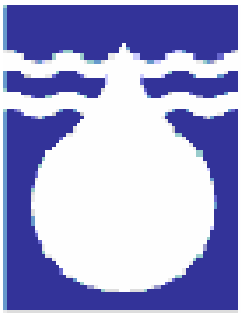

The Benchmark

Newsletter of the Water Research Commission Benchmarking Project

Issue No. 4

PROGRESS UPDATE ON THE WATER RESEARCH COMMISSION PROJECT ON BENCHMARKING

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This is a more difficult report to add to the Benchmark as progress has been impeded over the past two months by the technical problems encountered in establishing the Web Site for the storage of the benchmarking data.

The happy side of the story is that it is now up and running and for the participants can be accessed through the address:

www.wrcmb.org.

The site is being hosted by the South African Association of Water Utilities web site, which is operating entirely independently of the Water Research Commission site.

The delays came in moving the SAAWU site from one service provider to another. The difficulties of effecting this move and then adding on the municipal benchmarking site were neither foreseen nor estimated in the delays that would be encountered. See subsequent article.

It is however now possible to start entering the data into the database and it will be possible to catch up on the missing months.

It is of interest that this is the one of the leading benchmarking projects currently underway in South Africa. The SAAWU initiative is currently collecting data but has not as yet started the process benchmarking in a formalised manner. This will happen with the Water Research Commission project as soon as sufficient data, including back data has been entered onto the web site.

None of South African Local Government Association, the Department of Water Affairs and the Development Bank of Southern Africa have any benchmarking initiatives on the go and are watching the Water Research Commission project with interest.

BENCHMARKING LEAKAGE FROM RETICULATION

The Water Institute of Southern Africa held its Biennial Conference in Capetown at the beginning of May. One interesting paper of relevance to metric benchmarking was that by Caryn Seago, Jay Bhagwan and Ronnie McKenzie on “Benchmarking Leakage from Water Reticulation Systems in South Africa.”

The authors base their studies on a model developed for the Water Research Commission called “BENCHLEAK” . This calculates inter alia the Infrastructure Leakage Index from data covering the total length of the mains, the number of service connections, the average operating pressure over the period in question, the

system input volume and the components of authorised consumption.

A comparison was made of 30 water supply utilities in the country. One of the more interesting facets to come out of the investigation was the importance of accuracy of the data that was to be fed into the system.

The programme "BENCHLEAK" is available from the Water Research Commission website and is based on an Excel Spreadsheet.

PERFORMANCE INDICATORS FOR WASTEWATER SERVICES

The International Water Association has published a set of performance indicators for wastewater services. It follows the standard set in the earlier volume on Performance Indicators for Water Supply Services. The indicators are classified in the following groups:

- Environmental
- Personnel
- Physical
- Operational
- Quality of Service
- Economic and Financial

Indicators, which set the context of the utility are defined as contextual indicators (CI) and differ from those that measure performance which can be used for process benchmarking.
Accuracy bands for the data are defined as:

- Highly Reliable, better than 1%
- Reliable to within ± 5%
- Unreliable to within ± 10%
- Highly unreliable to within 25%

It is pointless to collect data that is unreliable as it will prove misleading and counter productive. All data collected should be qualified as to its probable accuracy

A methodology for selecting the indicators is set out in the algorithm below.

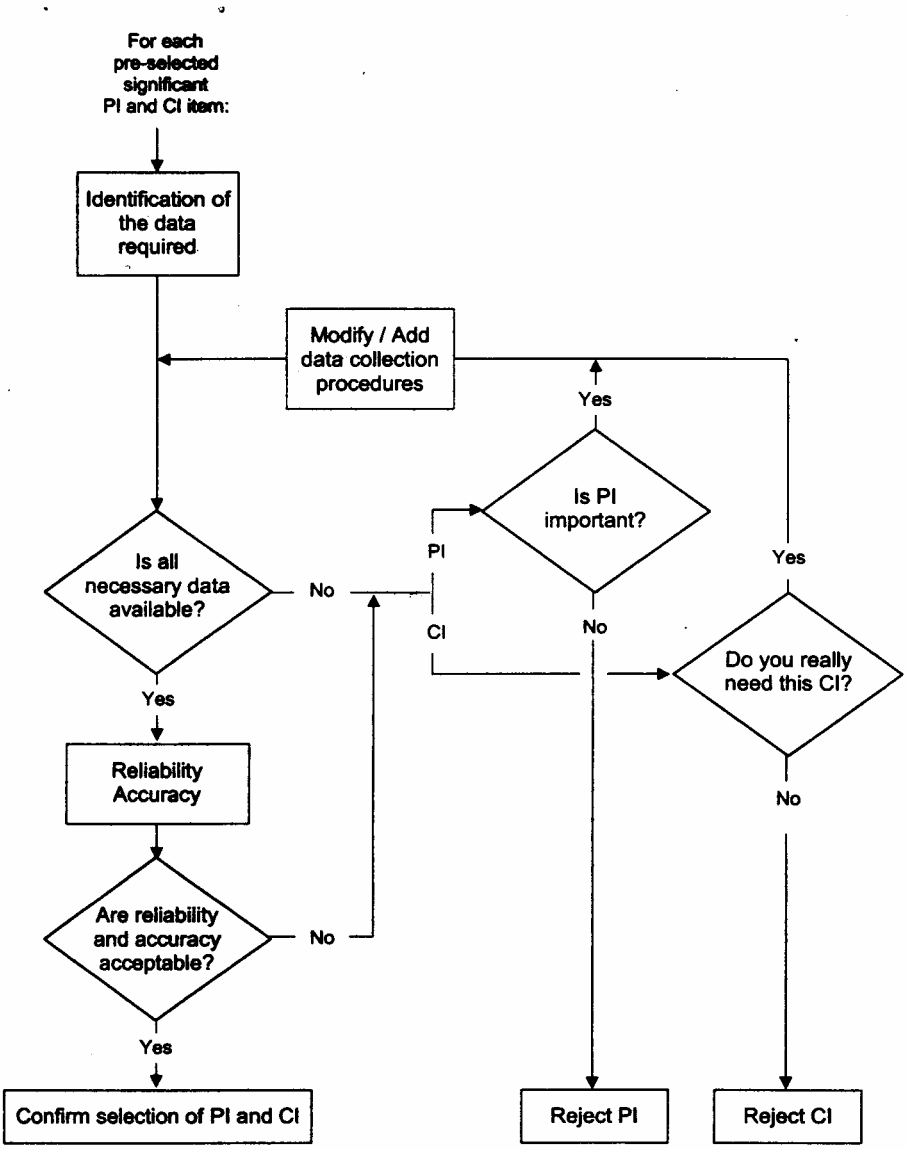

Figure 8. PI and CI selection procedure.

It is noteworthy that the indicators cover on-site treatment and disposal systems not normally found in the developed world where the indicators were developed. Another interesting aspect is that the only indicators relating to treatment refer to the degree of plant utilisation and not to the performance of the plants themselves. The reason is that the nature of the wastewater flows is never comparable from one works to another apart from differences in the processes used and the degree of plant utilisation. Therefore the performances of different works cannot be compared.

Quality tests relate to the number of tests carried out in relation to the number required by regulation for any particular parameter and not to the values obtained.

Each indicator is meticulously defined in accordance with the protocols worked out for the first publication on the water supply performance indicators.

The book includes the Sigma Lite software to assist the user in implementing the wastewater PI system given in the manual.

The main features are:

- Incorporation of the complete set of indicators as a stand alone evaluation system.
- Easy to operate with automatic calculation of Pi's from the input variables and
- The facility to export the results to an Excel Spreadsheet.

The Sigma Lite software is a prototype tool to evaluate the potential the IWA performance indicator systems.

The book is on sale from the International Water Association, 12 Caxton Street, London, SW1H0QS, United Kingdom.

SURVEY TO HELP WATER DELIVERY ALL OVER AFRICA

The following article was taken from Business Day

Monday 7 June 2004

KwaZulu-Natal Correspondent

DURBAN

Data collated from 107 water utilities in Africa will be used to improve delivery of water across the continent, says Water Utility Partnership MD Dennis Mwanza.

Mwanza was addressing the regional workshop yesterday on the performance indicators and the benchmarking of water utilities in Africa. He said reform in the water and sanitation sector throughout the continent and boosting service, particularly to informal settlements, were priorities.

Reforms did not automatically involve privatising water utilities and could mean greater efficiency in departments.

The partnership is a programme initiated by the World Bank, the Union of African Water Suppliers, the Regional Centre for Low-cost Water and Sanitation Burkina Faso and the Training, Research and Networking for Development in Ghana.

Launched in July 1996 during an international conference on reforming the African water sector, the programme aims to increase coverage of water supply and sanitation services and improve the quality of service through increased investments and reform.

Mwanza said concentrating on the urban poor in informal settlements would balance the investment in this sector against the capital spent either in rural or middle- and high-income urban areas. Traditionally, informal settlements are discounted under state policies that consider them illegal and so unserviceable.

The partnership aims to work with individual governments and utilities to ensure informal settlements are serviced.

But Mwanza warned against importing certain practices without adaptation, as that did not take into account local dynamics and exposed the practice to potential failure.

Benchmarking involved 107 utilities in 40 African countries. The report details the status of the water sector in the continent, and will be updated periodically and its information disseminated across the continent.

Partnership chairman Isaac Ngwenya said benchmarking will aid the overall operational effectiveness of utilities.

ESTABLISHMENT OF WEB SITE DELAYED BUT NOW UP AND RUNNING

The Web site "wrcmb.org" was registered in March 2004 and reserved for future use.

The trouble started when it was decided for the sake of economy to move the site of the server.

After numerous discussions with various departments the DNS update was forced and it was claimed that all had been done.

Only during our conversation with John on Tuesday did we become aware of the need to move the Domain saawu.co.za to the existing server and activate the wrcmb.org Domain Name.

Urgent requests for updates were asked for and we were advised that this had been done. It was still necessary to trace and activate the wrcmb.org name. This was activated late one evening. However the DNS servers are only updated every 24hrs and until the entries were updated the wrcmb.org site could not be activated.

The www.wrcmb.org site is now fully operational and the members of the benchmarking team are visiting the participants to ensure that they are able to enter the data.

WORLD BANK INTERNATIONAL BENCHMARKING PROJECT

The IBNET Project.

The World Bank is sponsoring a web site hosted by the Wrc of Great Britain that will enable participants to provide information on their performance and compare it with that of other water service providers.

The site is accessible at

www.ib-net.org.

The reasons for establishing this site are that the provision of comparative information and its use in benchmarking has become an important tool for managers in water and sanitation utilities. Benchmarking and knowledge of best practice is important for all water and sanitation utilities, regardless of developmental status:

- Benchmarking helps managers to understand the performance of their utility relative to others
- It facilitates the sharing of best practice information and supports decisions to improve performance
- Through IBNET, it helps to share knowledge of best performers and best practice

IBNET represents a continuing process of enlarging the opportunity for access to international information to support local benchmarking initiatives. These efforts continue to be promising, but the development of international data sets will be challenging because:

- It is difficult to agree on a universal set of indicators and their detailed definitions;
- The availability of reliable data can be limited;
- Comparisons between countries can be influenced by the different operating environment each faces; and
- The usefulness of an indicator, and its likelihood to be monitored, varies across countries.

Given these difficulties and the sector's decentralized organization, it is unlikely that a central monitoring system can or should be developed. A more feasible objective, enabled through the internet, is for a distributed network of stakeholders to build their own monitoring capacities and make their data available publicly on a voluntary basis.
If shared definitions are used by a sufficient number of participants, at least for a core set of indicators, this network will add value to all its users and contributors by providing them with useful international comparative information.
The Benchmarking Water and Sanitation Utilities: A Start-Up Kit (PDF) has been developed to support the above concept. The Benchmarking Start Up Kit is available in English, French and Spanish and includes the following resources:

- a set of core indicators on which stakeholders can build their own customized measurement and monitoring system;
- a data listing complete with robust data definitions;
- a data capture system that also calculates the complete indicator set; and
- a route to share the information.

SOME FOCUSED DEFINITIONS.

The following definitions have been culled from the web page.

www.engmanage.co.za

"Management for Engineers, Technologists "

The definitions are relevant to the Water Research Commission benchmarking project in that they give focus to the business management. The comments in italics are some slightly heretical thoughts to encourage some more radical thinking.

Benchmarking - Standard of excellence or achievement against which a

company's products or practices are measured or judged. Competitive benchmarking – Limit the study of best practices to competitors. Functional benchmarking – seeking best practices regardless of industry that they are in.

Competitive intelligence - A legitimate process whereby companies collect, analyse, evaluate and disseminate information on their competitors for strategic planning purposes. It can for example help a company not to expand into overcrowded areas.

Water municipal water utilities are not in direct competition with one another, but they do face competition from the private sector water companies that would love to seize on the failure of a municipal undertaking to expand its business interests.

Agility: The ability of an enterprise to manage the changing, unpredictable world of commerce and industry and survive in markets that demand rapid response to unexpected changes in customer demands, competitive challenges and *technological breakthroughs.*

Most municipalities are unable through a number of procedural handicaps to exercise real agility. It should be left to the legislators to see how to overcome these without opening up the fields to the unscrupulous.

Alliance - A unified effort involving two or more organisations, groups, or individuals to achieve common goals with respect to a particular issue.

This is the essence of the Water Research Commission programme, which is calling on the participants to collaborate with one another to explore and implement better and more effective ways of working.

Backward integration - The strategy of a firm to acquire others that supply it with inputs.

Give a thought to integrating the financial management of the water services with the engineering services.

Business strategy - "The essence of strategy is the way a company defines its business and links together the only resources that really matter in today's economy: knowledge and relationships or an organisation's competencies and customers." (R. Norman & R. Ramirez).

"We should take a cue from nature and change the way we develop business strategy, relying less on our ability to make accurate predictions and more on the power of evolution. ... Businesses should not have singular focused strategies, but instead cultivate and manage populations of multiple strategies that evolve over time. ... in creating a population of strategies, it is essential that the population contains a balanced mixture of initiatives ranging from short-jump incremental extensions to longer range initiatives.

"Microsoft and Intel do not win on the basis of product cost, product differentiation, or a customer solution; they have system lock-in" (Hax, A.C. & Wilde, D.L. 1999. The Delta Model: Adaptive Management for a Changing World. Winter 1999, Sloan Management Review, pp. 11-28).

Water utilities enjoy the same advantage naturally.

Scenarios –
Stories about what the future environment might hold and how a firm might respond to this future. They are attempts to identify a set of diverse alternative futures as a means of preparing managers for unavoidable uncertainties.
"... a tool for ordering one's perceptions about alternative future environments in which one's decisions might be played out. ... Unlike traditional business forecasting or market research, they present alternative images; they do not merely extrapolate the trends of the present. ... The purpose of scenarios is to help yourself change your view or reality... The end result, however is not an accurate picture of tomorrow, but better decisions about the future." (Schwartz, P. 1991,The Art of the Long View: Planning for the Future in an Uncertain World, New York: Doubleday Currency, pp. 4, 6, 9).
"Developing strategies based on narrow predictions about the future is entirely the wrong mind-set for an inherently uncertain

world." (Beinhocker, E.D. 1999. Robust Adaptive Strategies. Sloan Management Review, p. 96).
The purpose of scenario development is not to make predictions, but to understand the total environment in which the future may unfold.

Description

Change is a necessity for most companies if they are to grow and prosper. However, a recent study found that 70% of change programs fail. Change Management Programs are special processes executives deploy to infuse change initiatives into an organization. These programs involve devising change initiatives, generating organizational buy-in, and implementing the initiatives as seamlessly as possible. Even armed with the brightest ideas for change, managers can experience difficulty convincing others of the value of embracing new ways of thinking and operating. Executives must rally firm-wide support for their initiatives and create an environment where employees can efficiently drive the new ideas to fruition.

Methodology

Change Management Programs require managers to:

- Focus on results, not process. Maintain a goal-oriented mindset by establishing clear, non-negotiable goals and designing incentives to ensure these goals are met.
- Identify and overcome barriers to change. Anticipate reactions by identifying potential barriers to change and developing formal (organizational structures, incentive systems, etc.) and informal (personal persuasion, etc.) initiatives to overcome those barriers.
- Repeatedly communicate a simple and powerful message to employees. Any individual's first reaction to change will be one of doubt, and managers must work to overcome this initial obstacle. Change Management Programs should identify the key influencers within an organization and educate them about the change.
- Create champions and chase out senior managers who will inhibit change. In most success stories, significant changes in senior management were required. For the broader employee base, involvement tends to increase support for change—employee participation in committees, town meetings or workout sessions ameliorates the acceptance process.
- Continuously monitor progress. Take care to follow through and monitor the progress of change initiatives. Create and carefully track measurements of success to ensure a positive outcome.

Common Uses

Companies can use change management programs to:

- Implement major strategic initiatives to adapt to changes in markets, customer preferences, technologies, and the competition's strategic plans;
- Align and focus an organization when going through a major turnaround;
- Implement new process initiatives;
- Make internal improvements in the absence of external change.

Darrell Rigby
Bain and Company

This is a publication of the Water Research Commission, emanating from a research project entitled "Pilot Project to Facilitate Benchmarking in the Water Services Sector", executed by Philip Pybus and Consortia. Newsletters are available on the wrc website www.wrc.org.za. For further info please contact Philip at "philipp@ icon.co.za or Jay Bhagwan @wrc.org.za...