Institutional Assessment and Development Guideline

Final 1.0

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Acronyms

Acronym	
Capex	Capital Expenditure
CBO	Community Based Organisation
CEO	Chief Executive Officer
CRIDF	Climate Resilient Infrastructure Development Facility
CV	Curriculum Vitae
DFID	Department for International Development
DRC	Democratic Republic of Congo
GESI	Gender Equality and Social Inclusion
GIS	Geographic Information System
HR	Human Resources
IA / IAM	Infrastructure Asset Management
IAMP	Infrastructure Asset Management Planning
IAR	Infrastructure Asset Register
IAS	Institutional Assessment and Support
IRBO	International River Basin Organisation
IT	Information Technology
IWA	International Water Association
M&E	Monitoring and Evaluation
MF	Mobilising Finance
NGO	Non-Government Organisation
NPS	Net Promoter Score
NRW	Non-Revenue Water
O&M	Operations and Maintenance
OFO	Organising Framework for Occupations
Opex	Operating Expenditure
PP	Project Preparation
QA	Quality Assurance

Acronym	
ROI	Return on Investment
SADC	Southern African Development Community
SCADA	Supervisory Control and Data Analysis
SDGs	Sustainable Development Goals
SE&I	Stakeholder Engagement and Influencing
SWOT	Strengths, Weaknesses, Opportunities and Threats
TA	Technical Assistance
ToR	Terms of Reference
TVET	Technical and Vocational Education and Training
WCDM	Water Conservation and Demand Management
WHO	World Health Organisation
WSP	Water Safety Plan/Planning

1 Introduction

The CRIDF Programme is a British Aid-funded initiative designed to support and assist the water sector in the twelve mainland SADC Countries. Its core objectives within this context are to

- Enhance climate resilience
- Foster trans-boundary projects and linkages
- Focus on addressing the poor and vulnerable
- Foster and support gender issues.

To facilitate these ends, the CRIDF Programme carries out a range of preparation activities designed to ensure that projects, which may initially only be at the conceptual stage, are taken to the point where they can be regarded as bankable. In some cases CRIDF will implement these projects themselves, though the primary objective is to mobilise additional finance from a range of other potential sources. The need to close the gap for projects between the conceptual and the bankable stage has been identified as a short-coming in the development sector in Southern Africa for some time and therefore is a key "value-add" from the CRIDF perspective. In addition to the work on projects, CRIDF II is placing a major emphasis on what is known as a Stakeholder Engagement and Influencing (SE&I). This is seeking to enhance and foster best-practice around the core CRIDF objectives by a range of projects and support interventions.

The first phase of CRIDF (CRIDF I) commenced in May 2013 and was concluded in March 2017, while the second phase (CRIDF II) commenced in April 2017. CRIDF I achieved good success in terms of its original objectives with particular reference to implementing a range of projects, mobilising significant finance, as well as achieving significant stakeholder engagement and influence in the target areas. CRIDF II is building on the success of CRIDF I by not only replicating some of the success stories but also by applying some tweaks in the approach and objectives. This particularly applies to an increased emphasis on SE&I, higher targets for mobilising finance, as well as laying more emphasis on cross-cutters such as gender and institutional development and support.

Generally speaking, institutional support and development was not a priority in CRIDF I however it was recognised towards the end of the Programme that there was a shortfall in this area. As a result, a number of due diligence assessments addressing the institutional aspect were undertaken in the last year of CRIDF I. By coincidence, these all addressed projects where the client body was a water and sanitation utility, with most located in Zambia but also one in Malawi and one in Tanzania. The close-out report for CRIDF I[1], as well as independent reviews, identified the need to strengthen institutional support in CRIDF II. In the first instance this is being addressed in the Inception Phase of CRIDF II by the development of an Institutional Support Strategy[2]. This provides the guiding framework and approach for institutional work in CRIDF II. In addition to this, it was identified that a guideline document should be developed to outline the approach and methodology to institutional assessment and development of support interventions. This should be aligned to the Project Preparation process so that it can add value and support the work in that arena. This has been done to ensure consistency of approach and value for money in terms of the work that is carried out.

The range of potential projects to be assessed within CRIDF is wide. This not only impacts on the type of infrastructure; for example water services, water resources, irrigation, hydropower, flood protection but also the wide range of organisations and institutions that could end up becoming the client that is ultimately owning and operating the infrastructure. It should also be noted that while the primary emphasis of the CRIDF Programme is on infrastructure, there could be interventions of a strategic nature that are not infrastructure-related, for instance, the development of guidelines, policies, legislation, master-plans, strategies and models. Ultimately these will be related to infrastructure and infrastructure management in some form and also likely to have been adjudged to have the potential

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1 "Programme Completion Report: 2013 – 2017", CRIDF. April 2017

2 "The Institutional Support Component in CRIDF II: Concept Paper", CRIDF, July 2017

for a significant SE&I impact. This emphasises that this document needs to address a wide range of options, scenarios and situations. In addition, it is important to note that institutional assessment is a complex subject in its own right, not necessarily lending itself easily to simple methodologies and algorithms in terms of analysis and assessment. For this reason, this document has been specifically called a "Guideline", rather than a manual. This implies that it requires some judgement in its application. In addition, the emphasis here, generally-speaking, is on "light to medium touch" assessments (as specified by DFID). In view of the higher risk that this approach implies, the Guideline's use is primarily designed for practitioners who have a good degree of knowledge of institutional assessment support and development work. It is also highlighted that in some cases more in-depth work may be required than what is implied in this Guideline, depending on the particular institution and context.

It needs to be emphasised at the outset that the primary purpose for incorporating and embedding institutional assessment within the CRIDF Project Preparation (PP) process is to mitigate risk. The reason for this is simple; lack of institutional capacity is arguably the single biggest reason for the failure of infrastructure projects at some stage in their life cycle.

In the structure/content of this Guideline, this introduction is followed by Chapter 2 that provides perspective in terms of the overall strategy for institutional work in CRIDF II, as well as context with regard to the CRIDF PP process. Chapter 2 also includes a section on the need for this Guideline. Chapter 3 addresses the broad approach, process design and scope of the Guideline. It also includes sections on the linkages between the institutional support work and the core CRIDF Outputs and linkage, as well as coordination with the work that GIZ are doing. Chapters 4, 5 and 6 address specific steps in the process design, namely; status quo assessments, gap analysis and development of institutional support plans/interventions. Chapter 7 includes a brief discussion on monitoring and evaluation of the institutional component during the implementation phase. Chapter 8 gives some practical tips and suggestions with respect to addressing a range of different types of institutions and different types of projects. It also includes sections discussing how best to interact with the client institution, alignment with the CRIDF screening process and some context with respect to the water sectors in the SADC countries in which CRIDF works. Chapter 9 addresses risk management, while Chapter 10 gives some brief concluding remarks.

This Guideline includes a wide range of tools in the form of questionnaires, checklists, tables and workplan formats that are included as Annexures.

2 Background

In development terms, institutional factors are widely acknowledged as being a key element in terms of the sustainability of infrastructure projects. This applies not only to the water sector but also to a range of other sectors. It is also common cause that these aspects have often been a significant challenge in developing countries. Indeed, there are countless examples of infrastructure projects in developing countries that have failed due to the lack of capacity within the institution that is responsible for owning, operating and maintaining the infrastructure. At the same time, institutions are complex organisations that are required to have a range of capabilities including management and leadership, financial management, customer service, operations and maintenance, asset management, and human resources management. It can also be argued that this applies whether one is dealing with a large utility supplying two million people, or a community-based organisation running a scheme supplying five hundred people, though obviously the levels of complexity and size would vary significantly.

In spite of the comments noted above, it is important to recognise that in the context of CRIDF II, institutional support and development is not a core objective of the Programme, though its importance is acknowledged. It should therefore be treated as a cross-cutter, not only in terms of achieving a best-practice approach but also in the context of adding value to the activities being carried out directly to address the four outputs of Project Preparation, Mobilising Finance, SE&I, and Sustainability. In terms of this argument, this Guideline is clearly focussed on the Project Preparation Output with the intention to fully integrate it with the process from the outset. In addition however this Guideline will add value in terms of resulting in a more standardised and robust approach as part of the project preparation process. This will almost certainly assist in mobilising finance in view of the more robust nature of the outputs for each project. It is also believed that it will be able to assist for those projects that require work to address the financial capabilities of institutions with respect to their ability to manage development finance that is obtained and ultimately to actually secure and raise development finance themselves. Institutional assessment and development work may very well be required to address and support these scenarios. It is believed that this Guideline, though not specifically designed for these scenarios, will be useful to assist and support this work. Likewise the SE&I Output will also benefit from a more rigorous project preparation approach. In addition, it will contribute to an ongoing systemic debate and discussion with SE&I to optimise the institutional support interventions so as to achieve the maximum SE&I benefit. This could also relate particularly to non-project infrastructure-related interventions, as discussed earlier.

It is also important at this point to reference the broader institutional strategy for CRIDF II which is outlined in the document produced in July[3]. This sets out the overall objectives and sub-objectives for the Programme as follows:

Objective: To support the programme as a whole in achieving its objectives in terms of enhancing transboundary cooperation, building climate resilience, addressing the poor and vulnerable and supporting gender mainstreaming.

Sub objectives:

- Enhancing the sustainability of infrastructure and other projects via complementary institutional support interventions.
- Contributing to building (selected) sustainable institutions.
- Enhance key institutions' ability to address the core CRIDF challenges in terms of transboundary issues, climate resilience, addressing the poor, vulnerable and gender issues.
- Enhancing institutions' ability to manage and secure financial support.
- Contributing to broader strategic initiatives to build institutional capacity in the water and other sectors throughout the region.

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3 The Institutional Support Component in CRIDF II: Concept Paper. July 2017

As was noted earlier, the broad approach is that institutional support assessment should be regarded as a cross-cutter. In addition, the institutional support component will have five major "internal customers" as was noted earlier in terms of the four key outputs and also the overall Programme Management element. The strategy document outlines some lessons from CRIDF I, with particular reference to some of the success stories on institutional development, which provide pointers in terms of activities and approaches in CRIDF II. Though institutional development was not a direct focus for CRIDF I there were in fact important institutional support interventions which were implemented and where significant success was achieved. The Institutional Support strategy identified possible activities and projects at a high level that could support the four Core Outputs as well as Programme Management as a whole. It also discussed deliverables, caveats, constraints, challenges and risks.

During CRIDF I a comprehensive methodology for broad project preparation was developed, with the primary focus being on infrastructure. This included spreadsheet tools incorporating two so-called "screens". The first screen addresses the very early stage of the project and can be regarded as "reconnaissance level" in terms of conventional project terminology. In CRIDF this is known as 'eligibility'. Thereafter, in Screen 2, the sub-phases addressed are prefeasibility and detailed feasibility, which corresponds with bankability status. Following that is 'financial close-out'. The financial close-out stage includes preparation of detailed design and tender documentation. The idea with this Guideline is that it would seek to align with the screening process and that institutional assessment and support will be fully integrated in to all of the Project Preparation elements. At this stage it is not foreseen that the institutional aspect will be a major element in Screen 1 in view of the fact that this is such a high level assessment. It will however be fully embedded in all the elements of Screen 2. This is illustrated in the Project Lifecycle Diagram in Figure 1 below. In this regard CRIDF, addresses projects in stages 1, 2, 3 and in some cases, 5. It should be noted however that the institutional assessment component is very much concerned with addressing the implications and issues related to Step 4.

Figure 1: Typical Project Life Cycle

2.1 Need for this Guideline

As was noted earlier, to some extent the main users of this Guideline will be relatively experienced practitioners, which begs the question of why it is needed? There are a number of responses to this question:

- To ensure consistency of approach – experience in CRIDF I (not in institutional assessment work) was that the use of experienced practitioners does not imply that the approach will be consistent.
- To be more cost effective as a result – avoiding reinventing the wheel.
- To develop an approach for relatively light to medium touch institutional assessment as required by DFID - this is therefore not the normal approach to institutional assessments and therefore requires some new ideas and approaches[4].
- To try and mitigate the inherent risks in a light to medium touch approach.
- To optimize the learning and knowledge benefits from a relatively consistent approach.

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4 This also implies that this Guideline should be regarded as a draft at this stage, which is refined and improved after testing in the field.

3 Broad Approach

The proposed process for carrying out the institutional assessment and support is highlighted in Figure 2 below.

Figure 2: Proposed Process for Institutional Assessment

This highlights the four key parts of the process, namely the Status Quo Assessment, identification of the desired future state, together with gap analysis, development of the Institutional Support Plan and the implementation of the plan. The first step is the Status Quo Assessment whose purpose is to determine the current state of the organisation. This addresses eight subject areas as follows:

- Institutional environment
- Governance
- Organisational strategy
- Financial Management
- Organisational design and human resources
- Asset management
- Operation and maintenance
- Customer service

These subject areas are unpacked in more detail in Chapters 4, 5 and 6.

The second step is to identify the desired future state and carry out a gap analysis. In the desired ideal future state there are again eight categories. Development of the desired future state will be tempered based to some extent on the particular context in the country in question and the client organisation, so as to set a target that is challenging yet achievable. This will thereafter allow a gap analysis to be carried out between the status quo and the desired future state. A key element to facilitate this will be a Visioning workshop conducted with the client organisation.

Step 3 is to develop the institutional support plan. This will be informed by the gap analysis, which should provide focus in terms of the particular areas to be addressed. The institutional support plan will focus on these and develop a customised plan, again informed by the particular context and requirements of the institution. This will also be influenced by the specific focal areas of the CRIDF Programme, as well as affordability requirements. The close-out phase will often require the development of a more specific and detailed workplan(s), as well as Terms of Reference designed to address the institutional support element. This will be formulated in such a way that it can be utilised in a tender process for procurement of a suitable service provider to undertake the work.

In the implementation phase it is important to monitor and supervise the implementation of the Support Plan. An M&E tool will be utilised to guide this process and it is also desirable, on those occasions when CRIDF is implementing, for an oversight and guidance to be provided by the Institutional Support Team within CRIDF. It is important to note at this point that CRIDF will not be involved in implementing all of these projects, particularly when the main emphasis is on mobilising finance. In these cases other institutions are likely to take the lead. It is also important in the implementation phase to obtain feedback on the findings emanating from the support intervention, so that it can inform learnings and best practice in later projects.

It is useful to reflect on the institutional work that was undertaken in CRIDF I so that it can inform practice in CRIDF II. Probably the most important observation in this regard is the need to introduce the institutional component from the beginning of the project screening process and not at the end. This will inherently make the project preparation process more robust and, in addition, will allow more time for reflection within the institutional analysis as well as cross-pollination with other members of the CRIDF team. Another change proposed is to make use of a small specialist team to undertake the institutional assessments. Although there are eight sub-headings it is clearly unrealistic to send a team of eight specialists, so ideally the people used should, first of all, be relatively experienced in the institutional field, and secondly, be multi-skilled so that they will be able to address two or three of the subject headings. This will allow for greater cost-effectiveness. In CRIDF I, one individual was used to carry this out however this is considered to probably be unrealistic in terms of future analysis. This will require a somewhat larger budget than in CRIDF I however it is believed that the trade-off in terms of a more robust result is well worth it in the context of the whole PP process. In terms of the sources of information for the assessment work, it is foreseen that there will be four sources of this, namely a literature search, interviews, site inspections, and consultation with other members of the CRIDF team (the latter was also not really practical/feasible in CRIDF I). These aspects are unpacked in more detail in the following chapters.

3.1 Linkage with Core CRIDF Outputs

As was noted earlier, institutional support and development work in CRIDF II is not a deliverable in its own right. It is there to support the core Outputs and, more broadly, to enhance the sustainability of CRIDF projects and interventions. To address this requirement, the institutional support strategy emphasises the need to satisfy the requirements of both internal and external customers[5], with internal customers being primarily Output leaders and external customers; the client institutions that will take ownership of the project or intervention.

This "customer driven philosophy" tends to imply that the work of institutional support will primarily be demand driven. In practice however it is foreseen that the approach will be more subtle and systemic than this. In the case of Project Preparation, institutional assessment will be embedded within the screening process in CRIDF II. This implies that close linkage will be achieved throughout the process, almost by definition. This includes involvement at internal CRIDF workshops, when screening decisions are taken. A different nuance in CRIDF II, is that an institutional support intervention may be appropriate prior to an infrastructure project being implemented. This would be in a scenario where an institution

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has the potential to host a CRIDF infrastructure project but is too weak from an institutional perspective. This emphasises the importance of a systemic approach between PP and IAS.

With SE&I, a similarly very close relationship is foreseen. A key reason for this is that the SE&I team view institutions as providing key points of leverage for achieving broader SE&I objectives. This will not be the case for all institutions however and SE&I and IAS will work closely together to answer questions such as the following:

- Is this a credible organisation?
- Does it have reasonably good institutional capacity?
- Does it have wider influence, with particular reference to issues such as transboundary, climate resilience and addressing poverty?
- What kind of project or intervention should be undertaken, bearing in mind that not all will be infrastructure projects?
- How can the SE&I impact be maximised via this institution?

Some of the precise processes for interaction with SE&I will still evolve as the programme unfolds however the principle of systemic interaction is a key one.

The working relationship with MF will perhaps not be as "tight" as for PP and SE&I but will still need to be close. Four key areas of value add are foreseen:

1. The enhanced due diligence with including institutional assessment throughout the PP process (hence enhancing the MF potential)
2. Potentially enhancing the capacity of client institutions to deliver projects once finance has been mobilised – a key problem experienced in CRIDF I
3. Potentially enhancing the capacity of client institutions to successfully mobilise finance themselves – in many ways one of the ultimate manifestations of empowered institutions
4. Facilitating approaches and strategies designed to enhance cooperative governances – also a key problem area experienced in CRIDF I

Again a systemic relationship is proposed as well as a demand driven one.

With regard to the long term CRIDF Sustainability Output, the relationship with IAS is still immature however potentially IAS can provide key learnings from CRIDF I and II, as well as inputs into the proposed institutional form(s) of the new model.

3.2 Strategic Linkage with GIZ Work

GIZ are also providing water sector support to SADC, which is partially DFID funded. In some respects therefore, the GIZ work is a sister programme to the work of CRIDF. This emphasises the need for a close working relationship with GIZ and this is particularly important for the institutional component as support in this area is a core objective of GIZ (whereas it is a cross cutter in CRIDF). At the outset, it is important to determine in which areas GIZ are active so that duplication can be avoided. Unpacking this a bit further, there are, for example, a number of options for coordination/cooperation:

- **Division of labour**: this is simply agreeing to operate in different areas so as to avoid overlap
- **Coordination**: this implies working in a coordinated manner with e.g. the same institutions or on the same projects, though not necessarily together
- **Synergy**: this would imply working together with GIZ in integrated teams (on some initiatives)

It is also quite possible that a number of these different cooperation options can be pursued in different contexts.

Based on available information, it would appear that GIZ focuses particularly on working with IRBOs and are not very active with water services institutions. This would clearly need to be unpacked further and probably monitored thereafter on a regular basis throughout the programme. The process of coordination between CRIDF and GIZ is initially being facilitated, at a high level and it was not possible
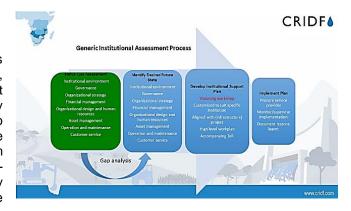
to address this during the Inception Phase. Discussions that are more operational in nature, including institutional support aspects will need to be undertaken, which could require changes to the relevant sections of the Guideline.

4 Status Quo Assessments

4.1 Overview

The purpose of the status quo assessment is to establish the current activities, capabilities, competence and capacity in terms of the eight subheadings noted earlier. In order to simplify this analysis a reductionist approach will to some extent be adopted with regards to these subheadings however the use of a small team will allow for a good degree of cross-pollination. This is very important since clearly most, if not all, of these categories have some kind of systemic relationship.

A major emphasis will be placed on forming a good relationship with the client institution and obtaining information from them. Information from a range of other sources is ideal as this allows a degree of "triangulation" to take place and thereby gain additional confidence in the analysis that is carried out. The four key areas which will assist in this analysis are, as was noted earlier, the literature search, interviews, site inspections and interaction with the CRIDF team. These are discussed in more detail below.

Literature Search

This will be seeking to gather as much documentation as possible about the client's organisation and the environment in which it works. Of critical importance is to obtain documentation that is not only produced by the organisation but also external to it. In this regard, typical external documents which are of relevance are the relevant Policies, Acts and Strategies, sector reviews, organisational reviews or programme reviews undertaken by some kind of independent source. The authors' experience in this regard, is that in some countries it is not as easy as one would expect to source this kind of documentation. This can result in a focus on documents produced internally, which is obviously not ideal. In terms of internal information, documents such as Annual Reports, organisational strategy, a range of policies and specific plans and strategies are of particular importance.

An area of information that is particularly valuable in the author's view is that of so-called "Sector Reports" produced by independent regulators. The big advantage of these is that they provide a credible and independent audit in terms of the performance of the institution. Typically however this is only available for water and sanitation utilities. A checklist of useful documents that should be sought in a literature review is attached as **Annexure A**.

Interviews

The second key source of information for the Status Quo Assessment will be obtained by interviews. To facilitate this process a draft questionnaire has been developed that is attached as Annexure B. This interview process will be "semi-structured", which implies that the formal questions need not be strictly adhered to and thus interesting additional topics and issues that emerge in discussion can be addressed. It is also suggested that this questionnaire should be non-attributable; in other words, anonymity is guaranteed, which is likely to produce more reliable results. It is important in this regard that interviews are conducted with both internal and external stakeholders. Due to cost constraints this will not be an extensive interview process and will probably have to focus on more senior representatives.

Site Inspections

In addition to interviews and discussions with management of the client organisation, which will involve a visit to their offices, it is also proposed to carry out a limited number of site inspections. This is particularly to inform the asset management and operations and maintenance elements in the institutional analysis, although it is believed that it would also give pointers for other areas of management of the organisation. Critical elements in this regard are treatment works and other major elements of infrastructure. Treatment works are particularly relevant not only because they require a range of disciplines in order to run them effectively but also because they are high-risk elements in terms of the outputs of the organisation if they are not run effectively. A well-run treatment plant tends to be a very good indication of a well-run organisation.

Interaction with the CRIDF Technical Team

The other source of intelligence in terms of the assessment will come from other members of the CRIDF team carrying out the technical assessments. It is believed that this can be a key additional source of insight in terms of the institutional assessment work. This was not really capitalised upon in CRIDF I due to time (and budget) constraints at that stage. In this regard it is important to note that the technical team will be spending much more time on site and interacting with the people in the client institution much more than the IAS team will be doing. This means that it is very likely that they will be able to gain insights and information that will inform the institutional assessment process. This therefore needs to be tapped into.

4.2 Institutional Environment

4.2.1 Why is this Important?

The Guidelines set out an operational approach for the assessment of the institutional environment that addresses the formalised policy and regulatory framework (legal rules and policy guidelines) as well as the institutional arrangements that have been put in place to manage and give effect to such a framework. In addition, the administrative/organisational rules that have been put in place in accordance with which organisational performance is prescribed, managed and assessed.

Within this context, the existing institutions and institutional framework provide the institutional lens or context for organisational performance. It not only shapes the broader external environment within which the organisation functions but serves to directly and indirectly influence organisational functioning.

Although a comprehensive institutional environment assessment may require that the process of enquiry includes a detailed analysis of the social, political, economic, and historical perspective within which institutions are rooted, the CRIDF institutional assessment process is nested in a multi-dimensional approach where questions related to the broader Political Economy form part of the CRIDF Proactive Risk Management scope of work.

4.2.2 How to Assess the Institutional Environment?

The institutional environment is assessed through a combination of desk-top reviews and interview and focus group meetings. The review process is required to signal and identify laws and regulations pertaining to the external environment and could be sector-specific. At the same time, additional policies and regulations falling outside of the sector but of direct importance to the broad environment within which the organisation(s) function may need to be considered. An example of this would be local government regulations and the impact thereof on an organisation providing water services. Alternatively, where both environmental as well as water related regulations may be important.

The initial status quo evaluation should focus on providing an understanding of the regulatory, policy and institutional context. This should include structural factors, historical legacies, power relations and institutions, incentives, disincentives as well as decision logics and choices.

Key mechanisms for undertaking the assessment include the need to ensure that the operational value of the analysis is enhanced through a detailed constraint analysis however, it is important that the focus on constraints simultaneously seeks to identify potential mechanisms for overcoming such constraints.

Given the fact that the institutional environment least lends itself to ready external influence and change, it is useful to approach the analysis as a process to understand problems of persistent sub-optimal outcomes and to start forging an understanding of how to avoid operations that may conflict with identified constraints. Alternatively, to identify mechanisms that could serve to provide supportive systems and processes to address constraints. Once a problem has been identified within the institutional environment (e.g. lack of cooperative governance, or repeated failure to implement sector reforms) an iterative interrogation and analysis process will allow questions to be formulated that offer the direction of a solution and promote practical follow-up.

In practice, this means that this assessment process is best undertaken in collaboration with the **Country Engagement Leads**[6], allowing the assessment process to be enriched by experience and tacit knowledge. An important aspect of this relates to whether there is a difference between the de jure and de facto implementation of regulations within the country and/or the sector. Another good source could be to draw on the experience of donor organisations, including where they have experienced persistent disappointing outcomes or where interventions deemed to be positive have met with negative results.

4.2.3 Scope of what needs to be assessed

Based on the above approach, it is accepted that institutions are defined via the interaction of laws, policies and administration. Although these dimensions may be analytically distinct, they are interwoven and interrelated from an operational perspective.

The key forces present in the institutional environment that will have an impact on organisational performance must be understood and the diverse associated issues explored. These include[7]:

- Reform in line with global/development trends and commitments: whether there has been sector reform over the past one to two decades that is commensurate with internationally tested and accepted good practice related to e.g. the principle of subsidiarity with associated ordered and coherent systems of co-responsibility between institutions of governance at all appropriate levels. Has there been a concerted effort to take on board indicators related to e.g. the SDGs and to actively incorporate activities and actions at policy as well as operational levels?
- The policy environment: what, specifically, characterizes the country's policy environment in this sector/field? Is an appropriate level of support given to the sector? Do the institutions make provision for focused national roles and functions and link to national or sectoral programmes? To what degree has the policy and regulatory environment been adapted in line with sector reform in an enabling manner that (i) clearly sets out areas of mandate and performance; (ii) allows clear oversight; (iii) and the achievement of equity, transparency, accountability and efficiency.
- The Regulatory environment: to what extent is the country's legislative system stable and functional? Do the laws that govern relationships function rationally, and is conflict arbitrated in a reasonable way?

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6 These are new positions introduced into the CRIDF II management structure. The intention is to have one in place for each of the eleven countries.

7 DFID (2009) Analysing the Governance M & E (ODI and World Bank)

- Institutional arrangements: to what degree does the institutional environment promote or impede delivery and support or hinder the achievement of key resource management and/or services delivery objectives in a sustainable and efficient manner? To what extent are government bureaucrats able to carry out decisions? On what basis are resource allocations made? Does the bureaucracy facilitate or retard the development of the organization? How is donor participation facilitated/impeded?
- External Role-players: are there other organisations, including donors, involved with the institutional support and/or support to the organisation(s) specifically? What is the objective of such support? Do there appear to be opportunities for coalitions and collaboration?

<u>4.2.4 Key things to look out for</u>

- Internal and external resources, including labour market pools, that could serve to build an enabling environment;
- The specific problems and constraints that are being experienced within the sector (e.g. failure to successfully implement sector reforms, institutional misalignment, poor regulatory enforcement, etc.) and have specific interventions been identified that may be used to overcome problems and constraints?
- Who are likely to be the "winners" and "losers" from reforms that have been or are being implemented? Are there any key reform champions within the sector? Who is likely to resist reforms and why? Are there "second-best" reforms which might overcome this opposition?'
- What experiences, cited by stakeholders, demonstrate the direction of solutions to specific constraints or deficits within the institutional environment?
- To what extent are there problems and issues with the implementation of cross-sectoral/inter-departmental initiatives and what mechanisms have been successful/unsuccessful in addressing such problems?

4.3 Governance

<u>4.3.1 Why is this Important?</u>

Corporate governance and associated matters are at the heart of how an organisation is managed. Governance finds expression in and is practiced within the context of the mandate for the organisation. It includes the way in which management practices are implemented subject to the constraints and guidelines imposed by the (external) institutional environment, and the needs of stakeholder groups with an interest in the organisation. For this reason, governance can be regarded as the point where the external (institutional) and internal (organisational) environments meet.

Although the elements that should comprise organisational governance may be based on expressed and formalised rules and requirements (e.g. specified by laws and regulations), there is also the expectation that corporate governance will involve a coherent process for growing the organisation and for its monitoring and control in a manner that represents the interests of stakeholders in a transparent and ethical manner.

In general, the regulatory framework as well as an organisational constitution and/or a prescribed mandate (e.g. a Service Level Agreement) provide both the legal and policy framework as well as the direction for the functioning of the organisation. It would also stipulate the way the governance and oversight body (usually a board of directors) would be required to be constituted and the way it should exercise its management and oversight function. This is where much of the power and politics of the organisation resides, where decisions regarding limited resources and their allocation are made and where key organisational management issues are required to be resolved, based on the core mission of the organisation and the needs and demands of its constituents.

Good governance, through the board of directors as well as senior management, aims at ensuring organisational compliance with the regulatory framework and the rule of law. It controls corruption and

promotes effectiveness, stability and accountability. It is at this level that strategic direction is supplied and priorities, equity, external environmental forces (both positive and negative) as well as core resources and stakeholder needs and requirements are considered as part of the governing approach.

It ensures that the organisation keeps its 'finger on the pulse' of the institutional environment within which it functions as well as the internal organisational environment, assessing whether it is responding to important institutional requirements whilst meeting the needs of those it serves (clients/customers/stakeholders).

4.3.2 How to assess Governance Matters?

Governance matters may be assessed by paying attention to the external environment and the specific requirements in accordance with which the organisation was established, its mandate as well as the contextual determinants of governance itself and how these determinants can be measured (e.g. what the board or other representative body composition should be, how often it should meet, etc.).

The assessment process will include an overview of relevant documents including minutes of Board meetings, key strategic documents, as well as discussions by board members and other stakeholders.

4.3.3 Scope of what needs to be assessed

The following information should be collected:

- Rules that govern the organisation (governance)
- Organisation and coordination of activities (management).
- Mechanisms and practices for leading the organisation in relation to organisational performance (leadership).
- The process by which the organisation uses and enhances its resources and knowledge (capacity-building mechanisms).
- The ability to anticipate risk, limit impact, and bounce back through adaptability, evolution, and growth in the face of change (resilience).
- Information about objectives that the organisation is setting for itself over the medium/long-term.
- Information on current skills sets within the organisation and the extent to which these hard and soft skills allow the organisation to meet mandates/requisite areas of delivery.
- Board functioning in respect of the following
    - Organisational performance evaluation results are reported to and reviewed by the board annually/regularly against established benchmarks
    - Overall organisational performance is compared to established benchmarks/rating indicators and/or best practice performance in the field.
    - Areas of operation are evaluated regularly/annually, based on rating indicators/ established standards/ best practice in the field: (i) Board performance; (ii) strategic planning; (iii) organisational/operational programmes; (iv) operating infrastructure; (v) human resources management; (vi) financial health and long-term sustainability; (vii) stakeholder needs; (viii) diversity and inclusion; and (ix) communication and external relations.

4.3.4   Key things to look out for

- The organisation is well managed: it has a clear mission, policy, and goals under the leadership of a capable, engaged Board of directors.
- The organisation has identified meaningful goals, metrics, and tools to measure and evaluate its performance and overall effectiveness.
- The organisation has a positive profile in the field, including amongst its stakeholders/clients/customers based on effective and well-managed programmes.

- The Board of directors is actively engaged in its oversight role and knowledgeable about key issues that might affect the organisation's success. Strategic and annual planning utilise results and lessons learned from past evaluations.
- The Board focuses on policy development, strategic direction, and evaluation of the organisation. It respects the staff's responsibility to implement policy directives.
- The Board's effectiveness is apparent in suitable programmes, well-managed operations, ample funding, within the confines of organisational grants or contracts (and/or the promotion of financial prudence) and organisational stability and sustainability.
- The Board has established clear leadership roles to promote capable management of its objectives and activities.
- The Board understands its fiduciary and legal responsibilities and actively manages the organisation's risk exposure.

4.4 Organisational Strategy

4.4.1 Why is this Important?

Strategy serves as the framework for the integrated planning and management system of an organisation, and forms the basis for communicating the organisation's approach for ensuring performance effectiveness for stakeholders and for bringing about ongoing improvements. The finished strategy-based planning and management system (at times set out in a separate corporate or business plan) translates the organisation's 'customer' and other stakeholder needs into its strategic results, objectives, performance measures and targets.

A well-constructed strategy allows an organisation to develop and demonstrate a clear understanding of what its Mission and Vision is and what is required for them to succeed. As such, it includes the identification of key projects and programmes as well as core capabilities that will be required to achieve success and mechanisms for identifying and addressing weaknesses and to mitigate risks. **Figure 3** gives a summary of the typical strategic planning logic and hierarchy.

Figure 3: Strategic Planning Logic

4.4.2 How to Assess the Organisational Strategy?

As is the case with other elements, the organisational strategy is assessed through a combination of a desk-top review and interviews. Some focus group sessions are an additional option that can be useful. Key documents include the organisational strategy as well as corporate business plans as well as annual progress/performance reports/ documents. Some organisations have shareholder compact documents.

4.4.3 Scope of what needs to be assessed

In line with Figure 3 above, the scope of organisational strategy assessment comprises the elements as set out. An assessment must be made not only of the absence or presence of each element, but the degree to which each of these elements achieve what is intended and build towards putting a coherent instrument (or set of instruments) in place to steer and manage the business.

4.4.4 Key things to look for

The following aspects should be taken into consideration during the assessment process:

- Is an organisational strategy in place and has it been developed in a purposeful and formalised manner?
- Have clear strategic priorities been formulated in line with the goals of the organisation?
- Has an organisational business plan been developed (in line with the organisational strategy and goals?
- Have key strategic priorities for the organisation (e.g. ensuring cost recovery, asset management, operations and maintenance, non-revenue water management and sanitation) been included, with clear objectives to be achieved and critical indicators in place to measure progress towards the achievement of goals?
- Is there a clear correlation between the strategic priorities and the objectives and/or policies that drive work to be performed?
- Are there projects and programmes and associated work activities that do not align with the mission?
- Are the targets that have been set realistic and achievable within the context of the resources allocated thereto?
- Are there clear indications that management can fully operationalize fundamental components of delivery?
- Are there existing (stretch) performance standards?
- Have elements of underachievement been identified and incorporated as part of a structured and appropriate action plan?
- If appropriate, have requirements from an external regulatory oversight body, been coherently incorporated and integrated into the strategy and business plan (e.g. as per a Service Level Agreement and/or specified benchmarks)?
- If appropriate, does the strategy show a clear commitment to collaborate and partner with all relevant internal personnel and external stakeholder groups?
- If appropriate, does it show clear linkages as well as targets for cooperative/collaborative planning and for ensuring ongoing communication and reporting?
- Are there any clear challenges that exist?

4.5 Financial Management

4.5.1 Why is this Important?

The financial health of any organisation is obviously critical in any context but particularly in terms of sustainability. If the organisation does not have a secure form of income, which at least meets, or ideally exceeds, its operating expenses then its future cannot be guaranteed. Admittedly there are some public sector bodies whereby any losses or shortfalls are "guaranteed" by the State however the reliability of this also needs to be verified/confirmed. By the same token, if significant subsidies of some form are involved, this could mean that there are additional risks involved in terms of the organisation's ongoing viability, even for a conventional government department. In addition to evaluating the overall viability, it is also important to understand and analyse the financial management capability of the organisation so as to ensure that the monies obtained are managed effectively and efficiently with high quality governance and high levels of transparency. All of these build confidence in terms of the capability and credibility of the organisation.

4.5.2 How to assess financial management?

In terms of documentation, a key starting point is the annual financial statements and these should include a range of explanatory notes which can be analysed and assessed. This should allow some degree of ratio analysis to be undertaken, with particular reference to financial structure, liquidity and profitability ratios. Corporate business plans and shareholder compacts are also of relevance here, though these will be addressed in more detail in the strategic management analysis discussed above.

Part of the financial assessment should look at whether key financial policies are in place. This includes aspects such as procurement, financial accounting, audit, tariff setting, depreciation, debtors

management, treasury management (if relevant) and creditors management. Evidence of effective implementation thereof is also important.

The presence/status of important financial systems should be assessed. These should address aspects such as financial accounting, management accounting, procurement, billing and debtors management.

At a more strategic level, areas which are of interest include if there has been work done on financial modelling in order to be able to assess financial performance projections for future years. Any work on tariff modelling would also be of interest. Ideally some kind of multi-year capex plan should be in place.

Areas of expenditure that should be viewed with particular interest include staff costs, administration, operation and maintenance, refurbishment and

4.5.3 Scope of what needs to be assessed

The scope of work being undertaken in financial management should address the following areas:

- Annual financial statements
- Corporate plans
- Financial accounting
- Audit
- Management accounting
- Procurement
- Tariff policies
- Financial modelling – multi-year budgeting
- Revenue management (including billing systems)
- Capex planning (see also discussion under asset management)
- Treasury function (if relevant)

These would not necessarily be addressed in detail but in overview.

4.5.4 Key things to look out for

In terms of key issues to be considered and addressed when considering financial management, the following issues are relevant:

- Are annual financial statements produced on a reasonably timeous basis (within several months of the end of the financial year)?
- Are these of good quality and credible?
- Is there an external auditor in place?
- Does the organisation produce a corporate/business plan?
- Is some kind of financial modelling undertaken for future years in order to assess projections and understand the planning environment?
- Is there a management accounting system in place that assists management with the ongoing management of financial affairs?
- Is there some kind of modelling in place to set tariffs?
- Is there a tariff policy in place and is some kind of step-tariff utilised for potable water?
- In terms of ratio analysis: are liquidity ratios such as the current ratio and debt coverage at acceptable levels?
- Is the organisation making an operating profit and is it making a net profit?
- Is there allowance being made for depreciation?
- Is there a multi-year capital expenditure programme in place?[8]
- Does the capital expenditure programme include items for refurbishment?
- Are the figures for debtors' days and creditors' days at acceptable levels?

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8 This and the following question should be cross-referenced with the discussion under asset management in Section 4.7.

- Is there a procurement policy in place?
- Are the procurement systems that are in place credible?
- Is expenditure related to key sustainability aspects such as O and M and refurbishment at acceptable levels (not too low)?
- Are staffing and administration costs at acceptable levels (not too high)?

4.6 Organisational Design and Human Resources

4.6.1 Why is this important?

Organisational design refers to the process of establishing and coordinating the structural elements of an organization in the most appropriate manner, with key aspects of the design required to address departmentalisation of functions, areas of specialisation, aspects of centralisation and decentralisation, authority and chains of command. Organisational design should ideally be informed by the overall purpose and objectives of the organisation; following the dictum of "structure follows strategy".

4.6.2 How to assess the organisational design and human resources aspects?

The organisational design is usually made up of several overarching components related to (i) tasks, (ii) structures (including hierarchical arrangements, powers, authority and oversight), (iii) information processes and technology management (iv) decision-making processes, (v) rewards, incentives and compensation, (vi) business processes and linkages, and (vii) human resources (people) management and organisational learning. Each component should be designed in a manner that speaks to the vision, mission and strategic perspective of the organisation as well as its key results areas and objectives.

Each of these elements is interdependent and must align with the organisational strategy. All (organisational architecture) elements should be arranged in a manner that are best suited for ensuring that the organisational strategy can be executed in a manner that achieves the organisational mission and goals.

4.6.3 Scope of what needs to be assessed

4.6.3.1 Organisational Design:

Organisational design should meet several key requirements, including that it should:

- Enable effective customer relations management and efficient delivery of services;
- Provide clear roles and lines of accountability and management;
- Be structured in a manner that reduces overheads and exploits economies of scale whilst maximising work process effectiveness;
- Allow an organisational structure that offers a clear connection with the organisational strategy, including the organisational mission and goals;
- Provide mechanisms that allow the integration and coordination of organisational behaviour across its parts aimed at achieving the organisational mission and goals;
- Provide systems that facilitate coherent flow of information within the organisation;
- Have planning processes in place that demonstrate the organisation's willingness to regularly engage, review and ensure the realignment of the structural implications for delivery, emanating from the Strategy;
- Offer clear differentiation of how people and resources are allocated to organisational tasks and goals.

4.6.3.2 Human Resources Management:

A key focus area of organisational design revolves around the specific human resources (mix of people, posts, skills and processes for collaboration) required to ensure that the organisation can achieve its specific goal.

Importantly, human resources management issues become organisational design issues at the strategic apex of the organisation, if not coherently addressed. HR management should have policies and processes in place that are in line with labour legislation and other institutional and sectoral requirements. In addition, policies and processes that include, but are not limited to, appropriately designed resourcing and recruiting, headcount targets, competence and skills, employee relations, and succession planning.

4.6.3.3 Organisational Capacity:

Capacity-building is a broad, ongoing and engaged process aimed at supporting the individuals within the organisation in a manner that will ensure that the organisation has the right combination of: human, technical and financial resources, leadership, governance (rules of the game) and practices. Capacity-building is a complex process that goes beyond simply training individuals in certain new skills or techniques but aims at building competence to function within an organisation for its benefit.

There are different levels of capacity, viz.; (i) competency which is defined as the individual's set of skills, knowledge, abilities and experience; (ii) capabilities which are the sum of both individual competencies and organisational elements (e.g. structure, resourcing, management, etc.) and is generally evident at the organisational level.

4.6.4 Key things to look for

- Does the organisational organogram reflect the key areas of delivery in accordance with mandate on the one hand, and core functions as set out in the Strategy on the other hand?
- Does the organisational design make provision for the necessary oversight of decentralised service stations?
- How many posts that exist on the organogram are filled versus empty? How could this impact delivery?
- Is there any indication that there is adequate succession planning, especially in terms of areas of scarce skills or senior positions?
- Are there clear job descriptions in place that allow (i) the appointment of appropriate personnel with the right mix of skills and experience for the post? Is performance monitored against this?
- Are training programmes implemented that assist in building skills and competence areas where improved performance is required?
- Are the ratios of professionals versus technicians/technologists, versus middle managers, versus artisan versus general workers indicative of a hierarchy of resources to ensure that the multiplicity of tasks that are required can be addressed?

4.7 Infrastructure Asset Management

4.7.1 Why is this important?

The IAM planning process imposes context, system, discipline and rhythm to the provision and maintenance of infrastructure capable of meeting the service needs of consumers. Without the system, new infrastructure would be ad hoc, constructed in the narrow context of immediate pressures and in time may turn out to be incompatible with scheme development, necessitating expensive corrective measures.

The Infrastructure Assets Register elements of the system contain the information that facilitates planned, integrated and sustainable maintenance of the scheme's elements. Without this, the scheme

is kept working by repairing elements as they fail, the extra cost of which is compounded by collateral damage, loss of consumer goodwill and consumption of management time dealing with crises.

The system serves three primary masters, capital development (engineering and design), operations and maintenance (core business) and finance (funding and budget). It impacts greatly on day-to-day customer care, and the human resources division gleans information necessary for human resource planning, development, and education and training.

4.7.2 How to Assess This?

IAM can be assessed (refer also to Chapter 5) by:

Reviewing:

- Whatever master planning documents exist (if any),
- Terms of reference provided by the entity to consulting engineers for infrastructure projects to see if they refer to any framework plan (that might represent an IAMP or a precursor),

Enquiring:

- About the approach the entity uses for making applications for grant funding,
- What information is recorded about parts/items of infrastructure or equipment,
- If the entity has an Infrastructure Assets Register (IAR),
- What format any IAR is in (paper, Excel, proprietary),
- How many items of infrastructure are stored in the register,

Requesting:

- Records of water demands on various parts of the infrastructure,
- Samples of the information in or from the IAR,

Probing:

- Relevant personnel to explore their level of understanding of what development of a comprehensive IAMP should entail,
- Whether their corporate calendar suggests any cyclical review of infrastructure needs.

4.7.3 Scope

The enquiry should cover the following in order, firstly, to explore the status of infrastructure planning, and secondly, the degree to which information from any planning process extends to other benefits:

- Evidence of knowledge of what IAMP entails, and of adoption of a methodical or systematic process towards infrastructure planning
- IA Register contents and links
- GIS, maps, drawings
- Infrastructure maintenance system (schedules, job cards, maintenance manuals, IAR link)
- Capex budgets and supporting documents

4.7.4 Key things to look out for:

- Interest from officials in demand growth, demographic changes, water resource quality changes
- Qualifications and background of senior personnel in planning or O&M positions

- Any young people with technical/ scientific qualifications
- Attitude and 'bent' of the Financial Director
- Attitude and 'bent' of Chief Executive

4.8 Operation and Maintenance

This section is split into three sub sections, namely O and M, Water Safety Planning and NRW Management.

4.8.1 O and M

4.8.1.1 Why is this Important?

Operations and maintenance (O&M) in infrastructure-based organisations is usually the core activity of the entity. As such, its efficiency and effectiveness often describes that of the organisation as a whole. In theory at least, other divisions/departments exist largely for the purpose of providing specialist services to support the work of the O&M division.

4.8.1.2 How to Assess This?

Insight into how well (effective and efficient) the O&M function is likely to be delivering on its mandate may be gained by soliciting information. In doing so, the responses may reveal insights by what is or is not available (and its nature, format and appearance), and what is or is not said (and the manner in which it is said). The list below is intended to suggest topics rather than being specific, and other avenues may open for investigation during the exercise.

Requesting information about daily operations:

- Operational records/ shift logs,
- Collection of operational information of any kind suitable for statistical purposes,
- Comparing capacity of facilities in comparison to actual demand,
- Characterisation of raw water quality,
- How effectively treatment facilities deal with water quality extremes,

Requesting information about personnel and their tools:

- Depiction of the organisational structure,
- Educational and experiential qualifications of personnel from director to treatment staff and artisans
- Types instrumentation/metering/ test equipment/ computers
- Requesting information about mobility of maintenance staff and any supervisory staff, about
- The nature of specialist support and whether internal or contracted externally/ outsourced
- The nature of budget constraints (what could be done if sufficient budget were available?)

Observing on site:

- Condition of infrastructure, vehicles, offices,
- Interest in occupational health and safety issues.

Interviewing personnel on site about:

- Operating procedures,
- Maintenance protocols,
- Staff matters (education, training, recruitment approach, performance management, discipline, recruitment, morale)

Analysing documentation provided:

- On-site operational records.

4.8.1.3 Scope

Scope variations are situation dependent, but for water utilities would cover the following:

- Raw water resources, treatment facilities, networks,
- Operating personnel at facilities (and their scientific and administrative support), their tools and operating support systems, record keeping and reporting systems, maintenance facilities
- Maintenance personnel (skilled field staff and their administrative support), ditto
- Non Revenue Water (NRW) teams and their tools and systems
- Management and supervisory personnel, their systems and reports, quality assurance systems, logistical/ supply chain and office/ workshop arrangements, etc.
- O&M budgets, reports and controls

4.8.1.4 Key Things to look out for:

The general state of facilities, offices, vehicles, equipment and tools is revealing in itself, but other situational indicators may be:

- Interest from officials in record keeping
- Qualifications and background of senior personnel in O&M positions
- Any young people with technical/scientific qualifications and the positions they occupy, and especially in relation to older personnel and the positions they occupy
- Attitude and 'bent' of Operations/Technical and Financial Directors
- Attitude and 'bent' of Chief Executive.

4.8.2 Water Safety Planning[9]

4.8.2.1 Why is this important?

Waterborne diseases account for significant mortality in vulnerable populations (infants, aged and immune compromised). A Water Safety Planning (WSP) tool (modelled on the World Health Organisation's) is useful for designing a quality assurance to protect public health, water resources and the environment, and constitutes credible evidence should the service provider be summonsed to account.

The planning process can involve scientists, environmental health practitioners, process engineering and design, and operations and maintenance. Some (amongst others) of its results are standardised operating procedures, compliance monitoring systems, incident protocols and process designs, all of which are critical for the effective and efficient performance of operations.

4.8.2.2 How is this assessed?

Product quality and WSP can be assessed (refer also to Chapter 5) by:

Requesting:

- Operating performance records and documents relating to standards,
- Documents explaining procedures,

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9 This subject has a very close relationship with the service quality discussion in Section 4.9. The subject matter relates specifically to the provision of water services.

- Records of quality planning projects,
- Details of compliance monitoring programme,
- Records or correspondence with the regulator,
- Information about expertise from outside (consulting specialists, samplers, testers, laboratories, etc.)

Interviewing personnel about:

- The nature and extent of crises,
- Educational, training, recruitment and performance monitoring of staff

On site inspecting, observing or viewing:

- Quality management systems,
- Personnel at work (operating staff, laboratory staff, samplers),
- Instruments and vehicles (esp. those used by samplers).

Visiting, or obtaining:

- Accreditation documentation,
- Reliable anecdotal information about capabilities of external laboratories utilised regularly.

4.8.2.3 Scope

- Raw water resources, treatment facilities, distribution and collection networks
- Laboratory facilities
- Offices, supporting resources, personnel
- Quality management systems

4.8.2.4 Things to look out for

- Evidence of instrument calibration and other systems aimed at verifying veracity of information and measurements
- Degree of concern (or conversely defensiveness) expressed by managers for veracity of technical and quality reports
- Inability of personnel to readily lay their hands on documents/ information/ items of equipment that had been reported as being available
- Condition of facilities, and age and demeanour of personnel

4.8.3 NRW Management

4.8.3.1 Why is this Important?

Non-Revenue Water is embedded with O&M, because of the multiple points of opportunity for loss of water and revenue, and because of the need for a comprehensive and systematic approach. However, its links to Infrastructure Assets Management is acknowledged.

4.8.3.2 How to Assess This?

NRW demands a methodical and systematic approach. Difficulty in finding information within the organisation might suggest to an assessor that progress towards effective management of NRW is limited.

Requesting information about NRW:

- Routine daily, weekly and monthly collection of meter readings,

- Conclusions drawn from statistical analyses,
- Comparing theoretical demand (based on known number of consumer connections) to actual demand,
- Availability of water balances and system logging,
- NRW issues such as maps of networks,
- Bulk and consumer metering,
- Quantification of flows and water losses,
- Billing and illegal connections,
- Nature of water wastage in network and by public/ consumers,
- Policies and bylaws.

Requesting information about personnel and their tools:

- Depiction of the organisational structure,
- Educational and experiential qualifications of personnel including outsourced expertise (such as, but not only, Instrument Technicians)
- Types instrumentation/ metering/ data logging and pressure testing equipment/ computers
- Requesting information about mobility of staff and supervisory staff
- The nature of specialist support and whether internal or contracted externally/ outsourced
- The nature of budget constraints (what could be done if sufficient budget were available?)

Observing on site:

- Condition of meter chambers and meter installations (bulk and consumer meters)
- Storage conditions of equipment (both when not in use and during transporting)
- Interest in accuracy and cross-checking.

Interviewing personnel on site about:

- Standard procedures, and assets register protocols,
- Staff matters (education, training, recruitment approach, performance management, discipline, recruitment, morale)

Analysing documentation provided:

- On-site records and reports.

4.8.3.3 Scope

Scope variations are situation dependent, but for water utilities would cover the following:

- Raw water networks, distribution and reticulation networks, reservoirs
- Non-Revenue Water (NRW) teams/ field personnel (and contracted expertise/ support), their tools and support systems, record keeping and reporting systems
- Meter maintenance personnel (skilled field staff and their administrative support), ditto
- Management and supervisory personnel, their systems and reports, quality assurance systems, logistical/ supply chain and office/ workshop arrangements, etc.
- Budgets, reports and controls

4.8.3.4 Key Things to look out for:

The general state of facilities, offices, vehicles, equipment and tools is revealing in itself, but other situational indicators may be:

- Interest from officials in record keeping

- Qualifications and background of senior personnel dealing with NRW
- Interaction between personnel in technical, financial and customer services departments
- Attitude and 'bent' of operations/ technical and financial directors

4.9 Service Quality

4.9.1 Why is this Important?

Virtually all institutions have customers and stakeholders for whom they provide services. This implies that the key quality aspects such as consistency and reliability are important whether it be a tangible, physical product or some kind of more intangible element such as the helpfulness of telephonists or responding to correspondence from customers. As was noted earlier, this CRIDF Programme is likely to address a wide range of institutions however the great majority are likely to be government institutions or parastatals in some sort. Generally speaking the Public Service is not necessarily known for its focus on customer service and this is particularly so in the developing country context. This emphasises that this aspect of institutional performance and capability is a work in progress and needs to be an aspect that is actively fostered and encouraged. It is also of note that this issue has a tendency to have a particularly severe effect on the poor and vulnerable, largely because they are often not in a position to access the means to elevate their problems and queries due to issues such as lack of transport, lack of communications and lack of education.

4.9.2 How to Assess This?

Once again, the institutional assessment questionnaire will be designed in such a manner to specifically target the issue of product quality and customer service. It is very important to highlight that this should address both the internal and external stakeholders, with the external customers and customer bodies being particularly critical in this context. In terms of policy documents, ideally there should be some kind of policy relating to how the organisation deals with customer service, and/or some sort of customer service charter, which would specify particular indicators. Linked to this should be some kind of measurement systems in order to be able to monitor performance on customer service on a regular basis. This is an area that can be extremely sophisticated in developed countries but often it is more practical initially to commence with more simple systems. Periodic customer surveys can also contribute in terms of obtaining an external view of the organisation from this perspective. As a rule, customer service tends to be something that ideally needs to be embedded in the culture of the organisation, and this implies very high commitment from leadership but also regular training to improve performance.

In terms of physical products such as water, potable water and wastewater, one is looking at systems to ensure that quality assurance is achieved (see NB discussion under 4.8 with regard to potable water quality). Again this must be linked to rigorous monitoring systems that will assess the quality of the product utilising a range of determinands.

4.9.3 Scope

In terms of the issue of customer service, assessing the capability of the organisation needs to consider the organisational design elements to determine how customer service is prioritised and what staff are utilised in these functions. Clearly of critical importance here is the front office function in terms of the staff that are dealing directly with the public on a day-to-day basis. It is also then important to look at the infrastructure and systems which are in place to support customer service. If, for example, offices where customers come to pay or to raise queries are dirty and untidy, then it clearly sends a negative message. One would also have to consider the locations of the offices if the infrastructure is widely dispersed, so that customers do have ready access to the organisation. The use of mobile technology can also alleviate this to some extent.

In terms of the quality of physical products, generally in this context one is looking at aspects such as potable water, wastewater or raw water in the case of an irrigation scheme. The quality of these need to be monitored on a very regular basis (ideally almost continuous for potable water) and preferably also with some kind of auditing system in place within the organisation. Laboratory testing of some

aspects is critical and ideally the laboratories need to be accredited to carry out such work. In the more rural context, these tests would probably have to be less frequent although some local testing capability linked with training is also possible, if designed appropriately. In the water services context the presence of an independent regulator provides an additional level of audit for water services utilities.

4.9.4 Things to look out for:

Pointers in terms of key elements with respect to service quality include the following:

- Is there some sort of customer service policy or charter in place?
- Does the organisational design accommodate a customer service component?
- Are there adequate human (and financial) resources allocated to customer service?
- Is there sufficient infrastructure in place, such as customer service offices, to adequately address the demand from the public?
- Is there an adequate training programme in place specifically targeted at customer service within the organisation?
- Is there an adequate testing system in place to monitor the quality of physical products such as water, wastewater and raw water?
- Is the product monitored on a very regular basis?
- Are a sufficient number of determinands addressed?
- Are the results independently audited in some manner?
- Does an independent regulator report separately on the results?
- Is reliability of the service monitored and is the service provided adequate? This applies to both the numbers of hours a day that service is provided but also how long it takes to address supply interruptions?
- Is the consistency of the service, such as water-pressure, regularly monitored?
- Are independent customer surveys carried out regularly to obtain the opinions of customers?
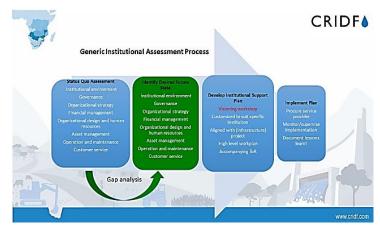
5 Undertaking the Gap Analysis

5.1 Overview

The next part of the process is to carry out the Gap Analysis. In essence this compares the status quo assessment with some kind of desired future state.

In order to determine the future state, it is foreseen that there will be three major inputs, namely international best practice, "realistic best practice" taking into account the particular context in the country and the institution being

assessed, and the views and opinions of the client institution. The first two aspects in terms of international best practice and realistic best practice, will be discussed in more detail in the eight subheadings in sections 5.2 to 5.9 below. In this regard, it is considered that with a process such as this, it is a useful exercise to outline international best practice, while at the same time providing the opportunity for customising this approach for use in the SADC context and bearing in mind that there are significant constraints in terms of resources available as well as possibly institutional and legal constraints.

The interview questionnaire (**Annexure B**) mentioned in Chapter 4, includes a simple scoring system (0 to 3) for each of the questions. This will be used to assist in the process of assessing the current status of the organisation against the desired future state. These scores will be summated to produce percentages for each of the eight organisational areas of competence, as well as an overall score. In essence, scores in the range 0-33% imply a weak area or organisation, 33-66%; an organisation with some weaknesses but also some reasonable capacity, 66-100%; a relatively strong organisation.

With respect to obtaining the inputs of the client institution, it is the intention of the institutional team to heavily involve and consult the client institution throughout the process in order to obtain their inputs, ideas and ownership. This will culminate in a milestone event, which we have called a Visioning Workshop. At this event, the results of the status quo assessment will be presented together with the best practice benchmarks as discussed earlier. This will then be utilised to determine the requirements in terms of institutional assessment and support, which will lead to the institutional support plan discussed in more detail in Chapter 6. The deliberations at the Visioning Workshop should include, at a high level, some discussion on the steps and measures to be undertaken in each particular area of focus that is agreed upon. In addition, a prioritisation process should be undertaken to reflect the fact that resources are always limited and that it may not be possible to attend to all of the items identified in the Gap Analysis.

5.2 Institutional Environment

5.2.1 Assessment of the institutional landscape

Undertaking an assessment of the institutional landscape should be done from the vantage point of the specific institution, project or programme for which support is being considered.

The logic of starting from this point and moving outwards is to ensure that the narrower organisational view (the level of execution) is understood within the context of the broader institutional framework

within which it functions. This includes the potential positive and negative impacts the institutional environment would potentially have on the project, including the factors that may need to be taken into consideration to address key constraints and/or demands.

Annexure B provides a Questionnaire (Assessment Tool), that includes a section that addresses the Institutional Environment.

It is important to note that an assessment of the institutional landscape allows contextual understanding, including the specific institutional risks and constraints that may be encountered. It is highly likely that any change management processes could be instituted at this level.

From a risk perspective, the overview of an ideal and an acceptable institutional landscape set out in the following sections should allow an understanding of the extent to which the institutional environment may be regarded as creating an environment that may be fully conducive to what is being proposed or, alternatively, may create a-risky scenario.

5.2.2 Description of the Ideal Scenario

The following focus areas and associated elements shown in Table 1 allow a quick overview of a limited but essential set of components that should, ideally, be in place. As well, in addition to their presence, there should be clear evidence that the institutional environment as well as the institutional management arrangements and collectives (including government departments) fulfil their respective roles in a manner that ensures the achievement of institutional objectives.

Table 1: Aspects of an ideal scenario

FOCUS AREA	ELEMENTS
REFORM	- Coherent regulatory reform and associated implementation (de jure and de facto alignment) - Reform rationale addresses issues of efficiency, effectiveness, equity and fiscal sustainability - Restructuring and decentralisation - Policy Oversight, including mechanisms for tariff approval, technical standards, independent regulatory oversight, dispute arbitration, monitoring and investment planning. - Intergovernmental/interdepartmental collaborative planning iro implementation of cross-sectoral reform processes and programmes. - Private sector involvement as appropriate
REGULATION	- Autonomy, including formal, financial and managerial. - Transparency – related to legislative provision as well as publication of decisions - Accountability established through the existence of independent appeal processes - Existence of appropriate policy tools (e.g. Raw Water Pricing, tariff and charges determination and indexation), guidelines and strategies as well as evidence of use
EXTERNAL GOVERNANCE	- Labour market discipline – nationally entrenched mechanisms for worker rights, including minimum wages, Occupational Health and Safety, disciplinary mechanisms and collective bargaining mechanisms. - Capital market discipline regarding taxation, access to debt, state guarantees and controlled outsourcing.

FOCUS AREA	ELEMENTS
CONSTRAINTS	• Constraints in respect of reform, regulation and institutional arrangements

5.2.3 Describe of an acceptable scenario

There is clearly the need to have as many elements as possible in place to ensure that a project or programme will not be implemented within a chaotic and/or destructive institutional environment.

At the same time, it is suggested that the following elements should be in place alternatively, that the constraint analysis undertaken has provided clear indications (preferably previously successfully tested in the field) of interim and/or alternative interventions that can be put in place to counter institutional deficits.

The experience of donor organisations, NGOs and development partners will be crucial in terms of assessing whether all the necessary AND sufficient aspects and actions that are required to be taken on board have been addressed. For this reason, the Visioning Workshop, aimed at developing the final Institutional Support Plan will need to confirm the practicality, relevance and sufficiency of what has been accepted as "the good enough" scenario.

Table 2: Aspects of an acceptable scenario

FOCUS AREA	ELEMENTS
REFORM	• Regulatory reform in place although there is not comprehensive de jure and de facto alignment. Here for example, regulatory prescriptions may be deemed to be at odds with traditional (and locally implemented) oversight and control. However, the system still allows for the implementation of mechanisms that allow the objectives of efficiency, effectiveness, equity and fiscal sustainability to be achieved • Mechanisms are in place for tariff approval, technical standards, independent regulatory oversight, dispute arbitration, monitoring and investment planning. • Intergovernmental/interdepartmental collaborative planning can be achieved in support of implementation of cross-sectoral reform processes and programmes. • Private sector involvement as appropriate
REGULATION	• The institutional environment allows (does not constrain) autonomous organisational functioning, within prescribed good governance parameters. • The regulatory and policy environment supports good governance measures related to transparency and accountability at organisational level. • Appropriate policy tools are in place or can be put in place over time and organisational functioning can be proactively aligned in accordance with appropriate aspects of international best practice
EXTERNAL GOVERNANCE	• Nationally entrenched mechanisms for Occupational Health and Safety and minimum wages. • External fiscal discipline

5.3 Governance matters

5.3.1 Assessment of governance matters

Annexure B sets out the Assessment Tool for undertaking an assessment of Organisational Governance.

The following sections provide an overview of the elements of an ideal as well as an acceptable scenario in respect of governance matters.

5.3.2 The ideal governance scenario

The following elements form part of what would be deemed a desirable organisational governance scenario.

Table 3: Elements of an Ideal Scenario

ELEMENTS OF AN IDEAL SCENARIO
The organisation is properly registered according to legal requirements, has a constitution, adheres to it and timeously submits all reports required from it to the relevant authorities, including financial and performance reports.
The board/trustees provide overall policy direction and oversight (reviews workplans, advises management team, etc.)
The roles and responsibilities of board/trustees are clear and do not involve daily operations.
The board provides accountability and credibility.
Leadership is accessible and accountable to all stakeholders, including those whose lives are affected by the decisions taken.
The board is composed of committed members who represent the interests of stakeholders (ask for composition of the board).
Board/trustees are able to carry out roles such as policy formulation, fundraising, public relations and lobbying
The board can secure sufficient funding (grant/donor/capital/loan) to meet core organisational objectives (e.g. capital expenditure projects)
The board shows a clear understanding of its fiduciary and legal responsibilities and manages the organisation's risk exposure in accordance.
Senior management have a clear understanding of their roles and responsibilities as providers of overall direction.
The board evaluates the performance of the chief executive/top management, based on previously mutually agreed goals and targets (e.g. staff retention, income generation/ cot recovery, key performance indicator achievement, overall organisational performance).

A succession plan is in place or under discussion for board leadership roles, the chief executive and/or senior management as well as key staff members if relevant. Board recruitment is strategically conducted by the Governance Committee.

Senior management is accessible and transparent to staff, can delegate and encourages staff participation in management of the organisation.

There are opportunities for leadership to emerge at all levels of the organisation.

The organisation's stakeholders are well defined and it works in partnership with the community and other stakeholders as partners.

5.3.3 An acceptable governance scenario

In general, the fewer number of indicators that are being satisfied that are found, the less acceptable the scenario becomes and the higher the risk that things will go wrong. Of critical importance is the understanding that the "fish truly rots from the head". Therefore, the less evidence there is of good governance and solid management at the top of the organisation, the more risk there is that any development project or programme or initiative will be unsuccessful in the medium to longer term.

Given this context, there are a minimum number of factors that will need to be met to (i) ensure the legitimacy of the organisation; and (ii) to ensure that the initiative has some chance of being rolled out with some success. Key of these is whether it will be possible to support the board and senior organisational management, including through backstopping or external partnering if necessary, to ensure that it can meet all fiduciary and management requirements.

The following elements form part of what would be deemed a 'good enough' organisational governance scenario.

Table 4: Elements of an Acceptable Scenario

ELEMENTS OF A 'GOOD ENOUGH'
The organisation is properly registered according to legal requirements, has a constitution, in the main tends to adhere to it. There is evidence that necessary reports are not necessarily submitted timeously for a variety of reasons, mainly due to a lack of capacity at governance, senior management and/or operational level. Indications are that, with some support, this situation can be reversed, including in respect of financial and performance reports.
The board/trustees have limited capacity (experience, knowledge and competence) to provide overall policy direction and oversight (review of workplans, advice to management team, etc.). This limited capacity extends to board members compromised ability to undertake activities such as policy formulation, fundraising, public relations and lobbying. However, evidence allows the conclusion that specific capacity building initiatives may bring about significant increases in level of competence and performance of members.
The roles and responsibilities of board/trustees are clear and do not involve daily operations.
The board provides accountability and credibility.
Leadership is accessible and accountable to all stakeholders, including those whose lives are affected by the decisions taken, and are clearly committed to representing the interests of stakeholders in an equitable manner.

ELEMENTS OF A 'GOOD ENOUGH'
The board can be supported to secure sufficient funding (grant/donor/capital/loan) to fund core organisational objectives related to capital expenditure, whilst at the same time ensuring that accounting and financial management practices will not be compromised.
The board shows a clear understanding of its fiduciary and legal responsibilities and would be in a position to manage the organisation's risk exposure in accordance thereto over time if provided with the necessary support in the short term.
The board sporadically evaluates the performance of the chief executive/top management based on previously agreed goals or goals that may be deemed to be relevant to the mandate of the organisation (e.g. staff retention, key performance indicator achievement, overall organisational performance).
Senior management have a clear understanding of their roles and responsibilities as providers of overall direction, ad create an organisational climate that encourages leadership, responsibility and commitment at all levels of the organisation.
Senior management is accessible and transparent to staff, can delegate and encourages staff participation in management of the organisation.
The organisation's stakeholders are well defined and it works in partnership with the community and other stakeholders as partners.

5.4 Organisational Strategy

5.4.1 Outline of the set of key indicators for organisational strategy

The following are key indicators of an appropriate organisational strategy:

- There is clarity regarding the organisational purpose.
- There is a clear organisational vision (picture) of the future.
- There are clear, comprehensive and appropriate metrics used by the organisation to assess and evaluate progress and results.
- There is clarity regarding what constitutes the main result focus areas (also referred to as critical focus areas or pillars of excellence) for the organisation.
- There is clarity regarding the ongoing activities required to achieve the key desired results.
- There is a clear understanding regarding what constitutes "value" to the client/customer/stakeholder groups, as well as how to achieve this and to improve on it.
- Key indicators are in place that show whether desired results are being achieved.
- Projects & Programmes are in place that allow the achievement of desired results.

5.4.2 Elements of an ideal organisational strategy

A well-constructed strategy allows an organisation to develop and demonstrate a clear understanding of what its Mission and Vision is and what is required for them to succeed. As such, it includes the identification of key projects and programmes as well as core capabilities that will be required to achieve success and mechanisms for identifying and addressing weaknesses and to mitigate risks.

The following are ideal elements of an Organisational Strategy:

- An organisational strategy that includes attainable goals has been developed and approved by the board in collaboration with staff members of the organisation. Staff members have not only

been enabled to provide support but have been placed able to provide key inputs into the process and the development of the plan.

- The strategic plan is regarded as a working document and is updated on a regular basis to take on board progress, changes in the institutional as well as internal environment, and to capitalize on critical opportunities.
- The Board receives regular progress reports from the senior management / chief executive of the organisation, relative to the implementation of the plan.
- Board members can articulate a shared future vision for the organisation, including related to its mandate and are able to evaluate strategic choices in this light. Where appropriate and necessary, board members can draw on their individual resources to support progress in achieving the organisational vision.
- Board members can speak knowledgeably about program goals, outcomes, and customer/ client / stakeholder needs. When applicable, they have visited programme sites and/or met with groups of stakeholders/ customers/ clients.

An assessment must be made not only of the absence or presence of each element, but the degree to which each of these elements achieve what is intended and build towards putting a coherent instrument (or set of instruments) in place to steer and manage the business.

5.4.3 Describe the 'Good Enough' Scenario

It is quite difficult to provide critical guidelines regarding what would constitute a "good enough" scenario, relative to the Organisational Strategy. For example, in a newly established entity, the complete absence of an organisational strategy need not be a fatal flaw although it would most certainly serve as a red flag related to a variety of aspects, including the ability related to governance and the achievement of organisational objectives.

Based on this, the slightly adapted criteria set out in respect of the 'ideal' situation are used to determine the 'good enough' scenario. Although it allows the introduction of potential actions that can be implemented to support this aspect of functioning, there are several key fatal flaws that will need to be considered as sufficiently risky to motivate a walk away. These are:

- Leadership indifference
- Deeply entrenched confusion and resentment amongst employees
- Complacency of stakeholders
- Short-term thinking
- Lack of unity
- Deeply entrenched traditional and/or contradictory perspectives.

The following may be regarded as 'good enough' elements of an Organisational Strategy

- An organisational strategy is in place and can serve as basis for the development of an appropriate strategy with attainable goals. Board and staff members would be willing and able to collaborate to develop this and staff members will be able to provide key inputs into the process and the development of the plan.
- The strategic plan is regarded as occasionally updated although does not necessarily adequately reflect changes in the external or internal environments. Critical opportunities are not addressed.
- The Board receives regular progress reports from the senior management / chief executive of the organisation, relative to the implementation of the plan.
- Board members can be supported in a process that will allow the articulation of a shared future vision for the organisation, including related to its mandate. Capacitation and support include increasing the ability of board members to evaluate strategic choices in light of the organisational mandate and a shared vision.   Where appropriate and necessary, board

members can be guided to draw on their individual resources to support progress in achieving the organisational vision.

- Board members can be capacitated to speak knowledgeably about program goals, outcomes, and customer/ client / stakeholder needs. When applicable, they can be placed in a position to visit programme sites and/or to meet with groups of stakeholders/ customers/ clients to increase their own understanding of issues whilst simultaneously gaining insight into the needs of customers/clients/stakeholders.

An assessment must be made not only of the absence or presence of each element, but the degree to which each of these elements may be achieve with relative ease in the short term.

5.5 Financial Management

5.5.1 Outline of the Key Indicators

Before discussing indicators, it is important to highlight that the basics such as annual financial statements being produced on a reasonably timeous basis, and some kind of external audit function are in place. If this is not the case, then most of indices which are assessed are potentially not going to be reliable/credible.

Ideally a range of financial policies should be in place, for instance those related to procurement, financial accounting, tariffing, debtors management and revenue management. Financial management of the organisation will also not be credible unless some kind of management accounting system is in place. This need not be too complex initially and can be spreadsheet-based, but there should be effective tracking of costs, ideally on a monthly basis, with reports submitted to management. There should be evidence that these reports are being utilised on an ongoing basis.

In terms of procurement systems, there should be evidence that there is good practice in terms of tendering processes, including the appropriate transparency, confidentiality and systems that foster good and fair competition from tenderers.

There is a series of key financial indicators that are typically utilised to measure the health of the organisation. These are outlined in Annexure? Figures are given in terms of acceptable levels and the ideal situation with respect to these. Critical areas in this regard relate to liquidity, sustainability, profitability and financial structure.

5.5.2 Ideal and Acceptable Standards

In terms of key policies and practice for financial management, **Table 5** below gives a summary of best and acceptable practice.

Table 5: Key Financial Policies and Practice

Policy Area	Best Practice	Acceptable Practice
Financial Statements	- Produced by external auditors - Within 3 months of the end of the financial year - No qualifying statements are given - Have substantial explanatory notes	- Produced by external auditors - Within 6 months of the end of the financial year - Minimal qualifying statements are given - Have substantial explanatory notes
Procurement	- Formal policy in place - Fair and transparent process for tenderers (where appropriate)	- Formal policy in place - Fair and transparent process for tenderers (where appropriate)

Policy Area	Best Practice	Acceptable Practice
	• Timeous processing of bidding processes	• Relatively timeous processing of bidding processes
Financial Accounting	• Relevant policy in place • Internal audit function in place	• Relevant policy in place • Internal audit function in place
Management Accounting	• Systems in place • Reports produced monthly and timeously • Utilised by management for decision making	• Systems in place • Reports produced quarterly • Utilised by management for decision making
Revenue Management	• Procedures and systems in place • Regular monitoring occurs for all customers • Accurate metering in place • Sanctions applied for non payment	• Procedures and systems in place • Regular monitoring occurs NB for major customers • Accurate metering in place for high proportion of customers and all large ones • Sanctions applied for non-payment
Financial modelling	• Systems in place addressing at least 20 years hence • Allows analysis of a range of scenarios • Provides key inputs to strategic and capex planning	• Systems in place addressing at least 5 years hence • Allows analysis of a range of scenarios • Provides inputs to strategic and capex planning
Capex	• Multi-year rolling capex plan in place • Informed by and informs overall financial modelling and tariff modelling • Includes refurbishment (renewals) component	• Multi-year rolling capex plan in place • Includes refurbishment (renewals) component
Tariffs	• Formal policy in place • Includes stepped tariffs, where relevant • Addresses a range of customers • Addresses a range of services • Tariff setting is informed by overall financial modelling work	• Formal policy in place • Includes stepped tariffs, where relevant • Addresses a range of customers • Addresses a range of services

A summary of key financial ratios is given in **Annexure D**. Financial ratio analysis is an area where it is possible to unpack things in as much detail as is desired by the reviewer. What is presented in **Annexure D** however is a summary of high-level indicators. In some cases these can provide prompts for more in-depth analysis in a particular area.

5.6 Organisational Design and Human Resources

5.6.1   Outline of set of key indicators for OD & HR

The following indicators and key aspects are important in the assessment of Organisational Design:

- The design eliminates bureaucracy, simplifies the working environment and puts the talent where the action is.
- Where work production is dependent on process flow (as opposed to function or product), the organisational design does not compromise this by 'batching' or through insular organisational units/departments/sections that become 'silos'. Frequently this will manifest as conflict between organisational units, with finger pointing related to the source of production/delivery delays, as well as disconnects in the flow of key processes across units.
- The design and the processes between workstations/departments/sections allows for seamless exchange of information and sharing of ideas and knowledge.
- The hierarchical nature of the organisation reflects a realistic assessment of the levels of accountability required, the degree of management support required as well as a realistic number of individuals to be supervised. Remember however that flow of information from the top to the bottom (and back up) is compromised by too steep a hierarchical pyramid.
- There is no reported/observable difficulty in sharing resources or bottlenecks that are created because of limited/shared resources (physical as well as human).
- There is no observable and/or reported fragmentation in the smooth flow of information, materials or decision-making.
- Decentralised systems are supervised and managed through appropriate mechanisms and structures, including in line with the technology choice utilised in the support of decentralised services delivery.
- There are no reported and/or identified problems related to communication within the organisation, including from and to management as well as inter- and intra-divisional.
- Client/customer/stakeholder needs are seamlessly met across different functions with clear alignment of authority and responsibility across the 'delivery chain' as well as clear 'ownership' of the process allocated at appropriate points.

5.6.2 Describe the ideal set of indicators

The following indicators and key aspects are important in the assessment of Human Resources Management:

- There is a relatively stable, low personnel turnover rate within the organisation, especially in respect of skilled staff members, indicative of retention of talent. Possibly, a retention strategy is in place that provides details of key mechanisms for ensuring that talent retention is deemed to be a key performance area for the organisation.
- There is a clear 'logic' related to staffing norms and standards utilised, including workable ratios of supervisors to general workers as well as professionals to technicians. Where there is the need within the organisation to ensure workplace-based technical training, master craftsmen/technicians are available or can readily be sourced.
- Where asset management and operations and maintenance functions are required to be performed, there is clear evidence that operations, maintenance and management teams can manage a hierarchy of problems and issues related to preventive as well as breakdown maintenance.
- There are clear breakdowns of tasks required to achieve deliverables in line with the organisations mandate, tasks have been translated to competence and skills requirements and coherently captured in job descriptions. There is an iterative process in place between

supervisors, managers and HR personnel to ensure that changes in mandate and deliverables will be captured in associated changes in job specifications and descriptions.

- Job descriptions inform the hiring of staff as well as their formalised performance evaluation.
- Staff productivity (turnover, absenteeism, outputs, workplace accidents) is monitored and adaptations are made as required.
- Staff performance is monitored vis a vis delivery imperatives and workplace-based training and competency development is provided on a regular basis.

Further information on this is presented in Annexure C.

5.6.3 Describe the 'good enough' Scenario

It is not possible to state a "minimum" number of factors that could, collectively, be deemed to offer the necessary and sufficient components to ensure a 'good enough' organisational design and human resources development scenario. Even fundamental issues such as an absence of job descriptions would not necessarily allow a 'walk away' conclusion. As well, from an intervention perspective, both organisational design and human resources management are (potentially) two of the relatively least complex issues to address that can have a profoundly positive impact on the future functioning of the organisation.

At the same time, the fewer of the components (lifted out as important under the previous section) that are in place, the less likely it will be that the organisation will meet even the most basic assessment as effectively governed. Unless the organisation is in its infancy, the expectation would be that governance and management imperatives will have required that a formalised organisational structure and at least a basic human resources management system would be in place.

5.7 Infrastructure Asset Management

For any investment, it is important is to try to determine the likelihood that a given expenditure (on an institutional strengthening intervention in our context) will provide a sustainable step benefit (or return) that could be built upon by subsequent interventions. To realise the benefit, it is obviously important to provide solutions that fit a particular entity's circumstances (perhaps different between, if not unique to, particular entities) and then to make an estimate of the extent of the intervention to achieve the desired benefit. In general, the weaker an institutional aspect is within an organisation, the magnitude of required investment increases exponentially both in time and money.

Except with an extremely rigorous and structured audit approach, making a precise measurement of an entity's institutional capability is not possible. To complicate matters, no aspect of an entity works in isolation of a range of others. The Section dealing with IAM (and latterly O&M and Water Safety Planning) has been tabulated to facilitate a gap analysis, based on scenarios describing the relative status of these subjects in the institution being analysed. This in turn will inform decisions regarding the type and form of support that could/should be provided, or indeed if investment is a good idea at all. **Tables 6** and **7** have three columns that can be used to classify the status of an entity's IAMP capability. The assessor, using the approach described in chapter 4 of this guideline and with reference to the ideal scenario, would develop a mental picture of the entity's IAM capability and capacity. This picture can then be compared to the each of the descriptions in turn contained in the tables.

In summary, if the assessor places the entity's IAM capability in the realms of the first column (Embryonic IAMP), the scope of support, and hence cost, is going to be large. In addition, the length of the intervention required could be in the range of 5 to 10 years. A wider range of institutional support needs is also highly likely due to a number of systemic issues.

A classification with "Developing IAMP" characteristics should also be approached cautiously, though with more confidence that an IAM institutional strengthening investment would deliver good results.

A "Rooted and Growing IAM" capability would give an investor better than even chance that his time and money would be well spent.

The tables that follow cover not only IAM but also the Infrastructure Assets Register, which is normally a significant precursor to overall IAM.

5.7.1 IAM Plan – Ideal Situation

The IAM Plan is developed utilising – to a greater or lesser extent depending on stage of institutional development – a suite of sub-systems aligned with legislative and strategic frameworks, incorporated assets register, target levels of service, gap analysis and strategies, risk analysis, capital and operational budgeting, IAMP continuous practice improvement.

Infrastructure Asset Management system:

- Corporate calendar prescribes stages of the process
- Task roles and responsibilities described and allocated
- Governance, executive and professional oversight de facto
- Effectively influences operating strategies, capital and operating budgets, and tariff models
- Utilises or links with sophisticated tools (ranging from IAM Register data bases, GIS, billing and customer care, metering and non-revenue water)

Infrastructure Asset Management outcomes:

- Infrastructure budgets (capital, renewal/ refurbishment, upgrade) project 5, 10 and/or 30 years
- Funding sources identified and funding secured
- Strategies relating to capacity, conservation and quality of resources, and tariff setting are considered in the light of the gap and risk analyses undertaken in the IAMP process.

5.7.2 IAM development scenarios

Table 6: Infrastructure Asset Management Plan Scenarios

Embryonic IAM Plan	Developing IAM Plan	Rooted and growing IAM Plan
Key personnel have background knowledge of what development of a comprehensive IAMP should entail.	There is broad-based appreciation that IAM planning is a process and needs to be systematic.	IAM planning is aligned with legislative and strategic frameworks, assets register is 'developing', target levels of service for key services are defined leading to gap analyses and upgrade strategies, risk analyses and capital and operational budgeting. The importance of IAMP continuous practice improvement is appreciated and planned.
Ad hoc upgrades to elements of infrastructure are planned to pre-feasibility stage, as a result of compelling capacity or capability pressures.	'Master plans' have been documented on the basis of professional studies.	Multi-year master plans, budgets (of all kinds) reflect values arising from studies initiated by the IAMP process.

5.7.3 Asset Register – Ideal Situation

Initiation, and subsequent growth, of a register of infrastructure assets varies along a continuum between ad hoc and decentralised to centrally planned within a recognised framework. A useful register

will break down the assets to a level of detail that permits maintenance to be planned, makes information easily discoverable, and where the information is comprehensive enough to facilitate capital and operational planning at reasonable levels of confidence. The information storage tool used (paper, Excel or purpose built software) influences efficiency (mainly) and effectiveness. Stages of development and usefulness therefore needs to be assessed from three aspects:

Levels of detail:

- Facility [e.g. treatment works],
- Unit (e.g. xyz raw water pump station),
- Component [e.g. raw water pump set], or sub-component level [e.g. electric motor in raw water pump set 1]

Type of tools:

- None or paper based
- Excel
- Proprietary or bespoke

Comprehensiveness:

- Hierarchical system decided, defined and identification coded
- Asset (Facility, unit, component) description, location, age and condition recorded
- Purchase price and current replacement values
- Expected useful life and remaining useful life
- Maintenance history and updating system defined and implemented
- Assets linked to maintenance schedules, condition monitoring, job card system, renewal schedule, operational and capital budgets

5.7.4 Asset register development scenarios

Table 7: Asset Register Scenarios

Embryonic	Developing	Rooted and growing
None or paper based system	Excel based system	Proprietary or bespoke system
No assets register or one that is less than 20% complete	Assets register at facility or asset levels	Assets register at component and sub-component levels
Some asset descriptions with location, age and condition recorded	Hierarchical system decided, defined and identification coded, and key assets described descriptions with location, age and condition recorded together with other valuable information (e.g. replacement values and EUL, etc.)	Comprehensive information recorded for key components, most units and all facilities

5.8 Operations and Maintenance[10]

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[10] This also includes the Water Safety Planning issue (for water services) that has strong linkages with the service quality analysis discussed in Section 5.9.

As was the case for **Section 5.7**, this Section has been tabulated to facilitate a gap analysis, based on scenarios describing the relative status of these subjects in the institution being analysed. This in turn will inform decisions regarding the type and form of support that could/should be provided, or indeed if investment is a good idea at all. **Tables 10**, **11** and **12** have three columns that can be used to classify the status of an entity's IAMP capability. The assessor, using the approach described in chapter 4 of this guideline and with reference to the ideal scenario, would develop a mental picture of the entity's IAM capability and capacity. This picture can then be compared to the each of the descriptions in turn contained in the tables.

The tables that follow cover not only O&M but also two complementary sub-aspects essential to ensuring sufficient coverage of the subject. These relate to Non-Revenue Water management and the Water Safety Plan.

5.8.1 O&M System – Ideal Situation

- Professionally designed infrastructure (supported by IAMP) and prescribed processes (manuals and procedures) and maintenance schedules (supported by Infrastructure Assets Register and associated systems)
- Management of targeted O&M functions (for targeted positions: minimum entry qualifications, succession and HR development system, performance, supporting information systems)
- Sufficient operating resources (financial and material)
- Supporting systems (e.g. SCADA, standards and incident protocols, maps and diagrams, hydraulic analysis systems, purchasing and other administrative systems, HR systems)
- Non-revenue water system (with institutional, social, technical, financial sub-elements)
- Quality assurance system (including water safety planning, operational monitoring, on-going/routine independent compliance monitoring, independent periodic auditing of the entire range of operations and maintenance)

5.8.2 O and M development scenarios

Various O and M system development scenarios to assist interpretation by the assessor are described in Annexure E.

5.8.3 Non revenue water – ideal situation

Like IAMP, NRW is an on-going cycle of status quo assessment, strategy development, strategy implementation, status quo review and strategy revision, etc. It requires institutional, social, technical, and economic sub-elements that work most effectively when planned, managed and implemented together. Like IAMP, NRW is iterative practice improvement over extended periods of time. Key elements include the following:

Technical

- Management information for proper assessment (demographics, demands, water loss, level of service)
- Key water loss contributing factors
- Key performance indicators and targets
- Infrastructure assets condition
- Departmental organogram

Financial

- Tariffs
- Metering, billing and revenue collection status

- Sources of funding

Legal

- Approved NRW policies and bylaws
- Regulatory and Legislative compliance

Social

- Customer/ consumer profile
- Communication dynamics between entity and consumers
- Support structures for consumers
- Stakeholder involvement

Integration

- Correlation and alignment with IAM, organisation development and skills development plans
- Linkages with Infrastructure Assets Register, GIS, meter reading, water conservation and demand management, billing, customer care and public relations/awareness/education systems
- Co-operative working relationships between operations/technical, financial and public relations functions

5.8.4 NRW management development scenarios

Various NRW management development scenarios to assist interpretation by the assessor are described in **Annexure F**.

5.8.5 Water Safety Planning - Ideal Situation

The purpose of Water Safety Planning is to construct the quality assurance programme needed to protect public health. The WSP process entails assessment, risk analysis/hazards management system development, use of those systems in day-to-day operations, independent surveillance to verify compliance and operational effectiveness of the systems, periodic re-assessment and system revision to deal with changed circumstances and so on. The planning methodology follows World Health Organisation guidelines.

Like IAMP and NRW, WSP aims to iteratively improve operating practices over extended periods of time. Unlike the other two, WSP must assure the delivery of water that is safe from the moment of implementation. Key elements include the following:

Regulatory requirements to protect public health, system assessment and risk analysis

- WHO, national and local health related standards used to set internal standards
- WHO Water Safety Planning methodology or similar used to guide the process
- Catchment to consumer assessment of threats to public health, quantification of the risk (estimate of the severity and likelihood of occurrence of the threat)
- Determination of critical points at which monitoring should be performed, and the nature of monitoring required

Hazards management and operational monitoring systems, operating procedures and incident protocols

- Design of operating monitoring system framework

- Collation and/or drafting of standard operating rules, procedures and record keeping to be performed by operating and maintenance personnel and units
- Set quality standards for key points, quality alert and reporting standards, protocols and procedures, metering and sampling regimes, on-site testing facilities and equipment needs
- Design of human resource specifications, minimum education standards for future recruits and organisation structures required to perform the operating rules and procedures, and the associated skills development plans and systems, especially for process control, maintenance and supervisory levels
- Development of suitable operating budgets

Independent routine monitoring programme and independent periodic auditing

- Based on the initial assessment and risk analysis of each scheme, determine compliance monitoring programmes/ locations of sampling points, nature of determinands to be tested and intervals between tests per determinand
- Design sampling schedules, sampling materials, equipment and sample transport needs
- Determine testing and laboratory requirements, including sampling officer, laboratory technician, scientist expertise, laboratory accreditation
- Identify areas where more detailed baseline studies (covering the comprehensive range of recognised determinands) may be required to isolate problematic situations/ catchments/ abstraction points that can be expected to change over time (e.g. agriculture/ fertilisers/ feedlots, mining, sewerage, etc.) and develop appropriate monitoring responses
- Set up arrangements for periodic (at least annual) independent audits of facilities and networks

5.8.6 Water Safety Planning development scenarios

Various Water Safety Planning development scenarios to assist interpretation by the assessor are described in Annexure G.

5.9 Service Quality

A list of typical customer service indicators is given in Table 13 below, together with an indication of benchmarks. Likewise, similar information is given with respect to targets for potable water quality and wastewater quality in Section 5.9.1 below. Once again, measurement systems need to be put in place to address all of these otherwise the information analysed and assessed will be meaningless. In some cases the requirements for this are very significant; in the area of customer service for instance, the IT systems alone can be very sophisticated. Likewise the measurement of water quality requires significant investment in equipment and associated systems. The potential implications of the latter however, particularly in terms of potable quality and the impact on human health, are highly significant and thus emphasise the importance in this regard. The same issue applies to wastewater, which if it is not treated to the appropriate standard can have a disastrous impact on the environment, not to mention the impact on potential rural and low-income consumers living downstream, taking water directly from the rivers.

Table 8: Customer Service Indicators[11][12]

Indicator	Measurement unit	Ideal	Acceptable
Coverage	%	100	Site specific
Drinking water quality compliance (see Table ?? for further detail)	%	100	> 95%
Service hours	Hours/day	24	20

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[11] Many of these are measured by independent regulators

[12] Some of these indicators require further research and clarification

Customers served with individual connections	%	100	Site specific
Proportion of connections that are metered	%	100	75
Number of customer complaints	Number of complaints/100 connections	< 10	< 30
Resolution of complaints	%	> 95	> 85
Interruptions of supply	Days/year	0	< 5
Minimum pressure/flow	7 litres/minute	> 7	> 5
Unjustified disconnections	% of customer base	< 0,2%	For further research
Sewer blockages	Number/100 km of network	< 100	< 300
Compliance quality of discharged sewerage (see further detail in Table ?? below)	%	For further research	For further research
Compliance of quality of raw water supplied (see further detail in Table ?? below)	%	For further research	For further research

Preceding these issues in terms of the measurement of indices and KPIs, one of the basics is some sort of customer service charter, which should address issues such as the following:

- The philosophy, principles and commitment of the organisation to customer service
- Approach adopted
- Accountability and performance standards
- What is expected of the customer (the issue of rights and obligations is very important in the context of the provision of public services)

This needs to be accompanied by appropriate organisational design and adequate staffing, appropriate levels of infrastructure to service the public in terms of payment and enquiry offices where the public can effect payments and raise queries and problems, and apply for connections. A toll free line is another common requirement. An independent customer survey should also be carried out periodically, perhaps on a frequency of one to two years.

5.9.1 Product Quality

In the water sector product quality refers primarily to drinking water, wastewater effluent and raw water (rather than service "products" like the provision of water and wastewater connections, for example). A summary of the necessary standards for two of these three areas is given in Tables 9 and 10 below.

Assuming that proper sampling and analyses of raw water resources in all seasons informed the original design of the constructed treatment works, the purpose of raw water monitoring would be to track quality changes in water resources. The knowledge gained thereby should be used to facilitate pollution control or ensure works remain capable of treating the water to safe standards. Changes are tracked against the results of the original baseline study comprising the full range of determinands that can have an effect on the wholesomeness of water for human use. To the extent that the purpose is for design, raw water testing does not form part of an operational or compliance testing regime. Water quality parameters of interest are all those subject to national or WHO guidelines.

Comprehensive water quality assurance comprises two systems, (a) operational and (b) independent compliance monitoring.

a. Operationally, drinking water quality is monitored by operating personnel as part of their continuous standard procedures, and often is limited to turbidity, chlorine residual (and sometimes total chlorine) and pH. E.coli should always be measured, but others associated with a laboratory and more sophisticated instruments often do this, who also perform microbiological tests on a regular basis (determined by the operating conditions, daily - unusual -, weekly or monthly). Raw water may be tested routinely to predict treatment adjustments or biological tests seasonally (to facilitate algae related decisions, for example).

b. A properly designed compliance monitoring system is an output of the Water Safety Planning process (see discussion in Section 5.8), although programmes based on local knowledge and professional judgement are (where they exist) probably more usual, albeit quite risky.

Table 9: Drinking Water Quality Standards

Determinand	Frequency	Short duration	Normal standard
Turbidity	2 hourly	5 ntu	1 ntu
Chlorine residual	2 hourly	5-10 mg/l	<5 mg/l
pH (depends mostly on the coagulant used and nature of distribution infrastructure but the standard in SA is between 5 [unusual] and 9.7)	2 hourly	Based on stability/ corrosivity	Based on stability
Microbiological	Daily or at least weekly (site specific)	Ecoli undetected in random presence/ absence tests	Ecoli, cryptosporidium and giardia = 0 Total coliforms <10/100ml Heterotrophic plate-count count <1000/1ml
Others determined by original process design or Water Safety Planning processes	tbd	Site specific/ situational…	
Compliance monitoring determinands as determined by original process design or Water Safety Planning	As determined by WSP processes	Properly designed programmes specify not only the limits of determinands for both (defined) short and long term consumption, but also the % of samples over a predefined period in which failures (both maxima and minima numbers) may have	

Determinand	Frequency	Short duration	Normal standard
processes (based on national regulations)		been detected (specifically microbiological samples)	

Table 10: Wastewater Quality Standards

Determinand	Frequency	Short duration
Microbiological	tbd	E coli and Faecal Coliforms – none/100 ml
Chemical	tbd	Chemical Oxygen Demand – 75 mg/l Ammonia and Nitrate Nitrogen – 15 mg/l Ortho-phosphate – 10 mg/l
Physical	tbd	pH – 5.5 to 9.5 Suspended Solids – 90 mg/l Electrical Conductivity – 150 mS/m

6 Development of the Institutional Support Plan

6.1 Overview

This chapter addresses the development of the Institutional Support Plan designed to support the relevant institution. It is clearly informed by the outputs of the two previous chapters, with particular reference to the Gap Analysis and the Visioning Workshop designed to ensure the buy-in and support of the client institution, as well as to integrate practical implementation aspects so as to ensure its successful implementation. Once again, this is structured around the eight subsections utilised earlier, however it should also be recognised that there are risks with this reductionist approach in terms of the systemic relationships that are needed to ensure the most effective plan. An intervention designed to address NRW management, for instance, will certainly cut across aspects such as asset management, operation and maintenance, revenue management, training and customer service. This is likely to be the case for many other interventions. In this chapter it is not appropriate to go into great detail in terms of the development of the Plan, since clearly at this point the specifics of the particular institution and its challenges are not available. Also once again, the guideline approach is appropriate. Key outputs for bankability will include some kind of high-level workplan, with indicative costing. Financial Close out will include scoping and costing of specific interventions, development of focussed workplans and detailed terms of reference (if relevant). It is proposed that the high level workplan addressed for Bankability should be holistic in nature even though CRIDF itself may not be able to support a major institutional support intervention itself. It needs to be borne in mind however that there could very well be opportunities for development and fleshing-out of the support plan to enable some other funding source or institution to proceed with implementation of a holistic institutional support programme. This workplan should identify the plans and actions to be undertaken, the responsibilities for these, together with an initial high-level indication of time-lines and budgets. Prioritisation of activities for support should also be integrated into this. As was noted earlier, this is one of the issues that will be debated in the Visioning Workshop. An example of the format for the workplan utilised in CRIDF I is attached as **Annexure K**.

It is likely that the support could vary to a significant extent from a wide-ranging institutional support intervention down to focussing on particular specific areas. Generally speaking this would be based on the relative strength of the organisation. Taking examples from CRIDF I, for example, the Makonde Water Supply Association had a wide range of challenges and therefore really needed a holistic and holistic institutional support programme. The support plan for Southern Water and Sewerage Corporation in Zambia however, which was aligned to the Kazangula Project, was narrow in view of the fact that this is a relatively strong organisation. Interventions therefore were focussed on two specific areas, namely non-revenue water management and water safety planning. For those particular elements that are targeted in the support plan, it will be necessary during this phase to understand and scope them in more detail and develop a plan to address the shortfalls. This will also allow for a costing estimate to be done in somewhat more detail and to identify the type of TA required and the CVs of particular individuals. In order to take this to financial closure, terms of reference should be developed in order to facilitate a tendering process (this would not be required if the project is implemented by CRIDF resources). An outline of a typical ToR is attached as Annexure L. Some sort of formal handover process should ideally be included when the project is being implemented by another agency. This may necessitate a series of interactions/meetings for institutional interventions where the scope is large and/or complex.

6.2 Institutional Environment

<u>6.2.1 How to Address Shortcomings in the Institutional Environment?</u>

Organisations are open systems, and the characteristics and quality of the external environment can serve to severely hinder or promote organisational performance, as well as any project or programme being introduced by CRIDF. It is, therefore, essential that there is a good understanding of the environmental forces being exerted on the mission, performance and capacity of the organisation and what the major opportunities and risks are that result from the institutional environment.

By its very nature, the institutional environment does not readily lend itself to change management in the short term, particularly in respect of potentially intractable political problems. A fair degree of caution will be required in respect of approaching institutional constraints, especially within the scope of a single project.

Previous experience has shown that the most constructive way to address institutional shortcomings within the limited scope of a single project is to identify specific actions that (i) meet the fundamental principles for efficiency, equity, inclusion and poverty relief; (ii) supports the required change and development momentum proposed by and for the project; and (iii) offer a best fit with local conditions.

The critical mechanism for addressing short-comings within the institutional environment will be to build in specific activities that will serve as 'counter-weights' to the institutional drawback, constraint or deficit that has been identified. As an example, if there is a pervasive absence of capacity at local government level, it will be necessary to introduce mechanisms into the project scope that will support increases in capacity at local level in a coherent manner. This would, from a practical perspective, not involve a drive to capacitate local government institutions. At the same time, it could mean that training workshops (plus backstopping) for some local government personnel would serve as an appropriate intervention.

From a purist perspective, this may be deemed to be far from ideal. At the same time, any initiative that does not take the practical institutional realities related to the formalised policy and regulatory framework (legal rules and policy guidelines) as well as the associated institutional arrangements into consideration, will fail. Interventions will need to include the necessary and sufficient mechanisms that will allow key constraints to be overcome and that will assist in balancing deficits and promoting the sustainability of the intervention.

<u>6.2.2 Scope of what needs to be addressed</u>

Although it is not possible to identify the institutional issues that may be present during the assessment process, there are several constraints that manifest within the institutional environment on a regular basis in the countries where CRIDF works. These include the following:

- Inadequate mechanisms for ensuring true participation of stakeholders, in particular the poor and the (male and female) socially excluded. Frequently this is related to distance, assigned roles and responsibilities and/or the absence of resources (including time) to actively participate in processes. Specific efforts will need to be put in place to ensure that stakeholders are able to participate as fully as they feel the need to.
- Inadequate mechanisms to address corruption, cronyism and nepotism. Clear and coherent systems and checks and balances will need to be introduced to counter potential corruption.
- There may be significant differences between the de jure (formal framework of rules and regulations) and de facto (practical framework of rules and regulations as implemented) or even contradictions. The existence of informal institutional elements (including traditional or customary institutions, expectations and interests; norms, customs, traditions, values and relationships) can create confusion and even conflict unless taken into consideration.

- Inadequate capacity (human resources, skills, financial) is a chronic reality and, unless taken into consideration and addressed, will create ongoing problems during implementation. Even though mandates may specify that operational capacity will be in place, this cannot be assumed.
- Potentially disparate professional, technical and/or academic levels of qualification. An engineering degree obtained from one university and professional registration via the in-country professional board may be significantly different to that obtained from a professional board in another country. The same is true across the spectrum, including laboratory services, wastewater process control or human resources management.
- An absence of political support for reform, in particular where such reform may be interpreted as an attempt to 'change the rules of the game' Care will need to be taken to ensure that the project is deemed to offer a (non-corrupt) win-win in order to garner necessary support.

6.2.3 Key Things to look out for:

Probably the most important issue to look out for is the identification of any 'lessons learnt' by other role-players, including donor organisations and funding partners. Not only will there be a well-nuanced understanding of local constraints and challenges but there will, as well, be a tested set of mechanisms that have previously been put in place to overcome constraints and challenges.

At minimum, there will be the need to ensure that mechanisms are put in place that will focus on the promotion of accountability, transparency, monitoring and evaluation and associated in-country capacity building in a manner that incorporates the nuances on the ground in each setting.

6.3 Governance Matters

6.3.1 How to address shortcomings in governance matters

Interventions related to governance will generally fall into one of four categories. Three of these deal with the processes, functions and competence of board members as the chief purveyors of governance within an organisation. The last component deals with whether the organisation meets all regulatory compliance requirements. These components are as follows:

- Competency: where board members and/or senior managers do not have the necessary knowledge, understanding, skills, experience and reflexive capacity to fully engage the work that is required to be done. This includes board members ensuring that top management functions in accordance with performance standards and agreed targets.
- Roles and Responsibilities: lack of clear articulation and/or understanding of the requisite roles and responsibilities, governance principles and practices, role of the board, necessary committee charters, codes of ethics, etc.
- Practices and Procedures: where there is an absence of or insufficient applicable systems in place as required from a regulatory (national) and/or peer group norm perspective, including codes of conduct.
- Organisational Legitimacy: failure of an organisation to meet all regulatory requirements is generally reflected as a fiduciary failure of the board of an organisation, together with senior managers. Equally, ensuring that the organisation is well-run and fulfils its mandate is deemed to be a key responsibility of the organisational board.

6.3.2 Scope of what needs to be addressed

There are four critical aspects of building governance capacity. These are:

- Promoting the ability of members to monitor and control the strategic management of the organisation through mechanisms that promote accountability, ensure monitoring and set suitable parameters for functioning.

- Ensuring the capacity and competence to provide leadership through mechanisms such as forward planning, the provision of guidance to the organisation, and the collaborative development of the strategic direction for the organisation.
- Ensuring that board members have the capacity to safeguard the organisation and to act as custodian.
- Promoting the ability of board members to maintain the viability of the organisation by ensuring (or helping to ensure) that the organisation has the necessary resources to sustain it.

Key steps in this process are:

- Building an understanding of what the task involves, including individual and group roles, responsibilities as well as the duties of board or committee members.
- Developing leadership, including building an understanding of the requirements for setting the direction for the organisation and planning for its future development.
- Ensuring that board members understand and can ensure accountability and can monitor performance. This includes the ability to exercise effective control, effectively monitoring the organisation's overall performance, establish clear mechanisms for the delegation of authority, and implementing a system for monitoring performance and reporting that will support system wide accountability.
- Allowing comprehensive processes for risk management, including the development of risk management plans, ensuring legal and financial compliance requirements and promoting financial sustainability as part of the organisation's future viability and sustainability.
- Building mechanisms to sustain good governance, including the ability of board members to undertake reviews and implement corrective actions.

6.3.3 Key things to look out for:

The following are key areas that may need to be addressed

- Competency
    - The board/trustees provide overall policy direction and oversight (reviews workplans, advises management team, etc.)
    - The board provides accountability and credibility
    - The board is composed of committed members who represent the interests of stakeholders.
    - Board/trustees can carry out roles such as policy formulation, fundraising, public relations and lobbying
    - The board can secure sufficient funding (grant/donor/capital/loan) to meet core organisational objectives (e.g. capital expenditure projects)
    - The board evaluates the performance of the chief executive/top management, based on previously mutually agreed goals and targets (e.g. staff retention, income generation/ cot recovery, key performance indicator achievement, overall organisational performance).
    Senior management is accessible and transparent to staff, can delegate and encourages staff participation in management of the organisation.
- Roles and Responsibilities
    - The roles and responsibilities of board/trustees are clear and do not involve daily operations
    - Leadership is accessible and accountable to all stakeholders, including those whose lives are affected by the decisions taken.
    - The board shows a clear understanding of its fiduciary and legal responsibilities and manages the organisation's risk exposure in accordance.
    - Senior management have a clear understanding of their roles and responsibilities as providers of overall direction.
    - There are opportunities for leadership to emerge at all levels of the organisation.
- Practices and Procedures

- All applicable systems are in place as required from a regulatory (national) and/or peer group norm perspective, including codes of conduct.
- A succession plan is in place or under discussion for board leadership roles, the chief executive and/or senior management as well as key staff members if relevant. Unless appointed by an external agency such as a national department or a regulator, board recruitment is strategically conducted by the Governance Committee.
- Organisational Legitimacy
  - The organisation is properly registered according to legal requirements, has a constitution, adheres to it and timeously submits all reports required from it to the relevant authorities, including financial and performance reports.
  - The organisation's stakeholders are well defined and the organisation works in partnership with the community and other stakeholders in an open, transparent manner.

6.4 Organisational Strategy

6.4.1 How to address shortcomings in organisational strategy

It may be necessary to assist in the formulation of an organisational strategy from scratch, whilst at other times it will be necessary to strengthen components of such a strategy. The following section provides a brief overview of what is required to build/develop an organisational strategy from scratch.

The critical starting point is in ensuring that members of the board as well as senior management are comprehensively involved in the process from the word go. This is particularly important given that broad-based consensus regarding the organisational mission and organisational goals is a prerequisite for achieving success.

Where the organisational strategy is deemed to be appropriate, there may be a need for review, monitoring and update of the plan to allow the alignment thereof with agreed upon priorities and/or to ensure that there is a crisper focus, sense of joint purpose and/or consensus on new or additional strategies that are required. Alternatively, to ensure that it is updated and aligned to allow the measurement of progress and impact.

Ensure that:

- There is commitment to an organisational identity (either in terms of organisational mandate, and/or in terms of its specific offerings)
- Formulate strategic intentions as concrete objectives to be achieved, ensuring that requirements for cross-functional capabilities are taken on board.
- Integrate unique or valuable aspects of the organisational culture – particularly shared values and behaviours – in a manner that will leverage strengths.
- Economies of scale are considered that integrate lines of command and organisational communication without sacrificing efficiency.
- There is a continual dialogue related to whether the strategy being developed speaks to mandate, customer needs/demands and industry best practice.

6.4.2 Scope of what needs to be addressed

An organisational strategy is, essentially, its change management strategy, setting out (i) where the organisation is, (ii) where it wants to be (vision) and (iii) how it intends getting there (strategy map, performance measures and targets, etc.). For this reason, the best way to build strategy is from the top (vision) down. This involves starting with the destination (where does the organisation want to be /what does it want to achieve over the next number of years) and then charting the routes that will lead there. Based on this, there should be a review of the mission statement (what is the organisational

purpose/what does the organisation do). Next, an assessment of the vision (what is our picture of the future and our associated core values). Essentially why does the organisation exist and what does it believe in and the resultant formulation of the strategic vision (what the company wants to become). This vision should create a clear (but somewhat 'stretched or aspirational') picture of the organisation's overall goal—for example, to become the leading utility in the industry.

Confirm that there is consensus about why the organisation exists, the specific goals and outcomes it aims to achieve, as well as who it serves. Any mandated activities, including regulatory benchmarks that are required to be achieved will need to be clearly defined as part of this process.

Annexure H sets out the basic elements required to build an organisational strategy.

6.4.3 Key things to look out for:

The development of an organisation strategy is an onerous task, best divided into phases that allow participation by as many staff members as possible as well as external stakeholders (e.g. donor organisations, funding partners, etc., should this be deemed important). It is a requirement to ensure that all necessary resources are secured beforehand, including the fact that allocation will need to be made in respect of allocating personnel time to the activity. If deemed appropriate, a core working group can be selected to focus on the development process, with specific iterations aimed at obtaining key inputs from as broad a group of stakeholders as possible.

There are several things to consider in the process to develop an organisation strategy. Key amongst these are:

- Every organisation is unique. Therefore, whilst there may be the temptation to adopt and adapt an organisation strategy from a 'similar' organisation or a competitor, this is an expensive and self-defeating 'short-cut' to take.
- Resist the temptation to identify too many strategic objectives. The key is to identify the three or four critical objectives that should be achieved and to focus on building a solid map for implementation in respect thereof.
- In the same way, attempting to roll out too many strategic initiatives tends to stretch limited resources and has the potential to move the organisation into too many different directions creating bottlenecks and constraints within limited resource settings.

6.5 Financial Management

6.5.1 How to address shortcomings in financial management

Once again, it is not possible to provide detailed directions in terms of development of a support plan in the financial area without knowing what the particular shortcomings would entail in each particular case. If an organisation, for instance, does not even have the basics in place in terms of producing annual financial statements, then a TA can be put in place to design and implement these for the organisation. The same principle would apply in terms of the absence of key policies and practices and or major shortcomings in areas like procurement, financial accounting, management accounting, revenue management and tariff modelling and design.

In many cases there are adequate skills within the CRIDF team, if necessary, to provide TA to address most of these issues however in some situations it may well make sense to outsource it to some sort of independent TA, with a locally-based resource being ideal, particularly in non-English-speaking countries such as Angola, DRC or Mozambique. As well as studies and analysis, these interventions could in some cases involve a training input. In some cases, systems may need to be implemented. These will need to be customised and incorporated in to the scope of the proposals developed.

6.5.2 Scope of what needs to be addressed

The overall scope needs to address the following key areas:

- Production of annual audited reports and related systems and processes
- Ratio analysis related to the audited annual financials
- Presence and content of key financial policies as well as evidence of their effective implementation (see discussion in chapters 4 and 5 that will provide more detail)
- Presence and content of key financial systems and evidence of their effective implementation (see discussion in chapters 4 and 5 that will provide more detail)
- Presence, content and application of tools for different types of financial modelling and analysis (see discussion in chapters 4 and 5 that will provide more detail)
- Analysis of key, sensitive areas of expenditure (see discussion in chapters 4 and 5 that will provide more detail)

6.4.1 Key things to look out for

The ratio analysis referred to in earlier chapters will provide useful information with respect to more focussed areas that need to be addressed, for example aspects such as debtors management, liquidity or revenue management. The same applies to problems with key input costs such as staffing, energy, chemicals or O and M. This will allow more targeted support interventions designed to address these specific issues. Often however these issues tend to be systemic and require a more wide-ranging support programme.

The non-existence of key policies and systems provide easy pointers in terms of support needed. In some cases there may be informal systems in place that need to be captured and institutionalised in some manner. Paper based or simple Excel-based can be a useful and practical starting point for systems, rather than trying to implement sophisticated IT based systems that may be difficult for the organisation to assimilate and maintain.

6.6 Organisational Design and Human Resources

6.6.1 How to address shortcomings in organisational design and human resources management

There is never a single best design or structure for any organisation or function. All organisations have different capabilities and strategic positions with associated structures that have inherent strengths and weaknesses.

Good organisational design is custom-made (frequently by trial and error) through creating an enabling environment for its work activities aligned to its strategy.

Several criteria should be in place in respect of the design, including the following. The design should:

- enable the organisational strategy,
- leverage people,
- operate within exiting constraints
- optimize hierarchies,
- clarify decisions, rights and responsibilities and strengthen accountability
- contain costs/ensure economies of scale,
- facilitate linkages and connections within the organisation as well as external to it,
- improve innovation and flexibility,
- include integrating mechanisms that facilitates appropriate dialogue amongst groups,
- ensure buffer management and protection of critical resource,
- align structural and technological aspects congruently,
- be supported by critical organisational systems such as decision-making processes, rewards, goal and metrics, human resources and training and capacity building.

6.6.2 Scope of what needs to be addressed

From the perspective of organisational (dys)function, and attempts to address issues and problems it is an important caveat that one should "**fix the structure last, not first**". Organisational redesign takes place over time and involves a change from a current to a future reality. Unless the structural changes are incorporated towards the end of the process, chances are that structural changes will not be sustainable. A distinction should also be made between organisational design changes required at governance and at operational level. It may be that the one requires change whilst the other does not.

At the same time, where there are structural deficits that require attention, then the structural changes may be made in tandem with organisational changes. An example of this is the establishment or strengthening of a decentralised service centre with an associated allocation of tasks, personnel and infrastructure.

This may happen as well where a new strategy has been created for an organisation and gaps appear in the organisational design as a direct result of new objectives that have been set and new skills sets that may be required.

A key aspect of what needs to be addressed is for the organisation to critically assess what must be in place for it to allow the achievement of projects and programmes it has adopted as part of its objectives. There is a tendency amongst organisations to move directly to the adjustment of its organisational design (most often the organogram) to "accommodate" additional people to perform the tasks required to achieve the new deliverables. Unfortunately, appointing more people doesn't automatically translate into greater efficiencies. Unless there is a clear understanding as to (i) the level at which employees should be appointed in respect of the Organising Framework for Occupations (OFO) as well as Post Level, (ii) what specific qualifications are required by each employee, and (iii) a thorough understanding of what the skills/capabilities are that are required in each post to allow a staff member to perform effectively in respect of that post, the appointment may have zero impact.

Unfortunately, there is a tendency for organisations that have adopted a new strategy to identify the need for additional staff members with a generic set of skills (e.g. engineers) and to move straight into creating an organisational chart that accommodates one or more new persons or reassigning one or more existing staff members to the "new" positions.

To begin to redesign the organisation, it is essential to start with the question "What are the functions this organisation needs to fulfil to be successful in terms of its vision (future state)?" From that point, "What are the new Outputs/Deliverables and associated Tasks that will need to be in place?" and "What are the new skills that are required for this to happen?". Changes must be analysed and planned as part of a systematic process to ensure that appointments are in line with appropriate job descriptions. And that job descriptions have been firmly based on the organisational deliverables. The following flow diagram provides an overview of this process.
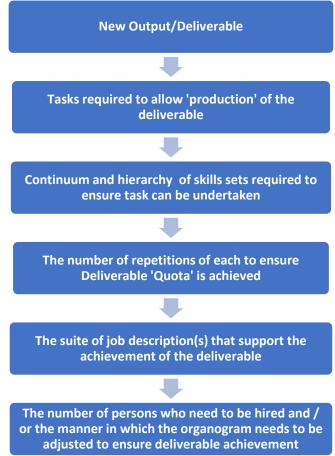
```
┌─────────────────────────────────────┐
│         New Output/Deliverable       │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│  Tasks required to allow 'production'│
│         of the deliverable           │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ Continuum and hierarchy of skills    │
│ sets required to ensure task can be  │
│            undertaken                │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ The number of repetitions of each to │
│ ensure Deliverable 'Quota' is achieved│
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ The suite of job description(s) that │
│ support the achievement of the       │
│           deliverable                │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ The number of persons who need to be │
│ hired and / or the manner in which   │
│ the organogram needs to be adjusted  │
│ to ensure deliverable achievement    │
└─────────────────────────────────────┘
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Figure 4: Moving from Organisational Deliverables to Informed Human Resource Practices

The following steps must be put in place where there are organisational design deficits that need to be addressed:

- Ensure that all stakeholders understand the existing/altered/new organisational strategy – in particular, there is the need to ensure that all stakeholders understand the impacts of the strategy on their own work and deliverables as well as that of their 'group'.
- Define the functions necessary for ensuring success – the strategy may require new core functions to be fulfilled, whilst others may already be in place in the organisation. Whatever these functions, it is essential that stakeholders visualize the interdependencies among them (e.g. project management), as opposed to their hierarchical relationships. This way of assessing core functions allows a neutral mechanism to assess what is being done in the organisation and is required to be done, as opposed to who is doing it or should be doing it.
- Identify the capabilities required to achieve your new strategy – as set out in the flow diagram above, this process should be undertaken in a goal-directed and coherent manner. While it may involve discussions with members of the organisation to identify broad skills sets that they deem valuable, and an incorporation of that into the detailed analysis process, this process requires the development of detailed job descriptions.
- Adjust the organisational design – adjust the design in accordance with the new requirements if necessary, ensuring that there is a coherent understanding of reporting flows, level of authority and scope of responsibility across all positions and posts.
- Assess existing talent – this process requires measuring existing staff capability and competence against the capacity requirements to address new functions and, based on the gaps identified, to decide whether there is the need for (i) training and capacity building of

existing personnel, and/or (ii) building cross-functional teams, and/or (iii) hiring new personnel members.

- Adjust processes and culture – as the organisation undergoes change, there will be a need to ensure that strategic shifts can be implemented as seamlessly as possible. Performance management systems may need to change, inter-organisational communication flows may need to be adjusted and clear ownership of processes as well as outputs may need to be put in place.
- As your organization changes, you'll need to identify the cultural shifts needed to make the strategic shifts work. For example, greater accountability may become more critical, so you may need to invest in stronger performance management processes and reviews, ensuring that these are aligned to the new functions and with clear ownership.

Strategic success can only be achieved if an organisation is designed to achieve its new objectives. In this regard, the adage of "form follows function" remains as true now as four odd decades ago when it was first introduced formally. However, it requires that a comprehensively stripped down organisation and the associated activities that it must fulfil to ensure goal achievement, serves as the first area of focus. Thereafter, the necessary hierarchies and 'boxes' can be introduced based on workflow, management and performance requirements. It cannot start with the boxes.

6.6.3 Key things to look out for:

The following aspects are important to note:

- Ensure that individuals, departments and groups demonstrate an understanding of their role and responsibility in the organisation, including whether they have been assigned the necessary authority to carry out their function and roles and whether this aligns with their responsibilities as well as whether they are held accountable for their work.
- Ensure that the organisation's mission, goals and strategy are supported by its structure. Are roles within the organisation clearly defined and inter- and intra-divisional linkages and groupings coordinated to improve performance.

Annexure I provides key organisational design and human resource development components that should be put in place as part of a move towards best practice and promoting optimum organisational form and human resources functioning.

Annexure J provides a list of relevant indicators that may be used as the basis to identify and select appropriate organisational design, human resources and workforce performance related measures, as needed and appropriate.

6.7 Infrastructure Asset Management and the Infrastructure Asset Register

The degree of IAM capability (described in **Chapter 5**) of an entity will determine the nature of the support provided. In the scenarios described, the first two are intended to try to emphasise the significantly higher risk (and scope) of an investment necessary to achieve a sustainable and adequate result. The third description (in the column headed 'Rooted and growing IAM') implies that there is both a better chance of a sustainable benefit and that there is more flexibility in choice of intervention and extent. In the first (Embryonic IAM), support will have to commence from first principles and in the second (Developing IAM) it is similar but perhaps opportunities for different approaches may be found.

Since the IAR is an integral part of the IAM, it is included herein.

Embryonic IAM/IAR

Without the capacity to maintain an IAR, it is better not to attempt to develop one beyond ensuring that for any new infrastructure, the contractor provides a comprehensive database of the kind of information that would properly be found in an IAR.

Devoting time to developing an IAMP may only be practical if sufficient resources existed to outsource the function entirely over whatever period of time it took for the organisation as a whole and especially the O&M Division to move into the 'Rooted and growing' category. The risk with this approach is whether the organisation will have the capacity to take on the IAMP, once it has been completed. To expect any system or database to be maintained in the other categories is probably unrealistic.

Developing IAM/ IAR

Without the capacity to maintain an IAR or IAMP, it is better not to attempt anything sophisticated without significant support from independent contracted service providers. Simpler, Excel based systems can be considered, which can be introduced on a developmental basis.

Rooted and growing IAM/IAR

The applicability for day-to-day O&M of the IAR, and the relationship in terms of maintenance of the system, means that IAR has a high priority in this context. Capacity is the nub of the problem however and this tends to be an ongoing challenge. Even mature entities lapse, but the following case study describes an approach that achieved success elsewhere:

(An entity) engaged the services of a contractor to carry out planned maintenance for a fixed period. The terms of the three-year contract, apart from details of the work and standards required, specified the trades, and stipulated that the artisans be based in the operational area for the duration. The contractor developed the utility's job card and infrastructure assets register systems compatible with their financial and GIS systems. The contractor was to have employed (with funding from a separate grant) apprentices recruited locally, who were to be promised employment by the utility when they qualified. In the event, of the four artisans the contractor had employed, three took up the utility's offers of direct employment, but the apprenticeship plan, for reasons unconnected with the work or contract, never came to fruition. However, the model was sound.

Quality and standard of education of key maintenance and technical staff are an institutional necessity. Any compromise in the education standard in these functions will be punished by system failure and long-term loss of insight and understanding in the infrastructure maintenance functions, with gradual erosion of standards and drifting of focus from important principles. Entities' self interest in promoting and investing in such key personnel is best served by doing so in the broader national interest. The notion of placing impediments on development because 'they will leave for more money elsewhere' is self-defeating.

IAM planning frequently requires professional oversight, and size of operation and value of assets clearly have a bearing. However, knowledge and control of the system and IAMP cycle are fundamental, and whereas professional expertise can be bought externally, protection and provision of the assets is internal. There is merit in establishing senior status for the position in the organogram controlling the IAMP process, the quality control standards and procedures for the IAMP, IAR and associated linkages with budgeting (Capex and Opex and tariff model), GIS and customer care.

6.8 Operation and Maintenance

The degree of operational capacity (described in chapter 5) of an entity will determine the nature of the support provided. The O&M department, or plain Operations, is where the core business of the entity is performed. Sadly, it is not uncommon for it to be the most dysfunctional within the organisation. For the purposes of the discussion in this section, NRW management is considered part of O&M.

Embryonic O&M

Managers of entities in this state will have either no or a very obscure view of how an effective operational function should look. The continuous state of crisis prevents them from 'stepping back', and perhaps they do not even realise that their situation is not the norm, condemned to continue thus so into the future. It is likely that the situation is not isolated to O&M, is pervasive and developed over time under the stewardship of most of the current managers who are unlikely to be able to collectively envision a better future state or how to effect change (attempts by an individual manager, even the Operations Director, to 'go it alone' are likely to be wasted).

Interventions in an 'Embryonic O&M' situation that rely on training and development, introduction of new systems and tools, and mentorship and coaching generally last as long as, but little longer than, the duration of the intervention. This is because overall control and management remains in the hands of those who created or sustained the previously dysfunctional situation, and for whom change is difficult for a variety of possible reasons.

In the absence of significant nationally sponsored reform, the prognosis in an 'Embryonic O&M' situation would depend on the Board, or failing them, the regulator and the responsible government authority, because it may even be necessary to replace members of top management. Since what services exist would have to continue, a project of this nature would be risky, complicated, expensive and time consuming.

Remedial action, if seriously considered by an external partner, would of necessity have to emerge from an analysis more detailed than the ones described in chapters 4 and 5 and would probably require drastic action to effect a turnaround situation.

One option is temporarily outsourcing the activities of the entity in their entirety, an approach fraught with complicated risk and high costs (political, human resources, public and labour relations, financial) but with the potential to provide, relatively cleanly, the framework and foundation for a functional entity. The duration of an outsourced service contract would need to last ten years or more, and be crafted to seamlessly transition from private to public management. This action is clearly of a radical nature and may not be possible/feasible in many situations.

In an entity with an O&M situation fitting an 'Embryonic O&M' description, it is improbable that any important parts of the rest of the organisation function properly however, if significant changes can be made at top management level (alongside placement of insightful, determined, politically incorruptible yet powerful elements onto the board) then a more optimistic prognosis might present itself. Experience in dysfunctional entities suggests that contractual introduction (via outsourcing) of capable units with their own management/supervisory structures can be functionally successful, establish proper standards that become 'the new norm', and produce enduring results. Judiciously and strategically chosen (with provision for absorption into the entity and seamless transition from private to public management), such arrangements can provide tipping points that trigger change in associated supporting units.

Developing O&M

Interventions in an entity in a 'Developing O&M' situation would be subject to many of the same considerations as in an 'Embryonic O&M' situation. Given serious interest by an external partner and depending on the outcomes of a more thorough assessment, some form and extent of outsourcing is also a good option in this context. Outsourcing with provision for absorption into the entity and seamless transition from private to public management introduces flexibility and focus. To capitalise on such an arrangement, a CEO with good insights into 'how things should be' is needed, one who was appointed for his/her leadership ability, rather than for political reasons, and who has the support and strong mandate of a strong and supportive board.

The approach requires significant financial resources, some of which can be recouped by the increased rapidity of improved performance. This approach also requires long term (could be five years or more) of close and specialist coaching and mentorship in various fields of expertise and at different stages.

An entity at this stage may begin to benefit from interventions that rely on training and development, introduction of new systems and tools, and mentorship and coaching in core functions. However, the

suite of systems considered should extend beyond those specific to O&M, and extend into areas such as (not confined to) succession planning, recruitment policies and performance management practices aimed at a trend towards increased general standards of education, purchasing, cost and budget reporting, customer care, public relations, etc.

If interventions are confined only to the subject of interest (in this case O&M), the difficulties imposed by other dysfunctional systems, practices, policies, etc. will cause O&M to oscillate between crisis and order, and absorb time and focus of operating personnel, supervisors and managers. In the nature of things, eventually crises will emerge as the prevailing operating norm. The focus at this stage should be on effectiveness rather than efficiency. Likewise, it would be difficult to inculcate (let alone sustain) processes and systems to support NRW in an entity in the condition one would expect to find in organisation in this category.

Rooted and growing O&M

If the assessments described in chapters 4 and 5 place the entity in this category, the benefits from an investment in institutional strengthening should definitely exceed the cost. Any decision to support institutional strengthening should be followed by a broader assessment that is more detailed and comprehensive that those described in chapters 4 and 5. It is seldom the case that enhancement of one part will realise its potential without enhancement of other supportive areas.

This is still a place for contractually outsourcing the functions of some units, especially where desired skills are scarce and where special systems and tools are needed. It is noted that some aspects of NRW could be considered in this regard.

The use of specialists to develop systems, train and coach personnel and provide long-term guidance are enhanced when other parts of the organisation is less dysfunctional. For example, operating manuals, standards and procedures drafted with guidance from (and not drafted by…) a service provider with the right expertise enhances the results and the speed of completion. For the product to be useful, however, maintenance, health and safety, disciplinary and performance procedures, cost control and purchasing procedures must be to standard. Very little works in isolation.

Of particular importance from a sustainability point of view, is that infrastructure must be capable of performing to design standard, the key operating and maintenance personnel performing the core functions have to be capable (educated, experienced, trained) and supervised by capable supervisors that have available the monitoring and control systems they need, and the entity must provide sufficient budget to achieve the required results. Without any one of these elements, even if one or another of the elements excels, the system as a whole becomes fatally unstable.

6.8.1 Water Safety Planning

Water Safety Planning typically requires a higher level of functionality and is generally applied to an organisation that already has a reasonable water quality management programme in place but wants to put in place additional checks and balances.

The degree of service quality capacity (synonymous in reality with O&M capacity and described in chapter 5 for IAM, O&M and Service Quality) of an entity will indicate the nature of the support provided. However, almost by definition, an organisation that is dysfunctional, or has significant parts of itself that are dysfunctional, has at best a hazy understanding of the implications and use of a set of standards towards which it should be working to achieve.

With the exception (perhaps) of the scientific and environmental aspects of Water Safety Planning, service quality is a reflection of the O&M (and other) aspects of the entity. This is by way of definition of standards, and of systems of monitoring, recording, analysing and reporting performance in relation to the standards.

The approaches described in the section dealing with O&M apply, for the most part, directly to service quality, and will not be repeated here.

In a water utility some water quality deviations place public health in jeopardy. This raises the importance of aspects of the WSP to 'non-negotiable'. The fact that the subject is science-based, lends itself to outsourcing to service providers with both expertise and specialist equipment (laboratories with instruments and qualified technicians).

A complication is that development of the WSP in a water utility relies heavily on input from officials in the entity who have local knowledge. This may be challenging if the officials' have insufficient subject matter knowledge. The increased fieldwork by the service provider that would be necessitated thereby, does not preclude the approach, but increases it cost.

Once the essentials of the WSP are established, the service provider may perform the compliance monitoring function, with authority to report, or adjust and report, or train, adjust and report when serious process control deviations are discovered.

6.9 Service Quality

Often the starting point in this area is putting in place measurement systems, as historically customer service has not necessarily been a priority for many public sector organisations. There is the potential to implement very sophisticated IT-based customer service systems, however like many things, there is also the potential to start this out on a much simpler basis. The important thing with introducing measurement is that this will create enhanced awareness of the importance of customer service within the organisation. Of course if this is linked to performance appraisal systems then it becomes even more powerful. Typical indicators for this were discussed in Chapter 5. The key thing initially is to focus on the interfaces with the public and to look at measuring these, with particular reference to aspects such as addressing problems with interruptions of water supply and/or complaints of sewer blockages, and how long it takes to address these. Continuity of supply or average availability of supply is also a key issue (number of hours per day) and is an indicator measured by water services regulators.
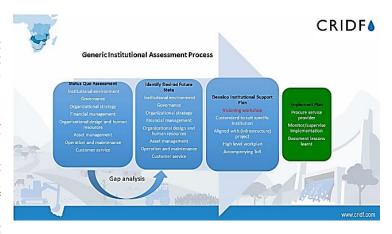
When it comes to interfaces with the public, one would like to start measuring indicators like responses to phone calls, time to respond to correspondence and the time taken to install a water connection or wastewater connection.

When it comes to potable water quality, one of the important aspects which can be looked at is Water Safety Planning (see 6.8.1 above). In addition, prior to this again measuring systems are also critical and in this regard one is looking at putting in place a water-quality monitoring programme if this does not already exist. Key indicators are those typically identified by the regulators (see earlier discussion in this regard. To put this in place however requires good capability in terms of instrumentation, training and systems. This is standard practice in most organisations providing water services and so there is substantial material on how best to do this.

7 Monitoring and Evaluation of the Implementation Phase

Once the project proceeds to implementation, it is important that some kind of M and E function is put in place to monitor the progress of the work so as to assure that it achieves its objectives. In addition there is the importance of providing a feedback loop so that interventions of a similar nature can in future be modified and improved if necessary. In this regard it is possible that there could be a number of scenarios in terms of implementation. The first would be that CRIDF would actually implement the project itself, the second is that the project is implemented by another body and that CRIDF plays some sort of oversight/supporting role, and the third scenario is where CRIDF hands the project over to some other implementing agent and would not be involved in the implementation phase. In the latter case the monitoring and feedback loop may not be able to be addressed by CRIDF but the M and E aspect is certainly still critical. As was noted earlier, key outputs of the phase to develop a support plan will include a workplan. A typical format for this is attached as **Annexure K**. A modification of this to facilitate monitoring and evaluation during the implementation phase is attached as Annexure M. It is incumbent on the implementing agent and/or the supporting TA to produce regular reports in this format, or something similar, with the preferred interval being on a monthly basis. As always in project management and M and E of this nature, the critical things to be monitoring are the utilisation of time, money and resources, and quality of the product. The resources aspect would include people, materials, equipment, systems and other aspects.

Assuming CRIDF was to be involved in the implementation phase, then they would be either producing or receiving the monthly reports. This would also involve ongoing engagement with the client. During this phase some kind of project governance arrangements will need to be put in place, consisting of typical structures like a Steering Committee and Project Team. These would play key roles in terms of guiding and implementing the project. CRIDF resources, including potentially the institutional component, should attend these meetings on a regular basis so that progress can be monitored and any troubleshooting occur.

Some sort of close-out report should be developed at the end of the project with respect to the institutional aspects specifically. This should address the achievements of the project, problems encountered, and whether it has achieved its objectives. It should also include recommendations with respect to practice in the future.

8 Practical Considerations

8.1 Addressing a Range of Institutions

As was noted earlier, in order to ensure that this guideline is relatively concise and focussed, the primary emphasis and style of the document has been around public sector corporatised entities, such as utilities, water user associations, irrigation boards and catchment management agencies. In practice the client institution could include a range of other models, including the private sector, a government department, an NGO, a CBO, an IRBO, a regulator of some sort or some other type of organisation. In these cases it is apparent that this guideline needs to be used in a somewhat more adaptable and flexible manner. There is also the option of using specific parts of it to focus on particular strategic interventions. In the case of a small organisation such as an NGO or CBO, for example, it is argued that the eight primary headings set out here would still apply. The institutional environment in which the NGO/CBO operates, would still be applicable as this is likely to have a significant influence on the organisation in terms of who it reports to, what institutions report to it, and what is the regulatory environment? An aspect such as governance would also be relevant; whereas for a larger body it would be guided by best practice corporate governance; this would be a more simplified form of governance where issues such as the following would need to be addressed:

- Is there some kind of governance structure in place?
- Was it elected in a transparent manner by the community?
- Does it conduct its proceedings in a transparent manner?
- Does it produce some kind of simplified annual report?

It is argued that the other headings are equally applicable although obviously at a more simplified level, whether it be asset management, human resource management, overall strategy and objectives, financial management, or even customer service.

These core principles could even apply to a government department since again one is looking, if the department is becoming the owner of the infrastructure, to ensure that it is a credible organisation. An in-depth institutional assessment may not be relevant or appropriate, depending on the size of the institution but it is argued that these eight headings are still applicable but should be used in a more flexible or adaptable manner.

As was noted earlier, with some institutions they may, by reputation, have already established a high level of credibility and therefore the full institutional assessment may not be a valid or sensible approach. One may therefore then focus in on particular aspects or headings as listed in this guideline, or indeed the same concept of the gap analysis could be used for some kind of specific intervention or subject matter such as revenue management, non-revenue water management or gender mainstreaming.

8.2 Assessing a Range of Projects

As was noted earlier, the scope and mandate of CRIDF indicates that a fairly significant range of projects can or could be addressed. This could include water services projects of different scales, such as water reticulation, bulk projects, including water treatment works, possibly wastewater projects and wastewater works, a range of water resources projects including dams of various sizes, irrigation, flood protection and hydropower projects. Again, the emphasis here is on a guideline approach rather than a manual in order to be able to address this diversity. Having said that, once again it is argued that the headings here would still generally be applicable for the client organisation; and certainly for the institutional environment, governance, organisational strategy/long term objectives, financial management, organisational design and HR, asset management. Certainly the O and M issue is also critical for all these different types of infrastructure and also a challenge for many projects implemented in developing countries and a key issue in terms of sustainability. With respect to customer service or

stakeholder service, it is argued that all institutions are providing some sort of service even if it is not paid for and therefore the broad principles addressed under this heading are still applicable.

It also needs to be recognised that some of the CRIDF interventions will not be infrastructure-related but could be more development of some kind of systems, for example the early-warning flood forecasting systems for the Limpopo and Inca-Maputo, or more strategic or institutional in nature. For these interventions this guideline will be less applicable although the broad principles can perhaps still be applied in terms of the gap analysis approach.

8.3 Engaging the Client Institution

It should be emphasised that the underlying philosophy and approach underpinning the institutional assessment work will be to involve and engage the client institution as much as possible. This should happen from the outset and will need regular consultation throughout the process. From past experience this will be limited to some extent by the communication challenges that often occur in developing countries. This means that actual site visits and meetings are extremely important, however this has to be balanced against value for money in terms of potentially expensive trips to visit the client in other countries. As was noted earlier, we think that there can be significant benefits from consulting other members of the team in CRIDF II which was not really undertaken fully in CRIDF I. A particularly crucial milestone, as was noted earlier, is the Visioning Workshop which again, although proposed, was not really addressed in CRIDF I due to lack of time and budget. It is proposed that more emphasis is placed on this for the institutional work in CRIDF II by a more focussed engagement with the client institution. We also think that there are benefits in the involvement in this by other members of the Technical Team. As was noted earlier, if CRIDF is involved in the implementation phase in terms of the institutional support, it is also crucial during that phase to maintain an open and regular communication with the client institution in order to determine that the intervention is proving to be effective and also to address any problems that emerge.

8.4 Alignment to the CRIDF Screening Process

As was noted earlier, this institutional component needs to be fully embedded within the broader CRIDF project preparation work. This alignment is illustrated in Figure 5 below. This highlights the following:

- The status quo is aligned with the prefeasibility phase in the screening
- Gap Analysis is aligned with feasibility in the screening
- The Visioning workshop and development of the overall institutional support plan are key deliverables at the conclusion of the bankability phase (Screen 2)
- Development of targeted workplans and ToRs for specific institutional interventions is part of Financial Close Out
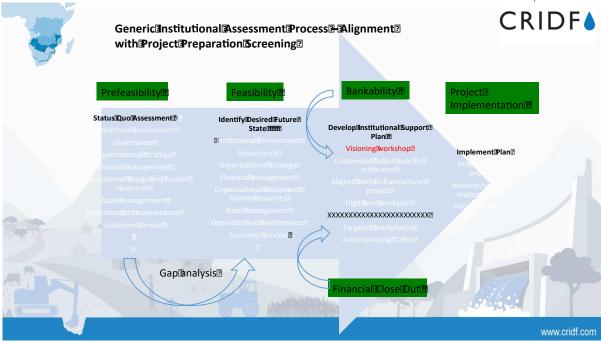- The implementation phase aligns with implementation within CRIDF which is beyond the screening process

Figure 5: Alignment of Institutional Assessment and Project Preparation Processes

As was noted earlier, the project may or may not be implemented by CRIDF. The ambitious mobilising finance objectives set in CRIDF II implies that the majority of projects are likely to be implemented external to CRIDF.

In terms of the Eligibility and Scoping phases in Project Preparation (Screen 1), there is not an in-depth institutional element at this stage as, in effect, it occurs prior to the first step in the formal institutional assessment process. Screen 1 does however incorporate some high level questions of an institutional nature.

8.5 Some Comments on the SADC Water Sector Context

The range/type of projects undertaken in CRIDF I was wide, as were the types of client institutions that the programme engaged with. There is no reason to expect that this will change in CRIDF II and the scope could even become wider with the increased emphasis on SE&I and MF. In order to address this diversity, it was necessary to compile this Guideline in a reasonably generic manner (apart from the fact that it is clearly water sector focussed). There is an additional reason for this however and that is the institutional design of the water sector in virtually all SADC countries is different. They are so different that they are almost "thumb print like". Even terms like WSPs or WUAs mean different things in different countries. This means that it would be useful in some ways to sketch out a description of the water sector in each country, which no doubt would be useful more broadly, but is beyond the scope of this Guideline. The advantage of the methodology outlined in this Guideline (as was noted in Section 8.1 above) is that, with some judgement and adaptation, it can be used in many different contexts.

In the CRIDF (and hence SADC) context, the typical institutions that are likely to become clients for infrastructure projects include the following:

- Water and wastewater utilities
- Water User Associations/Irrigation Boards
- NGOs/CBOs
- Electricity utilities (for hydropower projects)

- Transfrontier Parks
- Government ministries

In terms of the characteristics of these organisations within SADC, some generic conclusions are possible in the authors' view (which may contribute to individual institutional assessments). These include the following:

- There has been a significant process of institutional reform in the water sector in the last 10 to 20 years in probably all SADC countries. This process is not complete, which means that to some extent one has to deal with "moving targets" when carrying out institutional analysis.
- With regard to institutional reform, there is a trend towards establishment of corporatised, state owned utilities and away from pure government entities, including local government. This process is however far from complete. It is also more advanced in water services, rather than water resources. The general impression is that these corporatised entities have performed better than pure government entities.
- With water services there is a trend towards the establishment of independent regulators. This is generally regarded as international best practice. The first independent water resources regulator has been established in Zambia (and in the authors' view its progress should be closely monitored).
- There has been significant progress during this period towards achieving the MDGs and SDGs.
- Progress in water services has been particularly good in those countries where an independent regulator is in place. This not only applies to infrastructure related aspects but also things like governance.
- There are widespread problems and challenges with revenue management and tariffs are often not fully cost reflective. In some cases even operating costs are not recovered. There is still some degree of political pressure with regard to water tariff levels/increases.
- Most water sector institutions are not bankable in the conventional sense.
- There are widespread problems in terms of water conservation and demand management (we use this term here rather than NRW so as to also encapsulate the water resources context). This has almost reached crisis proportions in some countries with the recent drought, for example Zambia.
- Asset management is generally an area of weakness, though some of the stronger utilities (both water services and water resources) have made a good start.
- The situation with regard to capex planning is similar to asset management (and strictly speaking is a subset of asset management).
- Operation and maintenance is generally an area of weakness, which is also characterised by inadequate budgets. This also applies to spend on refurbishment.
- Awareness of customer service and service quality are improving but are generally not strong. Problems in this area tend to have a disproportionate impact on the poor and vulnerable.

There is a second category of projects, that one might term "SE&I projects". These will be selected for their potential for wider strategic leverage and influence. They could/should include infrastructure projects but could also include aspects such as strategic support, institutional support, planning studies, systems development, development of best practice guidelines and other, as yet unspecified, interventions. Typical examples from CRIDF I include the Early Warning Flood Forecasting Systems and development of the strategic plan for OKACOM. As we understand it, these SE&I projects/interventions could be addressed via the RAS approach or for larger ones they may very well also be run through the PP screening and analysis (and hence will include an institutional assessment). The "client organisations" for SE&I projects could include the following:

- SADC[13]
- IRBOs
- Sector regulators
- ESAWAS (the association of water services regulators for East and Southern Africa)

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13 In this case, and for IRBOs, particularly close liaison with GIZ will be needed.

- Transfrontier Parks
- Possibly selected utilities in some cases (water services, water resources, electricity)

In these cases, generally speaking the Guideline will be used on a selective basis to address the particular focus area, as was discussed in Sections 8.1 and 8.2. The process described is robust enough to cover this without a problem. It is also possible in some cases that a full institutional assessment is desirable, for example when an organisation is very young or very weak but is nevertheless deemed to have major SE&I potential.

9 Caveats and Risk Management

No analysis of this nature is going to be perfect and there are therefore always risks associated with it. It is therefore important to highlight some of the key areas of risks and at the outset it is important to emphasise again that the main emphasis of this assessment guideline is towards infrastructure projects, although it is believed that it can be utilised to some extent for a range of other strategic interventions. Undertaking institutional assessments is also, in itself, a risk mitigation strategy for infrastructure projects. By the same token, the tool is more applicable for corporatised organisations (and probably NGOs) and less so for organisations such as government departments and CBOs. As a result, the best applicability would be for organisations such as water utilities, water user associations, independent regulators, water resources utilities and possibly IRBOs.

This guideline is primarily targeted at practitioners that are reasonably experienced in the institutional realm. It has therefore not been designed from first principles as that would mean it would have to be much more lengthy in extent.

In terms of other potential risks and their impact, this is summarised in Table 11 below. This also gives suggested options in terms of mitigating strategies.

Table 11: Risk Management Strategies

Area of Risk	Probability H/M/L	Impact H/M/L	Mitigation Strategy
Potential overlap with work being undertaken by GIZ on institutional aspects	L	H	In-depth strategic engagement with DFID and GIZ at outset to clearly establish areas with synergy potential and/or effective "division of labour" (NB this has still to occur). Thereafter, regular engagement (e.g. quarterly) to ensure that agreements reached are being operationalized effectively.
Project Preparation is not adequately supported by institutional component	L	H	Full embedding of institutional assessment in PP screening process (currently underway) will adequately address this risk.
MF is not adequately supported by institutional component	L	H	Very regular communication with MF team will be needed to ensure coordination and alignment occurs. Relationship should be systemic so that information can feed both ways. Support to MF will probably be primarily demand driven.
SE&I is not adequately supported by institutional component	L	H	Very regular communication with SE&I team will be needed to ensure coordination and alignment occurs. Relationship should be systemic so that information can feed both ways and not just be demand driven e.g. institutional work could trigger an SE&I project in some cases.
Assessment is too high level/superficial	H/M	H	CRIDF has emphasised that institutional strengthening is not one of its priorities however institutional risk can have a profound impact on project sustainability. Some sort of compromise approach will be needed in terms of the level of assessment/use of resources.
Lack of cooperation of staff in client institution	L	H	In most cases it is assumed that staff would be cooperative when an external funding opportunity emerges however in some cases there could be other agendas that are in play. Full involvement of management in consultation/development and transparent process is best mitigation.

Area of Risk	Probability H/M/L	Impact H/M/L	Mitigation Strategy
Lack of availability of key staff in institution	M/L	H	Allow adequate time to arrange logistics and for good consultation. Emphasise importance of engagement processes.
Communication challenges	H/M	M	This is a common problem. In a number of SADC countries it would appear that site visits are almost crucial to facilitate good engagement and communication as other channels are not effective. CELs can play key supporting role here.
Management too optimistic about what can be achieved by the organisation	H/M	M	Also a common problem. This is not necessarily deliberate but perhaps more human nature! Need to cross check (triangulate) with various sources of information to try and verify organisational capability.
Lack of suitable external stakeholders to interview	M	H	External sources for the review process are very important. Significant effort and networking should be undertaken to try and source these. CELs can play key supporting role here.
Lack of an independent regulator	M	H	The presence of a credible independent regulator gives very valuable external review and audit information. If this is not present then the presence of other external review information becomes even more crucial. Water resources is a problem area in this regard.
Lack of credible external sources of information	M	H	Using only internally produced information carries fairly high risks. CELs should be able to assist with sourcing information, if it exists.
Lack of formal internal policies and strategies	M	M	The lack of these tends to imply a lack of capacity of the organisation. In some cases, lacking policies and strategies can be inferred from interview processes.
Poor buy in to institutional support proposals from client institution	M/L	H	Extensive participation and transparent processes should mitigate this.

It is also important to differentiate between assessment risk and institutional risk. The purpose of this assessment in the first place is largely to reduce the institutional risk in the sense of the project failing due to the fact that the institution lacks capacity or has challenges in other areas. Assessment risk is related to the fact that the assessment may not in fact produce accurate results and there is always some kind of risk in this regard. This table above focuses primarily on the assessment risk. It should be noted at this point that the more rigorous approach being adopted from CRIDF II should significantly reduce the assessment risk and this includes the early integration into the screening process, the use of a multidisciplinary team, better integration with the CRIDF Technical Teams and indeed the development of this guideline to facilitate a more consistent and robust approach.

There is also the risk with the use of this guideline, which does require a certain amount of judgement and expertise to apply effectively. The argument and discussions earlier about the wide range of projects with potential institutions significantly emphasises this point.

10 Concluding Remarks

This guideline document sets out some ideas, approaches, methodologies, tools and checklists in terms of carrying out institutional assessments as part of the Project Preparation process for CRIDF II. Its purpose is to try to ensure some consistency with the methodological approach to the work, as well as resulting in improved value for money by some degree of standardisation by the institutional practitioners. It draws on the experience of CRIDF I in the sense of improving the assessment processes that were undertaken there by earlier introduction into the Project Preparation process as well as a more thorough and robust methodology. This guideline can potentially be used for the wide range of project interventions envisaged in CRIDF II however this great diversity will necessitate significant judgement from practitioners who are utilising it.

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CRIDF: "The Institutional Support Component in CRDIF II: Concept Paper". July 2017

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Annexure A – Literature Search Material

REFERENCE DOCUMENTS	
FOCUS AREA	**INFORMATION SOURCE**
EXTERNAL ENVIRONMENT	• Water Act, Water Resources Act, possibly other relevant legislation e.g. local government, environmental • Regulations • Policies, policy tools and Instruments • Strategies (including related to water resources management, growth and development, poverty alleviation, gender and productive use of water) • Country Reports by international cooperating partners, including donor organisations • Progress reports iro the achievement of MDGs/SDGs • Sector Plans and progress reports • Reports on grants, subsidies, cost recovery mechanisms and financial support to achieve equity and poverty alleviation targets. • Regulator reports
INTERNAL CONTEXT	• Organizational Strategic Plans • Annual Reports • Corporate Business Plans • External assessments of the organization • Internal assessments and progress reports • Minutes of Board meetings • Human resources policies, strategies and plans • Human resources standard operating procedures • Formalised job descriptions • Organograms • Asset register • Asset Management Strategy/Plan • NRW Management Strategy • Water Safety Plan • Operations and Maintenance Plans and Schedules (including preventive maintenance) • Policies and procedures for M & E • Customer Services Charter • Customer complaint management logs/registers and reports of response • Training and capacity building plans and reports • Procurement policy • Tariff policy • Infrastructure Master Plan • Multi-year Capex Plan • Management accounting systems • Billing systems

Annexure B – Draft Institutional Assessment Questionnaire

The following focus areas and associated elements allow a quick overview of a limited but essential set of institutional and organisational components that should, ideally, be in place. There should be clear evidence that the institutional environment (institutional management arrangements and collectives, including government departments) allow the achievement of institutional objectives. As well, that the organisational environment demonstrates adequacy across a range of elements, including governance, services delivery, IAM and O&M.

Since this is a generic questionnaire/checklist, some of the questions may not be applicable in specific situations, while some may be more relevant than others. As such, the tool is offered as helpful support rather than a rigid instruction that is cast in stone. Use the tool as seems fit for the given situation and purpose.

The assessment tool is phrased as a questionnaire for primary data gathering, but may also serve as a checklist to support secondary data analysis. It has been designed to allow a numerical scoring, in case this is considered relevant. Scoring in each instance is based on the allocation of between 0 and 3, depending on the degree to which there is a marked presence/absence of key components that may be required. Although the scoring does not yet allow a weighting to be given in respect of each of the elements, it is intended to incorporate this over time as experience is accumulated in the field.

Scoring or the assessment of performance in respect of a specific performance focus area must be interpreted within a broader framework than that which relates to the findings of that indicator. It should serve as a 'building block' in drawing valid and appropriate conclusions and for formulating appropriate mechanisms to address risks potentially posed by factors within the institutional environment.

For example, there may be a significant number of reports from e.g. donors that indicate that there are critical constraints within the institutional environment such as weaknesses in respect of the regulatory and policy environment or in respect of informal or traditional institutions, or power relationships. This would usually result in a score of 0 or 1 which would clearly have negative connotations under 'normal' circumstances. However, discussions with stakeholders may identify potential mechanisms that have been identified (and preferably previously tested) that will serve to overcome such constraints and challenges, thus serving to balance or counter the negative assessment.

If a numerical ranking is applied, the following ranking scale is proposed:

0. Denotes an absence of systems and practices that are deemed essential to ensure basic institutional health
1. Denotes systems and practices are only partially in place / Not significantly in place /Fair, etc.
2. Denotes adequate systems and practices in place/ Largely in place/ Good enough, etc.
3. Denotes best practice/ Fully in place/ yes/ excellent, etc.

Should a question not be applicable, it is not scored.

INSTITUTIONAL ENVIRONMENT	
PERFORMANCE FOCUS AREA – INSTITUTIONAL LANDSCAPE	**SCORE & COMMENTS**
1	Is there an appropriate legislative framework which provides for a clear definition of responsibilities, including devolution of authority to local level, separation of regulatory and executive functions, separation of water resource management from water supply and sanitation delivery and mechanisms for coordination with other organisations?	
2	Are there formal institutional elements in place, including major policies, strategies and plans (regional, national, etc.) within and across sectors as relevant? As well, are policy instruments in place that serve to give effect to specific policies and strategies?	
3	Is there coordination of activities with donors and NGOs and have mechanisms been established for improvements in efficiency and service delivery as well as in respect of the application of funds (including aspects such as prioritised spending in the sector attached to e.g. gearing up for SDG achievement)?	
4	Are mechanisms in place that allow for the involvement of the private sector in a controlled manner that factors in the needs of markets, the environment, livelihoods and other drivers of change?	
5	Are there clear plans and mechanisms at operational level that support the development of human-resource capacity and capability in the sector/ initiatives to improve institutional functioning via focused human resource development?	
6	Have technology choice, service delivery levels and coverage targets been adopted that are appropriate to requirements of different consumer groups?	
7	Are there mechanisms in place to promote the long-term sustainability of service delivery through financial viability and cost recovery policies (and associated mechanisms for full cost recovery over time)?	
8	Is there coherent integration between formalised institutional elements and informal and/or alternative elements, including traditional or customary institutions, roles, expectations and interests; societally-embedded rules, norms, customs, traditions and values; and relationships between formal and informal institutions/organizations; informal modes of association or livelihoods?	
9	Is there evidence of supportive grants and subsidies to allow the achievement of equity and poverty alleviation targets and objectives, at least in the interim with mechanisms for the achievement of financial viability of organisations over time?	
10	Does transparent stakeholder engagement take place (including on future policy and organisational development) as well as community consultation and participation in project development, implementation, operation and maintenance as appropriate to local conditions and customs?	
11	Do strategic opportunities exist for leveraging wider change, including for the achievement of climate change resilience objectives?	
12	Have specific interventions been identified that are being/will be used to overcome problems and constraints experienced within the sector (e.g.	

failure to successfully implement sector reforms, institutional misalignment, poor regulatory enforcement, etc.)?

ORGANISATIONAL ENVIRONMENT	
PERFORMANCE FOCUS AREA - GOVERNANCE	**SCORE & COMMENTS**
1 Is there evidence that the organisation is well managed, including that it has a clear mission, policy, and goals under the leadership of a capable, engaged Board of directors?	
2 Has the organisation identified meaningful goals, metrics, and tools to measure and evaluate its performance and overall effectiveness?	
3 Does the organisation have a positive profile in the field, including amongst its stakeholders/clients/customers based on effective and well-managed programmes?	
4 Is the Board of directors actively engaged in an oversight role and knowledgeable about key issues that might affect the organisation's success?	
5 Does strategic and annual planning utilise results and lessons learned from past evaluations?	
6 Does the Board focus on policy development, strategic direction, and evaluation of the organisation and respect the staff's responsibility to implement policy directives?	
7 Is the Board's effectiveness apparent through the existence of suitable programmes, well-managed operations, ample funding, within the confines of organisational grants or contracts (and/or the promotion of financial prudence) and organisational stability and sustainability?	
8 Has the Board established clear leadership roles to promote capable management of its objectives and activities?	
9 Does the Board understand its fiduciary and legal responsibilities and actively manage the organisation's risk exposure?	
ORGANISATIONAL STRATEGY	
1 Is an organisational strategy in place and has it been developed in a purposeful and formalised manner?	
2 Have clear strategic priorities been formulated in line with the goals of the organisation?	
3 Has an organisational business plan been developed (in line with the organisational strategy and goals?	
4 Have key strategic priorities for the organisation (e.g. ensuring cost recovery, asset management, operations and maintenance, non-revenue water management and sanitation) been included, with clear objectives to be achieved and critical indicators in place to measure progress towards the achievement of goals?	
5 Is there a clear correlation between the strategic priorities and the objectives and/or policies that drive work to be performed?	
6 Are there projects and programmes and associated work activities that do not align with the mission?	

7	Are the targets that have been set realistic and achievable within the context of the resources allocated thereto?	
8	Are there clear indications that management can fully operationalize fundamental components of delivery?	
9	Are there existing (stretch) performance standards?	
10	Have elements of underachievement been identified and incorporated as part of a structured and appropriate action plan?	
11	If appropriate, have requirements from an external regulatory oversight body, been coherently incorporated and integrated into the strategy and business plan (e.g. as per a Service Level Agreement and/or specified benchmarks)?	
12	If appropriate, does the strategy show a clear commitment to collaborate and partner with all relevant internal personnel and external stakeholder groups?	
13	If appropriate, does it show clear linkages as well as targets for cooperative/collaborative planning and for ensuring ongoing communication and reporting?	
14	Are there any clear challenges that exist?	
	FINANCIAL MANAGEMENT	
1	Are annual financial statements produced on a reasonably timeous basis (within several months of the end of the financial year)?	
2	Are these of good quality and credible?	
3	Is there an external auditor in place?	
4	Is some kind of financial modelling undertaken for future years in order to assess projections and understand the planning environment?	
5	Is there a management accounting system in place that assists management with the ongoing management of financial affairs?	
6	Is there some kind of modelling in place to set tariffs?	
7	Is there a tariff policy in place and is some kind of step-tariff utilised for potable water?	
8	In terms of ratio analysis: are liquidity ratios such as the current ratio and debt coverage at acceptable levels?	
9	Is the organisation making an operating profit and is it making a net profit?	
10	Is there allowance being made for depreciation?	
11	Is there a multi-year capital expenditure programme in place?14	
12	Does the capital expenditure programme include items for refurbishment?	

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14 This and the following question should be cross-referenced with the discussion under asset management in Section 4.7.

13	Are the figures for debtors' days and creditors' days at acceptable levels?	
14	Is there a procurement policy in place?	
15	Are the procurement systems that are in place credible?	
	ORGANISATIONAL DESIGN AND HUMAN RESOURCES MANAGEMENT	
1	Does the organisational organogram reflect the key areas of delivery in accordance with mandate on the one hand, and core functions as set out in the Strategy on the other hand?	
2	Does the organisational design make provision for the necessary oversight of decentralised service stations?	
3	How many posts that exist on the organogram are filled versus empty? How could this impact delivery?	
4	Is there any indication that there is adequate succession planning, especially in terms of areas of scarce skills or senior positions?	
5	Are there clear job descriptions in place that allow (i) the appointment of appropriate personnel with the right mix of skills and experience for the post? Is performance monitored against this?	
6	Are training programmes implemented that assist in building skills and competence areas where improved performance is required?	
7	Are the ratios of professionals versus technicians/technologists, versus middle managers, versus artisan versus general workers indicative of a hierarchy of resources to ensure that the multiplicity of tasks that are required can be addressed?	
	INFRASTRUCTURE ASSET MANAGEMENT	
1	Is an Asset Management Framework in place that includes an AM Policy, Objectives, Strategy and Plan that allows AM practice that that allows optimal (specific to the organisation) cost-effective lifecycle management of assets?	
2	Is an Asset Management Register (spreadsheet, database or software system) in place that includes asset attribute data (quantity, type and construction cost, inter alia)?	
3	Is IAM planning aligned with legislative and strategic frameworks?	
4	Are target levels of service defined for key service areas and used for undertaking gap analyses and upgrading AM strategies, risk analyses and capital and operational budgets?	
5	Is there interest from officials in demand growth, demographic changes and water resource quality changes?	
6	Do the qualifications and background of senior personnel in planning or O&M positions align with requisite skills and competence?	
7	Are there any young people within the organisation with technical/ scientific qualifications who may be mentored as part of a process of IAM related succession planning?	

8	Do the attitude and 'bent' of the chief executive and the financial director align with the strategic, financial and operational demands posed by IAM?	
	OPERATION AND MAINTENANCE	
1	Are there appropriate Operation and Maintenance Manuals and SOPs in place and being used?	
2	Is there an incident reporting and response systems in place?	
3	Does the general state of facilities, offices, vehicles and equipment, tools demonstrate appropriate operation and adequate levels of maintenance?	
4	Is there any interest from officials in record keeping appropriate to O&M?	
5	Do the qualifications, background and skills of senior personnel in O&M positions reflect the requisite competence required?	
6	Are there any young people within the organisation with technical/ scientific qualifications who may be mentored as part of a process of O&M related succession planning?	
7	Do the attitude and 'bent' of the chief executive and the financial director align with the strategic, financial and operational demands posed by O&M?	
8	Is Maintenance System performance routinely measured and reported against goals?	
9	Does preventive maintenance work have the highest priority in the maintenance planning and scheduling effort, including that only serious safety, quality and imminent breakdown issues are given higher priority than PM work?	
10	Have standard procedures and parts lists been developed and are used for planning repetitive maintenance work?	
	CUSTOMER SERVICE QUALITY	
1	Is there some sort of customer service policy or charter in place?	
2	Does the organisational design accommodate a customer service component?	
3	Are there adequate human (and financial) resources allocated to customer service?	
4	Is there sufficient infrastructure in place, such as customer service offices, to adequately address the demand from the public? Does this infrastructure reflect the urban/rural spread and associated requirements of customers?	
5	Is there an adequate training programme in place that is specifically targeted at customer service within the organisation?	
6	Is there an adequate testing system in place to monitor the quality of physical products such as water, wastewater and raw water?	
7	Is the product monitored on a very regular basis?	
8	Are a sufficient number of determinants addressed?	
9	Are the results independently audited in some manner?	
10	Does an independent regulator report separately on the results?	

11	Is reliability of the service monitored and is the service provided adequate? This applies to both the numbers of hours a day that service is provided but also how long it takes to address supply interruptions?	
12	Is the consistency of the service, such as water-pressure, regularly monitored?	
13	Are independent customer surveys carried out regularly to obtain the opinions of customers?	
14	Is a log kept of customer complaints as well as response to complaints and performance measured against the customer service policy/charter?	

Annexure C – Aspects of the Ideal Scenario for Organisational Design

FOCUS AREA	ASPECTS OF IMPORTANCE
Organisational Design	- There is a formal organisational design in place (including and organogram) - The organisational design clearly reflects the key results areas and objectives of the organisation? - The organisational structuring is helpful in allowing it to achieve its organisational strategic priorities and goals. - The organisational structure clearly reflects governing and operational components. - The design makes provision for appropriate decentralised functioning (as necessary), including in respect of oversight and operational elements. - There is clarity about, and clear alignment in respect of authority and responsibility. - The organisational design aligns with the key task areas and the requisite linkages between units of production. - There is a deliberate and clear linkage between the design of the organisation and organisational development strategies (including those related to Human Resource Development)? - Technological Capacity is in place to maximise organisational performance based on design, including basics such as electronic databases, management systems, billing systems and mechanisms to promote technological 'absorption' and adaptation
Human Resources Management	- There is clear evidence of human resources (people) planning and management, including resource allocation. - There are coherent staffing norms and standards in place. - Job descriptions and associated qualification and competence requirements have been described that substantively speak to the key task/delivery areas. - Job descriptions are used as a basis for recruitment. - There are performance appraisal systems in place and staff performance is monitored against this. - There is an organisational development strategy and training plan in place for the organisation and an acceptable training budget allocated. - The organisational development strategy has been based on an understanding of the capability and implications of the country's TVET and/or tertiary education and training sector to support key areas related to Human Resource development. - Clear succession planning systems are in place, including for key personnel in areas requiring critical and/or scarce skills. - There is a coherent policy (and associated practices) in place for performance rewards, incentives and compensation. - Labour legislation, including in respect of Occupational Health and Safety, minimum wages, basic conditions of employment and labour relations (including membership of unions) is adhered to.

- Technical Capacity is demonstrated through (i) Number, Mix and Capacity of Technical Staff; (ii) Technical Quality Standards; (iii) Technical Supervision; (iv) Training and Mentoring; (v) Client/Beneficiary Communications; (vi) Community Involvement; (vii) Service Delivery Organisation and Quality Assurance; (viii) Referral Systems for Continuum of Prevention, Care and Support Services
- Organisational Capacity is demonstrated through (i) Governance and Leadership; (ii) Management Practices (iii) Operational Planning; (iv) Structure: Roles and Responsibility; (v) Structure: Delegation of Authority and Decision-Making; (vi) Partnering and Networking
- Capacity is in place as needed for (i) Procurement and Supply Management; (ii) Operations and Maintenance; (iii) Monitoring for Management; and (iv) Decentralised delivery

Annexure D – Key Financial Ratios and Targets

Ratio/Indicator	Unit	Purpose	Ideal	Acceptable
Sales volume growth	%	Speaks to growth of organisation and hence ongoing viability	> 10%	> 3%
Sales revenue growth	%	Speaks to growth of organisation and hence ongoing viability	> inflation + 10%	> inflation + 3%
Gross profit	Currency	High level indication of organizational viability	Typically 70% but will vary with different organisations	Typically 70% but will vary with different organisations
Nett profit	Currency	More accurate assessment of viability	> 10%	> 5%
Current ratio	Number	Key aspect with respect to liquidity	Between 1,5 and 3,0	Between 1,5 and 3,0
NRW	%	Indicator of how well assets are being managed	< 15	< 25
Collection efficiency	%	Key indicator with respect to viability – often problematic in developing countries	> 98	> 90
Debtors days	Days	Key indicator with respect to debtors management	<30	60-90
Creditors days	Days	Key indicator with respect to payment of creditors	<30	60-90
Operating cost coverage	%	Indicates if core operating costs are covered by income	> 120	> 100
Potable water tariffs	Currency	Allows benchmarking with other similar organisations and also high level indicator of viability	> $0,80/kl	Average tariffs probably need to be > $0,60/kl in most cases
Sewerage tariffs	Currency	Allows benchmarking with other similar organisations and also high level indicator of viability	For further research	For further research
Raw water tariffs	Currency	Allows benchmarking with other similar organisations	For further research	For further research

Ratio/Indicator	Unit	Purpose	Ideal	Acceptable
		and also high level indicator of viability		
Debt to assets	Number	Important indicator of the financial leverage in the organisation's financial structure	0,5 – 0,66	Could be much lower in developing institutions
Return on capital	%	Expresses net return of capital employed in the organisation	> 9	???
Debt service coverage	%	Another important liquidity ratio	> 1,2	> 1,2
Maintenance and rehabilitation spend	Currency or %	Important indicator for asset management and hence long term viability	> 2% of depreciated value of assets	> 1% of depreciated value of assets
Energy costs	Currency or %	Key input cost to be monitored	Organisation specific	Organisation specific
Chemical costs	Currency or %	Key input cost to be monitored	Organisation specific	Organisation specific
Overall staff costs	Currency or %	Key input cost to be monitored	< 50% of operating cost	< 60%
Operating staff costs	Currency or %	Key input cost to be monitored	For further research	For further research
Administrative staff costs	Currency or %	Key input cost to be monitored	For further research	For further research

Note: In some cases these targets are based on recognised international best practice, while in others they are based on intelligent initial guesses that will need to be verified by further research and/or work in the field.

Annexure E - O and M Status Scenarios

Embryonic O&M	Developing O&M	Rooted and growing O&M
Infrastructure repaired according to prevailing crises and past experience of personnel, without schedules, manuals or regard for service level requirements. Operations proceed according to historical practice rather than prescribed manuals and schedules. Some (perhaps younger) operations managers may have knowledge about how things should be, but lack enabling resources and systems.	Infrastructure repaired on failure, to standards approaching those prescribed in relevant manuals, and some attempt made to achieve targeted service levels. Operating manuals and schedules provided by service providers or suppliers may exist, but operations probably proceed according to stubbornly ingrained historical practice. Senior operations managers probably have knowledge about how things should be, but enabling resource and system constraints hamper the pace of development.	Infrastructure maintained per schedule according to resource constraints, otherwise repaired on failure, to standards approaching those prescribed in relevant manuals, and some targeted service levels achieved. Operating manuals and schedules exist (per supplier or customised in-house), and sometimes operations proceed according to prescribed practice. Senior operations managers are committed to prescribed practice and enabling resources and systems benefit the pace of development.
O&M personnel below senior management level are structured and qualified according to the needs of a previous era. Top management may be aware of the unsuitability of the situation, and may be considering how to transform the operating and maintenance units.	Core O&M functions identified and certain operating and supervisory levels targeted as key recruitment and growth functions aligned with strategic succession system adopted by corporate governance and top executive structures. HR recruitment and development objectives described, although majority of strategically targeted positions remain vacant or occupied by long-service but under-qualified personnel. Supporting systems required by core functions may have been identified but remain un- or under-developed.	Recruitment into strategically targeted operating and maintenance units and positions is aligned with new and ambitious minimum entry-level education standards. Resources for HR development and training are tipped in favour of strategically targeted operating and maintenance units. The national interest is given greater weight than narrower corporate interest in matters of HR development. Development of supporting systems in progress, but likely to be slow.
Operating resources (financial and material) severely inadequate.	Operating resources (financial and material) may remain constraining, but budgeting (which may previously have been decided by the CEO with assistance from the	Operating resources (financial and material) may be more closely aligned with actual operational needs.

Embryonic O&M	Developing O&M	Rooted and growing O&M
	finance department) may be based on a better tariff model and developed with input from senior operating executives.	Input from senior supervisors and middle managers may be required in the budgeting process.
No supporting systems exist except perhaps some few that are essential for senior managers to 'get by'.	An understanding of what supporting systems could enhance performance may have developed.	Some important supporting systems that enhance performance may have been developed, and others planned as other areas of O&M develop.
Non-revenue water values are unknown and largely unmeasured.	Bulk metering usually heralds the first signs of an awakening commitment to NRW. Perhaps an initial NRW strategy, developed by an external service provider to whom no accountability can attach, may be available as an indicator of intent.	Bulk metering in place at key points, and a consumer meter project planned or in progress. A NRW strategy, developed in-house with expert guidance, may be the basis for a multi-year NRW budget associated with performance targets for which managers may be accountable.
Quality assurance is 'pie in the sky'.	On site operational monitoring may herald the first signs of an awakening awareness about quality. Perhaps an initial report based on a 'quick and dirty' field inspection/ audit, developed by an external service provider to whom no accountability can attach, may be available as an indicator of intent. Awareness of broader quality assurance theory and practice may exist amongst (especially younger) operations managers.	On site operational monitoring may be routine. More formal audits by independent experts may be the basis for development plans and budgets. The concept of water safely planning may be understood, and an initial compliance-monitoring programme designed (perhaps with intuition rather than science, but an improvement over no monitoring programme at all). Perhaps a project plan and budget to develop a Water Safety Plan may exist.

Annexure F – Non-Revenue Water Management Status Scenarios

Embryonic NRW	Developing NRW	Rooted and growing NRW
Few (if any) bulk meters, and what there are, are not strategically situated, and only anecdotal information (if any) on demographics, demands, water loss and service availability.	Some bulk meters, perhaps strategically located, exist, and have yielded data useful for beginning to understand orders of magnitude of demand and losses. Attempts to correlate flow with population census (or estimates) may have provided a baseline for future demand measurement.	The bulk metering established has yielded data useful to understand the most obvious demands and losses. Confidence in available technical and demographic data allows a baseline for future demand measurement to be declared.
Sources of water loss visible (reservoirs overflow, taps drip or left open during outages, pipes leak, sewers overflow (or high volumes reach wastewater works). Most infrastructure is old or un-maintained and in poor condition. Managers may be aware of the situation, but action is mostly limited to complaining.	Some data logging may have taken place, useful for initial/ high level strategy planning, but not yet systematic enough understand water loss (in either pattern or quantum) and service availability probably remains erratic/ unpredictable/ problematic.	Data logging has helped to suggest areas requiring further study, and some early network systems analysis may have been commissioned.
Crises are the norm, precluding any thought about performance indicators and targets. There may be resentment at artisan and supervisory levels about staff inadequacies and absence of budget.	Sources of water loss remain visible (reservoirs overflow, taps drip or left open during outages, pipes leak, sewers overflow (or high volumes reach wastewater works). Most infrastructure is old or un-maintained and in poor condition. Managers have probably become painfully aware of the situation, and action is mostly aimed at lobbying for resources.	An approach that is systematic enough to lead to and understanding of demands and losses is in view.

Service availability may be less erratic/ unpredictable/ problematic.

The most obvious sources of water loss (reservoirs overflow, taps drip or left open during outages, pipes leak, sewer overflow/ high inflow volumes reaching wastewater works) form part of a plan to deal with them |
| | Crises remain the norm, but initial insights have facilitated thinking (perhaps quite fuzzy) about performance indicators and targets. Resentment at artisan and supervisory levels about staff inadequacies and absence of budget may have abated (any improvement may be seen as 'real progress'). | Key infrastructure in poor condition is being effectively dealt with, and although managers are probably severely stretched, they are not far from a position where they can craft coherent motivation for NRW projects. |
| | It is possible that a NRW 'champion' may have emerged, but it is unlikely that the 'board sanctioned' | Crises remain frequent if not the norm, but the entity is sufficiently stabilised to benefit from the services (and subsequent mentorship) of a NRW specialist who could work through a NRW 'champion' who may have emerged. A 'board sanctioned' organogram reflecting NRW may be mooted beyond hushed conversation. |

Embryonic NRW	Developing NRW	Rooted and growing NRW
	organogram of any department reflects NRW.	The entity may have begun to understand the importance of properly qualified artisans and supervisory levels (but are probably a long distance from considering succession systems such as apprenticeships).
No consumer meters (or only in isolated areas), and billing (if any) is inefficient/ erratic/ inaccurate. Tariffs may be unrelated to consumption, and collections ad hoc. Illegal connections abound, and actual consumption in poor areas is unknown, and unbilled. While funding might have been sought (and perhaps even a little received), without a coherent or comprehensive plan, whatever was spent would likely be a waste.	NRW invariably lags other technical improvements (such as rehabilitation or replacement of some of the worst/ oldest infrastructure), but tariffs may have been revisited as the means to self-fund critical needs (NRW feature as a way to stem cost outflows). Grant funding will almost certainly have been solicited, probably with little success pending delivery of a credible strategy and demonstration of board and executive commitment/ determination/ focus on billing, collection and fixing the worst visible leaks.	A stepped usage-based tariff may be under serious consideration (perhaps not yet based on a professionally formulated model), perhaps hindered by the cost of installing universal consumer metering. Operating budget remains inadequate but no longer 'in ignorance. Grant funding is likely to beneficially compound improvements derived from use of the entity's internally generated funding.
It is possible that some legislative framework may exist, and the entity may have considered some policy ideas, but it is unlikely that an entity at this level would have progressed to a point that different aspects of governance or strategy are aligned.	Even if some legislative framework exists, it is unlikely that an entity at this level would yet have crafted its own articulate policies.	The entity at this level may not yet have well-articulated policies, but it will be well aware of the legislative and regulatory frameworks within which it must operate. It will also be beginning to come up against some of the difficulties brought about by the lack of such policies and by-laws.
Members of the public mostly remain 'blissfully unaware' of impending doom, although some children might have 'tried to educate' their parents about the limitations of the natural environment to go on providing free water.	In the absence of convenient customer care places and systems, revenue loss from illegal connections, non-payment and billing distrust may be almost cataclysmic, and only the most civic-minded members of the public	Without precision, the entity may have an understanding its consumer profile that is slightly better than intuitive, but sufficient to plan effective communication between itself and consumers.

Embryonic NRW	Developing NRW	Rooted and growing NRW
Customer care has probably been superfluous in the prevailing circumstances.	pay for their services and almost none report leaks.	It may not have support structures for consumers, but will have talked about them quite seriously. That there is a broader range of stakeholders to be consulted and influenced would have dawned on more perceptive elements within the entity.
While there may have been some management awakening to the various aspects of O&M, thoughts about systems integration or alignment have been irrelevant. But there may be determined <u>intent</u>, fertilising the seed towards '*embryonism*'!	It may be that commercially available training in WC&DM has been sanctioned, and a consultant commissioned to conduct an initial investigation. This may have resulted in some insight into the inter-relatedness with other initiatives, systems and parts of the organisation. Plumbers, meter readers (if these yet exist) and cashiers may sometimes talk to each other, but managers may still be 'silo-bound'. If an assets register project is planned or in progress, it is possible (and good) that meters are prime targets. GIS may feature in the same context. If an entity is at this level, it would be some distance from possessing the range of systems with which NRW would wish to be integrated.	Respective function managers can hold a coherent discussion on: • IAM, Assets Register and GIS • Organisation Development • Skills Development • Meter Reading • Water Conservation & Demand Management • Billing and Customer care • Public Relations/ Awareness/ Education systems • Importance of co-operative working relationships between Operations/ Technical, Financial and Public Relations functions

Annexure G – Water Safety Planning Status Scenarios

Embryonic WSP	Developing WSP	Rooted and growing WSP
Standards used are historical, and the reasons for their adoption poorly understood at most levels. Managers' time is predominantly preoccupied with making the service available. Prescribed operating procedures may be followed when convenient or when under observation by an important other. Top management know that what is happening is not right, and even that there are health risks, but for managers to say that what is happening is actually wrong is less likely, especially since the services they oversee are largely 'free'.	Standards used are historical, and the reasons for their adoption poorly understood below management level, beyond that the regulatory authority acts as a referee who may promote or relegate an entity in competition with similar entities. While quality standards receive some management attention, in the face of crises, the availability of service receives higher priority than consumer safety/ health. Senior operations managers know why water must be cleaned to make it safe, but crises preclude much introspection about just how clean and in what way.	At least one influential scientific specialist in (or closely associated with) the entity, is likely to understand in detail how public health and associated quality management needs are linked. Any working understanding may at best be vague in operating divisions, and conceptually absent in divisions such as finance, human resources or public relations. Knowledge of the existence of WHO WSP methodology (or similar) may be confined to a very few (or none) of the organisation's scientific and process specialists. Some knowledge of site-specific water quality issues that place vulnerable consumers at risk may have developed through experience, but a systematic and scientific approach may not be in sight.
Personnel at facilities remote from the main offices may multi-task as operators and security guards. Crises have become part of normal daily life, and consume all the time of supervisors and managers. But (METAPHORICAL, ideally conspicuous and pushy), there may be 'an angry young woman', perhaps a local lass privileged with an education not granted to most others, who knows there is 'a better way' that is the (as yet microscopic) embryo of the new quality management system.	Some contractually prescribed operating procedures arising from previous contracts may have been carefully filed as having 'contractual importance' but are unlikely to have been used as part of any quality assurance process. If, for the time being, they are not what in less stressed circumstances might be seen as crises, operating managers may place some importance on the recognised quality standards prescribed by the regulator. The scientific elements of the organisation (if they exist, and perhaps seen by older staff as expensive and superfluous) may perform certain analyses	Some contractually prescribed operating procedures arising from previous contracts may be used in isolation (or 'lying around') rather than as part of the overall quality assurance process. Operating managers may place significant importance on the recognised quality standards imposed by the regulator, and the scientific elements of the organisation try to follow (where tools and opportunity allow) scientifically authenticated methodologies for the analyses they do. However, the range of determinands may be

Embryonic WSP	Developing WSP	Rooted and growing WSP
	(thereby deriving status and 'a reason for being') for operational rather than compliance monitoring reasons (and the two may not be differentiated in the circumstances).	insufficient or even inappropriate.

While many may metaphorically shrug their shoulders about budget and other 'external' constraints, there may be an intuitive appreciation about the probability of links between environmental and natural conditions, complexity of infrastructure/ processes and human resource quality and budgets. The more stoical in the entity may feel that it is unrealistically idealistic to think that change is a logical consequence of (perhaps obvious) dissonance between process complexity and current staffing and budgets. |
| The regulator has become accustomed to the absence of quality records or reports that have any credibility, and is pleased to note that the entity submits a document it calls an annual report at some point during the passage of each year. | The regulator is likely to have difficulty extracting reports from the entity, and attempts to check the veracity of some quality information may have become too frustrating to pursue.

Test records may nevertheless exist for those determined enough, and who 'want to make a difference'.

Visits by external experts are likely to be welcomed as providing a distraction from routine, and the possibility of opportunity elsewhere. | A compliance-monitoring programme (or anything else with the same intent) is unlikely to have been considered, although the concept may be intellectually appreciated if not well understood.

The regulator may attempt to check the veracity of some quality information the entity reports, and the entity may have a means of verifying the reliability of test results report by operating personnel. For instance, a lab technician (from outside the operations division) may carry out tests similar to those performed by operating personnel, or may check calibration of instruments used by operating personnel.

An external laboratory may be used for both sampling and testing, and any own laboratory may have quite limited capability. Use of a laboratory that is 'accredited' or with bilateral relationships (to routinely compare results |

Embryonic WSP	Developing WSP	Rooted and growing WSP
		from identical samples, for instance) with other credible laboratories may have been dismissed as impractical/ out of reach. Thorough training of sampling officers is unlikely, and specifications for transporting sensitive samples may frequently be transgressed. Visits by external experts are likely to be welcomed as providing opportunities for ideas, learning and growth.

Annexure H – The Basic Process of Building an Organisational Strategy

FOCUS AREA	ACTIVITIES
Mission	Mission: Why does the organisation exist. What does it believe and how will it behave.
Vision	Vision: This provides the (realistic but aspirational) statement of where the organisation wants to be in a specified period (usually from 3 to 5 years). It is a 2 to 3 sentence statement of a goal shared by all within the organisation that provides a mental picture of what the organisation hopes to become or hopes to achieve.
Strategic Perspectives	The organisational landscape assessment is a gap analysis aimed at establishing the current organisational situation or position. It serves as a point to depart from in mapping the way towards the achievement of the vision. There are several ways to tackle a gap analysis, including an in-house SWOT analysis or a detailed external market analysis. Whichever option is selected, it is essential to realistically consider and take on board factors related to (i) the broader institutional, socio-economic and institutional environment (particularly a public organisation) and (ii) the internal environment, including problems being experienced with internal processes and procedures, bottlenecks and constraints as well as client/customer/stakeholder feedback regarding organisational performance. This process forms the basis for the development and formulation of what are frequently termed 'critical success factors' as this process uncovers the dimensions of performance required to achieve success. It becomes, as it were, the strategic perspective that will need to be adopted, and the factors that will need to be addressed or put in place to ensure the future and continued success of the organisation.
Defining Strategic Themes	Strategic themes are areas where the organisation seeks to excel to achieve the vision set for it. The question that is asked is "if we could achieve and excel in these three or four selected areas (e.g. Business Growth, Customer Service Excellence or Operational Excellence), would we achieve our vision. If the answer to that question is affirmative, then the strategic themes (also termed pillars of excellence) the organisation needs to focus on to excel in its mission and fulfil its vision have been identified. Strategic themes create a framework for the placement of strategic objectives and the means to state strategic results (a statement of a desired end state) that will transform the mission and vision into action. Strategic results are measurable and defined in an explicit manner, using outcome language. While each of the themes are cross-functional and cross-organisational in nature, the specificity of the result gives guidance to transformation. As such, they provide a structure that the whole organisation can work towards.
Setting Strategic Objectives	Based on the strategic themes, organisational objectives need to be properly formulated and defined (frequently through incorporation of the Balanced Scorecard Approach). Organisational objectives are the short- and medium-term goals that an organisation will set out to accomplish as part of the process to achieve goals envisaged as part of the strategic themes. An organisation's

FOCUS AREA	ACTIVITIES
	objectives will play a key role in informing and developing organisational policies as well as the allocation of organisational resources.

It is important that, whilst most companies would be expected to set their financial objectives as paramount, given that their end-goal is to generate a profit, public utilities and non-profits have significantly different motivations related to service delivery. In such an instance, income generation serves as a means to an end.

Setting objectives in terms of what is to be achieved over the next few years is critical, as it serves to clearly link the strategy map to be developed (next step) to the organisation's mission, core values and vision (and reaffirms it). This step serves to differentiate between what the organisation truly understands as its overriding objective and the strategies it plans to implement |
| Developing a Strategy Map | The main idea of a strategy map is that each strategic objective (selected as part of the preceding step) can be mapped (usually visually) in a way that allows the organisation to describe and communicate its strategies concisely and succinctly. It aids in closing the gap between formulation and successful implementation of a strategy in that it clearly maps how the organisation will create value through a combination of technology, employee and business processes that will satisfy client/ customer/ stakeholder demands.

Using each of the strategic objectives as starting point, the next step in strategy mapping is to choose the appropriate value proposition that will help the organisation achieve the objective.

Once the value proposition has been established, plans and strategies are formalised around revenues and costs. While it is necessary to pay attention to revenue growth, productivity as well as asset utilisation as part of this process, the choice of value proposition will dictate where effort and energy will be spent.

The next step involves the formalisation of customer oriented plans and strategies aimed at (i) retaining and adding customers, (ii) increasing revenue per customer, or (iii) reducing cost per customer. Although this approach focuses on clients/customers (a profit motive), utilities and service organisations must not lose focus of the fact that financing remains a prerequisite for ongoing organisational functioning. As with the formalisation of the strategy regarding revenues and costs, the choice of value proposition once again dictates where the firm should focus its effort and activity.

Having established financial and customer strategies, it is necessary to map out the specific necessary and sufficient actions that will allow the achievement of plans and strategies. In other words, a move from 'what do we want to accomp0lish?' to 'how do we want to accomplish?'

Whatever the specific approach used, specific criteria for evaluating and choosing among steps to be implemented. They might include such criteria as the following:

Value – Will the activity contribute towards reaching the objective and agreed upon goals?

Appropriateness – are the actions consistent with the organisation's mission, values, operating principles as well as the objectives to be achieved? |

FOCUS AREA	ACTIVITIES
	Feasibility – are the tasks practical and in line with personnel and financial resources and capacity? If not, can it be achieved by introducing additional activities to ensure sufficiency?
	Based on these or other agreed-upon criteria, specific tasks can be evaluated and selected, or prioritised.
	In agreeing upon specific actions, there will be a need to clearly define responsibilities for their implementation.
	Having developed the strategy map, it will become obvious that there appear to be gaps in the knowledge, skills and abilities that are needed to execute the strategy. Although some issues may have been identified as part of the process to test feasibility, finalising the mapping exercise will require an additional step aimed at identifying and bridging gaps that could limit the organisation's ability to execute the key processes identified. In addition, the requirements to overcome constraints identified in the process.
	Once the map has been completed, it will be necessary to engage in a final process to validate the cause and effect linkages and logic of the map. This process of validation requires testing and proving that improvements in measures at one level of the map will create improvements at other levels, clearly contributing to the achievement of the overall objective set.
Setting Performance Measures & Targets	Setting performance measures and targets serves as the process to operationalise the Strategy Map. It requires board, staff and (for example with an external regulator) external stakeholder input, with senior staff usually taking major responsibility for developing performance measures and targets, ratified by the board. The process is usually accompanied by a commensurate process where the board defines a strategic governance monitoring role, based on the performance measures and targets.
	Setting performance measures and indicators may be broken into the following broad steps:
	Design appropriate performance measures that reflect the organisation's goals and serve to encourage the right behaviour from those responsible for delivering the goals.
	Collect data in a timely and relatively accurate format as basis for setting performance targets. While not necessarily perfect, data will need to be consistent, reliable and fit for purpose.
	Set targets for monitoring performance.
	Design an action plan for performance monitoring and measurement that cover all the projects and changes to the organisation that are needed to ensure that the targets are reached.
	Discuss action plan and agree implementation. This must be seen as a regular, two-way process and could include regular staff meetings aimed at confirmation of objectives, goals are outlined and progress discussed. Regular (bi-annual/annual) reporting as part of the organisational progress report is usually a requirement.

FOCUS AREA	ACTIVITIES
Strategic Initiatives	Once the framework is in place, the critical strategic initiatives required can be identified and prioritised. Decisions regarding the allocation of resources will be based on the priority ascribed to an initiative.

Annexure I - Key components of Organisational Design and Human Resource Development

FOCUS AREA	ASPECTS OF IMPORTANCE
Organisational Design	• There is a formal organisational design in place (including and organogram) • The organisational design clearly reflects the key results areas and objectives of the organisation? • The organisational structuring is helpful in allowing it to achieve its organisational strategic priorities and goals. • The organisational structure clearly reflects governing and operational components. • The design makes provision for appropriate decentralised functioning (as necessary), including in respect of oversight and operational elements. • There is clarity about, and clear alignment in respect of authority and responsibility. • The organisational design aligns with the key task areas and the requisite linkages between units of production. • There is a deliberate and clear linkage between the design of the organisation and organisational development strategies (including those related to Human Resource Development)? • Technological Capacity is in place to maximise organisational performance based on design, including basics such as electronic databases, management systems, billing systems and mechanisms to promote technological 'absorption' and adaptation
Human Resources Management	• There is clear evidence of human resources (people) planning and management, including resource allocation. • There are coherent staffing norms and standards in place. • Job descriptions and associated qualification and competence requirements have been described that substantively speak to the key task/delivery areas. • Job descriptions are used as a basis for recruitment. • There are performance appraisal systems in place and staff performance is monitored against this. • There is an organisational development strategy and training plan in place for the organisation and an acceptable training budget allocated. • The organisational development strategy has been based on an understanding of the capability and implications of the country's TVET and/or tertiary education and training sector to support key areas related to Human Resource development. • Clear succession planning systems are in place, including for key personnel in areas requiring critical and/or scarce skills. • There is a coherent policy (and associated practices) in place for performance rewards, incentives and compensation. • Labour legislation, including in respect of Occupational Health and Safety, minimum wages, basic conditions of employment and labour relations (including membership of unions) is adhered to. • Technical Capacity is demonstrated through (i) Number, Mix and Capacity of Technical Staff; (ii) Technical Quality Standards; (iii) Technical Supervision; (iv) Training and Mentoring; (v)

FOCUS AREA	ASPECTS OF IMPORTANCE
	Client/Beneficiary Communications; (vi) Community Involvement; (vii) Service Delivery Organisation and Quality Assurance; (viii) Referral Systems for Continuum of Prevention, Care and Support Services • Organisational Capacity is demonstrated through (i) Governance and Leadership; (ii) Management Practices (iii) Operational Planning; (iv) Structure: Roles and Responsibility; (v) Structure: Delegation of Authority and Decision-Making; (vi) Partnering and Networking • Capacity is in place as needed for (i) Procurement and Supply Management; (ii) Operations and Maintenance; (iii) Monitoring for Management; and (iv) Decentralised delivery

Annexure J - Identifying Performance-related Measures for OD and HR

OD & HR INDICATORS	MEASUREMENT AREAS
Demographic Indicators	• Number of employees • Median age • Median length of employment • Median salary • Gender diversity (i.e. ratio # of women vs. # of men) • Diversity (i.e. women, minorities, handicapped, etc.)
Organisational Structure Indicators	• % of permanent employees • % of full-time employees • % of part-time employees • % of temporary employees • % per hierarchic level • Additional major indicators: • Turnover rate (including overall, voluntary and involuntary) – this ratio represents the number of employees who leave the organisation for a given period of time, compared to the average number of employees during the same time period. • Retention rate: measures the percentage of employees still employed at the end of a given period. • Supervision rate: the number of employees supervised by a single manager. It provides an idea of the breadth of responsibility of a manager and is influenced by the extent of 'direct contact time' required by each employee.
– Productivity Indicators	Absenteeism: • Absence rate: the total number of work hours lost to absenteeism compared to the total number of available work hours. • Number of lost work days per employee: this indicator measures the number of absent days per employee. • Bradford factor: this indicator creates a relation between the frequency of absences with their duration. It allows the attribution of an individual score to each employee, which in turn allows the identification of disrupting individuals. Other Absenteeism Metrics: Average absence duration Absence Frequency Rate Overtime:

OD & HR INDICATORS	MEASUREMENT AREAS
	• Overtime Rate: represents the number of overtime hours compared to the total number of regular worked hours for a given period of time. • Overtime Frequency Rate: the total number of employees who worked overtime compared to the average number of employees in the organisation. • Overtime expressed as percentage of labour cost: it represents the cost of overtime compared to the total labour cost of an organisation.
Recruitment Indicators	• Average cost per hire: measures the average amount spent to recruit a new employee. • Average number of days to hire: the average amount of time required (number of calendar days) to fill an open vacancy. • Recruitment Quality Index: this indicator measures the efficiency of the recruitment function in addition to measuring the quality of the new recruits themselves. Usually, this index is personalised for each organisation (including notably: the retention rate of new hires, their performance, and satisfaction, as well as the satisfaction of their manager). Other Recruitment Metrics: • Average number of days to fill key positions • Turnover rate of new recruits (after one or two years) • Quit rate of new hires (after one or two years) • Diversity of new recruits (in managerial positions). • Offer acceptation rate • Referral hire rate • Re-hire rate • Interviewee satisfaction rate (in relation to the recruitment process)
Internal Movement Indicators	• Promotion Rate: the number of employees that have been promoted in comparison to the total number of employees. • Internal Mobility Rate: the total number of employees that were promoted, transferred, or demoted, compared to the total number of employees. • Career Path Ratio: this ratio encompasses the total number of promotions versus the total number of internal movements (promotions + demotions + transfers).
Training & Development Indicators	• Average number of training hours per employee • Training Investment per Employee: how much is spent on employee development per employee. Other Training & Development Metrics:

OD & HR INDICATORS	MEASUREMENT AREAS
	Volume: • Number of courses offered • Number of trained employees • % of trained employees • Number of hours of training hours provided • Average training duration • Number of individual development plan • Completion rate of individual development plan Quality: • Training satisfaction rate • Abandonment rate • Training success rate • Number of successful employees Cost: • Total training cost • Training cost per hour • Training cost expressed as a % of total costs.
Performance Management Indicators	• Performance Management Index: average performance of total employees (reporting to a manager), expressed as a percentage of a target score. • Pay Rate Differential between high performers and others: compares how much more high performers are paid in comparison to other groups (satisfactory employees and under-performers). • High Performers Turnover Rate: percentage that represents the number of high performers who leave the organisation for a given time diver, in comparison the total number of high performers during the same time period. Other Performance Management Indicators: • Number of performance appraisals • % of appraised employees • Average performance • Number or % of high performers • Number or % of low performers • Number or % of satisfactory employees • Number or % of high potentials.
Succession Indicators	• Pipeline Utilisation or % of key positions filled internally: the percentage of key roles that are filled through succession planning, in other words internally. • Succession Pipeline Depth or % of key roles with at least one identified successor: the percentage of key positions with

OD & HR INDICATORS	MEASUREMENT AREAS
	• Bench Strength or % of key positions with a "ready-to-go" successor: it's the percentage of key roles which have a replacement ready to step in. • Number of Days to Fill Key Positions: the time lapse between the departure of a manager and the arrival of a replacement. • Successor Performance: the average performance of the internally promoted replacements. • High Potential Turnover: percentage representing the number of high potentials who leave the organisation during a given time period, in comparison to the total number of high potentials at the same time. Other Succession Metrics: • Number and % of key positions identified • Number and % of vacant key positions • Number and % of high potential employees identified • Number of candidates identified during the succession planning process • Number of ready successors • Number of successor per key position • % of key positions without suitable replacement.
Leadership Development Indicators	• Leadership Quality Index: measures employee satisfaction when it comes to management and leadership. It is based on employee satisfaction survey. • Management Performance Index: the average performance of a manager based on his or her subordinates' performance • Management Quality Index: this indicator measures managers' quality based on a range of factors. They can notably include: individual managers' average performance rating, employees' satisfaction of their own manager, the percentage of high performers in the manager's team, the promotion and retention rate of their own team. Other Leadership Development Indicator: • Management staff ratio • % of managers without subordinates • Management average length of service • Management stability rate • Number and % of identified leaders • Number and % of potential leaders identified • Training investment cost per leader • Leader promotion rate.
Remuneration Indicators	• Average Pay Per Employee: measures the average annual investment of an organisation in its human capital.

OD & HR INDICATORS	MEASUREMENT AREAS
	• Total Remuneration Evolution: This indicator measures, as a percentage, the differences of salary from one year to another. • Labour cost as a % of total revenues: this represents the total labour cost in comparison to the total amount of operating income of an organisation, expressed as a percentage. • Compa-ratio: the comparison of an employee's wage in relation to the median value on an organisation's pay scale.
Financial Indicators	• Revenues Per Employee: revenues generated for each employee, or full-time equivalent • Profits Before Tax Per Employee: the amount of profit before tax for each employee, or full-time equivalent. • Human Capital ROI: the profit before tax for every dollar invested in wages and social compensations. • Human Capital Added Value: this indicator measures the value added per employee. It adjusts the profit value by neglecting the expenses related to human capital.
HR Indicators	• HR Expenses Per Employee: this indicates the total amount invested in the HR function per employee. Direct HR costs include internal costs such as salaries & benefits, consulting and external providers, and technology-related costs). • HR Ratio Per Employee: the total number of HR workers over the total number of employees. • Level of Satisfaction in Relation to HR: the employee satisfaction rate with regards to the work of the HR function.
Engagement Indicators	• Employee Engagement Score: this indicator measures the engagement of a workforce based on a range of factors, including notably: retention rate, employee surveys, average performance, promotion rate, absenteeism • Net Promoter Score: a legacy from marketing practice, the net promoter score or NPS measures the difference between the number of promoters and detractors of an organisation with one question – Would you recommend our organisation to your friends and colleagues?

Annexure K - Typical Institutional Workplan Format

Item No.	Activity Description	Source of Funds	Consulting Time (days)	Consulting Rate (Pounds Sterling) #	Cost (Pounds Sterling)	Disburse (Pounds Sterling)	Unit Equipment /Material Cost (Pounds	Number	Cost (Pounds Sterling)	Provisional Sum (Pounds Sterling)	Total Cost (Pounds Sterling)	Remarks
-	**Gearing Up**				-				-		-	
0.1	Workshop institutional strengthening proposals with CRWB	CRIDF	2	450	**900**	225	-	-	-	-	**1 125**	
0.2	Refine plan	CRIDF	1	450	**450**	113	-	-	-	-	**563**	
1	**Institutional Arrangements**											
1.1	Refine and confirm institutional model for Mchinji	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
1.2	Liaise and coordinate (as necessary) with other key institutions to ensure effective planning and implementation of the Mchinji scheme.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
1.3	Identify private operators for ablution blocks and put in place supply/service contracts.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
2	**Governance**											
2.1	Lobby with National Government regarding increased autonomy for the Water Board	NA	-	450	-	-	-	-	-	-	-	Being addressed as part of wider Public Sector Reform process.
2.2	Consult with MLGH regarding skills make up of Board	NA	-	450	-	-	-	-	-	-	-	Being addressed as part of wider Public Sector Reform process.
2.3	Identify key training courses necessary for new Board and conduct these.	NA	-	450	-	-	-	-	-	-	-	Already
3	**Strategic Management**											

Item No.	Activity Description	Source of Funds	Consulting Time (days)	Consulting Rate (Pounds Sterling) #	Cost (Pounds Sterling)	Disburse (Pounds Sterling)	Unit Equipment /Material Cost (Pounds	Number	Cost (Pounds Sterling)	Provisional Sum (Pounds Sterling)	Total Cost (Pounds Sterling)	Remarks
3.1	Consider review of strategic plan to address some key additional challenges and opportunities	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB. Additional support could be considered on request.
3.2	As this scheme will be started from scratch it can be used by CRWB to test new (best) practices and	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
3.3	Investigate options for use of local residents and entrepreneurs for outsourced tasks at Mchinji Border.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
3.4	In view of the strategic location of the new scheme and potential broader impacts (even international) consider giving the operation and maintenance of these schemes some level of higher priority.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
3.5	Consider inclusion of Mchinji Town to enhance the potential for best practice learning purposes.	CRIDF/CRWB	-	450	-	-	-	-	-	20 000	**20 000**	
3.6	Facilitate twinning arrangements with other appropriate Southern African utilities.	CRIDF	-	450	-	-	-	-	-	20 000	**20 000**	Support to set up the arrangements and facilitate ongoing engagement, research and analysis thereafter.
4	**Financial Management**											
4.1	If possible, create a separate "profit centre" (i.e. ring fenced) for the new scheme	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
4.2	Provide guidelines to private operators regarding tariffs	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
4.3	Implement programme to replace old and defective meters	TBD	-	450	-	-	50	13 500	**675 000**		**675 000**	Total budget is clearly out of the question for CRIDF to finance however it may consider supporting the effort in selected areas
5	**Organizational Design and Human Resources**											

Item No.	Activity Description	Source of Funds	Consulting Time (days)	Consulting Rate (Pounds Sterling) #	Cost (Pounds Sterling)	Disburse (Pounds Sterling)	Unit Equipment /Material Cost (Pounds	Number	Cost (Pounds Sterling)	Provisional Sum (Pounds Sterling)	Total Cost (Pounds Sterling)	Remarks
5.1	Review CRWB organogram to determine optimum arrangements for management of the new scheme.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
5.2	Implement changes to organogram as considered necessary.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
5.3	Training to be undertaken for staff involved in operation of new scheme.	CRIDF	-	450	-	-	-	-	-	-	-	Cost should be included in the estimates for construction of the new scheme - either under the contractor or the RE.
5.4	Assist the Water Institute to enhance its activities in areas such as the development of process controllers and apprenticeships for artisans	TBD								20 000		
6	**Asset Management (including Operation)**											
6.1	Put in place SOPs for the new scheme	CRIDF	-	450	-	-			-		-	Assumes that costs are included in the estimates for construction of the new scheme - either under the contractor or the RE
6.2	Put in place system to carry out water balance on a monthly basis.	CRIDF	25	450	**11 250**	2 813			-		**14 063**	Includes set up of system and support for 6 months. Excludes any equipment costs.
6.3	Septic tanks at ablution blocks to be monitored and emptied regularly.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
6.4	Populate Infrastructure Assets Register (IAR) with information on new scheme	CRIDF	10	450	**4 500**	1 125			-		**5 625**	This is to design and set up the system. It assumes that the cost of capturing the information will be borne by the construction contract. Also assumes that simple spreadsheet system will be used in the first instance. To address Border and Town.
6.5	Planned maintenance schedule	CRIDF	8	450	**3 600**	900			-		**4 500**	Ideally to address Mchinji Border and Town.
6.6	Develop Infrastructure Asset Management Plan (IAMP)	CRIDF	-	450	-	-			-	15 000	**15 000**	This will be limited initial system to address the pilot in Mchinji Town and Border

Item No.	Activity Description	Source of Funds	Consulting Time (days)	Consulting Rate (Pounds Sterling) #	Cost (Pounds Sterling)	Disburse (Pounds Sterling)	Unit Equipment /Material Cost (Pounds	Number	Cost (Pounds Sterling)	Provisional Sum (Pounds Sterling)	Total Cost (Pounds Sterling)	Remarks
6.7	Develop and implement a Water Safety Plan	CRIDF	-	450	-	-	-	-	-	-	-	Costing included in item 7.8
6.8	Assist CRWB to develop an organisation wide NRW strategy	TBD	-	450	-	-	-	-	-	25 000	25 000	
6.9	Consider use of simple SCADA system at Mchinji Border	CRIDF/ CRWB	-	450	-	-	-	-	-	5 000	5 000	
7	Service Quality											
7.1	Ensure that Mchinji Border is added to CRWB's Compliance Monitoring Programme	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB. Option of additional critique/inputs to improve compliance programme.
7.2	Engage actively with the local communities at Mchinji Border during the planning and implementation process.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
7.3	Public awareness campaigns	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
7.4	Design and implement programme to promote safe sanitation in Mchinji Border	CRIDF	40	450	18 000	4 500			-		22 500	Will be done in-house by CRWB however TA could be considered to support initiative as this is a new area of focus for CRWB. NB will require small team of specialists to support
7.5	Promote the use of private connections in the two new schemes.	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
7.6	Consider option of additional ablutions for tourists	CRWB	-	450	-	-	-	-	-	-	-	Will be done in-house by CRWB.
7.7	Consider use of mobile phone technology for payment and communication programmes	CRWB	-	450	-	-	-	-	-	-	-	Already being practiced by CRWB.
7.8	Review, critique and improve CRWBs compliance monitoring programme	CRIDF	32	450	14 400	3 600	-	-	-	-	18 000	

Annexure L - Typical Terms of Reference for a Targeted Institutional Support Intervention

Draft Terms of Reference for Institutional Support for Non Revenue Water Management

1 Introduction and Context

The Kazungula water system is to be rehabilitated and upgraded. Much of the distribution and reticulation pipe network will be new, and the system will be equipped with water meters to measure water quantity at key locations both within the system and at points of delivery to consumers. Water losses, both real and apparent will be low.

The Kazungula scheme is relatively small, but expected to grow dramatically during and after construction of the bridge across the Zambezi, and the associated border control facilities. The nearby, and larger, town of Livingstone, some one hours travelling away, is the centre from which the Kazungula system will be managed. The SWSC intends that Kazungula and Livingstone combined will be developed into their best practice entity on which other water schemes can be modelled.

The SWSC is a private water utility owned by the municipalities it serves, and while it has significant capacity in all aspects of water utility operations, it intends to enhance its standards of excellence using the vehicle of the Kazungula upgrade project.

Therefore, NRW work will begin in the design phase of the project, during construction and during commissioning. The on-going operational work to set up and embed the NRW systems and procedures will take place thereafter.

2 Contract Purpose

The purpose of this contract is to develop the capacity of SWSC to achieve generally accepted best practice NRW standards in Kazungula and Livingstone following the format of the standard IWA model, and thereby facilitate replication of the practices in other schemes within SWSC's area of operations.

SWSC has been practicing NRW and needs primarily to standardise their approach across the organisation in line with international standards.

3 Scope of Work

While available information suggests that NRW is well understood in SWSC, current knowledge of the institutional situation of SWSC as it relates to water services operations in Kazungula and Livingstone is insufficient to confidently prescribe the scope of tasks required of the PSP. However, the tasks listed below are likely to be required to a greater or lesser extent, and the envisaged quantum is expected to require some twelve, perhaps non-consecutive, months of work:

1. For the purpose of ensuring that effort achieves expected outcomes by developing a common understanding of SWSC's existing NRW strategies and the rationale behind each, as understood by the Managing Director, the PSP shall re-describe them and have the MD confirm their validity
2. For the purpose of defining the boundaries and details of the scope of work, and to provide a basis for measuring the success of the project, the PSP shall facilitate a process through which affected sections within Operations, Finance, Social Services and Human Resources sections of SWSC work collaboratively to formulate measurable goals for the project with specific objectives, responsibilities individually allocated, timelines estimated and measurement systems instituted
3. Review job descriptions and qualifications specifications of key positions that have some NRW

role in the Operations, Finance, Social Services and Human Resources sections, and that are critical to successful implementation and sustainability of the NRW strategy, and if warranted assist to re-draft in collaboration with incumbents and Human Resources.

4. Assess knowledge gaps in the personnel concerned with NRW and provide training to ensure all are well prepared for their NRW roles.
5. Provide on-site coaching in the Operations, Finance, Social Services and Human Resources sections as required to guide SWSC in prioritising, detailed planning, designing and setting up and testing systems, and providing advice relating to adjustments required in the light of experience
6. Six months into the coaching programme, carry out structured performance appraisals (in accordance with SWSC systems, enhanced to focus attention on NRW aspects) on personnel whose jobs involve significant NRW activities, and provide follow up training to correct deficiencies, and recommend other measures that will boost NRW effectiveness.
7. Following nine months of coaching, the PSP shall facilitate a process whereby the managers of each of the Operations, Finance, Social Services and Human Resources sections present an account to the top management team on the NRW situation in Kazungula and Livingstone using the IWA model
8. Once the managers of each of the Operations, Finance, Social Services and Human Resources sections having NRW functions have confirmed their readiness to fulfil the functions required of their sections, the PSP shall be considered to have met the assignment targets.

4 PSP's Deliverables

Subject to the limits of the scope that shall be agreed upon at inauguration, the PSP shall ensure the following deliverables are achieved:

1. A base document on which coaching effort will be prioritised, representing a comprehensive suite of measurable goals associated with Technical, Institutional, Financial, Social and Management aspects of the new NRW programme in Kazungula and Livingstone, formulated by designated senior and middle managers based in Livingstone, and establishing specific objectives for each section, with responsibility allocated to individuals accountable for defined deliverables, with timelines estimated and measurement systems identified.
2. Completion of a training and coaching process through which personnel in the Operations, Finance, Human Resources and Social Services sections in Livingstone and Kazungula that are required to implement and sustain the functions and activities necessary for the long-term achievement of Kazungula/Livingstone NRW goals and standards, have had their performance appraised jointly by their manager and the PSP to be at a thoroughly competent level in their performance of their NRW functions.
3. Completion of a coaching and assistance process through which NRW Policies, Standard Operating Procedures, system Performance Standards (based on IWA model separately for Kazungula and Livingstone) and relevant Assets Registers are comprehensively documented.
4. Completion of a coaching and assistance process through which specifications for software systems are described (and assistance with procurement choices given if required), and a complete list of essential items of key equipment with detailed specifications recorded for each (and assistance with procurement choices given if required).

5 Methodology

While available information suggests that NRW is well understood in SWSC, current knowledge of the institutional situation of SWSC as it relates to water services operations in Kazungula and Livingstone is insufficient for a methodology to be prescribed in these terms of reference for tenderers to follow. In order for a fair process to be followed, it will be necessary for tenderers without current insight into the operational status of SWSC in Kazungula and Livingstone to adopt an approach based on a number of possible scenarios, and to describe the methodological approaches that they intend for each.

The assignment will, however, inevitably be primarily coaching in nature, include some formal training

if knowledge gaps are disclosed, and perhaps some physical assistance.

The methodology adopted shall aim to ensure that:

- Those SWSC people who are based in Kazungula and Livingstone and who are charged with day-to-day activities associated with NRW, become thoroughly competent at performing their NRW functions, that they participate in planning their own NRW work, and that they embrace the opportunity to account for their own achievements and challenges
- The suite of systems, budgets, standards, operating procedures, tools and equipment necessary to attain acceptable protection of water resources, levels of water losses and proportions of non-revenue water for appropriate are precisely known by management who have responsibility for aspects of NRW in Kazungula and Livingstone
- Because of SWSC's stated desire for the project to become worthy of emulation by other towns where water services are under SWSC management, that insights are disseminated and promoted in as much width and depth of SWSC as possible about the meaning, importance and practice of the concept of NRW (within the constraints of the scope and budget of this project).

Annexure A gives additional background information and suggestions to assist the bidder.

6 Team Expertise

Given that current knowledge of the institutional situation of SWSC as it relates to water services operations in Kazungula and Livingstone is insufficient to be too prescriptive in terms of expertise requirements for the PSP team, tenderers shall be prepared for minimum levels of expertise within their team as follows:

- Team leader to be a NRW expert with O&M experience – a civil engineer who has specialised in the field for at least five years, with extensive experience in water utilities operating in a urban context
- Field trainer and coach, who will carry out the bulk of the developmental work – with practical NRW and associated civil engineering subject matter knowledge, field expertise in the use and application of 'the tools of the trade' such as data loggers, listening devices, experience with installations and troubleshooting involving various control valves, water meters and instrumentation including telemetry, and GPS devices
- Social scientist – with extensive experience in Zambia in community development and interaction, with experience in coaching social practitioners and community members
- HR training and development specialist/s – with extensive experience in investigating and determining training needs, developing personal development plans, recruitment and selection, and performance management

For the purpose of resource allocation and pricing, bidders should assume the following demands on the time of resources assuming a 12 month contract period:

- Team leader (Engineer, NRW expert with O&M experience) –

  35 days on site
  15 days off site

- Field trainer and coach (Technician or equivalent with NRW experience bulk of the developmental work) –

  90 days on site
  10 days off site

- Social scientist (Zambia experience) –

  30 days on site

10 days off site

- HR training and development specialist/s –

15 days on site
15 days off site

7 Timeframes

Depending on implementation progress of the technical elements, there will be a period of low or no activity on the NRW project too far in advance of commissioning. It is undesirable that organisational learning takes place without the benefit of functional infrastructure at Kazungula.

It is planned that NRW project work will extend for approximately twelve months, and should start shortly before, perhaps one month, before the final commissioning test phase is expected to begin.

8 Evaluation of Proposals

Evaluation of bids will consider:

- The qualifications and experience of the team that will carry out the assignment
- The nature of work in Zambia and other SADC countries in which the bidding entity has been involved
- The quality, quantity and location of support resources that the bidding entity can deploy in support of the field team
- The methodology and approach that the bidding entity expects to use to define the scope of work at the start, and then to execute the work within the scope
- Cost of resources and total cost

The scoring system to be used for the technical evaluation is shown in the table below.

FACTOR	DESCRIPTION	POINTS ALLOCATION
Company profile and experience	Provide details of projects of a similar nature undertaken by the company. Emphasis here on NRW management, institutional development and work in Southern Africa.	20
Curriculum Vitae of proposed team	Provide details of relevant experience to demonstrate required years of experience has been attained (as outlined in Section 6). NB experience of NRW management, institutional development and work in Southern Africa.	Team Leader: 20 NRW Technician/Field Trainer: 15 Social Specialist: 10 HR Specialist: 10 Subtotal: 55
Methodology	Expand and outline methodology proposed by the bidder in order to respond adequately to the terms of reference.	25
TOTAL		**100**

Price

Pricing of the bids will be considered after the technical evaluation has been undertaken however the "two envelope system" will not be utilised in this case.

Annexure M - Draft Workplan Format to Facilitate M and E in the Implementation Phase

Item No.	Activity Description	Source of Funds	Consulting Time Cost (Pounds Sterling)	Equipment /Material /Systems Cost (Pounds Sterling)	Provisio nal Sum (Pounds Sterling)	Estimat ed Total Cost (Pounds Sterling)	Performance indicators(s)	Responsi ble person	Target date	Progress to date	Expendit ure to date	Explanatory comments
-	**Gearing Up**		-			-					-	
0.1	Workshop institutional strengthening proposals with CRWB	CRIDF										
0.2	Refine plan	CRIDF										
1	**Institutional Arrangements**											
1.1	Refine and confirm institutional model for Mchinji	CRWB	-	-	-	-	-				-	
1.2	Liaise and coordinate (as necessary) with other key institutions to ensure effective planning and implementation of the Mchinji scheme.	CRWB	-	-	-	-	-				-	
1.3	Identify private operators for ablution blocks and put in place supply/service contracts.	CRWB	-	-	-	-	-				-	
2	**Governance**											
2.1	Lobby with National Government regarding increased autonomy for the	NA	-	-	-	-	-				-	
2.2	Consult with MLGH regarding skills make up of Board	NA	-	-	-	-	-				-	

Item No.	Activity Description	Source of Funds	Consulting Time Cost (Pounds Sterling)	Equipment /Material /Systems Cost (Pounds Sterling)	Provisional Sum (Pounds Sterling)	Estimated Total Cost (Pounds Sterling)	Performance indicators(s)	Responsible person	Target date	Progress to date	Expenditure to date	Explanatory comments
2.3	Identify key training courses necessary for new Board and conduct these.	NA	-	-	-	-	-				-	
3	**Strategic Management**											
3.1	Consider review of strategic plan to address some key additional	CRWB	-	-	-	-	-				-	
3.2	As this scheme will be started from scratch it can be used by CRWB to test new (best) practices and	CRWB	-	-	-	-	-				-	
3.3	Investigate options for use of local residents and entrepreneurs for outsourced tasks at Mchinji Border.	CRWB	-	-	-	-	-				-	
3.4	In view of the strategic location of the new scheme and potential broader impacts (even international) consider giving the operation and maintenance of these schemes some level of higher priority.	CRWB	-	-	-	-	-				-	
3.5	Consider inclusion of Mchinji Town to enhance the potential for best practice learning	CRIDF/CRWB	-	-	-	-						
3.6	Facilitate twinning arrangements with other appropriate Southern African utilities.	CRIDF	-	-	-	-						