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CASE STUDY

USAID WATER, SANITATION, AND HYGIENE FINANCE (WASH-FIN)

Customer Service Reform for Water and Sanitation Service Providers: The Cape Town Experience

March 2020

OVERVIEW

Over the past 2 years, the United States Agency for International Development (USAID) has made a significant contribution to the City of Cape Town's post-drought crisis recovery by supporting their efforts to reform their Water and Sanitation Department customer service system, which improved public trust in the Department and resulted

in a dramatic increase in revenue collection rates. The additional revenue will help fund implementation of the City's planned US \$385 million "New Water" supply program – an ambitious plan to increase Cape Town's water supply by nearly 30 percent over the next 10 years.¹

Cape Town's Water and Sanitation Department is one of the largest water providers in the country,

¹ "Our Shared Water Future: Cape Town's Water Strategy", City of Cape Town, February 2019. <http://www.capetown.gov.za/general/cape-town-water-strategy>

serving four million people across 1,000 square miles. In the last decade, Cape Town faced an unprecedented drought, culminating in 2018, when reservoirs fell to threateningly low levels that sparked predictions of “Day Zero”—the day when Cape Town would have to begin rationing water.²

During the drought crisis, Cape Town residents were made very aware of their water usage due to an aggressive public relations campaign and punitive tariffs imposed on heavy water users. As residents more closely reviewed their bills and rates, there was a significant increase in customer enquiries, which led to a backlog of unresolved customer issues. Against the background of the drought, in which the City was already being blamed for mismanagement that led to a crisis, these negative customer experiences further eroded trust in the government.

During this period, the City also faced high commercial water losses (also known as “apparent losses”).³ The City was only collecting 85 percent of

Increased revenues from CRM reform will be invested in augmenting and diversifying Cape Town’s water supplies to reduce the impact of future droughts. (Photo Credit: City of Cape Town.)



the revenue it generated through tariffs for provision of water and sanitation services. Stated another way,

15 percent of the City’s customers were not paying their water and sanitation bills which reduced the amount of money available to the City for investment in its water supply.

In response to the customer problems and loss of revenue highlighted during the drought, Cape Town’s Water and Sanitation Department undertook a Customer Service Turnaround Project (CS-TAP) that sought to improve its customer relationship management (CRM) systems and operations including metering, billing, collections, debt management, and customer care.

To guide the CRM reform process, the City requested support from the USAID-funded Water, Sanitation, and Hygiene Finance (WASH-FIN) program.⁴ In response, WASH-FIN recruited Mr. Paul Bender, a senior municipal finance specialist with over 20 years as Chief Financial Officer and Director (CEO) of three major US utilities. Paul, who also had significant previous experience in South Africa working with National Treasury and other municipalities, was embedded within the City of Cape Town Department of Water and Sanitation where he worked directly with the senior City management — for a period of 15 months starting in July 2018—. The City of Cape Town contracted an additional 15 consultants to implement the CS-TAP project under Paul’s leadership.

CRM REFORM PROCESS AND APPROACH

The WASH-FIN Municipal Finance Specialist conducted an initial diagnostic in close collaboration with counterparts at the City and identified areas for improvement in both internal and customer-facing operations. The CRM reform process described below fits within the broader and more comprehensive Cape Town Water Strategy, which provides a roadmap towards a future in which there

² <http://www.capetown.gov.za/Media-and-news/Day%20Zero%20when%20is%20it,%20what%20is%20it,%20and%20how%20can%20we%20avoid%20it>

³ Commercial water losses typically pertain to inaccuracies with meters, unauthorized consumption and data handling errors, among others. American Water Works Association (AWWA). 2012. Water Loss Control Terms Defined. AWWA.

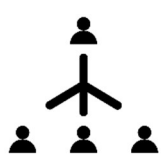
⁴ WASH-FIN is a five-year program financed by the United States Agency for International Development (USAID). Its primary objectives are to close financing gaps to achieve universal access to water and sanitation.

will be sufficient water for all, and Cape Town will be more resilient to climate and other shocks. It takes into account the important yet complex relationships between water, people, the economy and the environment.⁵

Specifically, the reform effort focused on the organizational structure and the performance of primary business areas.

ORGANIZATIONAL STRUCTURE

Like many other municipal water companies or utilities, Cape Town's water problems are compounded by a fragmented organizational structure. The City's water system is managed by many different work units: the Department of Water and Sanitation (meter reading, service request resolution, debt management, field operations, billing system, data management, etc.); the Executive Director of Area Management at the City Contact Centre; the City's CFO and Revenue Department (customer billings and certain debt management activities); and the Executive Director of Corporate Services at the City's IT Department.



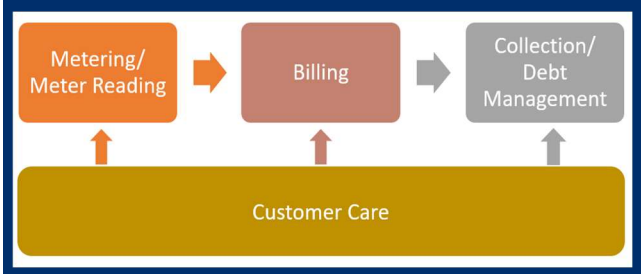
The Water and Sanitation Department has consolidated water and sanitation customer service operations into one organization. This will improve the efficiency and

teamwork among the various operating units involved in water management. The new Customer Service Branch will have a single manager who reports directly to the Executive Director of Water and Sanitation. Six work units will exist within the organization, including the four business areas outlined above. In addition, there will be a business analysis group responsible for IT, as well as a finance and administration unit. Actions are underway to formally establish this new structure, including recruitment for the new management team.

PRIMARY BUSINESS AREAS

Based on the diagnostic analysis, the WASH-FIN Municipal Finance Specialist collaborated with City officials to develop an action plan centered around major work units where issues were identified either as causes or results of deficient customer service and operational inefficiencies. These primary business areas include: 1) metering and meter reading; 2) customer billing; 3) collections and debt management; and 4) customer care and call centers. The relationships between these business areas is

Figure 1: CRM Primary Business Areas



illustrated in Figure 1.

The four business domains make up 95 percent of the CRM reform effort (several information technology projects were also targeted), and directly or indirectly impact revenue flows.

I. METERING



Context: Metering operations involve meter replacements and new customer meter installations, meter investigations, and meter testing. The quality of meters has a direct impact on billing accuracy, customer satisfaction, water use, and cash flows. Meters require continual care, including regular testing and calibration (for larger meters) and regular replacement (for smaller meters). In Cape Town, over 70 percent of meters are over ten years old and due for replacement. As a result, many are not working or do not register the full amount of water being used.⁶

⁵ "Our Shared Water Future: Cape Town's Water Strategy", City of Cape Town, February 2019. <http://www.capetown.gov.za/general/capetown-water-strategy>

⁶ Research conducted on water meter replacement in South Africa indicates that meters should generally be replaced between 10-15 years depending on water flow volume. Moahloli, Marnewick and

Action: The objective under this business area is to improve meter reading and operations. Two City-funded consultants were assigned to this area to assist with daily workflow and contract management. The City is standardizing the routine testing of meters, with the acquisition of new testing equipment underway.

2. BILLING



Context: Billing systems differ, but all demand good customer database management and an understanding of consumption levels to develop informed tariff structures. Clear

information on tariffs and efficient billing impact timely payment, thereby contributing to stable cash flows. In Cape Town, the primary billing problems included legacy data issues, inaccurate data capture in the billing system, and high estimated billing (around 15 percent of billing is estimated, and it should be 2 percent or less).⁷

Action: The action plan designates an advisor to assist with data cleanup and add the backlog of new meters to the billing system. The City developed and implemented a manual procedure to expedite this process, while an automated solution is under development. This effort will likely require additional attention and support, as transitioning to automated systems can require time, training, and an adjustment period. Finally, the City is implementing a daily procedure to pull all exorbitant billings for Director (or designee) review before mailing.

3. COLLECTIONS/DEBT MANAGEMENT



Context: Collection or debt management is critical for financial sustainability. It is the actual process by which the tariffs charged are paid and

received, thereby producing the desired reliable revenue stream.

Collections of outstanding bills are enforced by the threat of denial of service (i.e., disconnection). Previously, there was no consistent, disciplined daily disconnection process and as a result, there was limited incentive for customers to resolve their outstanding debts to the City.

Action: To resolve this issue, it was determined that disconnections (or restriction of service for domestic customers that are not paying) must be completed close to 100 percent every day. Five City-funded consultants were assigned to shadow foremen and coordinate the daily processing and compilation of disconnections. The reasons for not completing disconnections were addressed (e.g., access issues, billing disputes, etc.) by the consultants. Further, the threshold for disconnection due to an outstanding debt was doubled from approximately US \$30 to US\$60 to reduce the volume of daily disconnections to a manageable and cost-effective level.

4. CUSTOMER CARE AND CALL CENTERS



Context: Customer care is the work of looking after the City's customers and ensuring their satisfaction with their water and sanitation services.

Customer call centers provide information to customers on what is happening with their water service, serve as the first means of contact when issues arise, and aggregate feedback that informs constructive change and improvements to the system and service. Provision of reliable and understandable information can play an important part in customer satisfaction, which in turn affects consumer usage/conservation practices and willingness to pay.

In Cape Town, while customer calls to the City Contact Centre were answered relatively quickly

Pretorius. "Domestic water meter optimal replacement period to minimize water revenue loss". Water SA vol.45 n.2 Pretoria Apr. 2019

⁷ Estimated billing occurs when meters are non-existent or cannot be read, which risks a utility not accounting for water revenues and increased customer complaints. Other major cities in South Africa have also targeted the elimination of estimated billing to improve customer

service with the use of a new billing system. This was the case in Johannesburg in early 2017. See: <https://www.smart-energy.com/regional-news/africa-middle-east/water-billing-system-johannesburg/>

(often on the first ring),⁸ the responses and solutions provided by the Department work units took an average of 10 days, with many exceeding six months. Moreover, tracking of these issues was poor to nonexistent.

Action: As part of the CRM reform effort, the City endeavored to improve the responsiveness and effectiveness of customer care and call centers, starting with enhancing their understanding of customers' issues and perceptions. In response, the City hired two full-time consultants: one to focus on high-level complaints, and the other on improving the routine customer query process. The consultants updated the Contact Centre scripts and trained staff to help facilitate resolution of queries on the first call rather than sending 100 percent of customer contacts to Water and Sanitation work units to reach resolution. Finally, the City is planning to conduct skill upgrades to maximize first-call query resolution; however, this will take time and involves the support of other departments within the City.

EXPECTED RESULTS

It is envisioned that a streamlined organizational structure will sustain the customer service turnaround improvements, facilitating customer satisfaction through improved service and generating reliable internal revenue. Cape Town's customer service reform process is expected to eventually increase tariff collection rates from 85 percent to 95 percent of non-indigent households, which will result in additional revenue collected by the City of over US \$25 million per annum.

The expected results by primary business areas include:

Metering. The City aims to improve meter reading and operations to, in the short term, allow for 98 percent billing for non-indigent customers. The City has already increased the number of actual meter readings by 30,000 per month. Longer term, Cape Town is undertaking a comprehensive meter upgrade

and replacement program to yield virtually 100-percent-accurate meters. To date, about half of the backlog of 23,000-meter exchanges has been cleared.

Billing. With the changes, exorbitant bills will no longer be released without senior management review; billing accuracy will increase as the number of "estimated bills" is reduced from 15 percent to 2 percent.

Collections/Debt Management. Effective collections and debt management processes (i.e., disconnections) are key to capturing the additional 10 percent revenue projected by the CS-TAP program. Efforts to date have been hampered by poor contractor performance; however, the City is taking steps to improving its contract management.

Customer Care and Call Centers. It is anticipated that the immediate impact of these reforms will be faster response time for customer queries—addressed within 48 hours—with prompt resolution of issues within no more than 30 days (i.e., the issue is either fixed within two days, or the customer is contacted and informed what will be done and when). The City has already reduced the customer complaint backlog by 92%. Prompt response can reduce the number of customer service queries, as research by a recent McKinsey study showed that dissatisfied customers were twice as likely to contact customer call centers three or more times.⁹ In addition, many customers will withhold payment if dissatisfied with the service or if they dispute their billing. Timely resolution of these issues can improve collection efficiency.

CONCLUSIONS

This case study illustrates the lessons learned from the City of Cape Town's post water-crisis reform experiences. The City undertook important measures to improve its water and sanitation department's CRM systems, with assistance from USAID.

⁸ Number of rings prior to answer is a common metric for CRM programs.

⁹ D'Emidio, T., et al, The global case for customer experience in government. 2019. McKinsey & Company.

This case study demonstrates that a well-resourced and integrated approach to customer service reform can reap multiple benefits for water and sanitation service providers, including increased revenues and improved customer trust.

The reform process highlighted here is applicable to other water and sanitation service providers; however, an assessment of the unique characteristics and challenges of each entity is recommended prior to adopting a specific plan of action. While a crisis like Cape Town's drought can serve as a launch pad for change preemptive action is preferred to avoid the crises in the first place. A well-functioning CRM system can improve water security and ensure the resilience of the water services provider during times of water stress.

USAID's approach to providing technical assistance to the City of Cape Town proved to be particularly effective. Due to the disruptive nature of any major reform effort, it is necessary to develop a high-level of trust and personal relationships which are only achievable over time. By embedding a respected international consultant with local knowledge for an extended time period, USAID was able to leverage

trust and relationships with key stakeholders to achieve the outcomes of the reform efforts.

The five-year WASH-FIN project is funded by the United States Agency for International Development (USAID) and began in October 2016. Implementation is led by Tetra Tech with support from Open Capital Advisors, Segura Consulting and Global Credit Rating.

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The 3.5-year, \$2.3 million WASH-FIN Southern Africa activity is funded by the United States Agency for International Development (USAID) and began in July 2017. This case study was prepared by the WASH-FIN South Africa Team and the City of Cape Town. For more information contact Chris Serjak, WASH-FIN South Africa Team Leader, Chris.Serjak@WASHFIN.org or Meredith Kummings, WASH-FIN Technical Advisor, Meredith.Kummings@WASHFIN.org.