Supporting Poor-Inclusive Water and Sanitation Sector Reform

MajiVoice:
A New Accountability Tool to Improve Public Services

April 2015

MajiVoice is an innovative accountability mechanism that is transforming service delivery in the Kenyan water and sanitation sector. Linking citizens, water service providers (WSPs) and the sector regulator, the new *MajiVoice* software platform provides specific tools and incentives to strengthen the focus on customer needs and improve service standards. In its first year, the system has achieved concrete results: At Nairobi City Water and Sewerage Company Ltd (NCWSC), Kenya's largest water utility and the first to adopt *MajiVoice*, the number of complaints recorded rose almost tenfold, resolution rates climbed from 46% to 94% and time to resolution halved. Under the guidance of the Water Services Regulatory Board of Kenya (WASREB), the regulator responsible for sector rules and their enforcement, the system has since been extended to WSPs in Nakuru, Nanyuki and Mathira.

MajiVoice was developed in partnership between the World Bank's Water Global Practice, WASREB and participating WSPs. The Water Global Practice supports client countries in improving access to safe water and sanitation services, especially among the poor. To achieve this aim, lending operations such as the Kenya Informal Settlements Improvement Project (KISIP) and the Water and Sanitation Services Improvement Project (WASSIP) are combined with innovative technical assistance such as *MajiVoice.* This knowledge note describes how *MajiVoice* succeeded in improving accountability in the Kenyan water sector and outlines the building blocks to achieve similar impact in other countries and sectors.

THE KENYAN CONTEXT

Kenya is rapidly urbanizing and its WSPs are straining to keep up with population growth and economic development. The population served by public utilities has more than doubled to approximately nine million between 1990 and 2012, but demographic growth was so fast that this has only translated into a 3% increase of access to piped water.[1]

[1] WHO/UNICEF, Joint Monitoring Programme

BOX 1: MAKING SERVICES WORK FOR POOR PEOPLE

The 2004 World Development Report *Making Services Work for Poor People* stressed that *"successful services for poor people emerge from institutional relationships in which the actors are accountable to each other"*. The key actors in this context are citizens, providers and policymakers, and *"weaknesses in any of the relationships - or in the capacity of the actors - can result in service failures."*

MajiVoice strengthens both accountability and capacity in service delivery. The system improves accountability by making it easier and less costly for customers to submit and track their complaints to providers. *MajiVoice* also reinforces the ability of the regulator to enforce standards by giving it direct online access to provider performance statistics. Within providers, the *MajiVoice* software tracks each complaint along clear, timed workflows and thus not only strengthens accountability between staff and management, but improves their capacity to deal with large volumes of complaints efficiently.

By making the submission, processing and monitoring of complaints less costly and more intuitive, the *MajiVoice* software links and empowers citizens, water providers and policymakers. *MajiVoice* thus adds an innovative tool to reinforce accountability systems and ensure that even the poorest consumers' concerns cannot be ignored.

94% **of received complaints resolved by Nairobi City Water and Sewerage Company Ltd in the first year of using *MajiVoice,* with resolution times halved.**
(Source: MajiVoice System Data)

WORLD BANK GROUP

wsp water and sanitation program

In view of this rapid population growth and ever increasing demand for safe and affordable water, many WSPs are struggling to ensure high-quality services and customer complaints are frequent. In 2009, an African utility performance assessment found complaint rates that were five to ten times higher than in developed countries.[2]

Dealing with complaints efficiently is vital, not only to maintain customer satisfaction, but to identify and resolve issues such as leaks, water quality or wrong bills that directly impact service standards and revenue. Responsiveness to citizens is central to sector accountability and service quality.

While Kenya's water sector has a well-defined accountability framework with a strong regulator and clear performance targets, it lacked an effective tool to facilitate the submission, management and monitoring of complaints. As a result, not only were recorded complaints relatively few, but complaint processing by WSPs was inefficient. Moreover, the regulator had no reliable, timely access to complaint statistics, and thus no basis for enforcing existing standards. As the regulator's annual performance report of service providers, *IMPACT*, outlined in 2013, *"customer complaints handling [procedures have not been] submitted" for any of the water providers, although their "development […] is mandatory under Clause 7.2 of the Licence".*[3]

MajiVoice was developed to fill this gap with an integrated solution that increases accountability pressure from below by facilitating submission and tracking of complaints by customers, that reinforces monitoring from above by giving the regulator better data access, and by equipping public utilities with a modern complaint management tool to react productively to these pressures by processing customer issues more efficiently.

HOW *MAJIVOICE* BENEFITS WATER SERVICE PROVIDERS

A good accountability mechanism relies on the ability of the accountable agency to respond to customers and regulators efficiently. The backbone of *MajiVoice* is thus a web-based task management software that enables utility staff to receive, process and report on customer-submitted complaints following clear, guided workflows with an intuitive interface.

The system was developed in Kenya through a cooperation between the Water and Sanitation Program of the World Bank's Water Global Practice, the sector regulator (WASREB) and water service providers. After a pilot in Nairobi in mid-2013, it was launched in Nairobi in March 2014 and has since been extended to water service providers in Nakuru, Mathira and Nanyuki. The selection of the first providers to receive *MajiVoice* was based on utility size (at least 10,000 accounts to ensure a sizable complaint flow and potential for efficiency gains), adequacy of existing information technology (IT) infrastructure and management interest. Within a year, *MajiVoice* has thus gone from a small trial to managing all customer feedback from up to 500,000 connections across four water companies.[4]

BOX 2: THE WORLD BANK'S COMMITMENT TO BENEFICIARY FEEDBACK

In 2014 the World Bank committed to incorporating citizen feedback mechanisms in all of its investment project financing with identifiable beneficiaries by 2018. In its "commitment to listening" the World Bank states that *"citizen engagement can help governments achieve better development results, improving more lives and accelerating progress in the fight to end poverty".*

This firm commitment to beneficiary feedback marks the culmination of a long evolution of citizen engagement at the World Bank. In the 1980s, the World Bank was the first international financial institution to make consultations of indigenous peoples a requirement. In the 1990s, the Participation Sourcebook (1996) established a broader institutional mandate to work directly on governance and participation issues, and in subsequent years citizen engagement and stakeholder participation have become increasingly important elements of World Bank processes, notably through its Social Development Strategy (2005) and Governance and Anticorruption Strategy (2007).

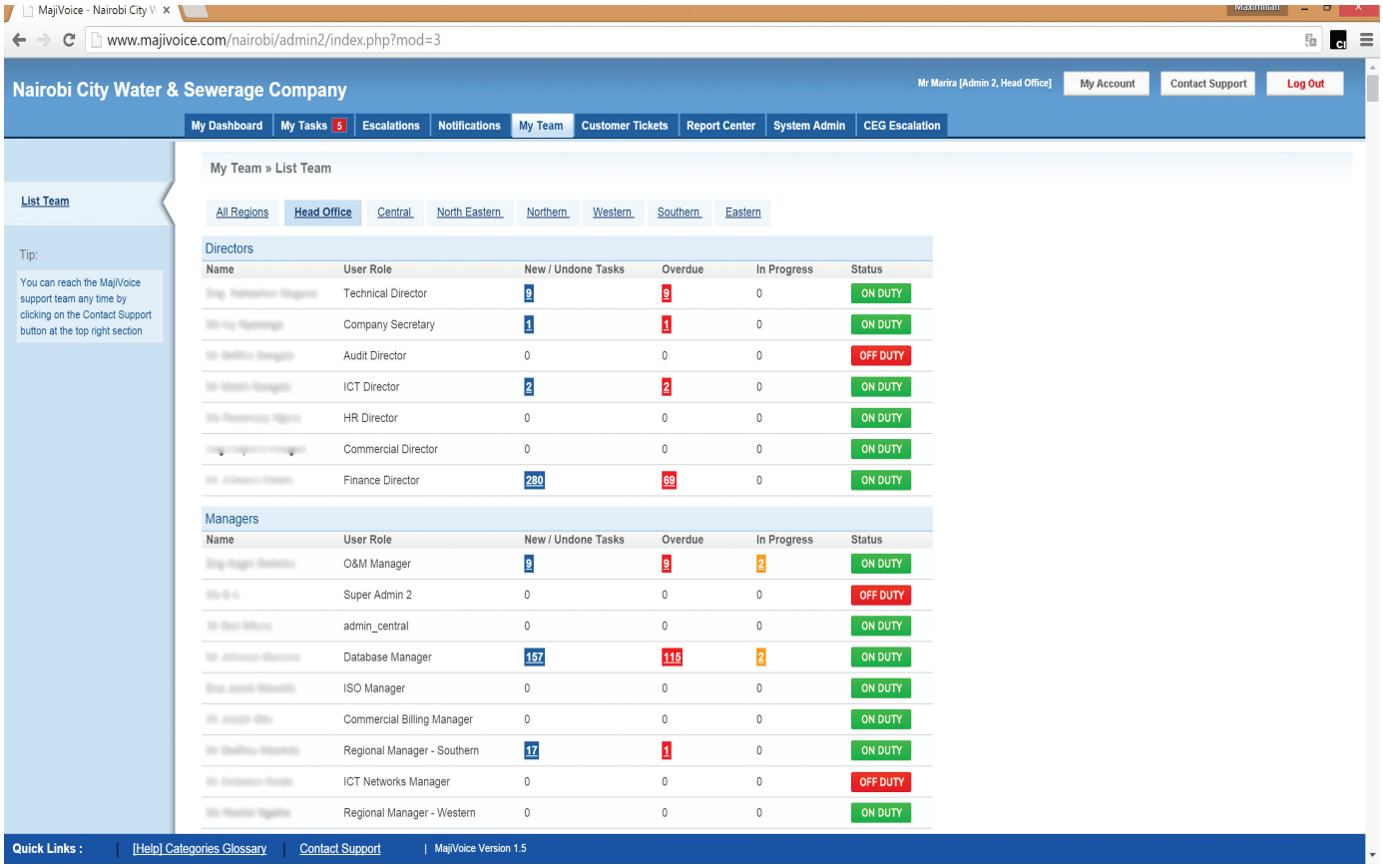
To achieve the new, ambitious goal of mainstreaming beneficiary feedback in all World Bank projects, a a *Strategic Framework for Mainstreaming Citizen Engagement* in World Bank Group operations has been issued and the World Bank President's Delivery Unit was tasked with monitoring progress.

[2] Lafferty, A.; Lauer, W.; Benchmarking - Performance Indicators for Water And Wastewater Utilities: Survey Data and Analysis Report, American Water Works Association,2005; pp.73-78; Sum of median technical and customer complaints for water (6.1+5.9=12); for African values: Water operators Partnerships, *Africa Utility Performance Assessment,* 2009; p.107 (note that due to substandard reporting systems at many African utilities, these may be underestimates); for more comparison figures, see also: Australian Government, National Water Commission, Australian National Performance Report 2006-2007 - Urban Water Utilities, p.25;

[3] Water Services Regulatory Board of Kenya's *IMPACT Report 6,* 2013; p.87;

[4] Water Services Regulatory Board of Kenya's *IMPACT Report 7,* 2014; Table 4.4, p.25;

FIGURE 1: THE *MAJIVOICE* INTERFACE IS OPTIMIZED FOR LOW-BANDWIDTH (TEAM OVERVIEW SCREEN SHOW)



MajiVoice tracks each submitted complaint and every staff action on it, triggering alerts if set resolution timelines are exceeded. The cloud-based *MajiVoice* system can be accessed by the service provider from any internet enabled device, be it a work-computer or smartphone. Its sparse, efficient design is optimized for low bandwidth to ensure smooth operation even on slow internet connections. A mobile version facilitates work on small devices. Recent staff survey results indicate that more than a third of staff (36.8%) has accessed the system from outside the office.

Broad uptake of *MajiVoice* by all staff handling customer issues is critical to achieve service standard improvements such as faster complaint resolutions. In Nairobi, the number of staff using *MajiVoice* on a regular (at least weekly) basis has risen from less than 100 in mid-2013 to over 400 in the last quarter of 2014.[5] A recent anonymous staff survey carried out by the World Bank and NCWSC has shown a positive staff response to *MajiVoice,* with large majorities reporting that the system "made it easier to deal with and follow up on specific complaints" (93%) and "improved the way NCWSC deals with complaints" (98.1%). The heightened performance pressure that comes with the comprehensive tracking of every single complaint was also captured, with a third of surveyed staff reporting that *MajiVoice* increased their personal workload (34%) and increased pressure to deal with customer complaints (37%).[6]

[5] *MajiVoice* system statistics; unique users per week. This implies approximately 20% of NWC staff are regular users of the system.

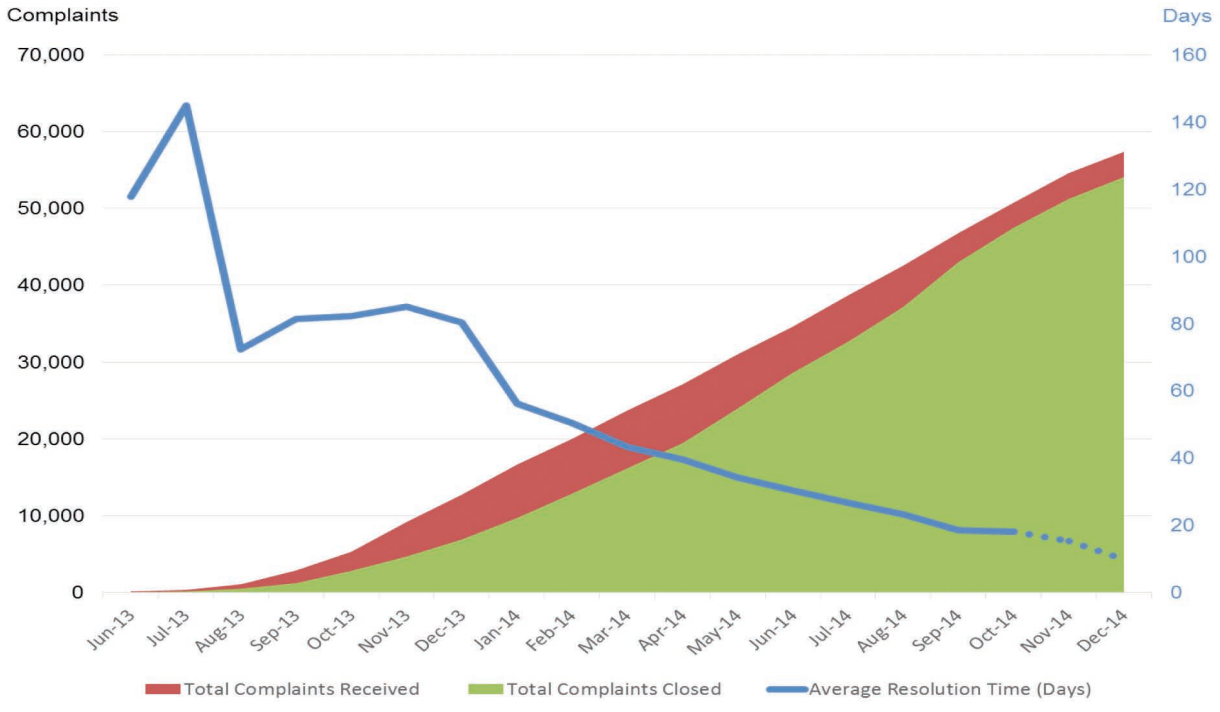
[6] Staff survey implemented in December 2014 by the *MajiVoice* team in cooperation with NCWSC customer relations team. Staff across all zones and departments were sampled randomly and provided with anonymous paper questionnaires (incl. an unmarked envelope for returning the filled questionnaire). In total, 106 responses were received and analyzed. Data is available on request.

A key metric for service standards and accountability is the percentage of received complaints resolved by the service provider. In Nairobi, 94% of all complaints submitted through *MajiVoice* between July 2013 and December 2014 have been closed. Monthly closure rates averaged only 46% in the first six months when staff were overwhelmed by a spike in recorded complaints after *MajiVoice's* introduction. Closure rates have steadily improved since, averaging 111% in the last six month of 2014 (i.e. more complaints were closed than received, indicating a catching up process). Nakuru, Mathira and Nanyuki are still early in this cycle, but averaged approximately 60% closure rates in the first months with an improving trend.

MajiVoice actively solicits secondary complaints in its closure confirmation Short Message Service (SMS) texts to customers in case the formal complaint resolution still left a customer unsatisfied. This provides an additional feedback loop to gauge customer satisfaction. If a secondary complaint is submitted, it is automatically highlighted to a supervisor at the service provider, thus providing lower ranking staff with an incentive not to carry out false closures. A recent survey of *MajiVoice* users in Nairobi found that while approximately two thirds were satisfied with the outcome of their complaint closure, one-third (33.6%) were not. It should be kept in mind, however, that closures may fall short of customers' expectations even when correctly processed (e.g. in billing disputes).

A further key service standard metric that has seen significant improvements since *MajiVoice's* adoption is average resolution time, that is, the period between receipt of the complaint and its closure. Resolution times indicate how efficiently providers are processing feedback and how long customers have to wait for the complaint to be resolved. In the first year of *MajiVoice's* deployment in Nairobi, the average resolution time across all complaint categories has more than halved between the first and last six months. Improvements were registered in all seven sub-regions of the water company, and in 21 out of 22 complaint categories. These improvements are reflected in a recent staff survey, in which almost 90%

GRAPH 1: *MAJIVOICE* COMPLAINTS AT NAIROBI CITY WATER AND SEWERAGE COMPANY[7]



[7] *MajiVoice* System Data; The dotted line for October-December indicates that at the time of writing, closure rates for complaints received in these months were still under 95%. Thus, average resolution time for complaints received in these months will likely rise as still pending complaints are being closed in the future, pushing the average up. Thus, the data for these months is not yet fully comparable to prior months with closure rates above 95%.

A unique reference number is provided for every complaint

of staff stated that *MajiVoice "made a positive difference to customers in practice".* At the end of 2014, the resolution deadlines targeted in service provision agreements (SPAs) still remained a challenge, however, with approximately a third of complaints in compliance. Going forward, this compliance rate can be expected to improve further if the current trend of decreasing resolution times continues (see Graph 1).

HOW *MAJIVOICE* BENEFITS CUSTOMERS

The World Development Report on *Making Services Work for Poor People* stated that *"many service delivery arrangements neglect the role of clients, especially poor clients, in making services work better".* Citizens have a particularly important role to play as *"effective monitors of providers, since they are at the point of service delivery."*[8]

MajiVoice puts a strong emphasis on facilitating citizen feedback, offering an array of modern complaint submission and tracking options. Kenyan customers can now submit complaints using a dedicated SMS shortcode (15444), a Unstructured Supplementary Service Data (USSD) shortcode (*624#), through the internet (www.majivoice.com) or by traditional channels such as walk-in service centers or a hotline number, in which case customer care agents input the complaint into *MajiVoice.* Free hotlines as well as internet and SMS submissions for KES 1 (< US$0.02) or less, give poorer customers multiple ways to avoid time- and cost intensive personal service center visits. *MajiVoice* was designed to offer the widest possible spectrum of submission options because, as a recent World Bank review of Citizens and Service Delivery pointed out, the *"more accessible redress procedures are, the more likely they will be effective in strengthening accountability and empowering users."*[9]

For each complaint, moreover, a unique reference number is sent to the customer's phone free of charge, which can be used to query the complaint status by SMS, USSD or the internet, or to follow up with customer care agents. In a recent survey of close to 500 customers who had used *MajiVoice,* over 74% had a positive opinion of the reference number system, and over 50% had actively used it to follow up on their complaints. Customers who received *MajiVoice* reference numbers were significantly more likely to feel that NCWSC took their "complaint seriously" and reported significantly higher satisfaction with NCWSC services in general (resolution duration and ticket closure were also significant determinants)[10] Confirmation SMS sent to customers are covered by providers, an operational expense limited due to concessionary bulk rates (see Table 2).

Ticket No: 2BL150113HQ1 [Billing] is in Progress with Senior Management Department, last acted on Jan 15 2015, 03:22 pm. For more, call NairobiWater FREE on 0800720018

Check Another Ticket,

Result of online status check by customer

[8] World Bank Group, *World Development Report 2004 – Making Services Work for Poor People,* 2003; p.9

[9] Ringold et al., "Citizens and Service Delivery - Assessing the Use of Social Accountability Approaches in Human Development", The World Bank, 2012, p.87;

[10] Customer survey data was used for a regression of a variable measuring whether customers felt their complaints were taken seriously (and alternatively, satisfaction with NCWSC services in general) on the time it took to resolve their complaint, an indicator variable of ticket status (closed or not closed), and a variable indicating whether they received a MajiVoice reference number (some customers did not e.g. due to temporary system outages during maintenance). The latter had a significantly positive impact at a 1% significance level. A closed ticket status was positively significant at the 1% level in both cases; resolution duration was significant at the 10% level in both cases (p=0.053 and p=0.085).

During the first year after *MajiVoice's* launch, the number of recorded customer complaints has increased almost tenfold. A baseline study carried out at the beginning of the project indicated that prior to *MajiVoice* approximately 400 complaints per month were formally recorded in Nairobi. This figure has been quickly exceeded in *MajiVoice,* with an average of 1,529 complaints per month recorded in the first six months, which has risen to 3,794 per month more recently. This represents an almost ten-fold rise of *recorded* complaints. In Nakuru, complaints recorded in *MajiVoice* have averaged 442 per month since the roll-out in October 2014.[11] The lack of comprehensive complaint tracking prior to *MajiVoice* makes earlier statistics unreliable and the reported increase is likely partly due to better recording rather than simply increased complaint volumes. As better complaint recording is a precondition for the more efficient processing which has led to more and faster complaint resolutions, it may be regarded as a beneficial effect in and of itself.

For NCWSC, the *MajiVoice* figures for 2014 imply 95 complaints per 1000 connections per year.[12] According to data collected by the Water Operators Partnership Africa from 53 utilities, this would put NCWSC above the median of 53 complaints per 1000 connections, but below the highest quartile exceeding 140 per 1000.[13] However, it must be borne in mind that these comparison figures likely suffer from the same downward bias that affected NCWSC prior to *MajiVoice* i.e. NCWSC's relative position may be considerably better if all utilities recorded issues as comprehensively as NCWSC does now.

HOW *MAJIVOICE* BENEFITS THE REGULATOR

In providing Water Services Regulatory Board of Kenya (WASREB) with the *MajiVoice* solution, the Water Global Practice supported the regulator in complying with the 2002 Water Act which mandates WASREB to put in place and monitor procedures for handling complaints made against utilities (Section 47c/f).

For the regulator *MajiVoice* adds value beyond just better task management at provider level. *MajiVoice* allows WASREB itself to view up-to-date, accurate complaint performance statistics from participating water service providers in its own customized online dashboard. Kenyan WSPs are contracted through Service Provision Agreements which set performance targets, including resolution times for complaints. The fact that WASREB can now track compliance with these targets accurately provides WSPs with an added incentive to address complaints, as violations will be noticed quickly and can trigger action by the regulator. This incentive has been reinforced by availing *MajiVoice* to the existing Water Action Groups (WAGs) – community activists funded by the regulator to support consumers and investigate contentious water related complaints. WAGs have been provided with a dedicated *MajiVoice* dashboard to better track selected issues, thus adding one more source of pressure for accountability.

A citizen who submits and tracks a complaint through *MajiVoice* can do so knowing that WSPs have committed to its timely resolution and are addressing it under clear mandates and supervision from the regulator. As the World Development Report on *Making Services Work for Poor People* put it, a regulator or policymaker *"can specify a contract based only on what he can observe - on what information is available. There has to be a method for monitoring providers and for having that information reach the policymaker."*[14] *MajiVoice* ensures that regulators always have exact and comprehensive information on complaints and the effectiveness of providers' response. The existing legal structure provided by the 2002 Water Act and WASREB's guidelines embeds *MajiVoice* and makes it a regulatory instrument rather than just a voluntary tool.

The ability of *MajiVoice* to directly share performance information of providers with the regulator is also in line with the Government of Kenya's *Vision 2030* that aims to promote *"results-based management within the public service"* and an *"accountable system […] that permits free flow of information".*[15] These cross-institutional information sharing aspects, however, required a cautious approach during the initial deployment of *MajiVoice.* Service providers may be reluctant to embrace comprehensive complaint tracking and information sharing if a harsh regulatory reaction to more accurate (often meaning less positive) statistics is expected. Regulators need to find a balance between encouraging accurate reporting and data sharing, and using such data for enforcement.

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[11] Water and Sanitation Programme, *MajiVoice Baseline Report,* 2012

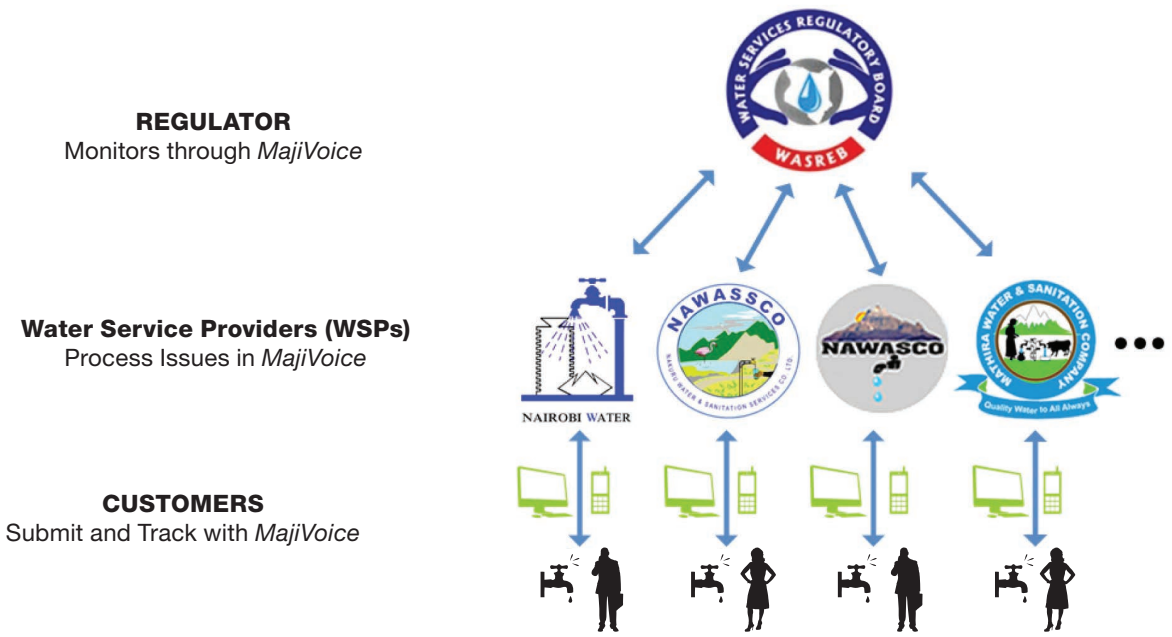
[12] Account figures for NCWSC were taken from the WASREB IMPACT 7 Report and have been combined with number of complaints received in calendar year 2014.

[13] Water operators Partnerships, *Africa Utility Performance Assessment,* 2009; p.107

[14] World Bank Group, *World Development Report 2004 – Making Services Work for Poor People,* 2003; p.9

[15] Government of the Republic of Kenya, "Kenya Vision 2030 - The Popular Version", 2007; p.25; p.22;

GRAPH 2: *MAJIVOICE* CREATES A FULL ACCOUNTABILITY CHAIN: FROM CUSTOMERS OVER PROVIDERS TO THE REGULAOR



TOWARDS A VIRTUOUS CYCLE: USING DATA TO IMPROVE BUSINESS PROCESSES

The value of *MajiVoice* data goes beyond its usefulness for monitoring overview metrics such as closure rates or resolution times. Digging deeper into *MajiVoice* data can reveal bottlenecks in complaint processing even at the level of individual staff and thus directly inform improvements in WSPs' workflows and organization.

This is possible because *MajiVoice* does not only record and track every complaint, but also every staff action taken along the entire response chain (a typical complaint can be processed by a sequence of five to fifteen staff before resolution, see Table 1). In Nairobi, thus, the over 60,000 individual complaints received so far are linked to over half a million logged staff actions. These can be analyzed to understand how, exactly, complaints are processed, and where, why and how long they get delayed.

In Nairobi, for instance, billing and metering related complaints constitute 48% of complaints closed beyond resolution deadlines (i.e. overdue). Improving how NCWSC deals with billing complaints is therefore critical for improving customer service and meeting regulatory targets. As Table 1 illustrates, *MajiVoice* can give clues about how billing issues could be processed more efficiently by analyzing staff action logs.

TABLE 1: ANALYZING WORKFLOW DATA - BILLING VS OTHER COMPLAINTS

	Billing or Metering complaints	Non-billing/ metering complaints
Steps to resolution (Average)	14.8	4.6
Median Duration of workflow step (days)	1	0.3
HQ Involvement (Avg)	67%	7%
Median task duration at key bottleneck (days)	**28.1**	**23.1**

Comparing the data from billing and non-billing complaints reveals that on average billing issues have more than three times as many steps from complaint receipt to resolution. Moreover, the median duration of each step of a billing complaint is three times as long, and NCWSC headquarters staff are actively involved in close to 70% of cases, compared to only 7% of cases in non-billing issues.

48% **of overdue complaint resolutions were related to billing and metering in 2014.** *(Source: MajiVoice System Data)*

Researching this further revealed a policy mandating NCWSC headquarters clearance for even minor account adjustments as a major cause. This policy requires complaints leading to bill adjustments to be reviewed and processed at both regional and headquarters level. Workflows become stretched and key headquarters officers who receive thousands of tasks for review from the regions struggle to keep up.

As Table 1 illustrates, some officers are so overwhelmed by billing and metering issues that the median task on their desk requires almost a month until it is actioned. Such information, in particular if further broken down by exact complaint categories, regions, and individual staff, can be the basis for targeted improvements. For instance, NCWSC may decide to decentralize its billing complaint workflows by devolving more authority back to the regional level, or if sufficient financial controls are not possible at that level, to at least reinforce the resources available to headquarters staff for processing billing complaints in a timely manner. *MajiVoice* may also enable intra-provider learning as the data shows that the average billing complaint takes as little as 13 steps in one region, but up to 19 in others. This examples show how embracing *MajiVoice* can empower providers to improve their work processes.

Thus, *MajiVoice* is not only a productivity software to process complaints efficiently, nor can it be limited to its regulatory value as a monitoring tool for operational metrics. *MajiVoice* also records in-depth business process data that allows WSPs a better understanding of how to improve their services.

ADOPTING *MAJIVOICE:* CHALLENGES AND COSTS

MajiVoice can add value in any sector or context in which citizen submitted feedback needs to be managed and monitored to ensure timely and productive responses. Certain challenges and costs, however, have to be met for the system to achieve its potential, and the Kenyan experience has yielded some critical insights in that respect.

A critical success factor is backing for comprehensive feedback processing and tracking by the institutions involved (i.e. providers and regulator). While *MajiVoice* can collect and display citizen feedback even if the relevant institutions are not incentivized and adequately staffed to react to it, the value of the system will be limited and citizens may disengage if no responses are forthcoming. A clear framework of rules

mandating institutional response and monitoring duties, as is in place in the Kenya water sector based on the 2002 Water Act, can be critical to incentivize stakeholders in this respect. A balanced approach to monitoring and enforcement, which insists on performance gains but does not react too harshly if initial statistics reveal performance gaps, is also critical to achieve service provider buy-in.

An important technical requirement is the computerization and network connection of participating service providers and regulators. The *MajiVoice* system is a digital processing software that relies on staff having at least shared access to computers or smartphones to work on responses to complaints. Requirements for these computers or smartphones are extremely basic as *MajiVoice* runs in standard browsers like Microsoft Internet Explorer or Google Chrome, and is optimized for low-bandwidth connections. In Kenya, even mid-sized utilities were generally found to meet these requirements.

Widespread use of mobile phones or internet access by citizens is required for some useful *MajiVoice* functions, in particular the submission and tracking of complaints by mobile phone or internet, or the confirmation SMS sent upon submission and closure of a complaint. In Kenya, mobile phone penetration rates have reached almost 80% of the total population in 2014 (close to 100% for urban adults), and over half of the population have access to the internet.[16] Even without a mobile-connected citizenry, however, the core task-management and reporting functions at provider and regulator level may still achieve efficiency gains as citizens could report and track issues directly with providers (e.g. in service centers).

In terms of financial costs, one may distinguish set-up and recurrent operational costs. Set-up costs include time and material to carry out management briefings, staff trainings, initial configuration of the system (including understanding and mapping provider workflows) as well as, potentially, customizations (such as integration with existing billing software) and hardware investments. These cost items can vary greatly with utility size and existing capacities. In Kenya, a *MajiVoice* set-up at a medium sized water service provider that does not require hardware upgrades will likely be in a range of US$15,000-20,000, but costs could be a multiple of this at larger providers.

For the institution hosting the *MajiVoice* application – in Kenya this role was taken by the regulator – the *MajiVoice* will also incur recurrent infrastructure costs. These expenses include costs for the cloud-server, SMS and USSD gateways and bulk-SMS used to send messages to customers. These costs are for the shared cloud-platform and network links and can thus be shared across all participating institutions. While these operational costs are likely to be location-specific, Kenyan figures are provided in Table 2 for guidance. It should be noted that SMS and USSD will likely be replaced by mobile internet in the medium-term, as has already largely happened in developed countries. Thus, the SMS/USSD gateway costs will likely drop in the future.

Mobile phone penetration rates have reached almost 80% of the total population in 2014 (close to 100% for urban adults), and over half of the population have access to the internet.
(Source: Communications Authority of Kenya, Quarterly Sector Statistics Report (Fourth Quarter of the Financial year 2013/14)

A major roll-out in a different context would likely require some adaptation (e.g. integrations with existing systems) and configurations, necessitating a one-off expense for a skilled IT consultant if such staff cannot be found in the participating institutions. For regular system maintenance or adjustments, IT departments in Kenyan service providers have proved sufficiently capable.

MajiVoice has been released under an open-source, Lesser General Public License (LGPL) and is thus available under LGPL terms for adoption and adaption without license fees or permissions.[17] The software, along with training manuals and documentation can be downloaded for free from: *https://github.com/CustomerFeedback*

TABLE 2: RECURRENT SYSTEM COSTS IN KENYA

Item	Annual Cost
Cloud Server (4GB RAM, 40GB SSD, 800MB/s, 10GB outgoing bandwidth)	US$ 2,500
SMS & USSD Gateways (Airtel and Safaricom)	US$4,000
Bulk SMS Credits for messages to customers (assuming 50,000 complaints per year)	US$1,500
Total recurrent operational costs	**US$8,000**

[16] Communications Authority of Kenya, Quarterly Sector Statistics Report (Fourth Quarter of the Financial year 2013/14);

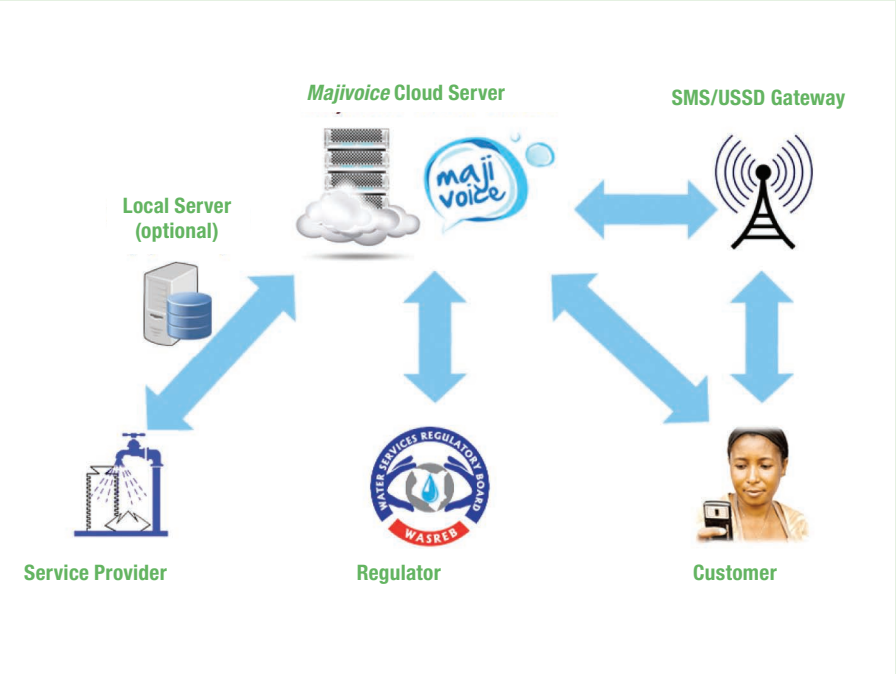
[17] Details on the LGPL license may be found here: http://opensource.org/licenses/LGPL-3.0

BOX 2: *MAJIVOICE* TECHNICAL SET-UP

The technical set-up of *MajiVoice* is optimized for easy, reliable access and data security.

The *MajiVoice* application runs on a cloud server and is thus accessible from any internet connected device (no installs necessary). Customers without internet can also send and track complaints using SMS or structured text menus (USSD) through a gateway provided by mobile network operators. Data is backed-up regularly.

Service providers with well-developed IT infrastructure and an internal network can optionally duplicate the *MajiVoice* application on a local server to ensure faster performance and accessibility even if internet connectivity is temporarily cut.



SUMMARY AND RECOMMENDATIONS

MajiVoice is fundamentally changing the way Kenyan WSPs are providing services to their customers. More than just an efficient complaint management tool, *MajiVoice* has strengthened the accountability compact between regulator, service providers and customers at each level.

At WSPs, *MajiVoice* has helped focus internal business processes on customer service and thus begun to change the behavior of staff. Comprehensive tracking of tasks allows staff to be held to account by their co-workers, superiors, and ultimately the regulator itself. At NCWSC, management has started to integrate *MajiVoice* into performance evaluations.[18] A level above, the regulator is using *MajiVoice* to exert pressure on WSPs to comply with service provision agreements.[19] The existence of a well-structured regulatory framework, with a clear distribution of roles and existing mandatory service standards has proven critical for giving *MajiVoice* regulatory heft. The system thus provides not only the tools but the incentives for working more efficiently, which helps to explain the dramatic impact that has seen recorded complaints rise almost tenfold, resolution rates double and resolution times halve.

Water service provider staff confirmed these improvements in a recent survey with close to 90% stating that *MajiVoice "made a positive difference to customers in practice".* The survey also confirmed the increased performance pressure many feel. Additional research will be required to understand the full impact of *MajiVoice* on the relationship between service providers and customers, but early data suggests a significant positive impact of the system on customer satisfaction, not only from more and faster complaint resolutions, but the responsiveness and interactiveness of the *MajiVoice* complaint tracking system itself.[20]

Ordinary customers, especially the poor, are the ultimate beneficiaries of *MajiVoice,* gaining better, lower cost methods to submit and track their personal complaints, and through their collective pressure, improved services. As Kenyan water providers expand their reach, it is the poorer customers without personal influence who will benefit most from systematic improvements in customer service.

As the World Bank's World Development Report on *Making Services Work for Poor People* pointed out *"successful services for poor people emerge from institutional relationships in which the actors are accountable to each other".*[21] *MajiVoice* has shown that combining modern task management software with strengthened accountability links can indeed lead to significant gains in service standards. The successful development and launch of *MajiVoice* over the past two years, however, is only a beginning. The lessons learnt translate into clear recommendations to the involved stakeholders going forward:

The water sector regulator, as the formal custodian of *MajiVoice* in Kenya, is tasked to lead the roll-out of the system to more WSPs. While self-adoption of *MajiVoice* by WSPs is a theoretical possibility, in practice some initial guidance for system configuration, customizations and staff training has proven important to achieve smooth deployments. Present plans by the regulator intend to add approximately 3-5 utilities per year to the system. It will be critical for the regulator to designate a full-time point person for coordinating this task. As more water service providers adopt the system, maintaining a balanced approach to regulatory enforcement, which combines increased pressure for accountability with enough scope to let reporting WSPs improve, will be critical to sustain adoption and achieve improvements.

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[18] Interview with Customer Relations Manager at NCWSC [01/28/2015]. These performance discussions are largely informal at present, but a bonus-scheme has reportedly been instituted for dealing with revenue related customer issues.

[19] WASREB has written formal warning letters to NCWSC citing specific MajiVoice data on overdue complaints; Water Action Groups who are associated with the regulator have been given access to the system and followed up directly on specific overdue complaints;

[20] See results from regression analysis – page 4 and footnote ix;

[21] World Bank Group, *World Development Report 2004 – Making Services Work for Poor People,* 2003; p.9

For water service providers that have already adopted *MajiVoice,* the challenge going forward is to sustain and extend service standard improvements using the system's tools and drawing on the information it provides. One way to further improve performance will be to formalize and broaden staff incentive schemes, for instance, with rewards for those that *MajiVoice* shows to be particularly efficient. Management, in turn, should continue to analyze statistics on workflow bottlenecks and take concrete actions to address them.

Government and development partners can support the continued success of *MajiVoice* in Kenya by commending water service providers for using the system and pressing others to adopt it as part of the ongoing sector re-organization and future investment projects. The latter may consider including "*MajiVoice* adoption grants" to cover set-up and training costs.

Citizens should be further encouraged to actively voice their grievances through *MajiVoice,* to use the tools provided for tracking progress and to submit follow-up complaints if initial responses are not satisfactory. Information campaigns by WSPs to publicize their service quality commitments, and to highlight the *MajiVoice* website and short-codes could help more customers to direct their feedback effectively and independently.

A broader opportunity lies in applying the lessons from *MajiVoice* to other sectors and countries which face similar accountability and service standard challenges. As a starting point, *MajiVoice* can serve as a case study to illustrate the general requirements and concrete benefits of integrating digital accountability tools with existing management and regulatory frameworks. At a more practical level, the software at the heart of the *MajiVoice* approach is available cost-free and can guide – or even be directly used in – future accountability projects. To allow others to build on the *MajiVoice* project in this manner, wide dissemination and discussion of its approach and results will be critical, and it is hoped that this Water Global Practice knowledge note constitutes a first such step.

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About the Author

Maximilian Hirn is an Economist in the World Bank's Water Global Practice. He has led the *MajiVoice* project in Kenya since 2013. His other work has focused on achieving efficiency improvements and infrastructure rehabilitation at urban utilities, innovative data-collection methods and poverty research.

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Contact us

Water and Sanitation Program
The World Bank Group
Delta Centre, Menengai Road, Upper Hill, P.O. Box 30577 - 00100
Nairobi, Kenya

Phone: +254 20 293-6000
E-mail: wspaf@worldbank.org
Web sites: www.worldbank.org/water
www.wsp.org

Contact: Maximilian Leo Hirn
mhirn@worldbank.org
T +254 20 293 6222

Design/Layout: Eric Lugaka

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