robert Carrigan,
Chairman of the Chairmen's Committee

Ron Milton,
Vice-Chairman of the Chairmen's Committee

Dan Morrow,
Chief Historian

APPLICATION

Eskom Distribution has successfully implemented a holistic service-oriented Customer Relationship Management (CRM) solution in its Distribution Division, which serves 3.7 million customers throughout South Africa. The major portion, the GT-X system developed by the Scottish company, Graham Technology, was implemented in the last quarter of 2004. GT-X currently has about 1500 users in Eskom, out of a projected user base of over 2000. The implementation project costs in excess of R80m (US\$ 13m) and was delivered within an aggressive timeline of 11 months. The design of the solution started in February 2005 with the roll-out of full functionality commencing in October 2005. The roll out of the solution was done in a manner that had minimal impact on customer service delivery during Eskom's summer storm period of peak call volumes.

APPLICATION

Eskom's UBUSO Project - "The 'Face' of Eskom" ('UBUSO' is the isiZulu word for 'face') - was responsible for the design, development, implementation and change management associated with the new CRM solution. UBUSO represented a strategically important project for Eskom Distribution and was aimed at enhancing and optimising the delivery of Customer Services at lower cost. This was the first implementation in South Africa of Graham Technology's process driven GT-X framework solution. The CRM solution that was implemented is unique, scalable and utilizes the latest integration technology to provide a 100% fit to the business to suit South African social, political, economic, demographic and geographic conditions.

The UBUSO Project brings to an end a four year CRM strategy to implement new technical, people and process changes to improve service delivery to Eskom's customers. Eskom provides more than 95% of South Africa's electricity requirements and supplies more than 50% of the electricity produced in Africa. The Utility receives an average of 270,000 calls from customers per month and required a system that would enhance customer service, increase productivity and cut costs by managing customer service activities and accessing information more efficiently and timeously.

Eskom's legacy customer management systems and processes lacked key integration into customer billing and were heavily reliant on proactive management and manual tracking and follow up. The GT-X solution introduced major improvements through workflow, case monitoring and escalation, as well as by providing improved CRM functionality such as enhanced integration of customer communication channels.

The solution integrates Eskom's 7 regionally deployed Contact Centres consisting of 350 Service Agents, and facilitates workflow, monitoring and escalation of cases being actioned by over 1200 staff in more than 60 remote back office locations.

GT-X is a process based application that streamlines the end-to-end business processes associated with high-volume, multi-channel customer interactions. The product's focus on rapidly deploying new

or improved processes throughout the enterprise enables Eskom to offer customers services across multiple, customer-facing communication channels including the Contact Centre, the Web, Computer-Telephony Interaction (CTI), Interactive Voice Recognition (IVR), Digital TV, Mobile/PDA, Kiosk and Electronic Point of Sale.

Furthermore, GT-X is capable of integrating business processes from all existing, third party, legacy and future strategic systems. The major challenge of implementing a CRM solution is to ensure customer data is always available. Customer data in Eskom is hosted in multiple systems at the same time. The CRM solution implemented at Eskom required realtime customer data in order to increase customer service excellence.

SeeBeyond was implemented to ensure customer data is always available without any time delay. The SeeBeyond component is a middleware that integrates GT-X with the billing and engineering systems. The Seebeyond component updates system's customer data immediately when requested. Therefore no batches are required and all data is realtime.

BENEFITS

Patrick J. McGovern,
Chairmen of the Chairmen's Committee

Daniel Morrow,
Executive Director

Robert Carrigan,
Publisher Computerworld

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BENEFITS

The Programme has provided Eskom with an opportunity to render quality service to its customers like never before. This has been achieved by streamlining employee behaviour, allowing customer agents to follow standardised business processes and ensuring that all customer requests are properly logged, managed and closed. Furthermore, customer satisfaction has increased, enabled through the tight integration of previously disparate customer systems using leading edge technology. Approximately 2300 users have been trained and GT-X has successfully become the standard customer contact system in which all customer interaction cases are logged, routed, tracked and monitored.

The successful implementation of GT-X is in line with Eskom's Customer Service Strategy:

"To provide customers with One Contact Resolution"

"Being Easy to do Business With"

"To run a Profitable Retail Utility Business."

The GT-X system has provided Eskom with the means to improve customer service and business efficiency. This has been achieved by streamlining employee behaviour, so that customer service agents follow standardised business processes within the system while ensuring that all customer requests are properly logged and managed.

The new CRM solution provides Customer Service staff with enhanced system functionality such as:

- One view of the customer at point of contact with all the relevant information being available to an agent on one screen;
- The ability to manage service requests through Case Management and Workflow ensuring that customer requests are dealt with quickly and accurately;
- Easy to use call scripting allowing the service agents to seamlessly deal with customer queries;
- Enhanced Case Based Reasoning that will support the service agents in identifying the customer's problem; and
- Knowledge Management tools that will allow the service agents to quickly access information to help them deal with a customer problem.

The new application will facilitate improved integration with engineering and billing systems, and other essential systems through a centralised environment known as the Integration Bus. The Integration Bus will allow the customer service agents to access information needed to resolve a customer's query immediately and will also ensure that customer information can be updated from more than one location at a time.

The GTX system will result in better customer service delivery as tasks, KPI's, and escalations will automatically be tracked by the system, providing increased effectiveness and improved customer case management. This will be a vast improvement from the previous manual system where there was no workflow tracking of tasks and escalations to proactively alert customer service agents when customer requests have not been resolved. The GT-X system will also enable management of service requests through case management and workflow integration.

The implementation of the CRM Solution will significantly increase greater opportunities for efficiency within Eskom Customer Services. Prior to the introduction of the new solution, changes in business processes led to significant training costs and continuous change management initiatives nationally, motivating customer service agents to adhere to the steps within the business process. Now, all customer service agents are informed and educated of a newly improved business process and process changes are made almost immediately (1 – 2 days) within GT-X.

The solution has provided the means to control routing and monitoring of work across Eskom's vast operational area, allowing for the sharing of workloads across seven regional Contact Centres.

The newly introduced capability of multi-channel proactive Campaign Management enables Eskom to inform customers of planned or unplanned power outages, as well as contact customers in arrears to warn them of impending disconnection. Being proactive in this area has positively impacted customer service ratings. The system allows Eskom to contact customers using the customers preferred channel of communication.

Eskom management and service agent supervisors now have access to powerful case management and online reporting tools to monitor customer service levels on an ongoing basis as well as daily progress on individual cases.

All functionality and processes within the solution have been designed in way to increase One Contact resolution. Eskom's target is to resolve 95% of all customer issues with only one inbound contact from the customer. In addition to this, Eskom aims to use the system to improve the level of First Contact resolution, which means that the front line agents will be empowered with the information from diverse business processes and systems to resolve up to 75% of customer issues immediately, without the need to create a workflow case that needs to be actioned by a back office person.

The new process driven framework allows Eskom Customer Services to manage its resources more efficiently and facilitate a customer-focused environment.

The following benefits are being realised:

- Efficiency Resulting from Reduction in AHT (Average Handling Time);
- Efficiency From First Call Resolution (Reduction in Despatched Items);
- Efficiency From Improved Case Management;
- Efficiency From First Call Resolution (Reduction of Repeat Calls);
- Efficiency From Self-Service Channels;
- Reduction in Training Costs; and
- Efficiency From Flexibility for Business Process Changes

Despite the high value technology delivered it was important for Eskom that social economical benefits will be derived during the UBUSO project. One of the key social objectives of the programme was black economic empowerment and the upskilling of previously disadvantaged individuals. Eskom ensured that its investment in this programme benefited the local IT community and that previously marginalised groups were included. The project was the first of its kind in South Africa in that an international first world product was customised to suit the needs of Eskom. Although GTX has been implemented in many parts of the world this was the first implementation in South Africa. The project team consisted of many different South African cultural groups working together with Graham Technology resources from Scotland to build a world class CRM solution.

Before the implementation of the CRM solution the customer services and engineering departments worked in silo's. Customer needs and requirements was not a priority. The restructuring of the Electricity Distribution Industry (EDI) in South Africa, and the creation of Regional Electricity Distributors (REDs) will in future require Eskom to differentiate themselves in terms of customer service. By implementing this solution and thereby lifting the bar in terms of customer service, the industry and all South African will be impacted positively.

IMPORTANCE

An Electricity Distribution Company is a complex business, with large capital investments in infrastructure, high operating costs and diverse business functions that are deployed over a huge geographic area.

Managing all of these business components in a cost effective and profitable manner is in itself a

challenge, but when combined with customer pressure for improved services and low tariffs (i.e. good value for money), the business priorities / forces seem to be pulling in opposing directions.

In response to this, the Core Principle of Distribution's Customer Service Strategy is to balance customer expectations with cost.

Superior Customer Service is seen as:

“Eskom is easy to do business with”

at

“a realistic cost to Eskom which reflects the value of the customer segment”

Where “Easy to do Business With” means:

1. Being Accessible, Responsive & Reliable in our interface with customers
2. Ensuring Distribution provides excellent service in the following “bedrock” areas:
 - Communication / accessibility;
 - Technical: reliability / availability of supply / Outage management / New connections (quote and connection times) / customer interface;
 - Accurate accounts and speedy payment allocation / efficient vending of prepaid electricity tokens; and
 - Support systems for the above and in particular for follow up management
3. Making it easy for staff to serve our customers through:
 - Operating customer-centric Processes;
 - Supported by effective Systems;
 - Guided by customer-centric Policies; and
 - In an Environment that stimulates & empowers staff to perform

The UBUSO Project aligned totally with this core principle and completely supports Eskom's Customer Service Strategy.

The focus of the UBUSO Project was to deliver:

- An integrated agent desktop to Customer Service frontline staff that will provide total customer insight at the point of contact;
- Support to frontline staff in the form of Scripting, Case Based Reasoning and Knowledge Management tools;
- Routing of Work Items to Back Office staff distributed at remote sites across the business (e.g. Area Offices, Account Operations Centres);
- Management of service requests through Case Management and Workflow; and
- Management insight in the form of real time escalations, real time flags, status dashboards and analytical reporting.

Specific key functionality requirements of the solution were:

1. Generic CRM functionality:
 - Provide an Integrated agent desktop across all customer contact channels;
 - Workflow management functionality within the CRM system; and
 - An agent desk top to display concise customer history view with real time alerts.

Agent Support Tools:

2. Call Scripting:

- Display key information and prompts to the call centre agent through a dialog box or script to facilitate correct and standardized resolution of the particular interaction.

3. Case Based Reasoning:

- A support tool to assist the agents in diagnosing the nature of customer problems, in order to route them correctly for speedy resolution;
- Flexible adaptation to different service categories such as analysis of fault logging, high bill queries; and
- Ability to create a comprehensive set of pointed questions and a diagnostic flow to diagnose the actual need or problem.

4. Knowledge Management:

- Capability to integrate to internet based knowledge management stores and to bring the information seamlessly to the agent desktop.

Management of Service Fulfilment:

5. Case Management:

- Create a single reference number per service request for tracking purposes.

6. Workflow Management:

- Ability to track the status of the service request until closure, across Value Chains and between business systems; and
- Ability to escalate overdue service requests interactions based on predetermined performance criteria.

7. Campaign Management:

- Identify customers that need to be contacted using certain parameters and filters;
- Creation and management of outbound campaigns integrated across multiple channels (Dialler, Email, SMS); and
- Ability to default to the customer's preferred channel for outbound communication.

8. Analytical Reporting:

- Provision of operations management level reporting highlighting the performance of the front and back office.

Other important considerations in the selection of the software solution were:

- Flexibility:

A highly scalable and flexible solution is required in order to prepare for the restructuring of the Electricity Distribution Industry (EDI) in South Africa, and the creation of Regional Electricity Distributors (REDs). In order to be of most value in this restructuring, the CRM system has to be scalable to accommodate expansion to the total combined customer bases of the 180 Municipalities and 6 Eskom regions, which will be merged to form the REDs. Also, it must be able to integrate and operate simultaneously with all the pre-existing billing and engineering systems that will be incorporated in the future REDs. It must be capable of supporting all incoming traffic as well as outbound customer campaigns, using all major electronic interfaces (telephone, e-mail, SMS and the Internet).

- Speed of Implementation:

Eskom required a fast implementation in order to obtain early gains from the system. In addition, the EDI restructuring will require rapid integration of additional business units and processes

- Maximise Existing Investments:

The system was required to make use of Eskom's existing investment in well defined Value Chains and business processes. Eskom specifically did not want to be forced to re-engineer its processes with the introduction of the new system, as a significant investment has been made in the last 5-8 years in redefining its processes and aligning them with world practices. Also, compatibility with existing Distribution systems were essential. Overall, Eskom sought a low total cost of ownership solution.

- Low Business Impact:

Alignment with existing business processes was essential to reduce the amount of training required. The switch-over from the old to the new system had to happen with minimal service disruption. In addition, Distribution sought for a solution that would be very user friendly, and that would eliminate the frustration of certain pre-existing manual processes by providing automation of these processes.

ORIGINALITY

The pressure to continuously improve customer service is unrelenting for most organizations. Eskom Distribution is no exception. Electricity is a commodity most people take for granted. Customers expect it to be there when they flick a switch, and at an affordable price.

Eskom serves a highly diverse range for customers, ranging from the smallest, most humble newly-electrified domestic homes, to highly sophisticated industrial plants. The provision of a low cost yet highly reliable supply of electricity is a key contributor to the success of the South African economy, supporting at one end of the scale, the social and economic upliftment of people that previously had no access to electricity, and at the other end, supporting farming, commerce and industry supplying both

local and export markets. For the customers and the country, quality Customer Service is not-negotiable – the commodity of electricity must be supported by accessible, reliable and responsive service. For Eskom, Customer Service, excellence is a means to differentiate their product in an increasingly competitive energy market.

Eskom's Contact Centres are the front line of its business. But usually, dealing with an electricity company is an inherently negative situation, because in the vast majority of cases, customers call when they have a problem – when supply is down, there is a billing issue or they are having difficulty making their payments. These are great opportunities to delight them with terrific service.

Eskom's UBUSO Project - "The 'Face' of Eskom" ('UBUSO' is the isiZulu word for 'face') – is aimed at improving the relationship between Eskom Distribution and its 3, 7 million customers. The solution's process driven framework ensures that all customer triggered cases are handled quickly and efficiently.

In the past it wasn't easy. Eskom's previous (homegrown) customer management systems and processes lacked key integration into customer billing, and were heavily reliant on proactive management and manual tracking and follow up. Service agents taking the calls did not have access to all the information relating to the customer. Calls would be logged and passed on to the section responsible for addressing the problem. If the customer called again, the service agent could see that a request had been logged, but would not always know what action had been taken, who had responsibility for it, and whether this person believed the issue had been resolved. A second request would be logged, with no assurance it would be handled with greater priority. In the meantime, management could not ascertain important data such as the number of unresolved requests, the average number of times customers needed to call before their problems were resolved, and the factors that were most likely to hamper resolution.

But it is the nature of an electricity company that not all service issues can be resolved by the Contact Centres. For example, an electricity fault has to be dispatched to the Field Services staff to go out and repair. Customers expect that these issues should be resolved with One Contact, without the need for them to call again. The back-office improvements due to the new solution are critical to achieve this. The CRM system integrates all Distribution's existing Customer Service data and systems, and provides real time request logging, tracking and analysis features. If an issue is not resolved in the expected time, it will be escalated automatically to the next level of management.

In considering the market for CRM solutions world wide, Eskom found that there is a spectrum of CRM solutions available. At one end of the continuum are the classic "Package" solutions, with largely pre-configured functionality, while at the other end are what are termed "Framework" solutions which are flexible systems, capable of being tailored exactly to the purchaser's business models and processes.

Eskom chose a business process framework solution developed by the Scottish software house Graham Technology. The product, called GT-X, was the most appropriate solution, one that had proved itself globally, had the flexibility to meet Eskom's requirements, and had all the features required to deliver on Distribution's Customer Service vision.

The strength of GT-X lies in the fact that it is a framework solution that utilises the organisation's existing business processes and systems, thereby protecting previous technology investments. The integration capabilities of GT-X allow the functionality and data of new or replacement systems to be directly incorporated into Eskom's business processes, with the data from all the back-end systems presented in a common front-end across a variety of channels.

This means that Eskom will be able to deliver a world-class service to its customers, without having to abandon its existing processes, systems and data and without having to endure massive, lengthy customisation and integration.

While the implementation of the new system has already streamlined and improved Eskom's existing front office and back office processes, it also presents major opportunities for the future:

- GT-X provides the Flexibility to cost effectively and quickly integrate many legacy systems from Municipalities and Eskom into Regional Electricity Distributors (REDs), and to provide economy of scale across 6 independent REDs;
- Higher levels of Self Service or Interaction Automation can be introduced. Eskom currently has a very basic self service facility available to its customers via an IVR (Interactive Voice Response) unit and

a simple web site. The intention is to significantly enhance these customer interfaces by integrating them with the newly established GT-X workflow capability;

- GT-X provides the means for increased levels of personalisation and service segmentation;
- Although initially implemented as a Service oriented system, the scope of the new CRM platform can be expanded into the Sales and Marketing side of the business; and
- Finally, UBUSO will support improved levels of Customer Relationship Management for customers such as Key Industrial customers that are allocated Customer Executives and are not served via the high volume mass market channels.

SUCCESS

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The UBUSO Programme has only just implemented the new GT-X system (it has been running for 3 months), and it is therefore too early to claim significant business benefits (although these will definitely be realised in the future). The Development of the business benefits realization framework for the CRM solution is currently in progress.

Some of the early successes of the project include the following:

- Speedy and successful roll out of the project in under a year;
- A very high level of business buy-in by all users to the new CRM Solution. The application is seen as a user friendly system which provides real time information. This is a unique characteristic of this implementation when compared with other recent major systems implementations in Eskom. The solution is based on the current Eskom processes and therefore the impact of change to the user is minimal;
- The successful training of over 2000 users across the country. Current users differ in terms of educational levels and computer literacy skills. As part of the project, approximately 100 'SuperUsers' were mentored by the project team, ensuring that the project empowered the business going forward;
- To date, the business has successfully logged over 200 000 customer cases;
- A decrease in the number of overdue and escalated customer service requests (less than 10% of total workitems sent to the backoffice for resolution). Through management and operational staff having easy access to real-time dashboard monitoring, the business is able to manage and coordinate work efforts across regional boundaries;
- Approximately 30 000 workitems have been generated in a short period of time. Workflow functionality is able to route each of these workitems to specific systems and departments for individuals to action. A tightly integrated solution enables Eskom to view the status of any customer request and its corresponding history;
- As part of the need to be proactive to customer service requests, the new solution has generated over 35 000 proactive customer contacts, relating to various campaign management offerings;
- Customer Service Requests are being completed and followed-up quicker than before; and
- Eskom is for the first time now able to calculate and analyse information such as First Contact, One Contact and Immediate Resolution of Customer Service Requests. Eskom Customer Services will once again capitalise on the sophisticated reporting capability and action areas of improvement or strengths.

The internal success of the project was the ability of the team to successfully deliver a solution through a team effort involving 6 very different project teams. Commitment and integration between these teams was essential in order to successfully deliver the project in the tight timelines.

Other internal successes of the project were the following:

- Testing

Due to the process-driven approach of the solution, there was a need to mobilise skilled users, sourced nationally, to join the project on a secondment basis for a period of 3 months, during which most of these people spent extended periods away from their homes and families. The complexity of the integration testing procedures was exacerbated by the number of different project teams involved in this effort. Significant effort was spent on coordinating and streamlining the process of testing and logging of issues across multiple project teams. The testing approach was well defined. Close management of the testing cycles ensured that this phase of the project was a success.

- Distributed Software Rollout (Desktop rollout)

The GT-X system is designed around a centralised technical architecture. Although centralised, users

are still required to access the solution via a locally installed version of the application (PC Workstation). The rollout of the application had to include users from 7 virtual Contact Centres and over 60 Area Customer Service offices across South Africa - more than 2300 end users. Each user was visited and mobilised for go-live on the system.

- Peak season – no disruption during migration of systems

The timelines of the project coincided with the peak storm seasons in many of the regions across South Africa. During this period, Eskom receives its peak number of customer service requests, relating to power losses and outages. The migration of users onto a new system meant that GT-X had to be stable and operational without disruptions 24 hours a day. The Project minimised this risk by ensuring that the previous system was still available for users as a contingency.

DIFFICULTY

DIFFICULTY

The UBUSO project had many obstacles to overcome in order to implement the solution successfully. The main challenges were the following:

- Different levels of adherence across regional contact centres

One of the primary drivers of implementing the newly revised CRM Solution was the fact that it would be rolled out to all users with an application design centred on the use of standardised business processes for all types of customer interactions. The previous application was a transaction-based one and did not force users to follow a pre-defined process. This led to a number of regions following their own customised processes which led to much confusion during the design and development workshops. Again, managing expectations and coming up with an agreed proposal was key in meeting the tight timelines set for the project.

- Operational Architecture:

In order to provide the users with all customer data and to achieve CRM best practices a centralized architecture framework was implemented. This created a large dependency on the network (WAN) to ensure stability of the solution. As the network is common domain within Eskom this does expose the risk of external factors influencing the stability of the CRM solution. It is therefore of utmost importance that the project team adequately influences the network stability within Eskom. The management of this environment is currently being managed by an external Information Technology group. Communication and close coordination is key to ensuring this challenging risk be mitigated proactively.

- Integration:

The use of the SeeBeyond application to integrate and to update information into GT-X from multiple systems added great complexity to the team's efforts. There are over 15 different integration points between GT-X and other external systems. GT-X has now integrated with external systems including, the billing and field services systems. This project also saw the first major real time system interface via the SeeBeyond integration layer between GT-X and the external systems. Different project teams responsible for the solution increase the complexity of this implementation. The difficulty in monitoring the operational environment of data flowing through multiple points in the architecture of the integrated systems has been a significant challenge to date

- Other projects within Eskom

During the implementation of the solution more than 10 other projects were taking place within the Eskom Distribution. At least 5 of these projects directly impacted the UBUSO project. Areas such as timelines, project plans and resource requirements were continuously changing. These projects were interdependent and made it extremely difficult to complete integration testing as the base solution was always changing. This necessitated continuous regression testing and intense project management. The risk of milestone dates delays were significant as this would not only impact one but multiple projects. The potential of escalating costs was prevalent on this project.