



## IMPROVING WATER SERVICES PROVISION THE NATIONAL MUNICIPAL BENCHMARKING INITIATIVE

**Benchmarking our way to better services, more effectively,  
more efficiently**

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### ABSTRACT

The SALGA/WRC Municipal Benchmarking Initiative (MBI) was re-launched in April 2011, re-establishing water services benchmarking amongst municipal Water Services Authorities in South Africa, and building on the lessons learned from earlier efforts.

For municipalities, the key benefits of benchmarking are access to a support network of peers and dedicated professionals where they can share common experiences, achievements and challenges in a manner that enables improved performance. A novel South African feature introduced to water services benchmarking is the modular and tier based approach which encourages and enables participation by all, at a level aligned with their current capabilities and future aspirations. Web-based reporting systems, and automatically generated performance reports, offer time saving, reliability and the potential for enhanced management oversight.

The MBI offers a bottom-up focus on the performance measurement capabilities of municipalities, with the provision of appropriate support to strengthen performance reporting systems and affirm their importance for effective service delivery. The objective is improved service delivery, achieved through improved management decision-making and oversight, which rests in turn on more reliable, comprehensive and up-to-date performance data. The focus is on spurring internal performance improvement, with an emphasis on affirming the distinctiveness of each municipality's challenges and strengths. Effective benchmarking will lead to substantial improvements in service delivery efficiencies and associated economic benefits. The supporting MBI project team includes IMESA and eThekweni Metropolitan Municipality.

### THE MUNICIPAL WATER SERVICES CHALLENGE

Water services provision in South Africa is the responsibility of municipal Water Services Authorities (WSAs). These organisations, and their associated water utilities, are facing significant challenges as they strive to increase the quality and manage the costs of services to their customers. Many of these challenges are generally universal (Water Research Foundation, 2014), including:

- increased customer level of service demands
  - financial Constraints
  - ageing infrastructure
  - security and emergency response concerns
  - growth
  - climate change and reduced environmental footprint pressures
  - stricture regulatory environment
  - retirement/loss of experienced staff and related workforce shortages.
- Additional South African challenges include rapid urbanisation and the need for prioritised apportionment of scarce resources across the municipality's broader services delivery mandate. Notwithstanding the progress made by WSAs in increasing services delivery over the last 20 years, many

times these complexities hamper WSAs in delivering desirable levels of efficient and sustainable services to consumers. Social protests against inadequate services delivery have increased in recent years, from 10 in 2004 to 173 in 2012 (Naidoo, 2013), and were a major feature of the 2014 National Elections (Department of Water Affairs and Forestry (2014) Water and its Role in a Better Life for All, Alignment of MTSF to NDP & Manifesto, unpublished data).

The South African Local Government Association (SALGA) and the Water Research Commission (WRC) have long been cognizant of these challenges and have been supporting a host of activities to address them. Recognised within this is the importance of performance measurement and management, and that effective municipal water services benchmarking is a key tool to improve service quality, expand service networks and optimise operations. This paper seeks to highlight the value of the SALGA/WRC MBI, and in particular key areas of progress since the re-launch in April 2011.

### THE SALGA/WRC MUNICIPAL BENCHMARKING INITIATIVE

SALGA and WRC have sought to re-establish municipal water services benchmarking in South Africa as a force for performance improvement. The purpose of the MBI is as an internal municipal management tool to assist municipalities in strengthening their performance measurement and monitoring systems, thereby identifying where their key challenges lie and from there formulate response strategies, with external assistance, with reference to peer review and knowledge sharing. Associated comparative benchmarking amongst WSAs flags the strong performers in particular areas as a source of learning and information sharing amongst peers. The MBI has built on the learning's of preceding benchmarking initiatives, and in particular seeks to use water services benchmarking to strive for continual and significant performance improvement by municipalities, while harnessing the experience of their peers to make the most efficient use of available resources to improve service delivery and customer services.

More specifically the MBI aims to:

- support improved efficiency and effectiveness in water services delivery through comparative performance benchmarking, peer-to-peer knowledge sharing and iterative performance improvements
- strengthen performance measurement, monitoring and management in municipal water services provision, whilst recognising and affirming the distinctiveness of each municipality's challenges and strength
- build communities of practice within and between municipalities
- forge relationships of mutual respect and trust between municipalities and the MBI team which strengthen the development of performance tracking, reporting and comparative assessment systems.

The MBI support team is well balanced, and in addition to experienced professional services providers from Emanti Management, Palmer Development Group and Maluti GSM also includes the Institute of Municipal Engineering of Southern Africa (IMESA) and eThekweni Water and Sanitation.

### WHY DO BENCHMARKING?

#### Benchmarking – some definitions

Benchmarking is defined as the continuous process of measuring one's products, services and practices against those companies recognised as industry leaders. It also includes the search for the best industry practices that will lead to superior performance.

#### Benchmark

- Noun: a standard or point of reference against which things may be compared
- Verb: evaluate (something) by comparison with a standard (Oxford Dictionary of English)
- Typically levels of performance of another organization

### Baseline

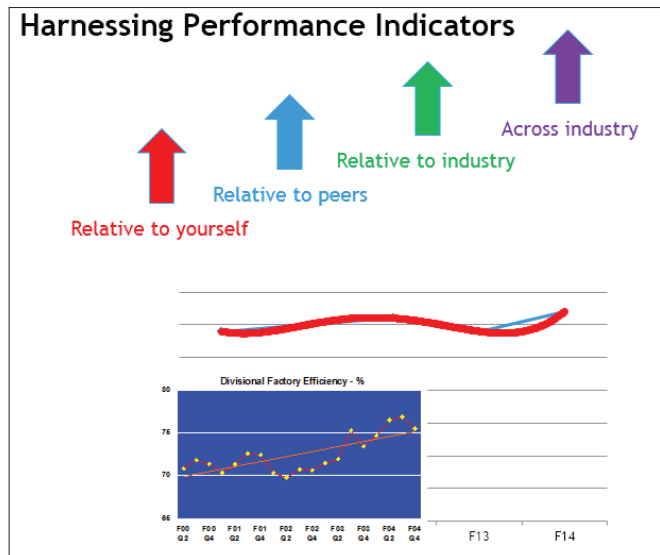
- A minimum or starting point used for comparisons
- E.g. Average current performance – check in future – changing?
- Target
- Level of performance you are aiming to reach in the future

### Standard

- A level of quality or attainment (Oxford Dictionary of English)
- E.g. attend to all bursts within 6 hours

The process of benchmarking often involves the following steps (Adam and Vandewater, 1995):

- knowledge of one's own operations (i.e. understanding one's strengths and weaknesses)
  - gaining knowledge of the external market by researching other companies. In this regard, it is important to know what companies in other industries are doing – some useful ideas and techniques may be adopted
  - establishing performance targets based on the knowledge gained
  - directing one's efforts on the established best operating characteristics
- The stages and maturity of benchmarking are illustrated in Figure 1 below (Petrarolo, D (2014), unpublished data).



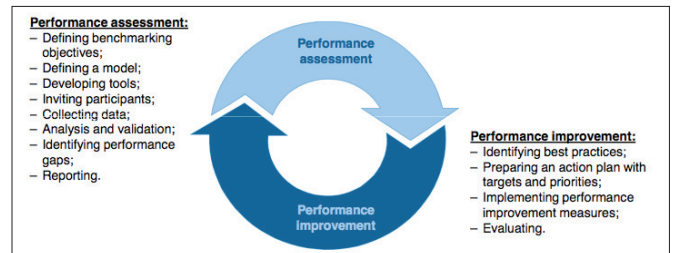
**FIGURE 1** Maturity levels of Benchmarking

Benchmarking is thus a tool to identify, establish and achieve standards of excellence; standards based on the realities of the market place. In this context, benchmarking reveals who the strong performers are, and raises constructive questions about what it is that they are doing that enables them to outperform their peers. Comparative performance indicators alert municipalities as to where their key vulnerabilities lie, and strengthen their receptivity to initiatives aiming to address such. Often this will provide “breakthrough” thinking within organisations that lead to non-linear improvements / breakthroughs in performance

### The Relationship between Performance Measurement and Performance Improvement

Benchmarking is about more than comparative assessment – year on year, assessing this year's performance against last year's, or this year's performance against this year's top performers elsewhere. Benchmarking is essentially all about performance improvement. It is not an end in itself; it is a tool, and a means to a far greater end – performance improvement, through systematic search and adaptation of leading practices (Cabrera and Pardo, 2008). The point is to reflect on the findings to decide how and where to improve.

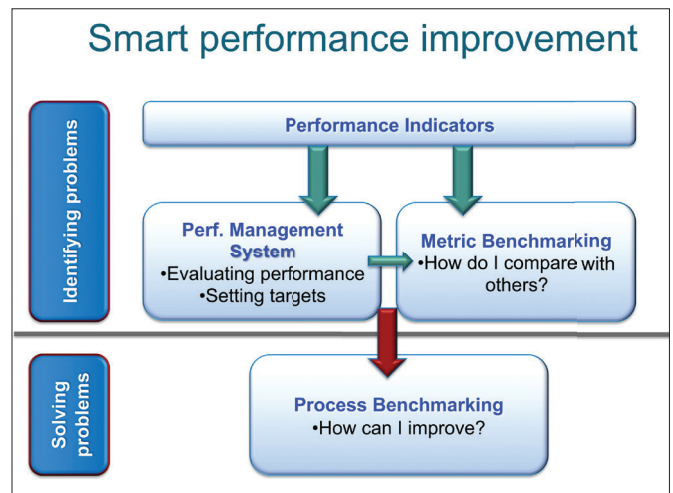
The European Benchmarking Co-operation distils the relationships between performance assessment and improvement in this way:



**FIGURE 2** The relationship between performance assessment and improvement (Source: EBC, 2010)

It is evident from this diagram that benchmarking is not a once-off event or a static snap-shot.

Figure 3 illustrates the critical linkages between data, performance information, performance management and benchmarking.



**FIGURE 3** The relationship between data, performance information, performance management and benchmarking

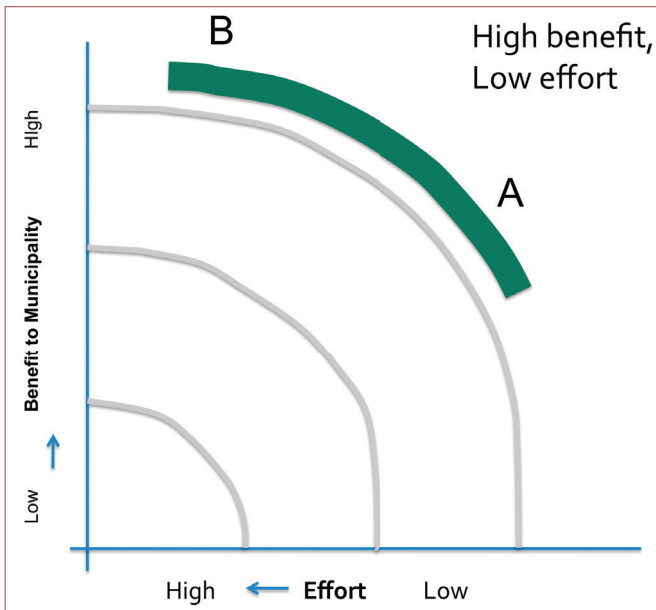
As shown in Figure 3, performance indicators enable comparison with others. At the simplest level, quantitative indicators enable quantitative comparison, known as metric benchmarking. Metric benchmarking shows how the current performance of an entity compares with the performance in a previous time period, or how the performance of one entity compares with the performance of another organisation. It is, however, not diagnostic, and cannot explain why the performance of one entity is different to another.

The reasons for the differences in performance between two or more entities fall into two broad categories:

- those beyond the control of management (water sources, terrain and topography, legacy issues relating to past investment decisions, etc)
  - those within the control of management (level of commitment to excellence, choices made around particular technologies and processes, efficiency of operations, priority given to asset management, etc).
- Benchmarking focuses on performance issues that lie within the control of management.

• **Process benchmarking** is concerned with how a utility approaches a particular task, process or function. It entails detailed analysis of the process flows of a particular aspect of operations (leak detection and repair, customer billing, etc) with the objective of learning from strong performers, and adapting internal systems to refine, streamline and

enhance the process flow to achieve optimal performance. This approach is generally iterative, with opportunities for quick gains tapering towards more subtle adjustments and performance improvement outcomes, once the quick wins have been exploited. Ideally, benchmarking will reveal opportunities for quick wins, through learning from the approaches of others. As Figure 4 shows, the most desirable gains are those that deliver substantial benefits for limited effort (Point A). As the organisation becomes more efficient, achieving further performance improvement requires considerably more effort (Point B).



**FIGURE 4** The relationship between effort and benefits in performance improvement

Learning about possible quick wins can be a powerful motivator to organisations to participate in benchmarking – particularly for participants coming from a low baseline performance. Ideally this incentive can build momentum to strengthen the internal performance management systems that will deliver the steady gains to the benefit of all users and the sector.

Over time, evidence of tangible benefits accrued through participating in benchmarking will also – hopefully – motivate organisations to refine their performance management systems and move increasingly towards Point B efficiency gains.

#### MBI, or Benchmarking Made Simple

Some people think benchmarking is only for metros or involves significant time and/or costs. Not true – municipal participation is voluntary and should focus on what will improve “your” municipal water services.

Every ambitious municipality strives for service quality, efficiency and best practice. Benchmarking will help “your” municipality to get the best results and also how to keep improving. But you choose your level of participation.

#### Benchmarking process

A typical benchmarking process considers the following steps:

- Select useful Performance Indicators (PIs)
- Collect and store data (data should be fit for purpose)
- Analyse data and generate PIs
- Discuss and interpret your PIs (What is going on?)

#### Find your level of participation – Basic, Intermediate or Advanced?

One of the key objectives of the MBI is to attain a level of participation by

all municipalities. Hence, a key feature of the MBI is the use of a modular, tiered approach to encourage and enable all to participate, at a level aligned with their current capabilities and future aspirations. Municipalities choose at what level they would like to participate (e.g. Basic, Intermediate or Advanced). Although a default list of suggested PIs is provided, municipalities are free to choose at what level and what PIs they measure/monitor/ manage (dependant on their needs and circumstance).



**FIGURE 5** Initial MBI performance measurement modules, and the different tiers.

#### Find the right Performance Indicators for you

Identifying the most suitable performance indicators (PIs) is easy if you know what you want your municipality to achieve. If you take a methodical approach and think about what you want your municipality to achieve, it should be easy to find PIs that suit you. Through consultation with municipalities, sector experts, and review of international best practice the MBI team have developed a “shopping list” of PIs from which to choose.

#### KEY AREAS OF PROGRESS

##### Process Benchmarking

The current focus areas are:

- Water Services Master Classes
- Peer Groups (incl. Cities Working Groups)
- Annual National Benchmarking Workshop

##### Water Services Master Classes

Water Services Master Classes (WSMC) have been established as peer-learning exchanges designed to bring together senior technical and management staff, experts and professionals on key areas of the water services business. The exchanges are based on a blended learning approach that prioritises interactive discussions and cross-pollination of information and experiences. The emphasis is on “practitioner to practitioner” exchanges. The classes draw from local case studies and better practices which are shared through presentations and deepened through group conversations. The WSMC is part of the peer-to-peer knowledge sharing that aims to provide access to a support network of peers and

*"I have been trying to do calculations comparing our performance with other cities but have been unsure as to whether I have interpreted numbers correctly. Now that I have met my peers I can just call them and check next time."*



*"As a Deputy Mayor and Water and Sanitation Portfolio Chairperson, the MBI Master Class was very important and informative and we look forward to more in the future."*



**FIGURE 6** Water Services Master Classes

dedicated professionals where common experiences, achievements and challenges can be shared.

- FREE participation by ALL
- Technical overviews
- Case studies
- Best practices
- Share common issues/challenges faced
- How did they do that?
- Performance measurement (PIs)
- Networking

#### Peer Working Groups

In order to structure peer learning around a specific topic, the establishment of various Working Groups is supported by the MBI team (e.g. City

Working Groups (CWGs)). The Working Groups are meetings of specialist practitioners, aimed at discussing performance as assessed by the PIs associated with the module, and sharing knowledge and best practice.

- Established for each module
- How are issues addressed?
- Specific topics
- Track PIs and discuss drivers of performance

#### National MBI Workshop

The aim of the annual benchmarking workshop is to discuss project progress, current status and performance via PIs, to draw from local case studies and better practices, with an emphasis on "practitioner to practitioner" exchange, encourage networking, peer group interactions, and agree on appropriate way forward actions to address challenges. The National MBI Annual Workshop 2013 was again aligned with the annual IMESA conference as a day and a half municipal benchmarking event from

**FIGURE 7** Annual national MBI Workshop 2013, Port Elizabeth

*"On-going case study presentations of success stories (as reflected by Performance Indicators) would assist other municipalities to learn, adapt and implement actions."*

*"I thought that I was the only one grappling with this issue. It is comforting to hear that others are having the same problems."*



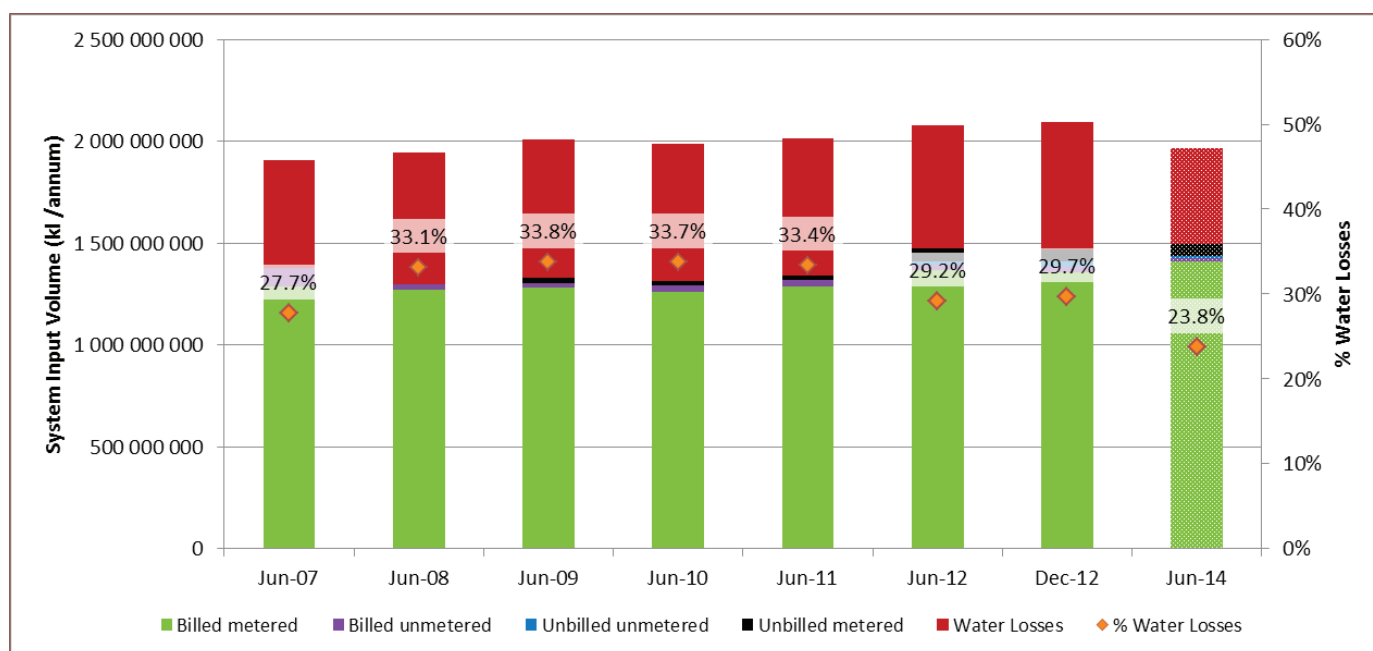


FIGURE 8 Non-revenue Water trend for all metros (DWA, 2013)

21st – 22nd October 2013, at the Boardwalk Hotel and Conference Centre in Port Elizabeth. All municipalities (regardless of maturity of participation level) were invited to attend this benchmarking event.

The primary target audience was Senior Water Services Technical and Management Staff. Seventy-Three (73) persons attended of which municipal participation was 71% of total attendance, with a good distribution of metros, district municipalities and local municipalities. All six benchmarking modules were covered in the workshop with invited speakers on specific topics followed by MBI benchmarking outputs.

In general, municipal feedback was that workshop was worthwhile and enjoyable. In particular comment was made that the topic experts set the scene well, and that the municipal led case studies were important (i.e. hearing from municipal peers as to how municipalities deal with challenges and issues).

Municipalities showed an eagerness and enthusiasm for benchmarking and there was a general expression for enthusiasm to become more involved going forward. Furthermore, discussion regarding draft MBI Scorecard results (as illustrated by PIs) was generally positive. The feedback obtained showed that the general sentiment from municipal participants was overwhelming positive in terms of workshop content, professional development, presenter quality and networking opportunities.

### Metric benchmarking

A key principle of the MBI is that municipalities are encouraged to start basic (less is more), entrench basic participation, and then expand participation as most appropriately suites themselves.

To encourage such participation, the MBI team's tactical approach has stressed the strategic importance of the MBI team sourcing / obtaining / utilising existing municipal data and pre-populating the Munibench system with such existing data – as far as is so possible – and thereby avoid duplication of municipal effort. It has variously been noted – and emphasised by the MBI Steering Committee – that a reliance on municipal provision of already provided data is likely to be seen as a frustrating extra burden to participating municipalities. By contrast, successes in securing and harnessing already provided municipal data by the MBI team would be well received by municipalities and would help ensure that there is no duplication in municipal effort, with municipalities only having to fill in

the gaps. Considering this, the MBI team has utilised a two-pronged approach to data collection, namely:

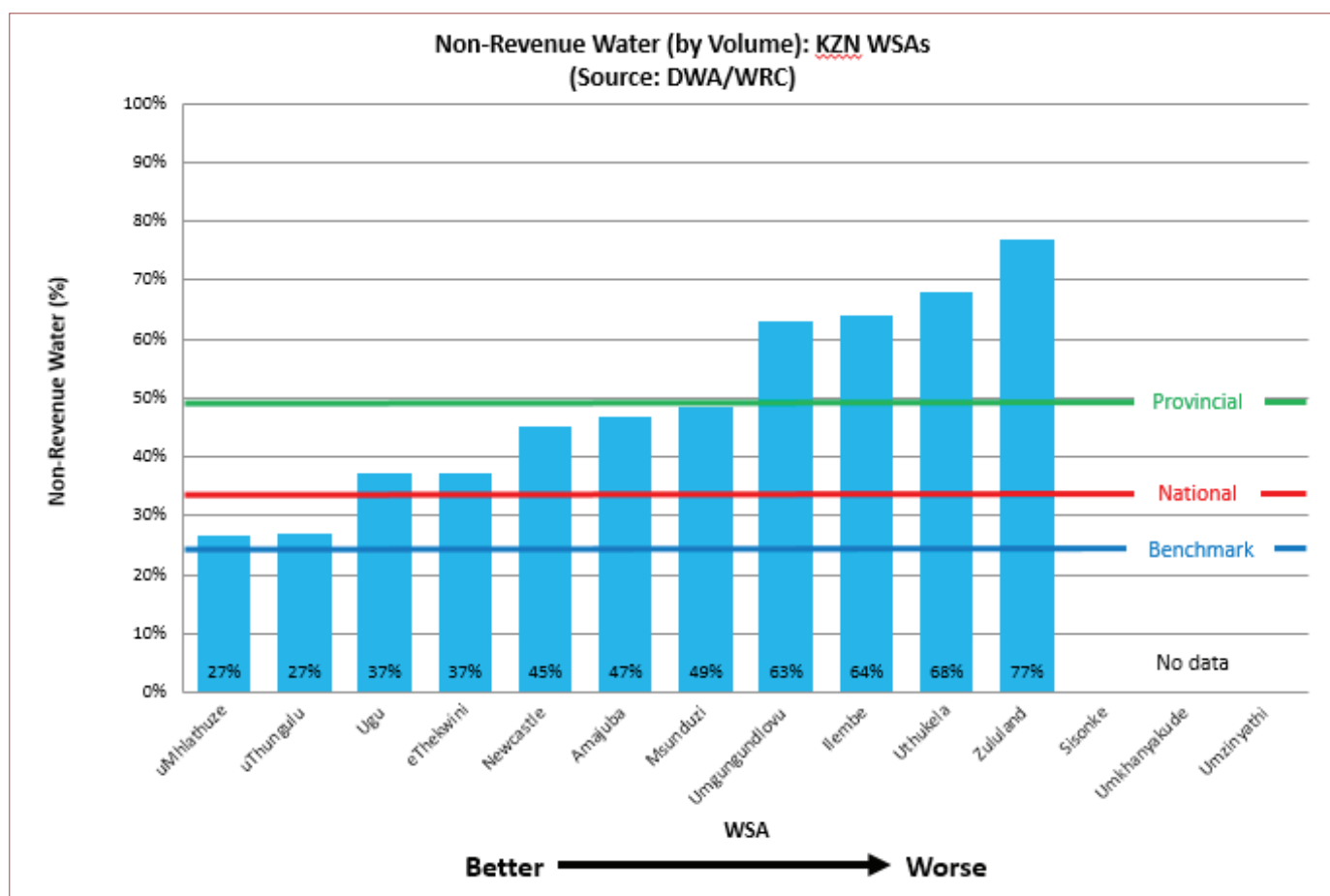
- accessing municipal data already provided to existing processes (e.g. DWA, NT, StatsSA)
- allowing municipalities to capture water services data of importance/relevance to improve performance (and establish benchmarking/peer networks).

Firstly, MBI Scorecards were developed for all 152 WSAs based on sector available context data and comprising 31 PIs, covering all MBI modules). These draft scorecards allowed municipalities the opportunity to view their performance versus peers, and correct data issues (i.e. incorrect data, no data). Data contained within these scorecards was used to generate the National MBI Report: 2013.

Secondly, peers groups – and at this stage only the CWGs – have been very successful in jointly agreeing to measure certain PIs and report against these. As similar structures are not yet up and running for DMs/LMs, the DM and LM response to requests for data submission for metric benchmarking has to-date been very poor. According to MBI Ambassadors from DMs and LMs this is mainly due to not having staff available for data gathering and loading. A very good example of this is the CWG on Water Conservation and Demand Management which worked closely with the then Department of Water Affairs (DWA) to update the state of non-revenue water amongst the Cities.

Key issues identified by the CWG in preventing metros from successfully implementing WCDM include: (1) Poor planning, (2) Budget constraints, (3) Supply Chain Management issues, (4) Inappropriate technical solutions, (5) Lack of community acceptance or support, (6) Poor levels of own revenue generation and limited expenditure capacity, (7) Poor metering and billing systems, and (8) Lack of skills, poorly trained and apathetic staff. These challenges have been shared through the process with DWA, and the WCDM CWG has applauded the win-win synergistic efforts of the MBI and DWA and explained that the process will not only drive performance improvement, but will also increase DWAs credibility in the municipalities. Building on this collaboration, DWA and the MBI will work jointly in harvesting and sharing municipal data to support both regulatory and municipal self-improvement purposes.

Similarly, based on the MBI Scorecards, theme based regional feedback is generated for sector efforts to drive performance improvement. An



**FIGURE 9** Non-revenue Water (by Volume): KZN WSAs

example of this is the non-revenue water (by volume) for WSAs of KwaZulu-Natal as per figure 7 below.

### DISCUSSION AND CONCLUSIONS

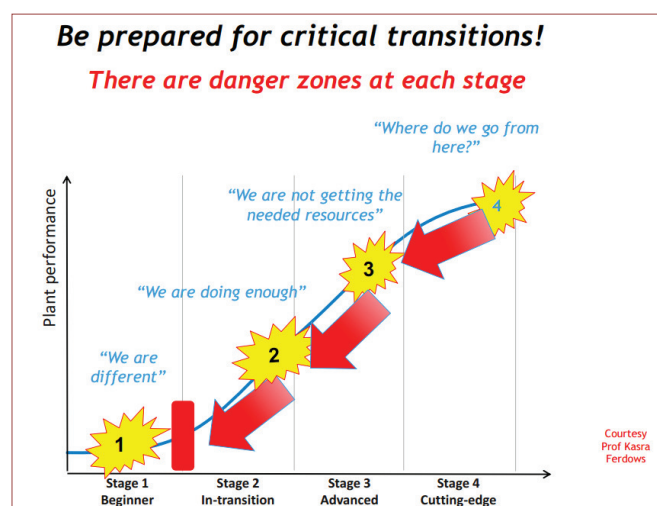
The MBI effort, and associated progress, has been substantial; yet it is still very much a fledgling process; with reference to Figure 10 below, unpublished data) in which the majority of WSA's are in Stage 1 (bearing in mind that international experience amongst competitive private sector multi-national institutions is that each stage has a duration of some 4 years (Petrarolo, D (2014)).

Much work is still required to ensure that: (i) Municipalities are monitoring/measuring their performance, (ii) Municipalities are reporting and assessing their own performance with a view to improve, and (iii) Municipalities are engaging other municipalities and sharing experiences, challenges, issues of concern and through this process improving their performance.

In order to overcome identified challenges and still make significant progress, the MBI is working hard at:

- the creation of peer networks with associated sharing of data/information/best practices/lessons learnt
- a peer review via checking adherence to regulatory priorities (e.g. non-revenue water as specified via DWA)
- the calculation of benchmarking PIs via measurement of associated key variables to indicate performance in particular areas of interest/concern
- accessing and utilising existing municipal data, and alignment to emerging national initiatives in this regard (e.g. National Treasuries Standard Chart of Accounts), to identify and address noted fundamental water services challenges.

On-going reinforcement of these principles by the MBI team to municipalities (especially via peer group activities) is therefore of primary importance.



**FIGURE 10** Be prepared for critical transitions, and the risk of slipping backwards

In addition to the efforts of the project team and project sponsors, success will be dependent on interest, commitment and involvement from Municipalities (councilors, senior management, and technical staff), and supportive involvement and alignment from key municipal and Water Services Sector groups including inter alia DWA, DCoG, SALGA, and WRC.

With time and commitment the MBI can lead to substantial breakthrough improvements in water services delivery in South Africa.

#### **ACKNOWLEDGEMENTS**

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