Complaints and anti-corruption box at Khulna WASA

PRACTICING INTEGRITY MANAGEMENT

The example of Khulna Water Supply and Sewerage Authority

Final.

April 2020

Water Integrity Network Association e.V.
Alt Moabit 91b, 10559 Berlin, Germany

+49 30 809 246 130

www.waterintegritynetwork.net
@waterintegrityn

PRACTICING INTEGRITY MANAGEMENT

The example of Khulna Water Supply and Sewerage Authority

About this document

The Khulna Water Supply and Sewerage Authority (KWASA) launched an Integrity Management process in 2015 with the support of WIN, BAWIN and cewas, using an adapted Integrity Management Toolbox to guide the process. This report documents KWASA's experience as a public sector utility and examines how integrity management is contributing to improved performance and strengthened integrity.

The utility has generated change not only within the company but also among consumers and civil society by building an awareness campaign and establishing interactive sessions bringing together KWASA staff members and customers.

KWASA's success is a result of several factors including a Managing Director (MD) with sufficient vision and leadership to push through a culture of change, a desire for change at the local political level, and sufficient autonomy to implement reforms.

This report aims to document the experience and drivers of change.

October 2019

Suggested citation: WIN and BAWIN. 2019. Practicing Integrity Management: the example of KWASA. Berlin: WIN.

Acknowledgement

Authors: Sifat E Rabbi for the Water Integrity Network (WIN) and the Bangladesh Water Integrity Network (BAWIN)

Editors: Binayak Das, Marian Ryan

This publication would not have been possible without the strong support and commitment of the Managing Director of KWASA Mr. Md. Abdullah. Various individuals provided crucial feedback and provided data and information during various stages of the publication. They include Swapan K Mondal of KWASA, staff members of KWASA, S M A Rashid of NGO Forum, Sanjib Biswas (ex-coordinator of BAWIN), Archi Biswas and Zakir Hossain Khan of TI-B, and Professor Mohammed Ziaul Haider, the Integrity Coach for the project. The case study was reviewed by Binayak Das, WIN and Tandiwe Erlmann, cewas.

CONTENTS

ACRONYMS

ADB	Asian Development Bank
BAWIN	Bangladesh Water Integrity Network
BDT	Bangladeshi Taka
CEO	Chief Executive Officer
DMD	Deputy Managing Director
DPHE	Department of Public Health
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Development)
GoB	Government of Bangladesh
IM	Integrity Management
IMA	Integrity Management Agent
JICA	Japan International Cooperation Agency
KWASA	Khulna Water Supply and Sewerage Authority
LGD	Local Government Division
LGED	Local Government Engineering Department
LGRD	Ministry of Local Government, Rural Development and Co-operatives
MD	Managing Director
M&E	Monitoring and Evaluation
NIS	National Integrity Strategy
O&M	Operations and Maintenance
SIWI	Stockholm International Water Institute
TI	Transparency International
TI-B	Transparency International–Bangladesh
USAID	US Agency for International Development
WASA	Water Supply and Sewerage Authority
WIN	Water Integrity Network

1 PROJECT BACKGROUND

The port city of Khulna, the third-largest city in Bangladesh, is located along the banks of the Bhairab and Rupsha Rivers. The area of Khulna City is 46 square kilometres (km^2) and its total population is 664,728; the population of the Khulna metropolitan area is approximately 1 million.[1] The city is vulnerable to frequent saline intrusion and is climate-sensitive as a result of its geographical location. Khulna faces major challenges in providing improved access to water, sewerage, and drainage facilities.

1.1 Water Supply in Khulna City

Public water supply in Khulna was established in 1921 with the installation of shallow water pumps with a total capacity of 900 cubic meters per day (m^3/day). In 1960, the Department of Public Health (DPHE) began introducing deep-water tube wells and became the operator of the city water supply. In 1984, DPHE transferred the water supply system to the Khulna City Corporation for better operations and maintenance (O&M), revenue collection, and expansion and improvement of existing services.

In 2008, to expand piped water coverage and utility services, the Government of Bangladesh applied the concept of the Dhaka and Chittagong Water Supply and Sewerage Authorities to form a new water supply authority in Khulna, the Khulna Water Supply and Sewerage Authority (KWASA). In 2009, this entity was established as an autonomous body under the Ministry of Local Government, Rural Development and Co-operatives (LGRD).

1.2 Launching an Integrity Management Project

In 2015, the Water Integrity Network (WIN), via its Bangladesh (BAWIN) programme with Transparency International–Bangladesh (TI-B), began approaching various water utilities in the Bangladesh to determine their interest in addressing integrity management (IM) challenges, using the Integrity Management Toolbox. KWASA, which, as a relatively new entity, was struggling to handle its internal management while simultaneously ensuring adequate service to customers, showed an interest in knowing more about integrity management to improve its efficiency and reputation. KWASA was keen to address irregularities and insufficient service levels, which were being reported in the local press. In addition, the Managing Director (MD) was interested in strengthening services by developing and improving employee performance.

The need to comply with the National Integrity Strategy (NIS), adopted in 2012 by the Government of Bangladesh, provided additional motivation to apply an effective, in-house strategy for detecting and preventing corruption. The NIS makes it mandatory for all government institutions and their employees to understand and follow the values and principles of integrity, and practice them in their work and as individuals.

Initially, however, senior management was still reluctant about using a tool specifically designed to tackle corruption and integrity issues, expressing concerns about the potential discomfort of staff and other stakeholders with the term 'corruption'. BAWIN colleagues continued to pursue the discussion, conveying to senior management that the tool would focus on integrity and would not expose anyone or put staff members in a vulnerable position. The discussion also highlighted how KWASA could use the experience to promote its image and experience both nationally and internationally, for example at international water conventions. The MD was

[1] United Nations. 2014. *World Urbanization Prospects 2014.* New York: United Nations, Population Division of the Department of Economic and Social Affairs, p. 319.

convinced, and since then has played a strong role in taking the project forward, as discussed further in Box 1.

Box 1: Leadership for Integrity Management

KWASA's Managing Director, Mohammed Abdullah, took responsibility for convincing employees to participate in the integrity management process at KWASA. He briefed key mid-level managers, outlining how the IM Toolbox could help them to enhance overall utility services. He described the Toolbox's systematic, bottom-up approach and its potential as an effective tool for tracking and reporting for any KWASA employee.

The MD also communicated the Toolbox's ability to enhance management skills, efficiency, and commitment, qualities all too often absent in many government organizations. In addition, the MD explained, the Toolbox would support teamwork to improve KWASA's overall working capacity.

1.3 About the Integrity Management Toolbox

For any water sector organization, an irregular procurement process, illegal connections, collusion of officials with informal water alliances, or falsification of invoices and accounts are major integrity challenges. Risks may be driven by external or internal mechanisms. Weak internal mechanisms, for example, can allow the faking of time sheets and promote dishonesty among the workforce. Failure to maintain consistent collection of bills, on the other hand, can result from a weak external mechanism. Such risks can undermine effective service delivery, damage the reputation of an organization, and affect its bottom line.

The Integrity Management (IM) Toolbox is a **systematic, bottom-up approach** to identify and address such integrity risks in the day-to-day operations of a water utility. It can help improve service, reduce costs, and bring money routinely lost to corruption risks back in, improving operations and increasing accountability to customers, stakeholders, public authorities, and partners. The approach can be used to optimize business models and reduce the risks affecting the utility's performance over the long term. It **can be applied as a change management tool**. It is not designed as a moralistic approach, since it is not about finding individuals to be blamed. Rather, it is about leveraging existing processes to lower the risk of malfunction and mismanagement.

In a key step of the process, selected staff members of an organization are brought together in a workshop, during which they jointly analyse their current practices, identify areas for improvement, and select concrete tools. The Toolbox does not impose pre-determined solutions; rather, the organization itself makes an appropriate selection of tools after having understood its problems. One or more integrity coaches accompany the decision making and implementation process, guiding the stakeholders without taking decisions for them. The operational and implementation procedure depends solely on the organizational management and employees, who form the backbone of the IM change process.

WIN, cewas, and Caritas Switzerland have been developing and adapting toolboxes for water utilities, small water supply systems, organizations implementing water, sanitation, and hygiene (WASH) projects, and multi-stakeholder processes in river basins since 2012. They have initiated, facilitated, and coached more than 18 processes in Africa, Asia, Europe, and Latin America, partnering with the Swiss Agency for Development Cooperation, the Inter-American Development Bank, SIWI, USAID, GIZ, and KfW among others.

1.4 About KWASA

1.4.1 Operations and Coverage

When KWASA was established in 2009, the distribution network was poor and levels of non-revenue water were high. Most KWASA staff who had transferred from the prior operator, Khulna City Corporation, were under-qualified, unmotivated, and inefficient.

KWASA expanded and upgraded water utility services. By 2016, when the integrity management project was starting to be implemented, the utility produced around 116.5 million litres daily, with a supply network of 282 km covering an area of 45.6 km^2. In 2018, KWASA served 700,000 residents out of a population of 1.6 million.

In 2009, there were no meters for monitoring water consumption, and billing systems were manual. In 2016, the billing system was manual for private well users and semi-automatic for direct water supply beneficiaries.

Street dwellers can access water free of cost via 14 mobile water tanks and 500 hydrants. Granting permits for private well owners to use public aquifers and providing free water for street dwellers are part of the policy of water rights for the poor.

KWASA also provides water to the community on request as needed: in response to any sudden interruption of water supply within Khulna City, the utility supplies water immediately via mobile tanks.

Table 1: Selected KWASA data on coverage and capacity

Parameter	2009	2018
Daily water production	6 million litres daily	122.5 million litres daily
Non-revenue water	37%	24%
Billing system	Manual	Computerized
Revenue collection rate	78%	94%
Number of household connections	12,245	45,000 (367% increase)
Connection of meters	None	68.42%
Distribution network (pipelines)	227 km	650 km

1.4.2 Funding and Expenditure

KWASA's funding derives from two major sources: the Government of Bangladesh and international donors. In the year 2015–2016, development budgets were mostly funded by the government; however, since 2017, government subsidy decreased and international funding increased substantially.

Large-scale development of operations and maintenance (O&M) capacity over the past four years has been made possible through significant donor involvement. The Japan International Cooperation Agency (JICA) has been a major donor from the beginning, and extensive infrastructure development has been carried out with JICA funding. Since 2011, the Asian Development Bank (ADB) has provided support for water supply and drainage projects. The Government of Bangladesh has increased funding for maintenance over the past three years (see figure below) and KWASA's O&M is now funded mostly by the government.

The greater portion of KWASA's generated revenue is allocated to employee salaries. The rest is spent on infrastructural development, energy costs, and O&M.

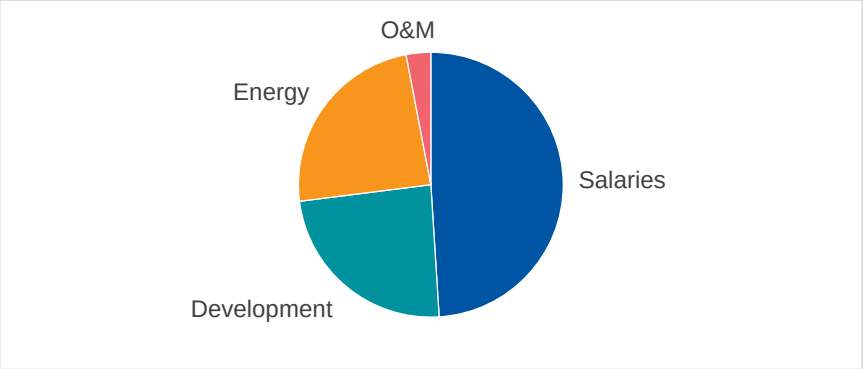

Figure 1: KWASA Expenditure in 2017

1.5 Bangladesh Legal Framework on Water and Sanitation Management

Water Supply and Sewerage Authority Act, 1996

The Water Supply and Sewerage Authority Act describes the autonomous corporate management structures of WASAs which are answerable to their respective boards of directors, who in turn represent a range of stakeholders. Integrity issues, such as equitable service provision, right to water, gender perspective, and monitoring and evaluation (M&E), are embedded in the law, but accountability and transparency are missing.

National Policy for Safe Water Supply and Sanitation, 1998

The objectives of the National Policy for Safe Water Supply and Sanitation were to improve the standard of public health by making water and sanitation services accessible to all within the shortest possible time at a price affordable to all. Critical areas missing in the policy are elements of behavioural change among users and user participation in planning, implementation, management, and cost sharing.

National Sanitation Strategy, 2005

The National Sanitation Strategy identifies relevant policy guidelines, major sanitation issues, strategies for sanitation improvement, and a development action plan. Under the strategy, priority has been given to equitable service provision, right to water, civil society participation, gender perspective, M&E, and decentralization.

Pro-poor Strategy for Water and Sanitation Sector, 2005

The Pro-poor Strategy for Water and Sanitation Sector covers the operational definition of very poor households, basic minimum level of service, how to target poor households, and a mechanism for distributing subsidies. In terms of integrity issues, the strategy includes equitable services provision, right to water, gender equality, and civil society participation in water and sanitation activities, M&E, institutionalization, and decentralization.

National Hygiene Promotion Strategy for Water Supply and Sanitation Sector, 2012

This strategy is designed to promote sustainable use of improved water supply and sanitation infrastructure, and ensure comprehensive hygiene promotion to reduce water and sanitation–related diseases.

2 APPLICATION OF THE INTEGRITY MANAGEMENT TOOLBOX AT KWASA

The Integrity Management Toolbox was applied to support the Integrity Management process at KWASA in three main phases.

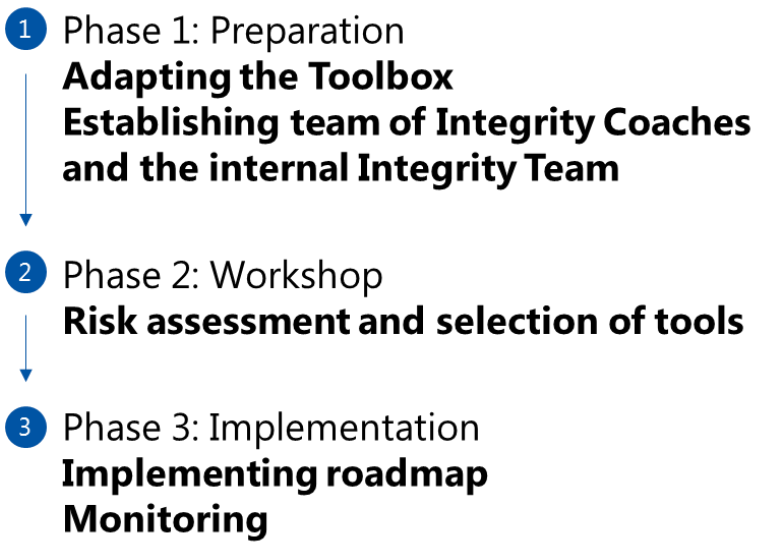

Figure 2: Overview of Integrity Management Toolbox Methodology

2.1 Phase 1: Preparation, Adaptation, and Establishment of Teams: six months (Jan-June 2015)

Following organizational buy-in, cewas adapted the IM Toolbox and training modules to the local context based on a desktop study, and the adapted material was translated into Bengali.

In parallel, the advisory board of TI-B and BAWIN developed terms of reference outlining responsibilities and activities for integrity coaches and identified five integrity coaches for integrity management processes across Bangladeshi WASAs. The integrity coach (or coaches) plays a crucial role in ensuring the proper application of the IM Toolbox and in training resource persons, known as Integrity Management Agents (IMAs), within the organization. Three BAWIN/TI-B representatives and two cewas trainers conducted a coaches' orientation, including a 1.5-day theoretical training, followed by a 2-day practical, on-the-job-training. The objectives were to ensure coaches' understanding of the integrity management process and the underlying principles of integrity management, clarify the roles and tasks of the coaches, and to prepare practical tools for coaches to use in carrying out and following up on Phase 2. Professor Dr Mohammad Ziaul Haider, of Khulna University, was selected as integrity coach to specifically guide the integrity management process at KWASA, with assistance from the BAWIN coordinator.

The Integrity Coach, together with KWASA's Managing Director, selected an integrity management agent to lead the internal process: the Deputy Managing Director (DMD). The IMA is responsible for leading the internal Integrity Team to coordinate and follow-up on the implementation of integrity tools at the utility. Ideally, Integrity Management Agents are mid-level managers, able to initiate the change process while maintaining the support of senior management. At KWASA, the Integrity Team, including and led by the DMD, consisted of 10 members (listed in Annex 2), selected from three departments: management, engineering, and commercial.

2.2 Phase 2: Workshop: 5 days (June 2015)

In the next phase, the Integrity Team and Coach took part in a risk identification and tool selection workshop.

2.2.1 Step 1: Introducing the Integrity Management Process

- Phase 1: Preparation
- Phase 2: Workshop
  - **Step 1: Introduction**
  - Step 2: Business model
  - Step 3: Integrity risks
  - Step 4: Integrity goals
  - Step 5: Integrity tools
  - Step 6: Roadmap
- Phase 3: Implementation

To begin the tools selection workshop, participants were asked to talk about their understanding of integrity. They also summarized newspaper stories about integrity issues at KWASA which had been printed out and shared with the group. Using these articles as a starting point, team members explored the link between integrity and organizational values and identified how those values align with KWASA's mission and vision.

The exercise enabled the team to articulate a basic understanding of non-integrity versus integrity and gain clarity about corruption-related issues at KWASA, as well as make an assessment of organizational integrity risks and their consequences. Team members with little or no experience in working on integrity and corruption issues presented a worst-practice example to illustrate mismanagement and poor integrity in the water sector. The remaining participants shared similar experiences and practices with which they were familiar, writing summaries on coloured cards and placing these on a pin board. To conclude this step, the team clarified their ideas, and defined the scope and principles of the KWASA integrity change process.

2.2.2 Step 2: Describing the Organization's Business Model

- Phase 1: Preparation
- Phase 2: Workshop
  - Step 1: Introduction
  - **Step 2: Business model**
  - Step 3: Integrity risks
  - Step 4: Integrity goals
  - Step 5: Integrity tools
  - Step 6: Roadmap
- Phase 3: Implementation

The Integrity Coach described the concept of the business model and its building blocks. Working in groups of three according to department (management, engineering, commercial), participants first explored a generic business model and then developed and visualized their own business model for KWASA, focusing on three building blocks in each group. The groups came together to combine and streamline the three models to reach a clear, common understanding of the nine building blocks of KWASA's business model and how these create, deliver, and capture the organization's values.

Figure 3: KWASA Business Model Developed at Integrity Management Workshop.

2.2.3 Step 3: Identifying Integrity Risks

1 Phase 1: Preparation
2 Phase 2: Workshop
- Step 1: Introduction
- Step 2: Business model
- **Step 3: Integrity risks**
- Step 4: Integrity goals
- Step 5: Integrity tools
- Step 6: Roadmap

3 Phase 3: Implementation

In this step, participants identified KWASA's key integrity risks, such as poor customer and employee satisfaction, and their impact on the organization's business model.

First, the integrity coach briefly described integrity risks and facilitated a discussion of those which are preselected and included in the IM Toolbox. Participants then identified the relevant Toolbox integrity risks for KWASA, as well as 'new' risks. Both current and potential future risks were considered. Each participant pointed out five risks. The facilitator summarized the risks which were most frequently mentioned. Working in the same three smaller groups, participants then discussed their lists of integrity risks and linked those risks with the KWASA business model developed earlier, specifically focusing on the direct impact of the risks on the business model and resulting revenue losses.

At the end of the session, participants shortened the list of risks to three (one for each department represented), based on their judgement as to which were most significant for KWASA. The three priority risks selected by the integrity team and their identified impacts were:

- Risk 1: Misuse of key positions (management)
  Impact: Centralization of power; lack of staff ownership of organizational mission, in turn leading to delays in decision-making and work
- Risk 2: Lack of relevant worker training (engineering)
  Impact: Poor implementation of activities, lack of employee learning
- Risk 3: Inefficient revenue generation (commercial)
  Impact: Disruption in development work and employee payroll; decrease in service quality

The complete lists of risks identified by each group is in Annex 3.

2.2.4 Step 4: Setting Integrity Goals

1 Phase 1: Preparation
2 Phase 2: Workshop
- Step 1: Introduction
- Step 2: Business model
- Step 3: Integrity risks
- **Step 4: Integrity goals**
- Step 5: Integrity tools
- Step 6: Roadmap

3 Phase 3: Implementation

Step 4 focuses on setting integrity goals to enhance the success of the organization's business model.

At KWASA, members of the integrity management team determined goals based on changes they wanted to see for the organization for each integrity risk. Most participants identified improving revenue as a goal. It was clarified at the workshop that this is an indirect goal, rather than a direct one, and an overall outcome of the integrity change process.

The goals agreed on include:

- To ensure better service for consumers/customers
- To strengthen integrity and efficiency in KWASA employee performance
- To change the traditional mind-set
- To improve overall KWASA services through motivation and encouragement
- To enhance the capability for service deliverables

2.2.5 Step 5: Identifying Integrity Tools

1 Phase 1: Preparation
2 Phase 2: Workshop
- Step 1: Introduction
- Step 2: Business model
- Step 3: Integrity risks
- Step 4: Integrity goals
- **Step 5: Integrity tools**
- Step 6: Roadmap

3 Phase 3: Implementation

Step 5 focuses on specifying the appropriate tools to minimize selected priority integrity risks, a crucial stage in the process.

In groups by department, participants carried out a systematic review of the tools available in the IM Toolbox and chose a set of tools relevant for improving KWASA's organizational performance, based on a needs assessment. Besides those selected from the IM Toolbox, each group also proposed adapted tools and new tools for consideration. The groups proposed among others: participatory management, an improved organigram for KWASA, improved cash handling, and an updated billing system. All potential tools identified by each group are in Annex 5.

After identifying the potential tools, participants clustered them into three groups:

- tools which had already been applied;
- tools which had already been applied but which still had room for improvement; and
- tools which were considered difficult to apply.

The latter were put aside as low priority for purposes of the current integrity change process.

In making their final selection, participants needed to consider available resources in terms of amount of time, finances, and personnel. Ultimately, participants agreed on a set of 10–15 potential tools and ranked the six most important tools according to priority. They determined these tools' expected impact on the business model, thus embedding integrity into their business model.

- Tool 1: Improved billing system
- Tool 2: More efficient connection procedure for new customers
- Tool 3: Semi-automatic meter installation for residential customers
- Tool 4: Established meter reading procedure
- Tool 5: Asset management (primarily pipeline network)
- Tool 6: New procedure for account adjustment

The three priority risks noted above informed the choice of tools, but consensus around which tools were most practical for KWASA to implement meant that the risks and the tools did not align exactly.

2.2.6 Step 6: Developing a Roadmap

The Integrity Management roadmap is an action and monitoring plan for the implementation selected integrity tools.

At this step, workshop facilitators from cewas and BAWIN described the importance of the roadmap in achieving the vision of the organizational integrity process set out in the integrated business model. Participants determined SMART objectives for the roadmap (Specific, Measurable, Accepted, Realistic and Time-bound, or SMART) and management appointed a change agent to lead the work on each objective. Participants then drafted the roadmap, including specific staff responsibilities, activities, and deadlines for tracking the implementation process and achieving objectives. The main activities for the implementation of each tool are in Annex 6. The team allocated a budget by considering the costs of tool implementation, including training, new recruitment, hiring of consultants, purchase of new technologies, incentives for staff, and event costs. The roadmap was later refined with the support of the lead Integrity Management Coach.

It was agreed that participants would be rewarded for successfully implementing the roadmap through benefits both financial (salary increase, bonuses, social benefits) and non-financial (promotion and transfer, special assignments, training, certificates, other forms of recognition).

2.3 Phase 3. Roadmap Implementation and Monitoring

The Integrity Team and Coach followed an iterative planning approach, to set realistic milestones.

The aim of the coaching process was to finalise the roadmap that was drafted in the piloting workshop and assure its successful implementation, including the achievement of the objectives for the different integrity tools selected.

The coaching sessions following the IM workshops served two more specific purposes:

- Discuss progress with respect to the previously planned actions
- Define actions for the next month(s)

A sound understanding of the reasons why activities were completed and also why certain milestones were not met was considered crucial for reflecting on the process. This provided a basis for effective planning and a successful implementation of the roadmap. To do this, the following questions were used as a guideline for the coaching sessions.

- Which targets have been achieved?
- Why were they achieved?
- Which targets have not been achieved?
- Why were they not achieved?
- What problems were encountered?
- How were they solved?
- Which problems could not be solved?
- How could these problems be solved?

The Integrity Coach led the monitoring and mentoring process working closely with the Integrity Agent and the Integrity team. BAWIN closely supervised and coached the IMC that was carrying out the coaching activities with KWASA and compiling the coaching report. The MD was proactive during the roadmap implementation process. Originally planned for 6 months, the process actually lasted 9 months.

The first roadmap that was developed by KWASA staff in the piloting workshop was not approved by the MD who felt that the selected instruments were not appropriate for tackling integrity issues. Close follow-up and explanations by BAWIN resulted in a revised roadmap that was approved and pushed by management. The revised roadmap was much more in line with already ongoing organisational development processes at KWASA, including the reduction of time required for setting up new connections. This made the added-value more apparent for KWASA management.

A dedicated integrity team and IMC were essential in working on the roadmap. Job descriptions were specified and well planned in the roadmap. Responsible staff signed the roadmap to explicitly commit to carrying out the activities as planned.

3 RESULTS OF THE IM TOOLBOX APPLICATION AT KWASA

3.1 Impact

KWASA's Managing Director, who had a key role in ensuring fulfilment of the IM objectives, at times faced pressure and scepticism from local political figures about the process. Through outreach he was finally able to achieve mutual understanding and buy-in, allowing the implementation process to move forward as planned. During the course of the implementation and afterwards, there has been general appreciation of the value of the toolbox for KWASA. It was acknowledged by various stakeholders outside KWASA, like the city mayor, representatives from JICA, and officials from other utilities in the country.

Table 2 shows key indicators tracked within the timeframe for the roadmap objectives.

Table 2: Results of the Integrity Management Process: Key Indicators

Objective	Before pilot	After pilot
Objective 1: Distribution of undelivered customer bills	1,500 untraced bills/customers	362 untraced bills/customers
Objective 2: Reducing connection procedure time frame	30-day time frame	20-day time frame

Objective 3: Establishing district metering area in Nirala residential area	No meters in residential areas	470 meters installed in Nirala residential area
Objective 4: Estimating daily water consumption and production	No meters or monitoring of consumption or production level	Regular monitoring and reporting; improved efficiency and helped put in measures for reducing water theft, or illegal sale as meters helped in monitoring if production and consumption matches.
Objective 5: Reducing time needed to identify and correct pipeline disruptions	Leakage repaired within 5 days of notification	Leakage now being repaired within 2 days of notification
Objective 6: Advance adjustment within 30 days of receipt	No mandatory timeline for adjusting advances	20 days maximum allowed for adjusting advances

3.2 Progress towards Objectives and Challenges in Implementation

Objective 1: Identification and distribution of undelivered customer bills

Aligned with Tool 1: Improved billing system

Before the IM pilot, customers did not receive bills in a timely manner, and in many cases bills were returned due to the lack of proper address. In all, bills were delivered to only 14,500 of 16,000 customer households. This inefficiency resulted in a great loss of revenue.

Relevant personnel identified some traceless customers through the Khulna City Corporation ward councillor's office. They incorporated the identified correct addresses into the customer list. The goal was to reach these 1,500 untraced customer within five months. Among the 1,500 untraced customers, KWASA succeeded in tracing all but 332.

The billing system is now better organized and systematic. Besides better tracking of customers, the commercial department initiated the use of integrated software to issue bills for both meter and non-meter resident accounts. As a result of implementing Tool 1, revenue has increased and customers have expressed satisfaction with the new system.

Challenges:

A small number of customers have not been traced.

Objective 2: Reducing time required for establishing a new connection from 30 to 20 working days from request

Aligned with Tool 2: More efficient connection procedure

Before the IM pilot, brokers were assigned responsibility for connecting new water lines. Now customers can apply directly to KWASA for a new connection.

To achieve this, senior engineering staff held meetings with the concerned personnel about how to speed up the process for establishing new connections. They prepared a flowchart to capture the chain of required activities, and established a monthly reporting mechanism to provide data on the number of new connections requested and established as well as dissemination channels for sharing the information with potential customers, such as notices, leaflets, posters, and news reports.

The result is 'a much faster and smoother process', according to an Executive Engineer, also reported that of 83 tube wells requested in total during project implementation, about 50 tube wells were installed.

Challenges:

For new connection requests, some customers delayed in paying the required fees. Other challenges occurred when approved new customers missed or delayed communicating with KWASA, or when the relevant personnel failed to take action in time due to other workload responsibilities.

Objective 3: Establishing a district metering area in Nirala residential area

Aligned with Tool 3: Semi-automatic meter installation for residential customers

Previously, no meters were in place. Residents were able to use unlimited quantities of water and pay only a fixed monthly bill which did not reflect usage. In implementing the IM Toolbox, KWASA installed approximately 9,330 meters (50 per cent of households) and upgraded connections for 8,500 households during the pilot period. With the new district metering area (DMA), water production is measurable, expenditure is known, and water pressure and consumption are measurable. Feedback from Nirala customers has been positive (Box 2).

Box 2: Customer Opinion – Residents in the Nirala Residential Area

Several residents stated in interviews that water management greatly improved in the last two years. They have their own meters at their houses, get uninterrupted water supply, and receive monthly bills.

A few residents complained because their meters were stolen. The meters were installed outside of customers' houses and were possibly easier to steal. Several customers whose meters had been stolen did not file complaints with KWASA, however, because they were still able to access water by using their own submersible pumps. These customers also complained that they had not received their monthly bills for the last three months (since April 2017). They requested that their meters be installed inside their collapsible gate or household premises to protect against theft.

Overall, customers expressed satisfaction with services they received from KWASA over the previous two years except for a small number of unforeseen incidents.

Objective 4: Estimating daily water consumption and production

Aligned with Tool 4: Established meter reading procedure

Installation of meters enabled the initiation of daily meter readings along with collection of data on machine runtime to estimate the quantity of water extracted daily. Engineering staff began compiling daily data and submitting a weekly report to the sub-assistant engineer. Reporting included analysis of machine runtime, water production data, and generation of customer bills.

KWASA established a standard meter reading procedure for direct-connection residential customers to monitor usage, making it possible to obtain accurate data on water extracted and identify non-revenue water. In addition to increasing revenue by allowing KWASA to invoice customers on actual water used, the new procedure improved efficiency by providing data on supply versus demand. For example, if scheduled load shedding interrupts the power supply for a set period, KWASA can identify the problem via monitoring and fill the supply gap as needed.

The meter reader position was also eliminated in the institutional organigram in favour of hiring an external meter reader through a competitive bidding process.

Challenges:

The goal was not achievable for tube wells because of delays in obtaining a permit to dig roadways required to install meter boxes.

Objective 5: Reducing time needed to identify and correct disruptions from 5 days to 2

Aligned with Tool 5: Asset management

Pipeline leakage causes loss of water as well as water contamination; older pipelines are the most vulnerable and most affected. At the beginning of the process, physical and/or network data were collected by monitoring the piped network; engineering staff estimated the cost and materials needed for repairs and applied for official approval. Engineers then repaired the leaks and followed up on post-repair condition. Monthly reporting was initiated to track lead time needed for repairs and whether the target of two days was met; this was ultimately achieved. Typically, only one day is required to identify and repair a leakage problem versus three days or more before the programme.

Challenges:

Repairing leakage faster was sometimes difficult due to challenges in timely identification. In addition, the needed equipment was not always in stock at KWASA's supply depot, causing delays.

Objective 6: Advancing adjustment within 30 days from date of receipt

Aligned with Tool 5: New procedure for account adjustment

Within KWASA, various departments receive advances based on their departmental budget estimate which needs to be adjusted with the actual expenditure over time. There was a weak accountability mechanism within departments to ensure that the time for adjustment was within limits and not affecting budgets of following year. KWASA set a limit to reduce adjustment time for advance funds received for departmental procurement needs. Previously, with and adjustment period of 30 days, only 20 per cent of the total money was received. Now the accounting staff set a target of adjusting 100 per cent of the total amount within this period. Accounting staff identified the unadjusted advances and provided recipients with two reminders to adjust the advances, putting pressure on the concerned departments to report on expenditure with the aim of making the system more transparent and efficient.

3.3 Additional Steps Taken Post-Pilot

Following the IM pilot, KWASA has continued to strengthen the organization's commitment to integrity change by applying these tools beyond the project period:

- Tackling customer overcharging
- Computerized accounting
- External audits
- Field inspection
- Improved work environment and conditions for employees
- Improved customer complaint management
- Reduction of illegal connections
- Customers' charter
- Strengthening feedback and communication with customers
- Transparency of bills
- Reduce non-revenue water (system loss)

KWASA intends to follow up further by implementing these tools:

- Corporate governance
- Impartial recruitment of auditor

- Smart meters
- Increased citizen participation
- Integrity training for both employees and management
- Increased transparency of water connection procedure
- Monitoring of staff performance and evaluation
- 7 “golden rules” of cash handling
- Transparent procedures for disconnection and reconnection

In the next phase of the programme, KWASA is taking part in an integrity assessment, pilot testing the InWASH set of indicators for utilities. Based on this assessment new integrity management measures will be prioritized and introduced. KWASA has also committed to sharing its experience with integrity management with other utilities in Bangladesh and beyond.

4 TAKEAWAYS

From the initiation of the discussion of the project to implementation of the roadmap, there are many lessons to learn from KWASA's experience.

Convincing an organization to take on integrity

The topic of anti-corruption and WIN's mandate to reduce corruption in the water sector inherently complicate the process of engaging and convincing public sector organizations to work on integrity. Convincing KWASA required sustained dialogue and detailed explanations on the implications of applying the IM Toolbox from partners with local, direct know-how. This required time and patience.

Leadership and commitment

Engaging and convincing a public sector utility to work on integrity and corruption issues is a sensitive and challenging task. The motivation, role, and long-term commitment of leadership and senior management are crucial to the success of the project. In the case of KWASA, the MD led from early on and took a strong position. His commitment was essential to the success of the project.

Public officials and bureaucrats are frequently transferred and if this happens during the implementation of an IM project, the project suffers or may even be permanently scrapped if the new leader or senior manager is wary about tackling integrity challenges. In the case of KWASA, leadership remained in place, leading to success throughout the project.

Motivated team

The KWASA integrity team and other employees were equally motivated and committed to the project, which helped in implementing the roadmap and achieving the project goals and targets. The integrity team worked together to enhance the organization's reputation and increase its revenue. After the IM Toolbox training, the team's efficiency and integrity in carrying out their responsibilities increased. KWASA general staff were supportive of these efforts.

Embedding integrity in an organizational structure and processes

At KWASA, the IM project was not taken up as an isolated project; gradually, the MD started embedding integrity elements within the organizational structure, leading to a sustained effort to continue addressing integrity challenges, reflected in the additional steps taken after the pilot project. Even after project completion, KWASA staff contributed to the undertaking of new measures, with the MD leading from the front.

Interaction with the public

KWASA regularly organized interaction and public hearings with the customers, which kept them updated on the steps being taken to address their grievances. The public also had the opportunity to raise their grievances directly with the MD during these sessions. Customers found this process useful. Additionally, press briefings held by KWASA were a crucial part of the outreach process which built trust and made the workings of the utility more transparent.

External support

External support is crucial to pursue projects to strengthen integrity and address corruption. Donors need to play a significant role in convincing public sector organizations to undertake projects on integrity management. The role of central government and line ministries is also key in supporting such processes.

ANNEXES

Annex 1: KWASA Integrity Team (2015-2018)

Participant	Designation
Swapon Kumar Mondol	Deputy Managing Director
Md. Kalam Azad	Chief Assistant to Deputy Managing Director
Jesmin Akhter	Accountant
Biplob Kanti Das	Revenue Officer
Debtosh Kumar Das	Revenue Officer
S K Maruf Haque	Assistant Engineer
Khademul Islam	Revenue Officer
Md. Monirul Islam	Chief Assistant to Managing Director
Md. Rezaual Islam	Executive Engineer
Md. Ashekur Rahman	Assistant Engineer

Annex 2: Identified Integrity Risks

Management	**Engineering**	**Commercial**
• Lack of integrity of staff • Lack of awareness of rules and regulations among staff • Operations and maintenance not carried out properly • Political interference (new risk) • Unclear roles, responsibilities, and duties • Low customer satisfaction • Preferential treatment of some contractors and partners • Petty corruption to expedite connections or repair work • Poor contractor performance • Illegal payment for auditing (new risk)	• Lack of relevant training and skilled labour • Low customer satisfaction • Inefficient cost recovery • Political influence and negotiation on tenders (new risk) • Over-extraction and pollution of water resources • Poor contractor performance • Illegal connections and meter tampering • Unsatisfactory employment conditions • Lack of staff integrity • Lack of participation in all sectors (new risk)	• Lack of advanced water technology (new risk) • Lack of customer satisfaction • Lack of training and communication (new risk) • Non-cooperative customers • Unfavourable political framework • Over-extraction and pollution of water resources • Lack of awareness of rules and regulations among staff • Collusion of staff with customers • Lack of staff integrity • Lack of relationship management and advocacy with key partners (new risk)

Annex 3: Measures to Mitigate Identified Risks

Management	**Engineering**	**Commercial**
• Creating both positive and negative incentives to encourage good staff performance (e.g. promotions, project ownership). • Providing effective trainings and orientation for staff about the rules and regulations. • Developing proper performance evaluation mechanism at all levels of staff. • Introducing automated billing system as well as collection. • Reducing number of illegal customer connections by tackling bribery. • Addressing low levels of staff motivation by tackling the issue of poor staff attendance and increasing staff commitment. • Counteracting irregularities in auditing by ending illegal payment for auditing. • Strengthening weak financial management systems by approving Development Project Proposal and fund release. • Counteracting low level of responsiveness to complaints by sharing information about delays in operations and maintenance. • Introducing time-bound grievance-response mechanism to overcome problem of low responsiveness to complaints. • Introducing full e-Government process to make procurement transparent and ensure accountability of all contractors.	• Providing effective trainings and orientation for staff about the rules and regulations. • Periodically assessing customers' satisfaction and establishing accountability mechanism to address customer grievances. • Creating both positive and negative incentives to encourage good performance among staff (e.g. promotions, project ownership). • Developing employee service rule to clarify roles, responsibilities, and duties/strengthen internal communication.] • Enhancing trainings for the staff to improve skills and professionalism. • Reducing interference by external actors (political interference; negotiation)	• Procuring adequate equipment to mitigate crashing of database, lack of advanced water technology. • Improving partnership with management staff to address weak relationship management.

Annex 4: Potential Tools Identified

Management	**Engineering**	**Commercial**
Applicable tools: • Knowledge sharing • Award for employee of the month (based on punctuality) • Incentives for better performance • Use of improved technology and equipment • Improved one-stop service Other tools: • Citizen/consumer participation (participatory management) • Team building and leadership training (ownership) • Delegated authority document (delegation of power) Proposed new tools: • Standard tendering procedure • Guideline for coordination with other authorities • E-Government procurement • Improved operations and maintenance department • Participatory management • Ownership of work • Delegation of power Proposed adapted tools: • Procurement regulation compliance • Partnership • Human resources planning/improved organigram • Job skills training • Strong meter division and testing laboratory • Strong mechanical division	Applicable tools: • Relevant training for staff • Cash management • Incremental water bill increases (for both metered and non-metered connections) • Improved management of customer complaints • Merit-based appointments, promotions, and job security • Up-to-date, reliable billing system • Strengthened consumer committees • Development of water supply pressure to minimize system leakage and illegal connections Proposed new tools: • Relevant training for staff • E-Government procurement • Strong meter division and testing laboratory • Overtime and incentives • Strong mechanical division • Well-furnished space for storage of diverse materials • Monitoring source of water • Identification of division lawyer and magistrate Proposed adapted tools: • Job skills training (relevant training for staff, strong meter division and testing laboratory, monitoring source of water) • Improvement of work environment and conditions for staff (overtime and incentives) • Dispute resolution mechanisms (recourse to state division lawyer and magistrate)	Applicable tools: • Relevant trainings • Procuring digital systems

Annex 5: Action Plans for Tool Implementation

Tool 1: Improved billing system

- Prepare a list of undelivered bills
- Identify missing/traceless customers
- Find missing customers' proper addresses
- Reissue bills to updated customer addresses

Tool 2: More efficient connection procedure for new customers

- Prepare a flowchart for the new connections procedure
- After approval, install new connections according to the flowchart
- Prepare and submit monthly report of requested and competed connections

Tool 3: Semi-automatic meter installation for residential customers

- Install meters for customers in residential areas
- Identify valve and pressure monitoring point
- Repair any visible leakage
- Monitor data and verification of district metering areas

Tool 4: Established meter reading procedure

- Record data from meter reading
- Compile data from meter reading and report to zonal engineer
- Analyse relationship between machine runtime, water production, and customer bills
- Review meter reading data monthly

Tool 5: Asset management

- Gather information on pipeline disruptions
- Estimate cost and materials needed to repair leakage
- Repair leakage
- Report monthly on leakage repairs needed and carried out

Tool 6: New procedure for account adjustment

- Identify unadjusted advances
- Create reminder for adjusting these advances
- Undertake a new process of issuing letter (to relevant departments) explaining cause in case of delayed adjustment
- Report monthly on unadjusted advances