"WHAT DO WE DO TO ACCELERATE SANITATION?"

Report to the

Water Research Commission

by

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EXECUTIVE SUMMARY

"The absence of a coherent national programme to improve community sanitation has left an obvious legacy. Given the limited practical experience in the field and the evolving institutional arrangements at local level, such a programme must be flexible enough to develop and change over time. It must build on the lessons of experience and reinforce the role of local government as the implementers of service provision.

Investments in infrastructure, including sanitation infrastructure, can deliver major benefits in terms of improved health, economic growth, enhancement of quality of life, poverty alleviation, and environmental sustainability – provided that the services are in response to genuine demand and that delivery is effective and efficient." (National Sanitation Policy – White Paper: October 1996)

Background to the Project

The prime motivating factor of this project is the 2010 target date for eradicating the basic household sanitation backlog, so as to ensure that every constituent in South Africa has access to at least a basic level of sanitation by the end of 2010. This national target is captured in the 2001 White Paper on Basic Household Sanitation and reiterated in the Cabinet approved Strategic Framework for Water Services 2003.

Between 1994 and 2003 DWAF did play a major part in leading the National Sanitation Programme in identifying and developing national sanitation policy objectives and co-ordinating the actions of relevant national departments in order to address these objectives. Provincial Sanitation Task Teams did develop and co-ordinate strategies to support sustainable and accelerated delivery of sanitation mainly in rural areas, utilizing DWAF funding under the national Community Water Supply and Sanitation Programme.

Since 2003, Water Service Authority municipalities have been fully responsible for sanitation delivery across all villages within their areas of jurisdiction. In terms of the Municipal Systems Act, delegated authority provides for nominated Water Services Authorities to plan and carry out water and sanitation service provision making use of a capital conditional grant known as the Municipal Infrastructure Grant (MIG) in order to promptly tackle service backlogs. It is the Integrated Development Plans (IDPs) and Water Service Development Plans (WSDPs) of municipalities which are now the primary mechanisms for shaping municipal strategies to tackle sanitation delivery.

The above-mentioned change in the context of the national delivery of sanitation does have major significance for the way strategies to tackle sanitation backlogs should be formulated and carried out. The main objective of this research project is therefore to identify bottlenecks which obstruct delivery and then capture innovative sustainable sanitation approaches and experiences which have been developed, and check their significance against the current political and institutional environment in South Africa in order to then support improved and accelerated sustainable sanitation service delivery through the development of key criteria and support tools and guidelines to enhance the accelerated delivery of sanitation services within a climate of limited resources so as to best to sustain this into the future.

It is hoped that the development of these institutional models, tools and guideline to support the improvement and acceleration of sustainable delivery of sanitation services will assist in reviewing

the progress in the delivery of sanitation services on a regular basis, and that innovative strategies or processes emerging from this project could lead to actual testing and piloting.

Research Approach

In order to achieve the objectives of this project, the following overall research focus areas have been addressed in a practical approach so as to generate reports and materials in a sequence that reflects the issues a WSA must address in planning and implementing accelerated sustainable sanitation projects, namely:

- Identification of the bottlenecks which impede accelerated sanitation delivery at all levels;
- Documenting successful sustainable sanitation service delivery approaches and methodologies;
- Assessment and documentation of the key criteria for the acceleration of sanitation delivery in urban areas, and recommendations on how these can be implemented within WSAs and other municipalities where resources are limited;
- Formulation of support tools for enhancing municipal sanitation programme implementation based on an assessment of the key criteria for accelerating sanitation delivery across all settlement types; and
- Development of a guideline to facilitate the use of the support tools for the enhancement of municipal sanitation programme implementation.

Detailed planning and scheduling of activities was undertaken by the research team, as well as the development of a simple action research gathering guideline aimed primarily at collecting practical and strategic information from WSAs and service providers. Action research consultations were then held with a sample of key stakeholders at national level and municipal level, as well as with local service providers and interest groups (a detailed list of all action research key respondents can be found in Appendix 4 of this report).

The content of the research report was then formulated from the findings captured through these interactions with a wide range of municipalities across the country, at implementation level, as well as through liaison with sector role-players. The report captures some of the most important bottlenecks which impede the delivery of sustainable sanitation services by municipalities and then captures some of the most important successful sanitation delivery approaches and methodologies adopted by municipalities.

Furthermore the report goes on to capture some of the most important key criteria for accelerating the delivery of sustainable sanitation services by municipalities and then presents some recommendations for implementing these key criteria. It captures some of the most relevant examples of support tools required by municipalities in order to enhance the accelerated delivery of sustainable sanitation services and presents a practical guideline to assist WSAs in facilitating accelerated sanitation service delivery based on the use of the aforementioned support tools.

The project has thus reviewed what capacity and systems are currently in place within local government, what is needed, and how support initiatives should be focussed to assist municipalities to accelerate delivery so as to sustainably reach their 2010 sanitation service delivery targets – this also goes to the heart of collaborative governance. The guideline and tools which have been developed as outcomes of the project should assist the WSAs to begin with practical specifics and then progressively add further levels of intricacy as required – with the materials being tested and further refined as they are put into practice.

Research Findings and Outcomes

This report sets the scene by discussing the project findings in detail. It begins by describing factors that constrain and enable the delivery of sanitation at municipal level. These factors have informed the entire research project and have resulted in the assessment of key criteria which could accelerate sanitation delivery. Sanitation delivery support tools and a guideline document have been developed as municipal aids in addressing the constraints and taking advantage of the successes and enabling factors.

Delivery Constraints

The identification of bottlenecks which impede accelerated sanitation, highlighted gaps related to gathering accurate baseline information to populate IDPs and WSDPs and revealed that a lack of proper backlog data impacts negatively on the development of sanitation delivery strategies, levels of service planning and the longer term sustainability of sanitation services.

A review of municipal financial planning and management showed that MIG funding allocations are often prioritized towards water supply projects as opposed to sanitation delivery projects, and that levels of capital expenditure on sanitation projects far outweigh the required operational budgets allocated to operate and maintain sanitation infrastructure and services. There are also limited life cycle, cost recovery planning and budgeting mechanisms in place and the majority of new sanitation delivery projects are registered for implementation with very little feasibility or long term sustainability assessments done prior to these projects being approved.

An assessment of WSA institutional capacity and arrangements for effectively implementing sanitation delivery highlighted municipal skills and capacity gaps and gaps in integrated planning approaches, as well as the high turnover of staff, as impeding sanitation delivery. In many municipalities there is also a lack of alignment between MIG Project Management Units and municipal Technical Service Units in effectively liaising and ensuring adequate project and programme management. Where municipalities plan and run projects in accordance with their annual financial year, as opposed to as ongoing multi-year programmes, the delivery of sanitation was noted as being slower to implement and often lead to inconsistencies in delivery approaches. The evident lack of Section 78 arrangements for small scale sanitation service providers in terms of maintenance and ongoing provision of services, as well as the lack of appropriate sanitation delivery and monitoring and evaluation systems, was also noted as hindering the effective delivery of sanitation projects.

The lack of competent sanitation service providers, procurement systems and efficient supply chain management processes, as well as the limited ability to implement "soft" project aspects with "hard" aspects were all noted as gaps in the delivery mechanism required at community level to be able to effectively implement a sanitation project. In addition, the lack of suitable performance management and mentorship of local contractors, as well as limited quality control mechanisms and limited local economic development initiatives all contribute towards impeding sanitation service delivery. In order to ensure sustainable sanitation service delivery it is clear that there is a real need for reliable co-ordination and communication between different municipal role-players at ground level, as well as an enormous need for practical supervision and support in solving intricate sanitation challenges and problems so as to realize government's commitment to achieve sanitation for all.

Delivery Successes

The documenting of successful sustainable sanitation delivery approaches and methodologies was undertaken by conducting a review of successful sanitation implementation methods related to municipal managed and conventional consultant / contractor driven models with linkages to various contractual models and frameworks in terms of municipal procurement procedures.

After conducting an assessment of the necessary institutional aspects required in order to ensure sustainable sanitation service delivery, the successes derived from action oriented municipal sanitation task teams in order to co-ordinate and communicate between different municipal role-players at ground level was evident. It was also noted that where the need for increased skills capacity and support in solving intricate sanitation challenges and problems so as to realize government's commitment to achieve sanitation for all was being addressed, that significant successes were being realised. Municipalities tapping on external support interventions, establishing suitable internal arrangements, engaging in effective community participation, and adopting asset management programmes are clearly able to better manage and deliver sanitation services to their constituents.

An analysis of the current pace of sanitation delivery considered what capabilities and arrangements WSAs need to have in place in order to effectively utilize the sanitation component of their MIG allocation in relation to other available subsidies and grants, and in so doing, ensure that they aim where possible to meet national sanitation targets. Where municipalities have established clear backlog definitions and targets for the delivery of sanitation, and where they are able to capture accurate data on both progress related to expenditure and implementation, they are increasingly successful in adopting new ways to better manage and accelerate their pace of delivery.

Lastly, a municipal review of options for strengthening successful sanitation delivery approaches, in order to ensure an ongoing and sustainable sanitation service, showed the effectiveness of establishing ways of scaling up and accelerating existing approaches and levels of sanitation delivery. The acceleration of delivery can be successful through the use of programmatic approaches and the effectiveness of life cycle planning in relation to the proper use of appropriate technologies, and can achieve sustainability in the long term by ensuring operations and maintenance issues are suitably addressed.

Accelerated Delivery Criteria

After assessing and establishing the factors that constrain and enable the delivery of sanitation at municipal level, these factors led to the formulation of a number of key criteria which, when applied, could assist in enhancing and accelerating sanitation delivery. The key criteria which were developed for enhancing sanitation delivery are therefore captured as follows:

Reference Data:
- Local levels of service and backlog definitions must be clearly defined.
- Baseline data and backlogs targets per level of service must be established.
- IDPs and WSDPs must be properly interfaced and incorporate appropriate sanitation planning.

Human Resources:
- Municipal capacity and technical skills must be boosted and high staff turnover limited.
- Increased functionality of MIG Project Management Units must be promoted.
- Appropriate institutional arrangements, systems and approaches must be put in place.

Financial Resources:
- MIG funding allocations (National and Local) must include a sanitation specific sub-component.
- Project funding commitments must be in line with delivery targets.
- Expenditure must be aligned and reconciled against set delivery targets.
- Additional funding requirements and alternative sources must be clearly established.

Strategic Planning:
- Multi-year integrated programmatic macro-planning approaches must be adopted.
- Appropriate infrastructure life-cycle and cost recovery planning must be implemented.
- Planning inputs and support must be facilitated by setting up stakeholder delivery mechanisms.

Delivery Approach:
- Understanding of appropriate sanitation technology options and increased participation in local technology choices must be promoted.
- Skills development, mentorship and capacity building at local level must be undertaken.
- Local construction and user-education performance and quality management systems must be put in place.
- Delivery must be enhanced through the establishment and management of programmatic approaches.

Performance Monitoring:
- Key Performance Indicators must be set up for monitoring delivery success and performance.
- Tools must be developed to be utilized to accurately monitor Key Performance Indicators.
- Mechanisms must be developed for centralizing the use of the Key Performance Indicator monitoring tools.
- The use of Key Performance Indicator monitoring tools must be implemented to gather data and verify it against the set Key Performance Indicators.

Delivery Support Tools

Municipal support tools for the acceleration of sanitation delivery have been developed based on the findings in terms of the bottlenecks which impede sanitation delivery, the successful approaches to sanitation delivery and the key criteria for accelerating sanitation delivery. These support tools are aimed primarily at aiding the gathering of accurate reference data, the assessment of the human and financial resources required, supporting strategic integrated planning and the compilation of project technical reports and feasibility studies, achieving reliable co-ordination and communication between different municipal role-players at ground level, and ensuring that performance management and monitoring systems with key performance indicators for monitoring the success and performance of sanitation delivery are in place.

The support tools aim to practically assist WSAs in facilitating accelerated sanitation service delivery, and were formulated through interactions with municipalities at implementation level as well as in liaison with sector role-players. The fifteen support tools developed for facilitating the enhanced implementation of sanitation services are as follows:

- WSA Sanitation Policy Framework Tool 1
- WSA Sanitation Strategy Tool 2
- WSA Baseline Data Capture Tool 3A and 3B
- WSA Waterborne Sanitation Criteria Tool 4

- WSA Sanitation Task Team Development Tool 5
- WSA Sanitation Task Team Meeting Agenda Format Tool 6
- WSA Financial Planning Tool 7
- WSA Project Expenditure Monitoring Tool 8
- WSA Project Planning Tool 9
- WSA Technical Report Outline Tool 10
- WSA Technical Report Guideline Tool 11
- WSA Project Construction Programme Tracking Tool 12
- WSA Health, Hygiene and User Education Planning Tool 13
- WSA Monitoring and Evaluation Tool 14 (including Key Performance Indicators)
- WSA Project Site Assessment Tool 15

Delivery Support Tools Guideline

A guideline to facilitate the use of the support tools, which were developed for enhancing municipal sanitation programme implementation, has been compiled and the core aspects of policy, institutional arrangements, project planning, financial planning and arrangements, networking and stakeholder participation, sanitation programme implementation, skills development and mentorship, and monitoring, evaluating, operations and maintenance have all been taken into account.

From the information captured in this report, it can be concluded that there are several key focus areas where municipalities can apply the guideline and make use of the support tools in order to accelerate their sanitation delivery programmes and overcome many of the bottlenecks that might impede accelerated delivery.

The guideline aims to practically assist WSAs in facilitating accelerated sanitation service delivery based on the use of the support tools developed, and the content of the guideline was formulated through interactions with municipalities at implementation level as well as in liaison with sector role-players. The guideline for facilitating the use of the fifteen sanitation support tools comprises the following ten sections:

- Section 1 provides an introduction to the guideline to facilitate the use of support tools for enhancing municipal sanitation programme implementation.
- Section 2 locates sanitation delivery within the context of government policy, in particular, the 2003 Strategic Framework for Water Services.
- Section 3 outlines the various institutional arrangements required to enable improved sanitation delivery.
- Section 4 highlights aspects of sanitation delivery service planning to be included in Municipal Water Services Development Plans.
- Section 5 suggests options for financial planning and arrangements for funding sanitation delivery.
- Section 6 outlines the importance of ensuring stakeholder participation and networking in the context of providing sanitation delivery.
- Section 7 sets out key aspects to consider when implementing a sanitation delivery programme.
- Section 8 provides insight into skills development and mentorship aspects of sanitation delivery.
- Section 9 provides guidance and suggestions toward monitoring, evaluating, operating and maintaining sanitation infrastructure so as to ensure the sustainability of this infrastructure.

- Section 10 contains a conclusion to the guideline document.

Conclusion

From the information captured in this report, it can be concluded that there are broad and common challenges and bottlenecks which are faced by all local government municipalities in terms of the delivery of sanitation services, as well as examples of successful sanitation delivery approaches and methodologies. It is hoped that the guideline and tools developed as part of this project will aid municipalities in the enhanced and accelerated delivery of sustainable sanitation services to all eligible constituents within their areas of jurisdiction.

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Project Outputs

The project resulted in a number of unpublished reports and project deliverables.

These unpublished reports and project deliverables include:

- *Research Report 1 on Identifying the Bottlenecks which Impede Accelerated Sanitation Delivery.* WRC Project K5/1742/3, September 2007.
- *Research Report 2 on Capturing and Documenting Successful and Sustainable Sanitation Service Delivery Approaches and Methodologies*. WRC Project K5/1742/3, January 2008.
- *PowerPoint Presentation: What do we do to Accelerate Sanitation? : Project Overview and Progress Update*. WRC Project K5/1742/3, 5th February 2008.
- *Research Report 3 on Assessing the Key Criteria for the Acceleration of Sanitation Delivery including Recommendations for Implementation*. WRC Project K5/1742/3, July 2008.
- *Research Report 4 on Support Tools for Enhancing Municipal Sanitation Programme Implementation based on an Assessment of the Key Criteria for Accelerating Sanitation Delivery*. WRC Project K5/1742/3, December 2008.
- *Research Report 5 on a Guideline to Facilitate the use of Support Tools for Enhancing Municipal Sanitation Programme Implementation*. WRC Project K5/1742/3, March 2009.
- *Final Research Report on "What do we do to accelerate sanitation*?" WRC Project K5/1742/3, March 2009.
- *Final Guideline and Tools Report on "What do we do to accelerate sanitation*?" WRC Project K5/1742/3, March 2009.

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LIST OF ACRONYMS

CDW	Community Development Worker
CHW	Community Health Worker
CIDB	Construction Industry Development Board
COLTO	Committee of Land Transport Officials
DLG	Department of Local Government
DM	District Municipality
DOH	Department of Health
DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
EHP	Environmental Health Practitioner
EHS	Environmental Health Services
EPWP	Extended Public Works Programme
FIDIC	International Federation of Consulting Engineers
GCC	General Conditions of Contract
H&HE	Health and Hygiene Education
HPP	Health Promotion Practitioner
IA	Implementing Agent
IDP	Integrated Development Plan
ISD	Institutional and Social Development
JBCC	Joint Building Contracts Committee
KPA	Key Performance Indicator
KZN	KwaZulu-Natal
LED	Local Economic Development
LGSETA	Local Government Sector Education and Training Authority
LGWSETA	Local Government and Water Sector Education and Training Authority
LM	Local Municipality
M&E	Monitoring and Evaluation
MHS	Municipal Health Services
MIG	Municipal Infrastructure Grant
NEC	New Engineering Contract
NQF	National Qualifications Framework
NSTT	National Sanitation Task Team
O&M	Operations and Maintenance
PHC	Primary Health Care
PMU	Project Management Unit
PSC	Project Steering Committee
PSTT	Provincial Sanitation Task Team
SAACE	South African Association of Civil Engineers
SAICE	South African Institute of Civil Engineers
SALGA	South African Local Government Association
SAQA	South African Qualifications Authority
SETA	Sector Education and Training Authority
WSA	Water Services Authority
WSDP	Water Services Development Plan
WSP	Water Services Provider

1. RATIONALE FOR THE PROJECT

The WRC has five key strategic areas (KSAs) which relate to water-centred knowledge, each providing an integrating framework for investment in tackling a selection of key water-related requirements. Each KSA addresses a specific research portfolio which comprises of a range of key thrusts with each thrust containing a set of programmes. The KSAs aim to support technology transfer, commercialization and pilot implementation projects as well as other knowledge distribution campaigns.

Of the five key KSAs, four are water-centred and address investment focused mainly on knowledge creation, while the fifth addresses mainly knowledge dissemination and information management. KSA 3 is focussed on Water Use and Waste Management and aims to research effective and efficient water service provision to, and use of water in, the domestic, industrial and mining sectors. This includes the prevention of pollution and the development of technologies for treatment of water and wastewater.

Under KSA 3, Thrust 5 is focused on Sanitation, Health and Hygiene Education. This thrust addresses the research required to assist national government to achieve it's goal of clearing the sanitation service backlog by 2010. It also identifies research that is essential to support planning for basic sanitation service delivery beyond 2010 with the focus being on low cost and affordable sanitation technologies. This specific research project falls under Programme 3: Institutional and management aspects of sanitation service delivery, which aims to develop institutional models, tools and guideline that will support the improvement of delivery (O&M, sustainability, etc.) of sanitation services.

The prime motivating factor of this project is the 2010 target date for eradicating the basic household sanitation backlog, so as to ensure that every constituent in South Africa has access to at least a basic level of sanitation by the end of 2010. This national target is captured in the 2001 White Paper on Basic Household Sanitation and reiterated in the Cabinet approved Strategic Framework for Water Services 2003.

Between 1994 and 2003 DWAF did play a major part in leading the National Sanitation Programme in identifying and developing national sanitation policy objectives and co-ordinating the actions of relevant national departments in order to address these objectives. Provincial Sanitation Task Teams did develop and co-ordinate strategies to support sustainable and accelerated delivery of sanitation mainly in rural areas, utilizing DWAF funding under the national Community Water Supply and Sanitation Programme.

Since 2003, Water Service Authority municipalities have been fully responsible for sanitation delivery across all villages within their areas of jurisdiction. In terms of the Municipal Systems Act, delegated authority provides for nominated Water Services Authorities to plan and carry out water and sanitation service provision making use of a capital conditional grant known as the Municipal Infrastructure Grant (MIG) in order to promptly tackle service backlogs. It is the Integrated Development Plans (IDPs) and Water Service Development Plans (WSDPs) of municipalities which are now the primary mechanisms for shaping municipal strategies to tackle sanitation delivery.

The above-mentioned change in the context of the national delivery of sanitation does have major significance for the way strategies to tackle sanitation backlogs should be formulated and carried out. The main objective of this research project is therefore to identify bottlenecks which obstruct delivery and then capture innovative sustainable sanitation approaches and experiences which

have been developed, and check their significance against the current political and institutional environment in South Africa in order to then support improved and accelerated sustainable sanitation service delivery through the development of key criteria and support tools and guidelines to enhance the accelerated delivery of sanitation services within a climate of limited resources so as to best to sustain this into the future.

It is hoped that the development of these institutional models, tools and guideline to support the improvement and acceleration of sustainable delivery of sanitation services will assist in reviewing the progress in the delivery of sanitation services on a regular basis, and that innovative strategies or processes emerging from this project could lead to actual testing and piloting.

2. INTRODUCTION AND BACKGROUND

2.1 Identifying the Challenges

Adequate basic sanitation facilities are a key indicator of human development in situations of poverty, and basic household sanitation in terms of the safe management and disposal of human excreta and wastewater is not just a component of infrastructure, but primarily of people's practices, privacy, dignity and convenience. Proper sanitation, therefore, contributes to improved health through ensuring interventions to prevent the spread of disease-causing bacteria that multiply due to inadequate disposal of waste.

Research shows that human waste and wastewater do contain a number of contagious microbes such as bacteria, parasites and viruses. Diseases such as typhoid fever, diarrhoea, dysentery, and cholera amongst others can be caused by the micro-organisms conveyed through human excreta, and where the care of people living with AIDS in being conducted in the context of the home, it is absolutely crucial that clean water, proper greywater disposal and easily reachable toilets facilities are in place.

Ensuring the provision of sanitation and water services as well as related information to households should therefore be a critical component of any sanitation enhancement programme aiming to increase the understanding of the community as regards the linkages between good sanitation, safe drinking water and personal hygiene and therefore aim to decrease the risk of contracting communicable infections.

The importance of integrating infrastructure development initiatives with health programmes, and the alignment and co-ordination of technical and health interventions so as to ensure health-promoting human behaviour, delivery of toilet facilities and management of wastewater systems so as to collect, treat and dispose of human waste safely and sustainably is thus vital.

It is well know that the provision of community water supply involves the distribution of water from a central source to many access points, which is different to the provision of sanitation which is more focussed towards the gathering of human waste through providing various collection facilities. It can therefore be suggested that sanitation is perhaps more closely related to solid waste management than water supply. The most suitable sanitation technical options for the gathering, transportation and disposal of human waste differ in relation to the various factors of economics, topography, population density, available water resources thus all need to be taken into account during any project planning stage.

No matter the profile of a municipality in South Africa, they are all faced with challenges in fulfilling their constitutional responsibilities of ensuring sustainable and affordable service delivery to the poorest of the poor people living within their jurisdiction. Evidence shows that the number of residents living below the poverty line is increasing in small towns and rural municipalities and, in secondary cities and urban metros, dense informal settlements are increasing as people migrate in search of jobs to combat poverty.

The delivery of infrastructure is only one aspect of ensuring an ongoing service to residents – to ensure this, municipalities must also have adequate staffing, finances and systems for operating and maintaining service provision. From the beginning of any project planning cycle, the ongoing maintenance demands of maintaining and operating the selected sanitation system should be recognized, planned and budgeted for so as to achieve a sustainable service.

History shows that no matter what the technical option, over time, there is inevitably some element of contamination into the environment, but it is the level or extent of this contamination that is of longer term importance. Waterborne sanitation reticulation does generally present a higher risk of contaminating ground and surface water than on-site VIP systems do, due to possible spillages and blockages or waste water treatment works which may be out of operating order. In relation to planning for the delivery of dry on-site VIP sanitation, mandatory groundwater protocol assessments do consider water resource aspects linked to critically situated aquifers. For dry on-site systems, key variables are the height of the water table, the soil type and the population density of the project area.

Addressing the sanitation backlog target is really only one of many ongoing sanitation challenges – other challenges include: addressing sanitation services on privately owned land, refurbishing aging systems, implementing water service cost recovery programmes and managing, upgrading and operating existing services. The development of water demand and resource planning and management strategies is also very critical in the context of planning to provide a higher level of waterborne sanitation service.

The lack of appropriate institutional arrangements and in-house municipal planning and technical skills, as well as a lack of effective sanitation delivery mechanisms and competent sanitation service providers are also contributing factors which delay the implementation of sustainable sanitation. In addition, the many VIP toilets which have been implemented in South Africa, by government programmes since 1994, look set to create some form of secondary service backlog amongst those already served with a facility, due to the fact that many of the pits of these facilities are fast reaching their design capacity.

Based on interactions with municipalities, indications are that most municipalities are endeavouring to work with commitment towards the achievement of the National Government objective of 2010 as the target date for the eradicating all sanitation backlogs; but they are also encountering many bottlenecks which impede the delivery of their sanitation service programmes, and therefore there are also a number of municipalities who are not very positive about being able to reach the 2010 sanitation target. Many of these municipalities have highlighted the shortage of available funds as a primary constraint towards achieving the sanitation delivery target of 2010, yet, if one assesses this issue in depth it is clear that the bottlenecks which impede sanitation service delivery are not necessarily linked only to issues of funding.

In South Africa there are 170 Water Services Authorities: 6 Metropolitan WSAs, 22 District Municipalities (plus 16 Districts who are WSAs for the District Management Areas only) and 126 Local Municipalities.

In terms of the Department of Provincial and Local Government, there are three types of municipality – metropolitan, district and local – which can further be broken down into seven broad categories:

- A1 – Metropolitan Cities
- C1 – District municipal areas without WSA functions serving mainly urban areas
- C2 – District municipal areas with WSA functions serving mainly rural areas
- B1 – Local municipal areas serving secondary cities
- B2 – Local municipal areas serving large towns
- B2 – Local municipal areas serving large populations without large towns
- B4 – Local municipal areas serving mainly rural areas with small towns

In accordance with national backlog figures, it can be noted that the category B4 and C2 municipalities indicated above are the areas where sanitation and water backlogs are the highest – no doubt due to the fact that these comprise of rural and former homeland areas. Government's first Community Water and Sanitation Programme which ran from 1994 to 2003, mainly focussed on provision of basic water and sanitation services within these poverty stricken areas.

The constituting of new municipal boundaries, in South Africa, in early 2000 meant that municipalities had to re-orientate staff and administrative and financial systems which did in turn affect the planning and implementing of service delivery projects. In July 2003, powers and functions were gazetted in terms of the establishment of some municipalities being assigned Water Service Authority responsibilities in terms of the Municipal Structures Act.

In some areas former urban municipalities had to begin planning and ensuring sanitation delivery in surrounding rural and informal areas, and / or also devolve some skilled staff members to former "rural" municipal areas. The aspects of aligning integrated planning and collaborative governance between District municipalities and Local municipalities in terms of their various assigned functions continues to be an ongoing challenge.

In terms of the Constitution of the Republic of South Africa (No. 108 of 1996), delegated authority provides for nominated Water Services Authority municipalities to plan and carry out water service provision making use of a capital conditional grant known as the Municipal Infrastructure Grant (MIG) and the Equitable Share Grant in order to promptly tackle service backlogs. It is the Integrated Development Plans (IDPs) and Water Service Development Plans (WSDPs) of municipalities which are now the main mechanisms for locally shaping municipal strategies to tackle sanitation delivery.

Evidence shows that in a context of limited resources, aiming to meet the wide range of sanitation delivery needs of people living across a wide range of settlement types is extremely challenging in both the political and technical sense. Working to eradicate the bucket toilet system, coupled with dealing with the general expectations of communities to receive flush toilets, as well as coping with the inexperience of municipal sanitation staff in dealing with rural and peri-urban dry sanitation programmes are all aspects which most municipalities indicated that they feel incapable and ill-equipped to address.

2.2 Components of the Research

In order to achieve the objective of this project, the following overall deliverables have been addressed in a practical approach so as to generate reports and materials in a sequence that reflects the issues a WSA must address in planning and implementing accelerated sustainable sanitation projects:

- Identification of the bottlenecks which impede accelerated sanitation delivery at all levels;
- Documenting successful sustainable sanitation service delivery approaches and methodologies;
- Assessment and documentation of the key criteria for the acceleration of sanitation delivery in urban areas, and recommendations on how these can be implemented within WSAs and other municipalities where resources are limited;
- Formulation of support tools for enhancing municipal sanitation programme implementation based on an assessment of the key criteria for accelerating sanitation delivery across all settlement types; and
- Development of a guideline to facilitate the use of the support tools for the enhancement of municipal sanitation programme implementation.

The project therefore reviewed what capacity and systems are currently in place within local government, what is needed, and how support initiatives should be focussed to assist municipalities to accelerate delivery so as to sustainably reach their 2010 sanitation service delivery targets – this also goes to the heart of collaborative governance. This approach should assist the WSAs to begin with practical specifics, and progressively add further levels of intricacy as required – with the support materials developed under the project hopefully being tested and further refined as they are put into practice.

The first stage of this project focussed on the identification of the bottlenecks which impede accelerated sanitation delivery. This activity was undertaken with a focus primarily at the local government level where key bottlenecks related to the delivery of sustainable sanitation services in the context of the achievement of the 2010 target of full sanitation coverage were explored – these findings are presented in section 4.1 of this report.

The second stage of this project focussed on capturing successful sanitation delivery approaches and methodologies. This activity was undertaken with a focus primarily at the local government level where successful approaches to the delivery of sustainable sanitation services in the context of the achievement of the 2010 target of full sanitation coverage were explored – these findings are presented in section 4.2 of this report.

The third stage of this project is focussed on the assessment and documentation of the key criteria for accelerating sanitation delivery and how these can be implemented by municipalities. This activity was also undertaken with a focus primarily at the local government level where the key criteria related to the delivery of sustainable sanitation services in the context of the achievement of the 2010 target of full sanitation coverage were identified – these key criteria are presented as recommendations for accelerating sanitation delivery in section 5 of this report.

The fourth stage of this project is focussed on the development of municipal support tools based on the key criteria for accelerating sanitation delivery and how these can be implemented by municipalities. This activity was undertaken with a focus primarily at the local government level in order to aid municipalities in accelerating the delivery of sustainable sanitation services by 2010 –

all of these support tools are contained in the final version of this project's Guideline and Tools Report.

The fifth stage of this project focussed on the development of a guideline to facilitate the use of the support tools developed to enhance municipal sanitation programme implementation. This activity was also undertaken with a focus primarily at the local government level in order to aid municipalities in accelerating the delivery of sustainable sanitation services by 2010 – this guideline is included in the final version of the Guidelines and Tools Report of this project.

2.3 Outputs

The project resulted in a number of unpublished reports and project deliverables – these unpublished reports and project deliverables include:

- *Research Report 1 on Identifying the Bottlenecks which Impede Accelerated Sanitation Delivery.* WRC Project K5/1742/3, September 2007.
- *Research Report 2 on Capturing and Documenting Successful and Sustainable Sanitation Service Delivery Approaches and Methodologies*. WRC Project K5/1742/3, January 2008.
- *PowerPoint Presentation: What do we do to Accelerate Sanitation? : Project Overview and Progress Update*. WRC Project K5/1742/3, 5th February 2008.
- *Research Report 3 on Assessing the Key Criteria for the Acceleration of Sanitation Delivery including Recommendations for Implementation*. WRC Project K5/1742/3, July 2008.
- *Research Report 4 on Support Tools for Enhancing Municipal Sanitation Programme Implementation based on an Assessment of the Key Criteria for Accelerating Sanitation Delivery*. WRC Project K5/1742/3, December 2008.
- *Research Report 5 on a Guideline to Facilitate the use of Support Tools for Enhancing Municipal Sanitation Programme Implementation*. WRC Project K5/1742/3, March 2009.
- *Final Research Report on "What do we do to accelerate sanitation*?" WRC Project K5/1742/3, March 2009.
- *Final Guideline and Tools Report on "What do we do to accelerate sanitation*?" WRC Project K5/1742/3, March 2009.

3. METHODOLOGY

3.1 Inception Planning

In order to gather research data for this project, detailed planning and scheduling of activities by the research team was undertaken, as well as the development of a simple action research gathering guideline aimed primarily at collecting practical and strategic information from WSAs and service providers (refer to Appendix 2).

3.2 Action Research

Action research consultations with a sample of key stakeholders at national level and municipal level were undertaken, as well as with local service provider and interest groups. These interactions included one-on-one meetings; discussions within municipal and national sanitation-related stakeholders, site visits accompanied by municipal personnel and / or service providers, and included a range of disciplines such as baseline information capture, financial management and planning, institutional arrangements and sanitation delivery mechanisms. For the purposes of compiling this report, representatives from across five provinces were consulted, with interviews

primarily being conducted with Technical Managers, Sanitation Managers and other personnel as appropriate.

3.3 Identifying the Bottlenecks which Impede Sanitation Delivery

A review of the bottlenecks related to gathering baseline information linked to both backlogs and future resources needed for operations and maintenance was undertaken. This revealed critical consequences in terms of the exact overall size and type of backlogs which must enlighten national and municipal level budgetary procedures and local project implementation processes in line with the achievement of national delivery targets.

Secondly, a review of the financial planning and management element considered what capabilities and arrangements WSAs need to have in place in order to effectively utilize the sanitation component of their MIG allocation, and in so doing, ensure that they aim where possible to meet the 2010 target. This should also correlate with the establishment of levels of service strategies and strategic priority planning in association with IDP and WSDP aims, as well as to the overall financial systems and management required to ensure proper budgeting and sufficient cash flow for effective and uninterrupted construction at project implementation level.

Thirdly, a review of institutional arrangements highlighted a number of bottlenecks related to municipal capacity to be able to effectively tackle sanitation planning and implementation. This revealed that very often too much emphasis is placed on new capital works at the expense of broader sustainability considerations, and that programme implementation systems are largely deficient and this limits the municipality's ability to effectively performance manage sanitation service providers. Inconsistencies in funding and internal cash flow problems, as well as the varying approaches adopted for tackling sanitation across different settlement areas were also highlighted as factors which impede sanitation delivery.

Lastly, a review of the delivery mechanisms in order to ensure sustainable sanitation service delivery, considered the need for reliable co-ordination and communication between different municipal role-players at ground level and the enormous need for practical supervision and support in solving intricate sanitation challenges and problems so as to realize government's commitment to achieve sanitation for all. The findings revealed that only a few municipalities currently have the skills and expertise to plan and manage project implementation on the extent required and they are in need additional support related to planning, managing and monitoring implementation, and ensuring long term operations and maintenance. In addition, data gathered showed that there is also limited amount of service provider capacity available in the sector able to deliver a good product, and appropriate municipal support systems and assessment processes are needed to ensure that what is required is actually being achieved, and that service providers are really implementing what they have been appointed to deliver.

3.4 Documenting Successful Sanitation Delivery Approaches

In order to assess successful sanitation delivery approaches, a review of successful sanitation implementation methods related to municipal managed and conventional consultant / contractor driven models with linkages to various contractual models and frameworks in terms of municipal procurement procedures was conducted as a first step.

Then a review of the required institutional aspects necessary in order to ensure sustainable sanitation service delivery was undertaken, and this revealed the need for action oriented

municipal sanitation task teams in order to co-ordinate and communicate between different municipal role-players at ground level and the enormous need for increased skills capacity and support in solving intricate sanitation challenges and problems so as to realize government's commitment to achieve sanitation for all.

Next a review of the current pace of sanitation delivery assessed the most appropriate capabilities and arrangements WSAs would need to put in place in order to effectively utilize the sanitation component of their MIG allocation in relation to other available subsidies and grants, and in so doing, ensure that national sanitation targets are met where possible.

Thereafter, a review of options for strengthening successful sanitation delivery approaches, in order to ensure an ongoing and sustainable sanitation service, considered the means for scaling up and accelerating existing approaches and levels of sanitation delivery through use of programmatic approaches; as well as the need for life cycle planning in relation to the proper use of appropriate technologies with regard to achieving sustainability in the long term through ensuring operations and maintenance issues was taken carried-out.

3.5 Assessing Key Criteria for Accelerating Sanitation Delivery

A review of the key criteria for gathering the required reference data revealed that local levels of existing sanitation service and backlog definitions need to be identified by municipalities; sanitation backlog baseline data and delivery targets per level of service need to be established; and the interface between IDPs and WSDPs should be improved in order to ensure that sanitation planning and delivery strategies are appropriately incorporated.

Next, a review of the key criteria for ensuring that the human and financial resources are locally in place revealed that municipal technical skills and capacity should be boosted; high staff turn-over be limited; the increased functionality of MIG Project Management Units be promoted; appropriate institutional arrangements, systems and approaches be established; MIG funding allocations (national and local) be ring-fenced; project budget commitments in line with delivery targets be ensured; expenditure towards delivery targets be aligned and ensured; and that additional funding requirements and alternative sources be established.

Then a review of the key criteria for ensuring that strategic planning does take place at local level did reveal that multi-year programmatic integrated macro-planning approaches should be promoted; appropriate infrastructure life-cycle and cost recovery planning be ensured; and that planning inputs and support through the establishment of stakeholder delivery mechanisms should be facilitated.

Thereafter a review of the key criteria for ensuring that the most effective delivery approach is adopted locally did reveal that there is a need for greater understanding and participation in appropriate sanitation technology choices to be promoted; skills development, mentorship and capacity building at local level to be ensured; local construction and user-education performance and quality management systems to be established; and that acceleration through the establishment and management of a programmatic approached be enhanced.

Lastly, a review of the key criteria for ensuring that the most effective performance management and monitoring systems are locally set up did reveal that key performance indicators for monitoring the success and performance of delivery should be identified; that tools to be utilized in order to accurately monitor the key performance indicators should be developed; that mechanisms

through which to centralize the use of key performance monitoring tools should be developed; and that data should then be gathered and verified against the agreed key performance indicators.

3.6 Compiling Support Tools for Accelerating Sanitation Delivery

Municipal support tools were then developed based on the findings of a review of the key criteria for accelerating sanitation delivery. These tools focus primarily on assisting municipalities to gather the required reference data, assess that the required human and financial resources are in place, ensure that the required strategic planning is in place, make certain that the most effective delivery approach is in place, and check that the most effective performance management and monitoring systems are in place.

The support tools aim to assist municipalities to identify local levels of existing sanitation service and backlog definitions; establish sanitation backlog baseline data and delivery targets per level of service; improve the interface between IDPs and WSDPs in order to ensure that sanitation planning and delivery strategies are appropriately incorporated; boost municipal technical skills and capacity; limit high staff turn-over; promote the increased functionality of MIG Project Management Units; establish appropriate institutional arrangements, systems and approaches; establish a sanitation sub-component within the MIG funding allocations (national and local); ensure project budget commitments in line with delivery targets; ensure the alignment of expenditure towards delivery targets; establish additional funding requirements and alternative sources; promote multi-year programmatic integrated macro-planning approaches; ensure appropriate infrastructure life-cycle and cost recovery planning.

Furthermore the tools also aim to help municipalities to facilitate planning inputs and support through the establishment of stakeholder delivery mechanisms; promote greater understanding and participation in appropriate sanitation technology choices; ensure skills development, mentorship and capacity building at local level; establish local construction and user-education performance and quality management systems; enhance acceleration through the establishment and management of a programmatic delivery approaches; identify key performance indicators for monitoring the success and performance of delivery; develop tools to be utilized in order to accurately monitor the key performance indicators; and to develop mechanisms through which to centralize the use of key performance monitoring tools in order for data to then be gathered and verified against the agreed key performance indicators.

3.7 Developing a Guideline for using Support Tools to Accelerate Sanitation Delivery

A guideline for facilitating the use of the above-mentioned municipal sanitation support tools was also developed based on the findings of a review of the key criteria for enhancing and accelerating sanitation delivery. The guideline aims to assist municipalities in the use of the fifteen sanitation support tools in order that they may be better able to:

- Deal with sanitation delivery within the context of government policy;
- Define the necessary municipal institutional arrangements and mechanisms for best tackling sanitation delivery;
- Strengthen municipal sanitation service delivery backlog information and strategic planning;
- Establish municipal sanitation service delivery financial planning, arrangements and frameworks for capital and operational expenditure;

- Ensure improved co-ordination, collaboration, networking and stakeholder participation in the best interests of sustainable sanitation service delivery;
- Encourage enhanced sanitation programme implementation through following a work flow process of steps in order to establish the existing sanitation scenario in an area and then to assess critical design and planning factors so as to select the most appropriate technical solution for the specific scenario;
- Promote skills development and mentorship of municipal officials and local emerging service providers in the delivery of sustainable sanitation service delivery; and
- Ensure that the appropriate tracking systems and routine operations and maintenance related activities are put in place and regularly monitored and evaluated for sustainability.

4. SYNTHESIS OF FINDINGS

This section of the report presents a discussion of the project findings in detail. It begins by describing the constraints to delivery, as well as some successful approaches which could facilitate the improved delivery of sanitation at municipal level. All of the research findings in terms of the constraints and successes have informed the entire research project, and have resulted in the identification of key criteria for facilitating the accelerated delivery of sanitation. A number of sanitation delivery support tools and a guideline document have been developed as user-friendly support documents which are aimed at assisting municipalities to overcome some of the delivery constraints and take advantage of the successful approaches to accelerating sanitation delivery.

4.1 Delivery Constraints

This section of the report analyses research findings on the constraints to the delivery of sanitation the municipal context, and these constraints are discussed in relation to baseline information, financial planning and management, institutional capacity and arrangements and delivery mechanisms.

4.1.1 Baseline Information

The Integrated Development Plans (IDPs) of municipalities are the primary planning documents which should capture the main objectives and framework from which to develop the Water Service Develop Plan or WSDP. The development aims and related budgetary allocations of the municipality should be captured in the IDP as a result of extensive community ward consultations. Within IDPs there is a needs for sanitation service delivery to be given greater priority, but in order for this to be addressed reliable baseline information which recognizes and measures exactly what is required and shows how this relates to broader municipal development objectives, is needed.

With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following delivery constraint findings related to accurate municipal baseline information were identified during the research project:

a) National targets should be aligned with locally identified needs as municipalities indicated that it is quite a challenge to combine the achievement of these objectives as identified by their consultative IDP process, versus the national conditions of the MIG allocation and it's formulae. Sanitation cannot be tackled in isolation from wider municipal and water services development

plans, and in cases where municipalities recognise the value of better sanitation, they must still also plan and budget for addressing the needs of other infrastructure service backlogs.

b) Several municipalities do not yet have Water Service Development Plans – some have incomplete WSDPs, and most do confess that they do not use their WSDP documents to guide their sanitation project implementation. In many cases there are gaps between the content of WSDPs compiled by Local and District municipalities both situated within common boundaries.

c) Most WSDPs of municipalities are compiled by consultants via desktop processes and they therefore do not often tie up with the municipalities IDP plans and budgets and have reduced impact and significance to the WSA. There is not much of a consultative or participatory process involved in the development of WSDP unlike with IDPs – this clearly does have an effect on the integrated planning and prioritization of sanitation service delivery in relation to the broader municipal service delivery context.

d) The lack of comprehensive municipal sanitation delivery planning often only reveals itself during the project implementation phase when the actual delivery challenges and bottlenecks become evident – in these situations it is usually the beneficiary constituents who become the most affected. Due to the fact that most municipalities do not have Water Services Development Plans beyond Levels beyond an overall first level draft, it is clear that most WSDPs cannot generally offer appropriate strategic direction to inform sanitation project planning and ongoing service delivery.

e) Integrated planning and implementation amongst sector departments and municipalities is often poor. Very often there are housing developments which are planned in isolation from water services planning and this can result in costly interventions having to be made due to lack of proximity to bulk services and greywater disposal systems. Dealing effectively with the housing backlog will require that Housing departments work closer with municipal technical sections so as to properly align the provision of basic services.

f) On a national level, the relationship between housing and water supply and sanitation needs to be consolidated so that at a provincial and local level, the Housing Department can effectively deal with the housing backlog and service delivery of informal settlements, through supporting in-situ upgrades or establishment of greenfields developments to which people will be relocated.

g) In order for the longer term benefits of all of the current water and sanitation capital project implementation to be realized, it is clear that the planning capacity at municipal level does require considerable reinforcement. Before inclusive integrated planning can be tackled, dependable baseline information must be captured so as to inform the formulation of strategic approach for the achievement of local aims and objectives.

h) It is extremely challenging to try and assess, budget for and monitor the achievement of the eradication of sanitation backlogs with a municipality without accurate backlog baseline data from which to work. Most municipalities have indicated that they are not confident of the accuracy of their basic service backlogs figures and due to this their sanitation delivery plans could be poorly informed and thereby result in uncertainty with regards to achieving the 2010 sanitation target.

i) It was also noted that within municipalities, districts and provinces, there are quite often differing collections of baseline data which also causes further lack of agreement on the actual backlog status within municipalities. Some planners still utilize 2001 census data which is now more than six years old and very obviously outdated since basic service delivery backlogs are very much of a shifting target.

j) Whilst many municipalities are endeavouring to ensure sanitation service delivery to backlog areas, it is an ongoing task since new villages and informal settlements are constantly being formed as unemployed people migrate in search of job opportunities. The very definition of the "backlog" to be eradicated is also still not clearly understood and is under question in several municipalities – is it to include all current formal backlogs, or to also include all informal settlement backlogs or only historical pre-1994 backlogs?

k) In relation to the many sanitation service delivery challenges in backlog areas, many municipalities have not yet even begun to plan for or tackle the provision of sanitation delivery to residents on privately owned land. Just to collect baseline information of residents on privately owned land is a massive challenge on it's own, besides actually embarking on delivery of services, since often land owners may view the result of accommodating municipal support for infrastructure and service provision on their land the same as government now having a claim on their land.

l) Very often the requirements for addressing sanitation backlogs on privately owned land are not captured in the IDPs and WSDPs of municipalities. This can make planning and budgeting to ensure sanitation delivery to these residents, via the land owner water service intermediaries, very difficult as it can also involve complex legal and procedural challenges if not approached wisely.

m) In cases where municipalities do have WSDPs in place, it is obvious that there is insufficient content on addressing the aspects of sanitation delivery in relation to that of water supply. Most often sanitation delivery requirements and approaches in the context of dry on-site options are lacking and not well captured in relation to issues of long-term pit emptying requirements, the roles and responsibilities of the WSA, WSP and households with regard to serving, the method to be used to address servicing and the financial arrangements required.

n) The delivery approach adopted by many of the municipalities does not adequately appear to assess aspects of community-based job creation opportunities in relation to methodology for accelerating sanitation delivery via the use of local sub-contractors and batching of pedestal, block and slab manufacture for example. On-site sanitation projects are well positioned for the development and grooming of emerging contractors in a context where corresponding guidance and support can be given, and also present a variety of prospects to connect other secondary community-based enterprises as material suppliers, pit diggers or zone quality assessors, etc.

o) In many cases, the project feasibility studies and technical reports – which should accurately identify and assess the viability and appropriateness of levels of service and technical option choices before commencing with sanitation project delivery, and in so doing prevent longer terms financial, social, environmental and political implications – are lacking. The absence of these studies often means that critical planning information which may not be contained within the IDPs or WSDPs is not readily available.

p) The absence of proper feasibility studies noticeably limits the capacity and capability of municipalities to properly operate and maintain sanitation infrastructure, since this cannot easily be assessed and planned for in the context of plotting the entire project design life cycle and it's requirements. The consequences of not properly taking into account the longer term requirements of delivered infrastructure could lead to shortfalls in municipal funding to effectively operate waterborne sanitation systems, insufficient capacity of water resources or waste water treatment works leading to failing sanitation systems.

q) In many cases, sanitation project feasibility assessments also do not yet address aspects of pit emptying and sludge collection, abstraction and treatment in order to avoid the costly construction of sanitation facilities which in time will comprise new sanitation service backlogs as their pits become full and they become unusable.

r) There are increasing cases of completed municipal sanitation projects that do not offer the users a basic and acceptable sanitation service on a uninterrupted or continual basis since often these facilities are constructed with sealed and under sized pit volumes which rapidly fill up with no provision having been made for emptying them.

s) Information captured revealed that most often as soon as the contractor has finished with construction the responsibility for the sustainability of the toilets rests with the householder and yet there is little that the householder can do to rectify pit construction errors which are often out of sight below ground.

t) It was also very evident that dry on-site sanitation construction is frequently dealt with too simply, with the focus most often being on the delivery of a top structure facility only and failure to understand the onsite workings of the pit as a mini on-site digester to be carefully constructed in accordance with locally appropriate conditions and requirements such as adequate linings in collapsible soils, and compliance with SANS specifications, etc.

4.1.2 Financial Planning and Management

Since the launch of the Municipal Infrastructure Grant (MIG) Fund as a centrally allocated conditional grant source of infrastructure funding, the potential for aligning and integrating service delivery planning and needs has been significantly boosted. There is however still some misalignment of expenditure in terms of addressing the needs of service provision to the poorest due to misinterpretation and gaps in understanding of MIG policy and application of financial administration processes at municipal level.

Table 1: MIG Commitments per province per financial year as at March 2007 (MIG Quarterly Workshop 23rd to 25th April 2007)

Province	Municipal Infrastructure Grant National Financial Year		
	2006/2007 R' 000	2007/2008 R' 000	2008/2009 R' 000
Eastern Cape	99%	88%	72%
Free State	95%	55%	36%
Gauteng	100%	47%	7%
KwaZulu-Natal	97%	92%	61%
Limpopo	100%	90%	25%
Mpumalanga	92%	68%	36%
Northern Cape	97%	63%	66%
North West	100%	79%	62%
Western Cape	100%	90%	48%
NATIONAL	**98%**	**76%**	**46%**

The MIG policy specifies that only projects listed in IDPs and WSDPs are eligible for MIG funding, and this emphasises the value of increasing the priority of sanitation planning at municipal level. Table 1 contains figures presented to the MIG Quarterly Workshop held on 23rd and 24th of April 2007 which show the commitments against MIG allocations by province, across all sectors between 2006/07 and 2008/2009.

Overall national MTEF allocations to sanitation over the period 2004/05, 2005/06 and 2006/07 totalled 27%, as against 73% for water (according to the MIG Quarterly Workshop 23rd to 25th April 2007), yet just under one third of the national population lack access to basic sanitation facilities – please note that these percentages represent the value of sanitation and water funding allocations per the MTEF period, and not actual expenditure.

MIG funding is categorized and distributed nationally according to various specific groupings, of which the B Component is allocated to cover basic roads, electricity and water and sanitation services. The B Component comprises of 75% of all MIG allocations, and of this component, 72% is jointly allocated to basic water supply and sanitation services – unfortunately there is no sub-component percentage split between water and sanitation allocations in order to ensure that funding allocations are proportional with water and sanitation backlog splits.

Table 2: Indicating MIG Allocation Parameters (DPLG MIG Quarterly Workshop 24th April 2007, Limpopo Province)

	Original parameters	2004 parameters	2005 parameters	2006/7/8 parameters
MIG (T)	100%	100%	Baseline	Baseline
SMIF	4%	4%	R155m	R155m
MIG (F)	96%	96%	Baseline+R155m	Baseline+R155m
B Component	75%	75%	75%	75%
Water and Sanitation	50%	72%	72%	72%
Electricity	22%	0%	0%	0%
Roads	23%	23%	23%	23%
Other	5%	5%	5%	5%
	100%	100%	100%	100%
P Component	15%	15%	15%	15%
E Component	5%	5%	5%	5%
N Component	5%	5%	5%	5%
MIG(F)	100%	100%	100%	100%

From the table below it can be noted that in the current MTEF period overall water supply funding allocations have increased by 54% with sanitation funding allocations having been increased by 45% as against the previous MTEF period. Sanitation funding allocations do however still only make up the third lowest amount of the ten MTEF infrastructure allocations.

Table 3: Previous and Current MTEF Period Funding Allocations per Sector (DPLG MIG Quarterly Workshop 24th April 2007, Limpopo Province)

R Million	Previous MTEF 2004/05	2005/06	2006/07	Total	Current MTEF 2007/08	2008/09	2009/10	Total	% Inc.
Water (DWAF Water Boards, TCTA and Municipal)	**4296**	**5627**	**7808**	**17731**	**8395**	**9098**	**9758**	**27251**	**54%**
Sanitation (Municipal and DWAF)	1368	2297	2926	6591	3028	3180	3339	9547	45%
Electricity (ESKOM and DWAF)	**8110**	**11782**	**16272**	**36164**	**17223**	**23100**	**30983**	**71306**	**97%**
Housing	4474	4843	6822	16139	8238	9853	11531	29622	84%
Education (School Building)	2148	2453	3127	7728	3393	3984	4183	11560	50%
Health (Hospitals & Clinics)	2222	3059	4175	9456	4699	5468	6086	16253	72%
Roads (SANRAL, provincial and municipal)	**10998**	**13299**	**15743**	**40040**	**18740**	**20806**	**22618**	**62164**	**55%**
Rail (SARCC, Gautrain, Spoornet)	**2147**	**4959**	**12900**	**20006**	**15973**	**15857**	**14258**	**46088**	**130%**
Ports (NPA and SAPO)	**2221**	**2843**	**3667**	**8731**	**7122**	**5623**	**3808**	**16553**	**90%**
Justice (courts)	270	318	268	856	405	443	501	1349	58%
Police	368	447	508	1323	727	1226	1356	3309	150%
Sport & Recreation (Stadiums)				**0**	**2700**	**3800**	**1300**	**7800**	

With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following delivery constraint findings related to municipal financial planning and management were identified during the research project:

a) Often at municipal level sanitation is seen as a lesser priority and therefore most of municipal MIG expenditure is incurred against water projects as opposed to delivery of sanitation services. This raises a question is relation to how budget allocations are reached at a national sphere if at a local sphere municipalities can expend these funds in accordance with their own local priorities, and by so doing this will no doubt negatively impact on the achievement of the 2010 target of ensuring basic levels of sanitation to the poor.

b) Once projects are listed on the IPD of a municipality the finds for the project can be accessed, but in order to do this the project requires registration with DPLG via the completion of an MIG Project Registration System, as well as the compilation and submission of a Project Technical Report to DWAF for recommendation. In many cases municipalities lack the expertise and capacity to be able to swiftly and strategically complete the documents in line with their backlog project lists so as to prevent delays in accessing these funds.

c) In many cases municipalities are also prioritizing the implementation of water supply projects over sanitation in an effort to try and meet the 2008 national water supply target. In so doing there is often less funding available over the 3 year cycle for addressing actual sanitation delivery projects within a municipality. In the interim the unit cost of delivery is steadily

increasingly in relation to the planning which might have been done, which will no doubt mean that plans and costs will need to be revised by the time funding is made available and project construction can actually begin.

d) If MIG funds are also increasingly utilized to deliver waterborne sanitation projects then obviously this will also impact unconstructively on the progress of delivery of sanitation to as many households without access to basic sanitation as possible, since unit cost amounts will be disproportionately increased resulting in a smaller quantity households being served.

e) Often the limited capacity and insufficient understanding which municipal staff have of MIG registration processes causes gaps in the registration of MIG projects on the Municipal Infrastructure System (MIS) since data is often insufficient or deficient and this leads to delays in accessing funds and commencement of project implementation phases. This also highlights the need for improved communication and collaborative working relationships between the MIG staff of Local Government Departments, DPLG at national level and MIG Project Management Units (PMUs) at local municipal level.

f) In situations where municipal funding is delayed or where there are bottlenecks in the flow of funds from provincial departments to municipalities the implementation of projects can become delay. If project payment certificates cannot be processed or are delayed for any reason, this can have a knock on effect on the appointed service provider's ability to purchase materials and or pay local labourers working on the project. Once project implementation becomes delayed at community level it becomes difficult to retain skilled workers and maintain positive participation by local community members.

g) Municipalities have highlighted the "lack of funding" as their only main obstacle to achievement of the 2010 sanitation target. On closer analysis however it is clear that in many cases municipalities are unable to effectively spend large sums of their MIG allocated budgets within the stipulated time periods. In addition, construction snags at project level often lead to additional and unplanned expenditure which unintentionally results in a reduced number of households per project being served with a toilet – thereby shifting the achievement of the 2010 target further backward.

h) The lack of dedicated sanitation portfolio staff at municipal level has emerged as a key bottleneck, since this results in inadequate prioritization of sanitation in IDP planning and budgetary processes, inadequate capacity to turn WSDP aims into workable project plans, inadequate ability to streamline procurement processes and appointment of competent service providers, and the inadequate capacity to address bottlenecks and technical challenges at implementation level which often hinder construction progress and expenditure.

i) In many cases where municipalities do not have suitable internal sanitation capacity and skills, they need out source certain aspects of their sanitation planning and management activities to external service providers. Often these service providers may themselves not be well experienced or competent in relation to the various wet and dry technologies and their varying user requirements at implementation level. In addition to this, very often the municipal official, who may have the task of managing or overseeing the appointed service provider, also lacks an appropriate level of knowledge and experience required in order to avoid or swiftly deal with any implementation challenges that might arise at community level.

j) Proper user education and awareness amongst community members and households is mostly lacking in municipal sanitation projects since the critical engage of people at community level regarding the principles of operation and maintenance of the toilet structures seldom occurs. Integration and co-ordination of all municipal, community and Department of Health initiatives and health and hygiene activities and programmes at community level is critical to ensure that the correct project impacts are achieved and that there is sustained and improved health and behaviour change within communities.

k) Currently massive amounts of funding under the MIG programme are being allocated for the implementation of new capital infrastructure in an effort to eradicate all sanitation backlogs by 2010, yet municipal strategies to address the automatic increase in required operations and maintenance activities and associated funding are largely absent. It can therefore also be noted that strategically strengthening the sanitation component of municipalities WSDPs will be of critical importance to sustainably address the full life cycle of sanitation delivery.

l) Very often there is insufficient finance available for municipalities to expand or supplement their bulk water services infrastructure requirements and often they attempt to source this from their conditional MIG grant allocations, which are actually allocated with a focus toward addressing the basic needs of the indigent target group, opposed to being utilized for expanding bulk capital works. Complete and proper planning with regard to water services cost recovery and revenue generation is of vital importance in order to fund the upgrade and increased demand of bulk waste water treatment works and water purification works so as to ensure compliance with drinking water quality and effluent discharge standards. This is especially critical with regard to the integration required between new housing developments as well as in the context of bucket eradication programmes.

m) Many municipalities are recognising that their drinking water quality and effluent discharge standards are non-compliant with national specifications. Many of them are siting the lack of available operations and maintenance management and finance (internal revenue and external grants) as contributing factors. Ultimately the protection of the environment and the health of people are at risk as the number of service failures related to sewage spillages and polluted water supplies increase.

n) With regard to dry on-site sanitation systems such as VIPs, it is clear that most municipalities have little expertise or practical experience with emptying the contents of the pits when they are full, as well as with transporting and safely disposing of the extracted waste material. As previously highlighted, the full life-cycle of any sanitation system should properly be considered and captured in the IDP and WSDP planning documents prior to implementation – this should include the capital and operation costs and related activities.

o) Municipalities have demonstrated a very narrow grasp of what might be meant by "Free Basic Sanitation" (FBS) – the very definition of what might be intended by this "policy" or how to go about implementing FBS is still very much unclear. No doubt the greatest challenge that the Free Basic Sanitation policy might face is being able to define how to implement FBS in a rural dry on-site sanitation context, as opposed to an urban waterborne context, where FBS would basically form a component of Free Basic Water – thereby achieving "free basic sewage" instead of free basic sanitation!!

p) Many municipalities have indicated that they are struggling just to deliver new capital basic service to backlog areas, and do not have sufficient additional capacity to also be able to tackle

the implementation of free basic services. Currently the consequences of having to service dry sanitation facilities in rural areas in terms of municipal institutional arrangements and necessary budgets, have not yet been even comprehensively been addressed in terms of national planning an policy making so as to provide guidance to municipalities so that they in turn are able to appropriately get ready to provide this vital service.

q) It is clear that water supply is an income generating activity so long as cost recovery is properly executed – unlike dry sanitation which does not readily generate income. In this regard, it is increasingly evident that municipalities will either need to receive considerable additional funding in terms of their equitable share allocations in order to assist in the implementation of free basic sanitation, or to reprioritize the use of allocated Equitable Share amounts which they currently do receive, so as to include necessary budgets for dry sanitation servicing.

r) It is also clearly evident that in many areas constituents are advocating for flush toilets as opposed to VIPs and other such dry sanitation systems and, unless the definition of a basic facility and service are further clarified, it does seem that in future the unguided use of available funding may result in a lower number of households being served, with the allocated budget, against the planned 2010 backlogs to be eradicated.

s) Municipalities have also highlighted that the responsibility for ongoing maintenance of VIPs is still largely unclear in terms of national policy – many municipalities are merely trying to ensure that they do everything possible just to eradicate the sanitation household facility backlog in line with the 2010 target – and are of the opinion that the servicing of dry sanitation facilities is a household responsibility in light of limited municipal resources and capacity to address this activity.

t) Very often the allocated municipal budgets for addressing maintenance of refurbishment and upgrading of waste water treatment and other bulk works are insufficient. One contributing factor is that municipal tariff levels and active cost recovery systems are either not in place, or are poorly managed. The end results of operating bulk water and waste water treatment facilities which release poor quality drinking water and effluent which is non-compliant to national standards, is the potential contamination of the environment as well as the potential risk of increased disease in communities.

4.1.3 Institutional Capacity and Arrangements

In order to achieve the political targets of a basic level of sanitation service to all people in South Africa by 2010, the primary focus of current sanitation service delivery is on the construction of new dry sanitation facilities, and on the upgrading of existing levels of sanitation services (i.e. connecting households who currently have a functional septic tank system, onto a waterborne bulk sewage system, etc.). Due to the fact that there are limited technical staff within municipalities, the technical capacity and experience to adequately motivate to municipal councils the need for planning and provision of ongoing funding and initiatives to address maintenance and rehabilitation of existing and new sanitation infrastructure is largely lacking. It is also noticeable with respect to section 78 Water Service Provider (WSP) arrangements, that the necessary initiatives required to cater for the servicing of dry sanitation on-site technologies are largely non-existent currently.

With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following delivery constraint findings related to municipal institutional capacity and arrangements were identified during the research project:

a) There is a severe shortage of civil engineers, technologists and technicians on staff within municipalities and this is leading to a predicament in terms of available technical skills to oversee and manage infrastructure projects appropriately. Many municipalities report that roughly one third of their technical posts are vacant on an ongoing basis, and although there is some assistance of hands-on technical support being offered via the Development Bank of Southern Africa (DBSA) to municipalities at a local level, it still does not compare to having a full complement of suitably qualified and experienced technical officials available on full-time staff.

b) The high turnover of municipal staff only adds to the existing challenge of deficiency of technical skills at municipalities as institutional memory and priceless skills and experience are basically lost, often causing interruption in continuity of municipal planning and programme management activities. In many cases, experienced technical mangers are being offered better contracts in the private sector and others are simply leaving due to work overload and having to cope with high levels of work related stress.

c) There is a noticeable shortage of strategic sanitation planners and managers who are able to translate IDP and WSDP sanitation components into workable programmes to sustainably achieve 2010 sanitation backlog eradication. Unfortunately this strategic skills gap and related competency for sanitation planning, project implementation and service sustainability is for the most part quite severely lacking at municipal level.

d) Most often the management and oversight of sanitation service delivery planning and implementation falls under the authority of the technical section of a municipality, and where there is a lack of technical capacity within the municipality, available technical staff often have to cope with roads, electricity, water supply and bulk infrastructure as well as sanitation projects. This often means that the dedicated specialist technical attention which is required to plan, manage and implement sanitation programmes is lacking and in many cases, the sanitation projects and programmes are largely informed by political thinking, as opposed to technical thinking and planning in line with politically required objectives.

e) Under the Municipal Infrastructure Grant Programme (MIG), municipalities do have MIG Project Management Units (PMUs) aligned to their internal technical sections – these PMUs are responsible for planning and execution of MIG funded projects within municipalities. The PMUs should ensure technical, financial and managerial support and oversight in administering MIG projects within municipalities – in reality however, it appears that PMUs mostly deal with financial and managerial activities and leave the technical oversight and planning of MIG projects to be done by external engineering consultants appointed by the PMU. In addition, very few PMU personnel have the specific wet and dry sanitation specific experience or expertise required to oversee the implementation of these projects once funding for them has been secured.

f) In some municipalities existing technical staff members have been assigned to undertake PMU functions without any additional technical capacity being brought into the municipality, and this has just increased the existing work load even further on staff. In other municipalities, the process of compiling and approving the required MIG business plan for the setting up and establishment of a PMU has experienced long delays and this has impacted negatively on MIG sanitation project planning and implementation due to delays in accessing and managing allocated MIG sanitation funding so as to accelerate delivery.

g) In some cases the misalignment of functions and lack of proper co-ordination of activities between the MIG PM Units and the existing technical sections of municipalities is a challenge which can cause internal bottlenecks and time delays in the administration and management of MIG funded sanitation projects.

h) The training that most technicians and engineers receive at post schools institutions of higher learning is largely focussed on conventional urban waterborne flush systems which operate within reticulated networks using water as a mode of transportation to carry the waste matter to bulk treatment facilities where it is processes and treated for release back into the environment. The result of this is that many of the trained technicians and engineers within the municipal water and sanitation sections do not have adequate knowledge with regard to the operating, design and user requirements of other appropriate dry and wet on-site sanitation technologies which could be implemented as alternative options beyond urban settings.

i) Dry sanitation systems are relatively elementary applied technologies – however it is often evident that when these systems are implemented either by inexperienced contractors or by overly technical professionals, that often minor construction errors are made. These errors coupled with use of poor quality of materials, are largely the reasons why the facilities fail to operate at their optimum and therefore contribute toward many communities rejecting these types of systems at planning and implementation phase.

j) It is evident that many dry sanitation facilities are poorly constructed and that errors linked to misunderstanding the construction and lining and sealing of pits are common practice due to a limited understanding of the operating requirements of dry on-site toilet systems. In many cases toilets have to be reconstructed or repaired soon after initial construction in order to rectify such faults, yet this costs additional money and results in additional delays in the sanitation delivery process and obviously this has a direct cumulative impact on the achievement of the 2010 target (and unfortunately also undermines the use of this technology as an effective basic level of service to communities).

k) In many municipalities there is evidence of incorrectly constructed VIP pits – very often contractors and / or consultants aim to completely seal the sides and base of VIP pits so as to "prevent contamination of the environment" – yet the result of this is that they are merely constructing "holding tanks" in the ground which fill up rapidly with human waste, solid waste and greywater disposed into the pit by the householder. The consequence of this is that the municipalities do have to make alternative funding available to effect desludging and pit emptying operations where possible in order to address the maintenance aspects of these VIP / conservancy tank "combo" toilets.

l) It is clear that quite often available capital budgets are being utilized on the delivery of inappropriate technologies, due to municipal decision makers and project managers lacking the correct experience and expertise in order to anticipate the ongoing operations and

maintenance requirements of these systems, as well as the consequences of tolerating construction errors during the implementation phase. It should be clear that any on-site system which is implemented will at some point need to be desludged, and that any off-site wet system will require the availability of water and connection to a relevant waste water treatment facility.

m) It is noticeable that with respect to section 78 Water Service Provider (WSP) arrangements, the necessary initiatives required to cater for the servicing of dry sanitation on-site technologies are largely non-existent currently. It will be critical that if the proposed Free Basic Sanitation policy is to included servicing on-site dry sanitation, as opposed to just cross subsidizing urban water borne sewage systems, that appropriate WSP arrangements and budgets are put in place. This will obviously also require clarity in terms of the roles and responsibilities of municipalities to provide Free Basic Sanitation across all urban, peri-urban and rural contexts equitably. WSP functions to address dry on-site sanitation servicing will need finance and include the outlay of desludging capital equipment and staff training, in order to effect:

- repositioning of existing top-structures within stands,
- building of an alternative on-site toilet when the primary toilet is full, and
- the safe extraction and handling of waste recovered from the pits.

In order to address the above-mentioned activities, municipalities will need comprehensive plans and strategies in place and appropriate WSP institutional options and mechanisms with which to operationalise these activities.

n) In municipalities which comprise of large rural sanitation backlogs, quite often there is political demand to begin project implementation in as many Ward areas as possible, as opposed to concentrating implementation plans and activities in one village and moving swiftly through the area so as to ensure that full 100% coverage of all households is achieved before moving on to commencing with a project in the next village area, thereby also resulting in accelerated service delivery with an added benefit in terms of achieving economies of scale across the project.

o) It can also be noted that the practical positioning of toilet facilities within household stands is often not very well understood, and quite often little thought is also given to the future servicing and / or upgrading options that may be necessary in this regard. Where on-site toilets may in future be linked onto waterborne reticulation networks, the positioning in accordance with future stand water and sewer connections as well as the elevation of the land must be considered during planning and construction phase. In addition, project planning and preference on health basis – settlement density, risk of contamination of groundwater, risk of disease, etc. – seems to be the exception rather than the norm.

p) In most cases municipalities do make use of appointed sanitation service providers based on supply chain management polices and requirements, but often the relationship between the costs of these professional providers managing and overseeing the delivery of the projects, and the amount of funding which is actually spent on the construction of new household facilities is quite disproportionate and can result in fewer households being served by the allocated budget. Yet, due to the lack of internal municipal skills and capacity, many municipalities have little option but to procure external technical assistance to support the management and implementation of their sanitation delivery programmes since they simply do not have the manpower to oversee and manage all of their infrastructure projects on the scale

at which they exist in line with the achievement of existing presidential and millennium service delivery goals.

q) It is quite noticeable that in most municipalities there are no sanitation specific support initiatives or working groups in place in order to assist municipalities with localized planning and sanitation delivery in such a way as to unravel challenges, share successes and adapt ideas in creative ways so as to achieve successful and sustainable sanitation project implementation. The fact that such initiatives are not available at local municipal level is unfortunate since, more often than not, the bottlenecks to implementation are quite specific to local are conditions and situations within the immediate communities and their surrounding areas, as well as to the local emerging or professional service providers present.

r) Most municipalities do indicate that they do not have dedicated municipal sanitation action working groups in order to oversee and administer their sanitation programme implementation and service delivery programmes. The advantage of setting up such an initiative could be to monitor and track the progress and performance of sanitation service delivery with the municipality, by receiving reports and updates from service providers on a weekly and monthly basis, scrutinizing them in collaboration with other community Ward representatives and sector department role-payers and then providing support interventions where required so as to keep implementation and expenditure on track against municipal and national objectives.

s) It is clear that in situations where municipalities have appointed sanitation service providers to undertake their sanitation projects, that they often only rely on the reports which they receive from their service providers in order to track and monitor delivery against expenditure and therefore have little if any external mechanisms to track and monitor the actual progress independently. This can result in unverified project progress data being reported at provincial and national levels without the accuracy of such data having been checked prior to reporting. Furthermore, the issue of not checking and verifying project report data can also lead to the municipality not being aware of irregularities at project implementation level, such as poor quality of construction, use of sub-standard materials and overpayment of contractors against actual work completed as opposed to actual funds claimed.

t) Often municipalities do not have accurate and efficient monitoring and evaluation systems for tracking project implementation progress. In some cases, these activities are even compiled manually as a completely independent function to the related task of actual capital project management where all outputs and performance should actually be comprehensively measured. The key challenges with the gaps evident in local progress monitoring and report systems, is that it would imply that provincial and nationally reported data may be relatively unreliable, and this could highlight further concerns and questions in relation to the proper use and administration of government funding in line with the achievement of the objectives for which it has been allocated.

u) It can also be noted that in terms of the Municipal Finance Management Act, municipalities often do not pay out funds unless they are entirely certain exactly what expenses are being claimed for – however, at the same time they often lack the accompanying internal systems and project progress data required to accurately verify implementation information so as to allow them to process payments without delay. The lack of systems and delays in processing payments to contractors can result in project construction delays if cash flows are interrupted and contractors, in turn, have trouble paying builders and suppliers.

v) Municipalities often delay the submission of their MIG Technical Reports and Business Plans so as to receive larger allocated household unit costings as price inflation occurs and sanitation subsidy unit costs are reviewed at national level for increase – this can also result in delayed project implementation and a reduced quantity of households being served per allocated budget.

w) When MIG sanitation unit costs subsidies are amended upwards due to inflation, then delays do often occur while municipalities with approved multi-year sanitation projects try to process changes in unit costs through variation order procedures so as to ensure that the correct quantity of originally planned households to be served with basic sanitation will still all receive basic sanitation facilities. The upward adjustment of sanitation household unit subsidies will inevitably reduce the number of toilets planned per project, if the projects are approved prior to the date on which the subsidy adjustments are made – in this regard, it is also clear that there will need to be greater annual increases in national capital funding than previously anticipated.

4.1.4 Delivery Mechanisms

Where the important aspects of user-education and / or community participation in assisting to inform technical decision making regarding the required technology choice at planning and implementation phases is neglected, the beneficiaries of the toilet facilities could perceive the facilities provided to be of inferior quality or functionality if they are not waterborne flush toilet systems. In areas where this is the case, it is also evident that community members may abuse or even damage the infrastructure due to feeling that they may have been deprived or sidelined in relation to the level of infrastructure being provided to them. Yet in municipalities where the majority of people live in scattered rural villages, there is generally acceptance of VIP toilets as the most suitable and practical option available since the availability of reticulated water supply required for implementing flush toilet systems is not available.

With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following delivery constraint findings related to municipal sanitation delivery mechanisms were identified during the research project:

a) Some of the second-rate VIP toilets constructed under municipal programmes, have doors and roofs are not properly attached to the top structures, pedestals and vent pipes are often of the incorrect size and specification for dry sanitation facilities as opposed to the similar yet specific requirements for waterborne toilets; and often the size and dimensions of the pits and top structures are totally inadequate resulting in a decrease in the life span of the facility as well as limiting the number of users who could benefit from using the toilet. This does give communities some basis on which to refuse receiving VIP toilet facilities if one does look at the poor construction methods and substandard quality of materials often used to build these facilities – very often it is these aspects which give VIPs an awful reputation despite the sincere intention of the municipality to ensure a basic level of sanitation service to the community.

b) Within some of the newly constructed VIP projects it is clearly evident that in the short term there are already challenges of sustainability with a number of the facilities in relation to poor quality of erection of the structures and use of non-compliant low grade materials. If adequate funding and provision for ongoing maintenance activities is not immediately put in place by

municipalities to address these problems, then a large number of these toilets are likely to become ineffective as vent pipes crack, cover slab joints do not seal properly and fully lined and sealed pits rapidly fill up.

c) Many of the municipal-built VIPs have been incorrectly implemented with pits dug down to a depth which intersects the ground water table, then there is a risk of external seepage into the pit and also a risk of direct contact of the pit contents with the groundwater table thereby possibly allowing for the transfer of bacteria to the groundwater source and in so doing causing contamination of the groundwater. Quite often sanitation service providers aim to completely line and seal the base and walls of the pit in an effort to "prevent" groundwater contamination, as opposed to altering the pit volume or slightly raising the pit above ground level – once pits are completely sealed, they fill up quickly and will require desludging activities in order for the toilet facilities to remain functional – it is this activity which is often not yet planned or budgeted for by municipalities.

d) The majority of the VIPs which have been constructed since 1994 are steadily filling up, or are already full and it is therefore clear that even before 2010 a large number of these toilets will require evacuation of the pit contents or to be substituted by alternative functioning facilities. It is imperative that some comprehensive initiatives must be put in place in order for the many VIPs which have already been constructed, as well as those that continue to be constructed, are able to be used on an ongoing and sustainable basis. Municipal interventions such as formalizing feasible pit emptying programmes with appropriate organizational and financial arrangements and also improved monitoring of the proper design construction of new pits with appropriate pit emptying consideration is imperative.

e) Many different types of biological and chemical products are currently, being manufactured and marketed in the private sector market for the purpose of being sold to municipalities as alternative solutions to counteract the filling up of toilet pits. The vast majority of these products have not passed through any assessment protocol of government and SANS/SABS in order to validate their composition or effectiveness. In the absence of much needed national guidance on the recommended processes and mechanisms to deal with full toilet pits, municipalities are at risk of possibly incurring fruitless expenditure on unproductive interventions.

f) There is a definite lack of clarity surrounding the various dry sanitation roles and responsibilities of householders versus government stakeholders in the current context of municipal capital grant funded sanitation facilities which are to link to ongoing free basic municipal services. This challenge is most especially felt with regard to the rural dry sanitation "pit emptying" context, and it is unlike the approach initially used in the DWAF Community water Supply and Sanitation rural programme undertaken between 1994 and 2003, wherein householders did contribute financially or in kind to the construction of their own toilets with assistance from government. This demand responsive approach did also ensure that the ongoing responsibility for operating and maintaining the toilet clearly remained with the household post construction.

g) It is also very evident that although many municipalities do indicate that they intend to desludge the full and filling VIPs within their communities, it is also noted that very very few municipalities have ever attempted to desludge pit toilets, or have experience in overcoming the various physical constraints of actually undertaking a pit emptying exercise. The

repositioning of toilet top structures is another way to deal with full VIPs, but it does also highlight the need for appropriate planning and funding in order to reconstruct a new pit, as well as the need for the original top structure to have been built from materials suitable in weight and robustness so as to be easily repositioned. Clearly municipalities do require comprehensive guidance with regard to pit emptying operations and many have expressed interest in learning from the conducting of pilot projects.

h) It continues to remain unclear as to whether rural households with VIPs will be required to take responsibility for servicing their own full toilet pits, while the urban poor may benefit from the use of free flush toilets. The White Paper on Basic Household Sanitation, which was approved in 2001, did highlight the demand responsive approach to households improving their own sanitation with the assistance of government – however the Strategic Framework for Water Services, which was approved in 2003, places emphasis now on grant funded supply driven municipal service delivery.

i) Severe demand is being placed on municipalities by communities who are advocating for the installation of no less than waterborne flush toilets in their houses – this is despite the fact that there is insufficient funding or the existence of bulk connector services in such areas; as well as the fact that the cost of the provision of such a high level of sanitation service in one village, would mean that many other villages would remain unserved for longer while additional resources would have to be secured. In situations where inadequate budgets are used for the implementation of flush toilets systems, the result is often poor quality systems which are unfortunately prone to blockage, seepage and malfunction, thereby compromising service delivery.

j) It is quite clear that the implementation of flush toilet waterborne systems will not be feasible in many scattered rural areas, neither in the medium or long term, due to the fact that piped water supply and reticulated sewage networks linked to bulk waste water treatment works would first need to be funded and constructed.

k) The requirements of sustainably operating, maintaining and refurbishing existing sanitation infrastructure is progressively being unattended to in the light of increased prominence of the implementation on new capital sanitation projects in order to achieve the national sanitation target of 2010. Properly constructed sanitation systems which are accompanied by effective user education initiatives should ideally maximize the intended existence of these systems and ideally enable municipalities to rather intensify their efforts toward the delivery of basic sanitation to unserved households.

l) Budgeted funding for carrying out maintenance and refurbishment of higher levels of infrastructure, in particular, is insufficient and it is also alarming to note that high volumes of un-metered water is being lost through illegal connections and failing networks on a monthly basis, thereby decreasing the potential revenue basis which municipalities could be tapping on to fund such maintenance.

m) In situations where householders cannot afford to purchase toilet paper, they often make use of newspapers and other material which are unsuited to use with flush toilets – this mostly results in blockages of the toilet and connecting networks, which are expensive to clear out on a continual basis. In some cases toilet can remain block up for long periods of time, if the householder and the municipality have no means of funding these maintenance costs.

n) Municipal procurement and supply chain management processes do call for the increased employment of local service providers as opposed to those based in distant urban towns and other provinces. The core challenge that municipalities do face when aiming to appoint locally based service providers is that many of these service providers do not have sufficient administrative and technical expertise or experience in order to adequately undertake the scope of works required by the municipality and this often leads to compromises in project cost and quality of work.

o) It is clear that there are insufficient numbers of experienced and competent local service provider, and it is therefore important that initiatives be put in place to support, mentor and groom such emerging service providers, especially with on and off site sanitation specific skills and expertise. Where potential local service providers can be accessed, it is critical that appropriate municipal mechanisms such as ensuring smooth cash flows, assisting with cession agreements for the bulk purchasing of materials and supporting such emerging providers to deal with various contracting and financial requirements be effected, if these potential providers are to remain in the local market and within the sanitation sector as opposed to migrating to work in urban areas on other construction projects.

p) Basic dry on-site sanitation programmes are very appropriate for the use of large number of local emerging contractors, as they are community based operations which comprise of labour intensive activities and require very rudimentary construction skills. In many cases, it is also evident that locally based emerging contractors are more ideally positioned to undertake dry on-site sanitation programmes than "traditional" urban-based engineering companies due to their knowledge and experience in understanding and working with local community people, processes and structures.

q) The availability of sufficient building materials timeously from local building material suppliers is also of a critical importance when undertaking a sanitation project, since workflow activities must be planned in sequence and allowances made for delivery of materials to site, and then other aspects such as the curing of slabs, etc. before top structures can be erected. Failure to secure adequate quantities to be delivered without any delay is a vital component to accelerating any sanitation project at community level.

r) Employment on sanitation projects is often not stable, so builders are often likely to move towards acquiring available work in other sectors. This does have an impact in terms of increasing the challenges associated with retaining accomplished builders in the sanitation sector and accelerated progress in reaching sanitation targets, since delivery rests heavily on sufficient builders being available to undertake toilet construction. In addition, there are currently very few mentoring programmes or activities in place to deal with this need, and where such initiatives do exist; they do not get the support or backing that they require.

s) Inexperienced new emerging contractors within the sector do need close guidance and support in order to gather the distinct skills essential to implementing a successful sanitation project. VIP sanitation projects also offer very small profit margins unless implemented at large scale (i.e. not less than 3000 to 4000 household units per project); and where project work teams cannot easily be changed over to undertake other tasks, implementation delays could lead to the economic downfall of small contractors.

t) When builders and labourers working on sanitation projects are forced to sit waiting for materials, some unavoidably go off to look for other work. Building material suppliers also do

not necessarily give precedence to small building material orders to be dispatched to remote settlements, and delays do mean inefficient time against project expenses. In addition, substandard roads and wet weather can make some project areas unreachable and far-off distances raise the cost of delivering building materials, thereby ever-increasing the possibility of construction delays and causing chaos with project schedules when deliveries don't happen in accord with such schedules. Generally, the further the project is from a supply base – like a major town – the greater the cost of the project implementation.

u) Insufficient water to sustain hand-washing, regular use of hand-washing facilities and better individual and household cleanliness can undermine the health impacts of a sanitation project. Furthermore – inadequate local water supply resources required for use during construction often causes community members to have to purchase water and get it transported to site, which adds additional time and cost (not only to the project but also to the local community). Water supplies for construction or for effecting improved hygiene which are not readily available close to the site to support sanitation improvement can also lead to further delays in project implementation.

v) Municipal water supply planning needs to take note of water resource management and water quality issues, including safeguard from faecal pollution, as well as making provision for regular maintenance and future upgrading of water-borne sewer systems, where feasible. Insufficient water on-site to sustain sanitation upgrading more often than not indicates that wider water provision is deficient, and that sanitation provision is probably being planned for separately from water supply. Authority and accountability for overseeing this integration of water and sanitation services – scheduling, executing, funding and sustaining – does lie with water service authority municipalities.

w) Assisting, synchronizing and integrating the collection, removal and treatment across various technologies can be challenging when the requirements of integrating across other sectors is taken into account – such as housing, roads, water supply and solid waste management, in alignment with other activities such as municipal revenue management. Specific budgeting, expertise and equipment are required to keep the various forms of sanitation technologies, per level of service, functional and free of health hazards during it's intend existence.

x) In situations where community based 'ownership' of local sanitation systems is lacking; behaviour change and sustainable sanitation improvement is unlikely. Where community members are well informed and are participating in sanitation projects, they play a vital role in observing and checking the quality of construction in assistance to the municipality – and they can help in making sure that the toilets which a contractor builds per household, does conform to the nationally accepted specifications for wet or dry sanitation systems.

y) A key gap in many municipal sanitation programmes is the communal awareness and education element, where community members are informed as to which construction quality standards to count on from the appointed service provider. One of the results of the differences between a basic dry sanitation system and a high level of flush sanitation system, is that dry systems are very often seem as lower level "disgraceful" toilets, and flush toilets are often viewed as the only 'suitable' toilet for a household to have. It is quite regrettable that "levels" of sanitation service are often confused with sanitation "technologies".

z) Very often urban sanitation programmes tend to focus mostly on the supply of bulk sanitation infrastructure and they can fail to recognise the need to share toilet user or operator

information with the local residents as to how the newly implemented sanitation system functions, what it's weaknesses are, and what exactly the roles and responsibilities are with regard to the costs and activities related to the longer term operation and maintenance of the system. If householders are left to become passive bystanders in municipal service delivery programmes then it can be expected that very little lasting sanitation improvement may result, since the sustainability of any given sanitation system does also rest on the active participation and support of the people whom the initiative targets.

The research findings in terms of achieving the most effective local sanitation delivery mechanisms clearly indicate that elected politicians and local leaders do have a critical role to play influencing deliberations about appropriate ways to improve sanitation delivery at community level. On the other hand, where community members do actively participate in considering their own preferred sanitation options and making knowledgeable choices, and are empowered on how to best operate their toilets, the outcome is a sustainable enhancement in the well-being and quality of people's lives.

It is also evident, that municipal community development workers and environmental health practitioners do play a critical assistance and liaison function at community level, and many municipalities are using existing locally-based community health promoters to drive sanitation health and hygiene education campaigns. District health programmes are also aiming to reinforce their environmental health programmes by increasing linkages with sanitation improvement outputs.

Data gathered also confirms that Ward committees are the most apparent structures through which to manage user participation, so that project related expertise and support can be made available at community level. Bearing in mind that most municipalities are only able to offer limited service support to households, household members need to be equipped with information on how to keep their toilets functioning, and how to prolong the life of their toilet pits for as long as possible.

4.2 Delivery Successes

This section of the report analyses research findings on the successes of sanitation delivery in the municipal context, and these successes are discussed in relation to implementation methods, institutional aspects, the pace of delivery and ways to strengthen delivery.

4.2.1 Implementation Methods

Sanitation projects and programmes can be implemented under various different contractual models and frameworks. With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following successful delivery findings related to municipal sanitation implementation methods were identified during the research project:

a) Where WSAs have significant in-house capacity and/or local private sector consultants or NGOs lack capacity and experience the WSA can act as Implementing Agent and ongoing service provider – in this case the Municipality (WSA) plans and implements all projects, only appointing external consultants and contractors to undertake specific non-management tasks.

b) In a context where WSAs do not have sufficient in-house capacity or skills, and the available local agencies (private sector or NGO) have both capacity and experience the WSA can act as an Implementing Agent, but can contract out the Project Agent function, in this case the Municipality (WSA) can contract out the functions of the Project Agent (PA) to external specialists.

c) In cases where the WSA does not have sufficient in-house capacity or skills, and the available local agencies (private sector or NGO) have both capacity and experience the WSA can contract out both the role of Implementing Agent and the Project Agent, in this case the Municipality (WSA) contracts out the functions of the Implementing Agent (IA) and the IA appoints a Project Agent (PA).

d) In situations where the WSA is the District Municipality and has capacity and skills, and/or wishes to build the capacity of the Local Municipal Authorities falling within it's boundary, the Local Municipalities can be contracted as Implementing Agents via a "public-public partnership", in such situations the DM (WSA) may contract the LMs to act as Implementing Agents for the project.

e) The *Municipal Programme Management Model* sees the WSA appointing a Project Agent; this PA acts as a project manager, procuring all materials and hiring all labour and subcontractors. The responsibility is then on the municipality to oversee the standard of work to ensure that the Project Agent is fulfilling all requirements and meeting the correct construction standards and project specifications. In situations where tight budget control and a flexible approach required, a Programme Management option is most applicable. This approach can also assist municipalities to deliver sanitation in an accelerated way, as well as ensure increased facilitation of lesson learning, transfer of knowledge and sharing of best practises between municipalities.

f) Where a primary Service Provider is contracted by the Water Service Authority to oversee all sanitation delivery in a programmatic approach and to then sub-contract a number of local contractors to implement various projects within the programme, it is critical that the primary service provider have all of the required expertise and experience in the various aspects of Project Management, Technical, Local Economic Development, Institutional and Social Development and Financial so as to ensure appropriate and sustainable sanitation delivery and health and hygiene education.

g) Since management of the Project Management Model does rest exclusively with the WSA (with external support available to the WSA from other sector departments where required), municipalities should therefore be able to increase their internal capacity and act on fulfilling their own mandates via their own specific institutional structures without much external intervention.

h) The Project Management approach should also focus on ensuring that municipal officials and seconded to fully engage in the day to day operational aspects of the programme. Such officials would then gain competencies and skills to be utilized for future delivery of sanitation projects. Programme and project steering committees should be comprised of WSA and DM or LM officials responsible for infrastructure development and local economic development, with participation from political portfolio members – with meetings held regularly to track and assess all aspects of project implementation progress.

i) In the interests of building the local economy through job creation and the capacity building of SMMEs, it is also critical that appointed service provider Project Agent contractually adhere to compliance with Expanded Public Works Programme (EPWP) Guidelines and aim to sub-contract a minimum of 40% of sanitation projects to these local emerging enterprises / organisations. All labour working on EPWP projects should be employed under the Code of Good Practice for Special Public Works Programmes, since this code allows the public body to set the minimum wage on the project and allows for task based payments to labourers.

j) Local emerging contractors can approach the construction of sanitation facilities by either building an entire unit to completion and then moving on to build the next entire unit, or by forming small building teams with each team focussed on completing specific components of the unit in "batching" processes – fortunately both of these approaches do allow for the "career pathing" of builders.

k) Where an emerging contractor is appointed to construct entire sanitation units to completion, the emerging contractor does management of all construction work the project, including procurement of materials, commissioning of builders, quality assurance, compilation of reports and claims, liaison with project agent and community structures; smaller sub-contractors can then oversee 2 to 3 builders, quality assurance and builder training, supply of materials to site, compilation of requisitions, reports and claims for the builders and materials; with the builders then lining the pits, casting and placing slabs, constructing the walls and roof, and installing the pedestal, door and vent pipe each unit.

l) Where small building teams each focus on constructing specific components of the sanitation units, the emerging contractor usually manages of all construction work on the project, including procurement of materials, commissioning of builders, quality assurance, compilation of reports and claims, and liaison with the project agent and community structures. Small sub-contractors then oversee smaller building teams, including quality assurance, builder training, supply of materials to site, compilation of requisitions, reports and claims for the builders and materials; with the building team leaders fully responsible for working in batches to complete one of the sanitation unit "components" such as lining of pits, casting and placing of slabs, building walls, installing the roof and door (carpentry), installing the pedestal and vent pipe.

m) Sufficient builder team members are required to mix concrete and mortar, cut timber to size, supply materials to where they are needed, clean equipment and assemble and strip formwork and installing of the hand-washing facility and final finishing off of the unit. In order that builder team members gain varied skills and construction experience, it is important that they be rotated between the various teams every four to six weeks.

n) The *Conventional Consultant-Contractor Driven Model* sees municipalities adopting the conventional construction method of implementing sanitation projects by appointing a consultant to draft a tender document, with accompanying designs, to be put out on public tender advertisement. Under this model, the municipality does not have to allocate much time to project manage the construction, since they would rely on the consultant to oversee and manage the contractor/s' work. Due to the very nature of this approach, it is also noted that sanitation average unit cost are likely to be more elevated in relation to those of the municipal programme management model, primarily due to the involvement of professional fees and additional cost escalation on the overall project claims, as and when scope of works may need

to be adjusted. This model is based on a fully contractor driven approach with a strong focus on the delivery of infrastructure according to civil engineering industry processes.

o) The conventional consultant-contractor approach can assist municipalities to rapidly implement sanitation projects by providing the technical and management support required assuming a uniform approach across the project, however, it is still advisable that a institutional and social development programme be established to run alongside the contractor driven "engineering programme" so as to ensure that ensure that the many "soft" sanitation issues such as participation in management, job creation, targeting the poor, youth, women and physically disabled, and the creation of small enterprises are addressed. The advantage of this option is that there could be accelerated delivery of toilets under one contract, with a separate parallel contract for addressing the sustainability and social development aspects.

p) Municipal procurement options for contracting sanitation service providers do have to fall within the confines of the Public and Municipal Finance Management Acts, as well as in accordance with specific supply chain management policy of the specific municipality. Over and above this, the primary criteria that could influence the preferred approach of any municipality in terms of the desired contractual approach would be – the available budget, the time frames available for developing, adjudicating and awarding successful tenders, the required pace of delivery, the local economic development principles of the WSA especially in the procurement of local labour and materials, the scope to run a pilot procurement programme within the project scope of works, and whether or not there is flexibility of approach within the client, service providers and contracting bodies to implement the project using innovative methodologies.

q) The construction of VIP toilets is generally very favourable in terms of the use of labour-intensive construction methods and the progression of ensuring local economic development (LED) goals are achieved – this means that the best possible deployment of local labour in digging and lining pits as well as constructing the toilet top structure is easily possible. The community-based approach of using sanitation Project Steering Committees (PSCs) in relation to local Ward Committees has been found to really assist appointed Service Providers in the identification and management of local community workers to be trained and contracted to perform specific sanitation project tasks in their different villages.

r) Generally procurement procedures should allow for the use of local community labour or small local contractors to dig the pits, construct the pit lining, floor slabs and toilet top structure. Some of these main tasks require the identification of appropriate labour, the establishment of labour policies, the appointment and oversight of such labour and their payment for tasks finished. There should also be provision made for support in the ordering and delivering of materials, builder training, quality assessors and general construction management support.

s) The Expanded Public Works Programme (EPWP) does involve re-aligning line function budgets so that government expenditure is better employed in order to result in more work opportunities, principally for unskilled labour. This approach is a comparatively new one and does require a certain level of flexibility and close cooperation between the municipalities and their appointed service providers in order to achieve success. Service providers are required to use the guidelines for the implementation of labour intensive infrastructure projects under the Expanded Public Works Programme as agreed upon by the Department of Public Works in

conjunction with National Treasury and SALGA for the identification, design and construction of these projects.

t) The EPWP also requires service providers and contractors to have NQF level 7 and NQF level 5 resources available to be able to design and manage the procurement of contractors to build VIP toilets. The requirements for these labour-intensive projects for both the service provider and municipality do need to be clearly determined in the scope of work specifications and schedules associated with the contract and it is imperative to consider ensuring that appropriate time frames are allocated for the drafting of documents, issuing of tender advertisements, and adjudication and awarding of contract.

u) The "CIBD" approach is intended for procurement in the construction industry including the invitation, award and management of contractors as defined in the Construction Industry Development Regulations issued in relation to the Construction Industry Development Board Act (Act 38 of 2000). One of the primary aspects of this approach is that the construction component of the project scope of works does require local contractors of civil engineering works in class 1 and 2 (R300, 000 value of contract and less) to be registered with the CID Board.

v) In most instances the utilization of the CIDB process which will also require increased professional project fees in order to design the procurement documentation, ensure advertising, conduct local contractor training, award tenders and undertake implementation programme management – in addition, it is also not yet apparent as to the quantity of local emerging and / or community-based contractors who have dedicated themselves to the process of CIDB registration.

w) Any of the following recognised standard forms of contract can be used as a basis for municipalities to compile applicable tender and design documents – the General Conditions of Contract 2004, the SAACE Form of Agreement for Consulting Services, the CIDB Standard Services Contract, the NEC Professional Services Contract, the JBCC 2000 Principal Building Agreement and Minor Works Agreement, the NEC Engineering and Construction Contract and Engineering and Construction Short Contract, the FIDIC Conditions of Contract for Construction ("Red Book"), the GCC 1990, the COLTO 1997, or the FIDIC Short Form of Contract document.

x) The effective and successful municipal delivery of household sanitation facilities is enhanced by ensuring that the following project and programme factors are strategically planned for and adequately addressed within the scope of the preferred municipal contractual arrangements and agreements – namely, that:

- Scalable budget per toilet unit to be constructed be available (in order to ensure that service providers can sufficiently cover all cost of constructing a sanitation unit without having to subsidize the project themselves).

- WSAs plan for and embark on implementing multi-year sanitation programmes as opposed to many smaller independent sanitation projects (in order to increase the volume of sanitation units to be constructed across a number of villages simultaneously so as to harness the cost and delivery benefits arising from an economy of scale approach).

4.2.2 Institutional Aspects

It is quite clear that many local municipalities are lacking in capacity and resources. With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following successful delivery findings related to municipal institutional aspects were identified during the research project:

a) In many cases some municipalities employ few or no appropriately trained technical personnel due to the severe shortage of skilled practitioners available in South Africa. Where municipalities do have the required skills on staff, these personnel are working under extremely challenging conditions and under intense demands. Such a situation calls for staff to work more intelligently and strategically as opposed to more relentlessly.

b) Effective sanitation project execution is most often hampered by the following types of challenges:

   - lack of clarity regarding the central aims of the project;
   - vague procedures and poor execution of work plans;
   - lack of sufficient interaction and synchronization between role-players;
   - poor performance management and deficient supervision;
   - limited collection and distribution of data;
   - reduced accountability, responsibility and answerability; and
   - lack of "on-the-job" training, guidance and / or mentorship.

   In order to achieve a common purpose and to identify and align primary aims, enhanced tactical planning for sanitation is required. But in order to interpret such aims into substantial projects and services, it is necessary to develop more than a plan – what is needed is the development of a shared vision of the essential components required in order to effect and realize these service delivery aims.

c) Local problem solving and mentoring forums where project achievements can be shared with project management and steering committees working in the surrounding villages are lacking within municipalities; and there are generally very few action-oriented sanitation task teams operational at municipal level. With each municipality having it's own distinctive topographical layout, resource challenges, and locally-based service providers, the existence of such a local task team is vital, since the majority of sanitation project implementation bottlenecks identified are very much localised.

d) The nature and composition of any existing municipal forums varies from area to area somewhat, with some municipalities having existing forums to steer their project implementation plans, yet comparatively few municipal forums examine sanitation project progress with the intention of making joint decisions to take action in addressing bottlenecks – some regular municipal forums meet together for discussion and information dissemination and others are assembled mainly to collect data and discuss progress reports for submission by local municipal management to provincial level.

e) Action-oriented local municipal sanitation task teams have been noted to be an influential mechanism for operational management, oversight, co-ordination and progress monitoring of sanitation projects at local municipal level. Meeting together on a monthly basis at a venue near to the site of the project, representatives of different municipal units, track project progress within the local municipality by inviting service providers to bear witness to their construction work programmes and implementation milestones.

f) The analysis by a variety of role-players, including municipal sanitation managers, community structures and project steering committee representatives of comprehensive weekly project progress reports tabled by sanitation service providers, and the prominence of the sanitation task team on close project monitoring is what distinguishes it from other existing municipal forums. In order to offer support, disseminate data and confirm the accuracy of locally gathered project information the representatives of national and provincial departments also participate in these task team meetings.

g) Differing village types each comprise their own technical and service delivery challenges – from dense informal settlements and urban townships to scattered rural villages. The upgrading of quality of services across a range of settlement categories and circumstances in order to address backlogs, generate employment and enhance local economic development is putting municipalities under severe pressure from their constituents. It is the practical support systems to act on accelerating the current slow pace of sanitation delivery progress which are required in order to complete the loop linking government's commitment to achieve better sanitation.

h) To verify that service providers are actually providing what they have been appointed to do, some municipalities have established support and management systems to ensure that what is required is in fact being attended to so that sanitation services are provided at indigent households. In order to give sanitation implementation guidance and support to many of their local community-based emerging contractors, some municipalities together with various national and provincial government departments have sought to adopt creative new processes via their sanitation task teams.

i) It takes skilled specialist sanitation support to help with realistic problem solving and this is exactly why municipal sanitation staff must be enabled to work more strategically – as opposed to persistently – in order to establish a working mechanism to activate, support and synchronize all available resources at municipal level. The best sanitation project implementation objectives of municipalities are often currently compromised in a number of ways due to deficient techniques, synchronization and data capture.

j) Where recurring challenges arise during sanitation project implementation, the possibility for counter-productive examples to be set through illogical and incoherent informal and disjointed approaches to problem-solving, as opposed to utilizing experiences for widespread education and sharing of knowledge across different projects, is vast. Very often important prospects for 'outcomes-based' skills transmission and learning opportunities are lost and the potential of the skills, experience and insights created through project implementation are often not optimally channelled to enhance future project implementation processes.

k) Local emerging contractors often have to accept the impact of residents' discontent when municipal cash flow problems immobilize them, or when suppliers do not dispatch building materials to site on time, or when local labour or political uprisings negatively influence project

progress – in the majority of these cases the projects sometimes come to a standstill due to reasons outside of the jurisdiction of the community-based contractors.

l) Information gathered does not always correctly reveal project progress status at community level as reported on by national and provincial government departments since it is often not supplied or confirmed by relevant municipal officials. In many instances project progress reports are incorrect or have not even been captured and so municipalities only become conscious of project execution difficulties when they are already deep-rooted at community level. Municipalities usually depend on their appointed service providers to issue them with construction progress reports, but as the extent and tempo of implementation rapidly increases and the quantity of sanitation projects rises, this challenge of ensuring accurate and timely reporting becomes more intense. It is clear that without user-friendly reporting systems in place, the vast majority of municipal officials and their staff will not have the available capacity to visit each project frequently enough to check on the accuracy of reporting.

m) When payments are postponed and projects come to a standstill due to internal municipal proceedings and communication gaps, service providers could be unjustly affected. Often payments are legitimately delayed where the required paperwork is deficient. Equally, the possibility of payments being made for inferior quality of work is high – with the possibility of payment in excess being likely in situations where the municipality's capacity to check community level project progress is insufficient. Where the relationship between financial management and operational supervision is weak, invoice claims might also not necessarily link up with the programme objectives and construction targets identified in the project plan.

4.2.3 Task Team Mechanisms

With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following successful delivery findings related to municipal sanitation task teams were identified during the research project:

a) All of the key role-players are likely to be present during sanitation task team meetings, where expert technical or policy information may be needed with regard to effectively tackling social, scientific or ecological project challenges which may have been noted as obstructing the progress of locally community-based service providers. Project site assessments facilitated by locally elected community representatives also assist with resolving certain construction implementation challenges.

b) During monthly sanitation task team meetings, members evaluate progress of construction versus financial spending incurred against all government grant-funded sanitation projects – whilst gathering at a location in one of the municipal settlements or villages where the sanitation projects are in progress. In this way the solution to ensuring effective and sustainable sanitation project implementation is comparatively straightforward: a sanitation working, or task group "vehicle" constituted at local municipal level in order to maximize participation and co-operation in order to give effect to the municipality's sustainable sanitation objectives.

c) Most municipalities assemble their sanitation task teams with assistance and support from various government departments as follows:

- Officials representing water supply, sanitation, health, housing and local economic development portfolios;
- Elected portfolio members of municipalities constituted at district and local level;
- National and provincial departmental representatives such as Water Affairs, Local Government and Housing, Health and Education, etc.; and
- Applicable stakeholders such as Youth Commissions, the South African Local Government Association, locally based NGOs and relevant community-based organisations and structures.

Community-based emerging service providers appointed to execute sanitation projects do also participate in local sanitation task team meetings so as to present their project construction progress reports, to the municipal sanitation or programme manager, who ideally chairs and administrates the meeting.

d) In order to effectively monitor the distribution and spending of government grant funding, the sanitation task teams do provide the perfect arena from which to prepare and execute the sanitation projects recorded in the municipality's integrated growth plan. From observing the project achievements and failures, the task team members then track progress across projects and deliberate on the issues in order to compile improved implementation approaches and plans.

e) The practical activities which are usually co-ordinated within the sanitation task teams are as follows:

   - Administration aspects – site management; project supervision procedures; development and implementation assessments; and the monitoring of spending versus construction target outputs.

   - Construction aspects – agreeing on cost and value targets, considering what types of price variation orders are justifiable as and when cost of building materials increase; carrying out builder training and ensuring that labour-based building methods of skills transfer and community-based contractor development approaches are enhanced; ensuring consideration of bulk connector sewer infrastructure and sufficient water resources and supply where required; helping deal with the on-site aspects linked to the eradication of the bucket toilet system; adapting of ventilated improved pits toilets to flush toilets, conducting the necessary groundwork required to ensure interventions to deal with full pit toilets – and working out challenges related to adapting pit volumes in high water table and hard rock areas, etc.

   - Social aspects – planning and conducting community-based user education programmes in order to ensure sanitation responsiveness; conducting of various sanitation-related communicable disease campaigns; reinforcing the co-operation between municipal health and provincial health units; and helping to simplify the co-ordination of daily toilet operation and maintenance tasks.

f) Sanitation task teams can make it possible for national and provincial departments to also gather and verify project progress data directly from municipalities for capture on their wider information systems. The task teams offer the most optimum foundation for correct project level data to be collated by the municipality since applicable and relevant 'bottom-up' project

information is gathered at community project level and then tabled and confirmed or updated by local group members. Sanitation task teams can help to enable:

- Non-bureaucratic efficient guidance to municipal sanitation and programme managers;
- The formation of a single collaborative mechanism through which the municipality can channel and guide all of it's sustainable sanitation planning and implementation activities;
- A mechanism for facilitating sector support and data capture by sector departments; and
- A vehicle for knowledge sharing, liaison and co-ordination.

g) Local municipal sanitation task teams can facilitate the solution of fundamental project implementation challenges, and assist to ensure that the interface between key stake-holders shifts away from written and electronic communication towards networking and participation in task teams where opportunities can be created for evaluating options and developing a wider understanding of what sustainable sanitation actually entails.

h) The data required to track progress, categorize and sort out bottlenecks co-operatively is collected through the task team mechanism, which brings the primary stakeholders together, and therefore provides a vehicle for collectively confronting a range of sanitation implementation challenges.

i) While many municipalities have to spend time dealing mainly with grant funding and policy and administrative affairs, most are still expected to extend their hectic schedules in order to also deal with a wide scope of infrastructure programmes. Few municipal staff are suitably experienced or equipped as water supply or sanitation sector experts, and they rarely have the required level of planning skills necessary to support these entities in the attainment of their objectives. Where experienced municipal staff members do clearly understand the municipal political environment and objectives they are a real asset to municipalities.

j) Accelerating sustainable sanitation service delivery and ironing out project implementation blockages can be easily handled where the relevant sanitation stakeholders can come together at project level and where municipal staff can be are made aware of possible challenges long before projects run into difficulties. This is vital in order to strengthen project preparation, supervision and construction – sanitation task teams offer the best forum for supplementing stakeholders' knowledge and understanding of sustainable sanitation.

k) Comprehensive project implementation reports do permit municipal staff to track monthly progress, across villages, and are a chance to make use of assembling household progress data against weekly construction programmes. One of the advantages to the municipal project management staff of partaking in a sanitation task team is that of monitoring the many unpredictable challenges which can disrupt project progress. This demands careful project tracking of actual funds spent and ensuring a steady flow of funds from provincial government ministries through the municipality to the service provider. Municipal staff members also play a critical part in the monetary management of projects and in aligning implementation progress against financial and managerial systems.

l) Project implementation can be delayed if certain interventions are not adopted – simple weekly construction progress monitoring tools are useful in forecasting possible challenges in project implementation workflow activities. Such tools can support in planning all of the tasks required to transform basic raw building materials into finished toilets, and they are also vital forward

planning tools which help to allow service providers and municipalities to plan their operational funds and cash flow needs ahead of time. In addition, payment hold ups or delays in processing invoices can be highlighted and attended to before they become responsible for implementation bottlenecks or work go-slows and, with clear consideration to this kind of detail, service providers can also alert municipal staff to possible building material supply shortages and / or prise cost escalations.

m) An integral component of water supply and sanitation projects is user education and health and hygiene promotion – and this is emphasized in the Cabinet approved 2003 Strategic Framework for Water Services in South Africa. However, often ensuring positive results and effects of sanitation project initiatives beyond the construction of toilet facilities is very hard to measure as most user education programmes still concentrate on carry out community-based mass campaigns. The South African national Departments of Health and Water Affairs and Forestry have recently developed a national health and hygiene strategy – and it is hoped that increasingly the proposals of this strategy will be visibly apparent at community project implementation level.

n) In order for efficient and well-equipped programmes to become viable at magnitude, project resources are used to enhance and make better use of existing community development facilitators and municipal and provincial health officers. Key health messages are defined, with approaches agreed, within a reliable agenda across all sanitation projects, and sanitation task teams then provide a forum where this standardized municipal-wide methodology to implementing user education and hygiene promotion is adopted.

o) Where health emergencies arise, such as diarrhoea or dysentery, the sanitation task team can become an additional mechanism for planning and tracking interventions and preventing further disease outbreaks from returning, through dealing with various components of a complete community-based user-education and awareness programme for sanitation upgrading. Such education initiatives consist of the use of a series of illustrated leaflets comprising specific educational messages. Where funds allow, the task teams do adapt their own sanitation user-education information and training materials to suit the local community context.

p) Currently more importance is being placed on municipal supply driven service delivery as per the 2003 Cabinet approved Strategic Framework for Water Services. This is a slight shift from the accent on close participation of households in sanitation improvement as per the objectives of the 2001 White Paper on Basic Household Sanitation in South Africa. In accordance with the objectives of the White Paper, the involvement of constituents via community-based ward structures and community-based project steering committees should be better established, and improved in order to ensure that the responsibility of local community members in sanitation improvement does not become even more unclear in relation to the national municipal infrastructure grant programme and it's strong focus primarily on the delivery of infrastructure.

q) When they partake personally in sanitation task teams and have a say toward local decision-making and problem-solving activities, local community members acquire a say in the municipality's project implementation and planning activities. Community ward committee members, and / or members of the community-based project steering committees are connected directly in dialogue with the municipal and provincial role-players overseeing implementation and service delivery. Sanitation task teams do offer several advantages by

involving residents living in the village or community where a sanitation project is to be launched with the municipal officials and service providers, so as to minimize the possibility of implementation challenges increasing. Householders are therefore able to partake collectively and share in accountability for project accomplishments since they are not excluded from fully participating in projects.

r) Those who have the most to gain from good quality project implementation are the targeted recipients of user education and health and hygiene awareness activities, since they are the ones who take ownership of completed toilets. Local residents are the prime benefactors of sustainable sanitation interventions and discussing and agreeing sanitation and water services issues directly with them, and their key community representatives, in a local forum committed to improving sanitation-related service delivery is critical.

s) Sanitation task teams are solution-oriented hands-on action groups where challenges are tackled as they occur and before they become complicated – the close monitoring of the implementation of grant funded sanitation projects is one of the primary objectives of the municipal sanitation task team. Being capable of assisting the municipality in closely tracking the accomplishments of a service provider on site, allows community members to also gain from taking part in sanitation task team discussions associated with issues such as evaluating cost and standard of quality of the construction; as well as interacting with policy matters, so as to better understand the objectives and scope of a sanitation project.

t) By causing municipal officials, politicians and community representatives, service providers and other government departments to gather together in one location, the task teams can facilitate the adoption and implementation of uncomplicated integrated monitoring systems at municipal level, and investigate solutions to longer terms challenges such as the best methods of emptying full pit toilets and desludging of septic tanks. Some municipalities have established task teams in order to support the implementation of accelerated sanitation project implementation in urban and rural areas.

u) Task teams also aim to facilitate networking between sanitation, water supply and other programmes such as housing and health, in order to achieve integrated programme partnership and synchronization between technical and social project role-players and representatives of provincial and national ministries, as well as to assemble and authenticate progress data and address project challenges where necessary. The main advantages of local municipal sanitation task teams are that they can offer:

- a constant 'bottom-up' approach across numerous projects and service providers which enables the support and improvement of sustainable municipal sanitation service delivery;
- the opportunity for community representatives, living in the villages where sanitation projects are being implemented, to engage with service providers, municipal officials and elected councillors, so as to ensure responsibility for the provision of services is handled within one municipal forum;
- supervision of a variety of responsibilities through bringing various role-payers together on a monthly basis in one venue and thereby economizing on time and no doubt cost;

- information sharing opportunities and a platform for debating and solving implementation challenges practically, as well as the chance to encourage knowledge and transfer of expertise between all members;

- the chance to validate and gather the comprehensive project data which municipal managers are required to report on in alignment with their integrated development and service delivery budget implementation plans, and in so doing, verify the actual project implementation performance of service providers;

- a platform from which to enhance the achievement of the aim of ensuring labour-based construction skills transfer so as to support the municipality to groom local emerging contractors; and

- the chance to strengthen the working relationships which inform collaborative governance, through encouraging hands-on team work, and employing sector approaches to municipal challenges in order to work through project implementation bottlenecks by directly linking representatives of provincial and national ministries with officials at municipal project level – in order that they also be placed in situations to directly support municipalities in adopting the best possible solution, and in so doing comprehend the delivery challenges first hand, and give advice on policy-related aspects, as well as receive project progress data directly.

v) Ensuring that service providers are truly dispensing what they have been appointed to do is the only way that a municipality can make sure that integrated sustainable sanitation development projects are being addressed, and municipal sanitation task teams do provide a key mechanism towards ensuring this. The role of a sanitation task team is not simply to supervise the implementation of projects, but to highlight and come to grips with challenges experienced so as to arrive at local solutions. The high turnover of municipal staff does add to the existing challenge of the shortage of technical staff within municipalities. Institutional memory and priceless skills and experience are quite often lost when staff leave municipalities, causing interruption in continuity of municipal task team planning and programme management activities.

w) Increasingly, many questions and challenges are also being highlighted in relation to the longer term maintenance of dry on-site sanitation systems, and existing sanitation task teams are trying to get to grips with these complex issues in order to ensure that appropriate sanitation technologies and the quality of construction lend themselves to long-term sustainability and pit emptying activities. As dry on-site toilet pits full up the following types of questions are being posed – Should the households be able to expect any support to be offered from the municipality or it's appointed service provider in dealing with this challenge? Should the pits be desludged, and if so, how? Who are the service providers who will take on this task of pit emptying? How will desludging of the pits be funded? How will the sludge disposal be managed? Should the top-structures be repositioned, and if so, how and by whom?

x) As "free basic sanitation" policies are being drafted the following types of questions are being posed – How will such a policy be applied cross different technologies and topographic areas? – How will the implementation of such a policy be equitable, affordable and sustainable to municipalities? How does this differ from what is achievable in an urban formal or peri-urban informal settlement? How will free basic sanitation be applied in situations where villages are scattered and located in deep rural areas?

y) New implementation approaches are needed to ensure sustainable basic household sanitation and to consider the fundamental components of sustainable services – the above-mentioned questions are sparking a growing consciousness of the need to look beyond South Africa's immediate "delivery" targets. Unfortunately few municipalities, or their appointed service providers, are adequately able to yet address the full range of sanitation operational and maintenance needs. Sanitation task teams can therefore assist by offering experience and their knowledge can be drawn upon when municipalities undertake assessments of their institutional arrangements with regard to raising the profile of sanitation in their integrated development plans.

z) Sanitation task teams help to capture the creative thinking of local politicians and officials and, in so doing; group participants do increase their own level of practical experience and insight into sanitation provision and sustainability, which does have a positive effect on local development planning in order to help municipalities solve sanitation challenges locally. The sanitation task team approach, as presented in this paper, is aimed at ensuring that the local community stakeholders remain central to the delivery of sanitation services, since it is the participation of local role-players, and appropriate institutional arrangements and human relationships which keep most services working over time. The delivery of infrastructure is only one component of service delivery – in the end sustainable service delivery is about being able to successfully blend 'hard' and 'soft' aspects.

4.2.4 Delivery Pace

In terms of the Strategic Framework for Water Service 2003, it is necessary to clarify certain water services definitions and key performance indicators:

- A basic sanitation facility – is the infrastructure necessary to provide a sanitation service which is safe, reliable, private, protected from the weather, ventilated, keeps smells to the minimum, is easy to keep clean, minimizes the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease carrying flies and pests, and enables safe and appropriate treatment and / or removal of human waste and wastewater in an environmentally sound manner.

- A basic sanitation service – is the provision of a basic sanitation facility which is easily accessible to a household, the sustainable operation of the facility, including the safe removal of human waste and wastewater from the premises where this is appropriate and necessary, and the communication of good sanitation, hygiene and related practices.

- Universal Access to Basic Water and Sanitation – is indicated by the rate of reduction in the number of households in the entire municipal Water Service Authority area without a basic water supply or sanitation service, whereas, the provision of Free Basic Water and Sanitation is indicated as the number of domestic consumers (and proportion of total) that must pay for services even though they have access to a basic water supply and sanitation service and they use only a basic service amount.

- The sector basic sanitation target – is the delivery of an acceptable sanitation service to all citizens by 2010. Additional targets are to eradicate the bucket toilet system in formal areas by December 2007 (previously 2006); and to eradicate the clinic sanitation backlog by 2007 and the schools backlog by 2005 (revised to 2008).

- In terms of achieving the implementation of Free Basic Services, the following targets are captured in the Strategic Framework for Water Services – Free Basic Water policy to be implemented in all water service authorities by 2005 and Free Basic Sanitation policy to be implemented in all water service authorities by 2010.

- The Strategic Framework for Water Services states – the goal of providing water and sanitation sustainably, whilst the Millennium Development Goal is to halve the proportion of people that were without sustainable access to safe drinking water and sanitation in 1990, by 2015.

In light of these definitions and with reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following successful delivery findings related to the pace of sanitation delivery were identified during the research project:

a) Nationally, an estimated 15-million people – roughly 3,6million households – have inadequate access to basic sanitation. The table below provides a broad profile of national sanitation backlogs, and shows that roughly 9 million households were served with basic sanitation from 1994/05 to 2006/07. Taking population growth into consideration sector delivery has brought the current household sanitation backlog to 3,698 million households (DWAF Position Statement – published May 2007).

Table 4: Access to Basic Sanitation (DWAF Strategic Overview of the Water Sector 2007)

Year	1994/95 Households (million)	2001/02 Households (million)	2006/07 Households (million)
Households	9.7	11.2	12.2
Households below RDP	5.1	4.9	3.5
% Households below RDP	52%	43%	29%
Households equal or above RDP	4.6	6.3	9.4
% Households equal or above RDP	48%	57%	71%
% Improvement since 1994		19%	44%

b) An enabling environment should be fostered to increase the pace of basic sanitation service delivery. During 2006/07 sanitation facilities were provided to roughly 200 000 households, but much more needs to be done to fast track delivery and eradicate the backlog by 2010. As reflected in the table above, access to basic sanitation has improved from 48% (1994/95) to 71% (2006/07) with South Africa having already reduced the backlog of access to basic sanitation services to the poorest of the poor by 44% since 1994. Considering annual

population growth of the poor and a continuous reduction in household size, performance is further improved, and based on current performance, the Millennium Development Goal for basic sanitation will be reached in 2009, six years ahead of the 2015 target.

c) In order to meet the Strategic Framework for Water Services sanitation target, the rate of household sanitation delivery must be increased to at least 500 000 households in 2006/07, 800 000 households by 2007/08, 1000 000 households by 2008/2009, 1200 000 households by 2009/10 and 500 000 households in 2010/2011 – under the current scenario it appears that it is unlikely that this target will be met.

d) The eradication of the bucket toilet system was identified and agreed to by Cabinet as a top priority. The bucket toilet backlog comprises roughly 4% of the total national basic sanitation backlog which serves to emphasise that the overall national programme must continue to deliver with the same, if not greater attention, as is currently being granted to the eradication of all of the historic buckets in formal areas.

e) A special bucket eradication fund of R1, 2 billion rand was allocated over 3 financial years. In 2005/06 a total of 62 206 buckets were replaced, leaving 165 912 buckets still to be removed in informal areas. As at May 2007 the bucket toilet backlog was standing at 106 873 households (DWAF Position Statement May 2007) which indicated a further reduction of 59 039 households using the bucket system.

f) It is believed that the eradication of the bucket toilet backlog in established settlements may be successful due to the many actions which have been introduced to ensure suitable planning, access sufficient funding and deploy suitably skilled capacity to assist municipalities in accelerating delivery so as to achieve this objective, however it must be noted that due to insufficient bulk treatment works and water supply constraints the original bucket eradication target may not be feasible. In addition, it is accepted that there will still be household using the bucket system in informal settlements until such time as they can be addressed by other programs, e.g. housing or informal settlement upgrading programs.

g) Municipal water services capital expenditure will have to increase rapidly from ±R5 billion per year currently to ± R10 billion per year in 2008/09 (10 year total of R65 billion). This program is reliant primarily on grant finance and substantial borrowing will be required (±R2 billion per year at peak) to provide water and sanitation services to constituents. Current MIG subsidies are of the correct arrangement, but housing subsidies and their rollout are a large constraint.

h) Many municipalities have difficulty supplementing their MIG and equitable share grants to build and operate higher levels of water services to commercial users due to inadequate revenue, and as a result the MIG grants are often used to address the wrong beneficiary target group with delivery of these higher levels of service. It is also very important to note that capital budgets allocated do not necessarily correspond with actual expenditure achieved by municipalities.

i) The Municipal Infrastructure Grant (MIG) makes up 90% of the capital grants and subsidies that municipalities receive. Unfortunately grant funding is often not fully utilised and / or misaligned due to inappropriate management of these funds. Some municipalities (possibly due to of a lack of available funds) do make use of MIG money for the provision of higher service levels even though MIG funding is intended for basic service provision. After grants and subsidies, municipal internal funding is the next most important source of capital expenditure

(ranging between 26% and 30%). Water Service Authorities however often fail to recover their budgeted levels of internal funding due to very poor cost recovery.

Table 5: Sources of Capital Funding (from budgets submitted to DPLG by all municipalities for 2004/05)

Sources of Capital Funding	All Municipalities	All Muns excluding Gauteng
Grants and subsidies	44%	48%
External loans	20%	9%
Internal income	26%	30%
Donations	6%	8%
Other	4%	5%

j) Municipalities typically allocate 20% of their budget to capital infrastructure (water and sanitation receive roughly 4.8% of this 20%) and 80% to operations and maintenance. Municipalities spend about 20% of their capital funds on basic services and 80% on higher service levels.

k) External loans are an under-utilised source of funding, making up only about 20% of capital funds spent (mostly only in Gauteng). The main sources of external loans are the commercial banks and DBSA. Commercial banks determine the credit worthiness of municipalities before providing loans. Banks usually require surety, but works such as pipelines and reservoirs do not provide much security since they cannot be repossessed. Future MIG allocations may currently not be used for underwriting loans.

l) Currently, only the Metros and the large towns appear to be sufficiently eligible to borrow substantial capital amounts (i.e. above R10 million). Commercial banks are however under pressure to raise the level of lending under the Banking Charter, which has set a lending target of R25 billion for "social" projects (including housing and water supply). There are therefore potentially large, yet untapped, private sector opportunities to strengthen and increase the financial management capacity and credit worthiness of municipalities.

m) Internal funding makes up some 86% of municipal operational expenditure. Due primarily to poor cost recovery, budgeted internal income does not often equal actual income received. Municipal customer accounts in arrears (excluding substantial amounts written off since 1994) are currently well in excess of R20 billion. It is estimated that municipalities are generally writing off arrears older than 2 financial years – in a sample of 16 municipalities investigated by DWAF, it was noted that arrears written off over a 10 year period probably exceed R100 billion. In South Africa, generally more than 1 years' worth of municipal water sales is in arrears for longer than 90 days and the level of arrears is reaching crisis proportions.

n) Of all the subsidies and grants received by Municipalities, by far the most important grant is the equitable share. Unfortunately many municipalities have difficulty in supplementing their equitable share allocations to build and operate higher levels of services such as house connections and supplies to commercial users. This is again largely due to inadequate internal

municipal revenue generation owing to weak cost recovery systems – consequently the equitable share is not always used for it's intended purposes.

o) Municipalities currently do not have sufficient revenue to properly operate and maintain their existing infrastructure and this situation will get rapidly worse given the high rate of infrastructure delivery projected. As a result, the overall state of affairs of the basic infrastructure program is revealed to be running at a loss (i.e. un-economically viable) and this will no doubt impact on the ongoing provision of water services in the future.

p) From the information contained in Table 6, it can be also noted that the core financial challenges in terms of sourcing operational funding are:
   - The insufficient establishment and management of internal funding arrangements,
   - The lack of proper financial and debtors' management resulting in deficient and untapped internal sources of municipal funding, and
   - Improper water loss management which results in large sums of unnecessary operating expenditure.

Table 6: Sources of operating funding (from budgets submitted by all municipalities for 2004/05)

Sources of Municipal Operational Funding	**% of Total**
Water income	13%
Sanitation income	3%
Regional levies	7%
Property rates	19%
Electricity income	27%
Refuse removal income	3%
Other income	14%
Sub-total	86%
Subsidies and grants	14%
Total	**100**%

q) In order to achieve the target of ensuring sustainable sanitation delivery for all by 2010, municipalities will need to transition from implementing many small sanitation projects to implementing scalable sanitation programme within their areas of jurisdiction. Under normal current circumstances a municipality may be managing between one and five sanitation project building an average of ± 200 VIP toilets per month each. The oversight and monitoring of construction quality and pace can be very over burdening on municipal technical section staff since projects of this nature can demand a very high level of management capacity and capability. In order to ensure that finances are properly accounted and project objectives are being adequately met in future, municipalities will need to begin effectively managing strategic sanitation programmes as opposed to managing smaller multiple sanitation projects.

4.2.5 Strengthening Delivery

With reference to the contents of the action research data gathering schedule (see Appendix 2) and through interviews with national, provincial and local stakeholders (see Appendix 4), as well as through a review of local sectoral policy documents and implementation plans, the following successful delivery findings related to strengthening sanitation delivery were identified during the research project:

a) Currently the rate of delivery of basic household sanitation in South Africa is inadequate to achieve the 2010 target and extensive acceleration (greater than 400%) is required in order to achieve the basic sanitation 2010 target – one means by which municipalities may increase their delivery of sanitation facilities would be by exploring the use of alternative methodologies and technologies in order to increase their scale of implementation.

b) It is also evident, nationally, that increased funding per year (of greater than 300%) is required in order for municipalities to be able to meet the 2010 basic sanitation target. Clearly at community level there are many unemployed people who do have the necessary competencies to develop the required construction and social skills in order to be actively deployed within their local communities as part of sanitation implementation programmes.

c) Backlog profiles do vary vastly across WSAs country-wide, with the largest percentage of the national backlog occurring in the Eastern Cape, KwaZulu-Natal and the Limpopo provinces. Improved management of service levels and "new" backlogs is required and municipalities can ensure a major increase in the rate of sanitation production if they focus on ensuring local enabling frameworks for effecting sustainable sanitation delivery – they should plan sanitation implementation to be undertaken via a multi-year programmatic approach to ensure sanitation provision across broad geographic areas as opposed to only addressing the needs bit by bit in projects covering small sections of villages.

d) Where possible municipalities will benefit by utilizing experienced sanitation service providers, who can make use of numerous work teams in order to accelerate the delivery pace through the establishment and regulation of standardized technology in alignment with social facilitation or user-education and skills development. The procurement, cash flow and delivery of building materials to specific project sites all do require specific attention in order for the construction of accelerated sanitation units to be maximized and community level – by paying attention to adopting more effective and efficient administrative processed in this regard, the overall target of sanitation for all in South Africa will be achievable.

e) In the majority of the rural geographic areas in South Africa where sanitation delivery interventions are focused, the design option being utilized is in the majority of cases a dry on-site ventilated improve single pit toilet system – which does tend to fill up in five to eight years (depending on the quality and standards adhered to during the construction phase). The very nature of the design of a basic VIP toilet does make it a very challenging option for effecting the removal of waste material – with these toilets most often needing to be relocated or abandoned when full. There is therefore a very serious threat that if municipalities are able to begin accelerating sanitation delivery, by increasing the construction of VIPs, that the utilization of such an inappropriate and "un-serviceable" design could lead to the development of a "second generation" sanitation backlog in South Africa.

f) Alternative implementation models need to be investigated and implementation should be followed by sustainable operation and management based on the adoption of sound water service provider institutional arrangements achieved through the conducting of Section 78 legislative processes; and accelerated delivery must not compromise quality of implementation or sustainability of service. In order to address the extensive sanitation need various programmes dedicated to household, institutional and bucket eradication are quite critical.

g) In addition to the above overall water services "target-related" findings, the following key "macro" considerations should also be carefully noted and considered within the context of strengthening municipal sanitation service delivery:

- It is financial un-viable to ensure delivery to widely scattered beneficiaries and at a certain juncture it becomes too expensive – new policy approaches integrated with housing programmes are required to address this spatial development challenge.
- The cost of sanitation service provision can vary drastically from area to area yet current MIG and equitable share formulas ignore this – higher funding is required for areas with challenging terrain or absence of local water sources.
- The MIG is sometimes inadequate to allow for extending and upgrading services where there is insufficient bulk water or wastewater treatment capacity available – dedicated regional infrastructure funding is required for this.
- There are substantial capital and operational cost differences between off-site waterborne and on-site dry sanitation – additional operating funds as well as capital funding will have to be made available to increase water supply capacity in some cases.
- The Strategic Framework for Water Services longer term goal is to provide 50 litres per person per day and residents are already demanding this, as well as levels of full flush sanitation, basing the demand on the argument that the current basic level does not allow a livelihoods approach and entrenches poverty rather than alleviating it.

h) The targets for delivering basic water and sanitation, as currently defined in the Strategic Framework for Water Services, should possibly be revised to 2010 and 2015 respectively (there is however a real threat that these targets will only be reached in 2014 and 2030 respectively), and to ensure meeting the targets government should allocate 300% to 550% more funding – however, this alone will not be sufficient, as extensive delivery acceleration of between 300% and 600% is also required.

i) The conducting of Section 78 processes to comprehensively determine water service provider institutional arrangements must be actively supported as a mandatory activity, with close links in terms of the Water Services Development Plans (as sub-components of the IDPs), so as to ensure that integrated differentiated approach to levels of service provision that reflect different rural, peri-urban and urban topographical and density challenges are formulated.

j) Through the facilitated establishment of WSA Water Services "task teams", alternative implementation vehicles and models should be supported in order for municipalities to collectively fast-track their sanitation related challenges through collaboration and co-ordination at municipal level, with hands-on "project consolidate" mentorship and input from key provincial departments and specific representation of local stakeholders. Task team

operational activities should focus on addressing the following aspects in terms of consolidating and fast-tracking water service delivery:

- Establishment of backlog patterns and demographics per WSA;
- Ensuring stakeholder networking and participation in terms of integrated planning arrangements – land, housing and services;
- Addressing factors in terms of service level planning and facilitating the agreement and formulation of WSA policies regarding the service levels to be adopted;
- Assessing funding arrangements in terms of funds required, funds available, funding shortfall, and compilation of a strategy to acquire any shortfall of funds;
- Consolidating various project related scope of works into a multi-year WSA programme approaches so as to achieve greater economies of implementation scale;
- Developing proper service level implementation strategies broken down into tangible implementation action plans to be assigned to service providers based on experience level;
- Ensuring procurement policies and supply chain management processes are adhered to, yet streamlined so as to allow for the sourcing of bulk material supply and contracting the most optimum combination of experience service providers integrated with emerging contractors and a locally-based community workforce so as to maximize construction output and skills transfer through on-the-job mentorship; and
- Performance managing the monitoring and reporting of implementation plan progress against set time frames and expenditure cash flow projections.

k) Funding proposals and action plans for addressing area wide bulk infrastructure should be compiled, adopted and implemented (inclusive of all capital, refurbishment and or capacity upgrade costs and scope), and MIG funding allocations should take into account the municipality's ability to operate and maintain their infrastructure – and should ONLY be approved for the provision of basic services and NOT to subsidise high levels of consumption by non-poor consumers.

l) Increased technical and financial support should be provided to municipalities to ensure accelerated delivery and access of currently untapped internal sources of funding (cost recovery and loans) through proper financial and debtor management, and where necessary the appointment of a professional team on a % of savings basis should be considered.

m) Political and administrative leadership (i.e. Executive Mayors, MMCs and Municipal Managers) should be directly engaged with regards to the tabling of strategic conclusions and broad-based recommendations for implementing successful sustainable sanitation service delivery programmes in order to approve, adopt and drive detailed workable municipal sanitation delivery action plans.

5. RECOMMENDATIONS FOR ACCELERATING SANITATION DELIVERY

This section presents key criteria for the acceleration of sanitation service delivery based on findings from interactions with a wide range of municipalities from across the country. It draws on the bottleneck findings which impede the accelerated delivery of sanitation services, as well as successful sanitation delivery approaches and methodologies captured in order to identify the key criteria for accelerating sanitation delivery. Section 6 then seeks to outlines the support tools and guideline developed in order to "operationalise" these recommendations for accelerating sanitation delivery.

5.1 Reference Data

In terms of information, and the use of baseline information as a key factor for accelerating sanitation delivery, the following aspects have been identified as critical for any municipality to address:

- Clearly define local levels of services and backlog definitions
- Establish baseline data and backlog targets per level of service
- Ensure IDPs and WSDPs properly interface and incorporate appropriate sanitation planning

5.1.1 Clearly Define Local Levels of Service and Backlog Definitions

In terms of the Strategic Framework for Water Service 2003, it is necessary for municipalities to clarify certain water services definitions and key performance indicators:

- a basic sanitation facility – is the infrastructure necessary to provide a sanitation service which is safe, reliable, private, protected from the weather, ventilated, keeps smells to the minimum, is easy to keep clean, minimizes the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease carrying flies and pests, and enables safe and appropriate treatment and / or removal of human waste and wastewater in an environmentally sound manner.

- A basic sanitation service – is the provision of a basic sanitation facility which is easily accessible to a household, the sustainable operation of the facility, including the safe removal of human waste and wastewater from the premises where this is appropriate and necessary, and the communication of good sanitation, hygiene and related practices.

Universal Access to Basic Water and Sanitation is indicated by the rate of reduction in the number of households in the entire municipal Water Service Authority area without a basic water supply or sanitation service, whereas, the provision of Free Basic Water and Sanitation is indicated as the number of domestic consumers (and proportion of total) that must pay for services even though they have access to a basic water supply and sanitation service and they use only a basic service amount.

5.1.2 Establish Baseline Data and Backlogs Targets per Level of Service

National DWAF figures estimate that 15-million people – roughly 3,6million households – have inadequate access to basic sanitation. Roughly 9 million households were served with basic sanitation from 1994/05 to 2006/07, and taking population growth into consideration sector delivery has brought the current household sanitation backlog to 3,698 million households which has seen South Africa achieve a 44% improvement in access to sanitation since 1994 (DWAF Position Statement – published May 2007).

As per the Strategic Framework for Water Service, the sector's basic sanitation target is the delivery of an acceptable sanitation service to all citizens by 2010. Additional targets are to eradicate the bucket toilet system in formal areas by December 2007 (previously 2006); and to eradicate the clinic sanitation backlog by 2007 and the schools backlog by 2005 (revised to 2008). In terms of achieving the implementation of Free Basic Services, the following targets are captured in the Strategic Framework for Water Services: Free Basic Water policy to be implemented in all water service authorities by 2005 and Free Basic Sanitation policy to be implemented in all water service authorities by 2010. The Strategic Framework for Water Services states the goal of providing water and sanitation sustainably, whilst the Millennium Development Goal is to halve the proportion of people that were without sustainable access to safe drinking water and sanitation in 1990, by 2015.

The eradication of the bucket toilet system was identified and agreed to by the Cabinet of South African as a top priority. The bucket toilet backlog comprises roughly 4% of the total national basic sanitation backlog which serves to emphasise that the overall national programme must continue to deliver with the same, if not greater attention, as is currently being granted to the eradication of all of the historic buckets in formal areas. A special bucket eradication fund of R1, 2billon has been allocated over 3 financial years. In 2005/06 a total of 62 206 buckets were replaced, leaving 165 912 buckets still to be removed by in formal areas. As at May 2007 the bucket toilet backlog was standing at 106 873 households (DWAF Position Statement May 2007) which indicated a further reduction of 59 039 households using the bucket system.

It is believed that the eradication of the bucket toilet backlog in established settlements may be successful due to the many actions which have been introduced to ensure suitable planning, access sufficient funding and deploy suitably skilled capacity to assist municipalities in accelerating delivery so as to achieve this objective, however it must be noted that due to insufficient bulk treatment works and water supply constraints the original bucket eradication target may not be feasible. In addition, it is accepted that there will still be household using the bucket system in informal settlements until such time as they can be addressed by other programs, e.g. housing or informal settlement upgrading programs.

Evidence shows that it is extremely challenging to try and assess, budget for and monitor the achievement of the eradication of sanitation backlogs with a municipality without accurate backlog baseline data from which to work. Most municipalities have indicated that improved accuracy in their basic service backlogs figures is required so that, in turn, their sanitation delivery plans could be better informed and thereby result in greater certainty with regards to achieving the 2010 sanitation target.

It has also arisen from consultations with role-players that within municipalities, districts and provinces, there are quite often differing collections of baseline data which also causes further lack of agreement on the actual backlog status within municipalities. Some planners still utilize 2001

census data which is now more than six years old and very obviously outdated since basic service delivery backlogs are very much of a shifting target. It is therefore critical that data collection mechanisms and sources be agreed and centralized within local contexts.

Findings indicate that whilst many municipalities are endeavouring to ensure sanitation service delivery backlog areas, it is an ongoing task since new villages and informal settlements are constantly being formed as unemployed people migrate in search of job opportunities. The very definition of the "backlog" to be eradicated is still not clearly understood and is under question in several municipalities – it is within this context, making use of national definitions and guidelines, that municipalities should assess, agree and adopt their own backlog categories and related levels of service so as to plan for and implement accordingly.

In relation to the many sanitation service delivery challenges in backlog areas, research data shows many municipalities have still to also plan for and tackle the provision of sanitation delivery to residents on privately owned land. Just to collect baseline information of residents on privately owned land is a massive challenge on it's own, besides actually embarking on delivery of services, since often land owners may view the result of accommodating municipal support for infrastructure and service provision on their land the same as government now having a claim on their land. The use of established sector forums and private public mechanisms must be increasingly explored and utilized in this context.

5.1.3 Ensure IDPs and WSDPs Properly Interface and Incorporate Appropriate Sanitation Planning

The Integrated Development Plans (IDPs) of municipalities are the primary planning documents which should capture the main objectives and framework from which to develop the Water Service Develop Plan or WSDP. The development aims and related budgetary allocations of the municipality should be captured in the IDP as a result of extensive community ward consultations. Within IDPs there is a need for sanitation service delivery to be given greater priority, but in order for this to be addressed reliable baseline information which recognizes and measures exactly what is required and shows how this relates to broader municipal development objectives, is needed.

Arising from consultations it is clear that several municipalities do not yet have Water Service Development Plans – some have incomplete WSDPs, and most do confess that they do not use their WSDP documents to guide their sanitation project implementation. In many cases there are gaps between the content of WSDPs compiled by Local and District municipalities both situated within common boundaries which need to be addressed and aligned.

Evidence shows that most WSDPs of municipalities are compiled by consultants via desktop processes and they therefore do not often tie up with the municipalities IDP plans and budgets and have reduced impact and significance to the WSA. There does not appear to be much of a consultative or participatory process involved in the development of WSDP unlike with IDPs – this needs to be addressed in order that the integrated planning and prioritization of sanitation service delivery in relation to the broader municipal service delivery context can be improved.

In cases where municipalities do have WSDPs in place, research data shows that there is insufficient content on addressing the aspects of sanitation delivery in relation to that of water supply. Most often sanitation delivery requirements and approaches in the context of dry on-site options are lacking and more specific content needs to be captured in relation to issues of long-term pit emptying requirements, the roles and responsibilities of the WSA, WSP and households

with regard to servicing, the method to be used to address servicing and the financial arrangements required.

Findings indicate that the requirements for addressing sanitation backlogs on privately owned land should be increasingly captured in IDPs and WSDPs. This can make planning and budgeting to ensure sanitation delivery to these residents, via the land owner water service intermediaries, less difficult and assist in avoiding possible complex legal and procedural challenges from arising.

Research gathered indicates that the lack of comprehensive municipal sanitation delivery planning often only reveals itself during the project implementation phase when the actual delivery challenges and bottlenecks become evident – in these situations it is usually the beneficiary constituents who become the most affected. Due to the fact that most municipalities do not have Water Services Development Plans beyond Levels further than an overall first level draft, it is clear that most WSDPs need to be enhanced in order to offer appropriate strategic direction to inform sanitation project planning and ongoing service delivery.

5.2 Human Resources

In terms of resources, and more especially human resources as a key factor for accelerating sanitation delivery, the following aspects have been identified as critical for any municipality to address:

- Boost municipal capacity and technical skills and limit high staff turnover
- Promote increased functionality of MIG Project Management Units
- Establish appropriate institutional arrangements, systems and approaches

5.2.1 Boost Municipal Capacity and Technical Skills and Limit High Staff Turnover

Evidence shows that there is a severe shortage of civil engineers, technologists and technicians on staff within municipalities and this does lead to a predicament in terms of available technical skills to oversee and manage infrastructure projects appropriately. Many municipalities report that roughly one third of their technical posts are vacant on an ongoing basis, and although there is some assistance of hands-on technical support being offered via the Development Bank of Southern Africa (DBSA) to municipalities at a local level, it still does not compare to having a full complement of suitably qualified and experienced technical officials available on full-time staff.

It is quite clear from the consultations held, that many local municipalities are lacking in capacity and resources. In many cases some municipalities employ few or no appropriately trained technical personnel due to the severe shortage of skilled practitioners available in South Africa. Where municipalities do have the required skills on staff, these personnel are working under extremely challenging conditions and under intense demands. Such a situation calls for staff to work more intelligently and strategically as opposed to more relentlessly.

Research gathered indicates that the lack of dedicated sanitation portfolio staff at municipal level has emerged as a core challenge, since this results in inadequate prioritization of sanitation in IDP planning and budgetary processes, inadequate capacity to turn WSDP aims into workable project plans, inadequate ability to streamline procurement processes and appointment of competent

service providers, and the inadequate capacity to address bottlenecks and technical challenges at implementation level which often hinder construction progress and expenditure.

Findings indicate that most often the management and oversight of sanitation service delivery planning and implementation falls under the authority of the technical section of a municipality, and where there is a lack of technical capacity within the municipality, available technical staff often have to cope with roads, electricity, water supply and bulk infrastructure as well as sanitation projects. This means that municipalities should endeavour to acquire dedicated specialist technical attention for planning, managing and implementing sanitation programmes, so that such sanitation projects and programmes can be informed by technical thinking and planning in line with politically required objectives, as opposed to being informed by political thinking alone.

Research data shows that the high turnover of municipal staff only adds to the existing challenge of deficiency of technical skills at municipalities as institutional memory and priceless skills and experience are basically lost, often causing interruption in continuity of municipal planning and programme management activities. In many cases, experienced technical mangers are being offered better contracts in the private sector and others are simply leaving due to work overload and having to cope with high levels of work related stress.

Evidence shows that that in most cases municipalities do make use of appointed sanitation service providers based on supply chain management polices and requirements, but often the relationship between the costs of these professional providers managing and overseeing the delivery of the projects, and the amount of funding which is actually spent on the construction of new household facilities is quite disproportionate and can result in fewer households being served by the allocated budget. Yet, due to the lack of internal municipal skills and capacity, many municipalities have little option but to procure external technical assistance to support the management and implementation of their sanitation delivery programmes since they simply do not have the manpower to oversee and manage all of their infrastructure projects on the scale at which they exist in line with the achievement of all existing presidential and millennium development goals.

In many cases where municipalities do not have suitable internal sanitation capacity and skills, and from the consultations held, they need to outsource certain aspects of their sanitation planning and management activities to external service providers. In such cases it is imperative that these service providers themselves are well experienced or competent in relation to the various wet and dry technologies and their varying user requirements at implementation level. In addition to this, very often the municipal official, who may have the task of managing or overseeing the appointed service provider, must also possess the appropriate level of knowledge and experience required in order to avoid or swiftly deal with any implementation challenges that might arise at community level.

Research information captured shows that in situations where municipal funding is delayed or where there are bottlenecks in the flow of funding from provincial departments to municipalities the implementation of projects can become delay. It is critical that project payment certificates be processed and are not delayed for any reason, since this can have a knock on effect on the appointed service provider's ability to purchase materials and or pay local labourers working on the project. It is important that project implementation at community level does not become delayed as it may then become difficult to retain skilled workers and maintain positive participation by community members.

Findings indicate that quite often available capital budgets are being utilized on the delivery of inappropriate technologies, and therefore municipal decision makers and project managers must lack the correct experience and expertise in order to anticipate the ongoing operations and maintenance requirements of these systems, as well as the consequences of tolerating construction errors during the implementation phase. It should be clear that any on-site system which is implemented will at some point need to be desludged, and that any off-site wet system will require the availability of water and connection to a relevant waste water treatment facility.

Evidence shows that many municipalities are recognising that their drinking water quality and effluent discharge standards are non-compliant with national specifications. Many of them are siting the lack of available operations and maintenance management and finance (internal revenue and external grants) as contributing factors. Ultimately the protection of the environment and the health of people are at risk and the number of service failures related to sewage spillages and polluted water supplies must not be allowed to increase.

According to the research data gathered, very often the allocated municipal budgets for addressing maintenance of refurbishment and upgrading of waste water treatment and other bulk works are insufficient. One contributing factor is that municipal tariff levels and active cost recovery systems must be put in place and properly managed. The end results of operating bulk water and waste water treatment facilities which release poor quality drinking water and effluent which is non-compliant to national standards, is the potential contamination of the environment as well as the potential risk of increased disease in communities, but with proper management in place this can be avoided.

5.2.2 Promote Increased Functionality of MIG Project Management Units

Under the Municipal Infrastructure Grant Programme (MIG), municipalities do have MIG Project Management Units (PMUs) aligned to their internal technical sections – these PMUs are responsible for planning and execution of MIG funded projects within municipalities. The PMUs should ensure technical, financial and managerial support and oversight in administering MIG projects within municipalities – in reality however, research findings indicate that PMUs mostly deal with financial and managerial activities and leave the technical oversight and planning of MIG projects to be done by external engineering consultants appointed by the PMU. In addition, very few PMU personnel have the specific wet and dry sanitation specific experience or expertise required to oversee the implementation of these projects once funding for them has been secured.

From the consultations held it is apparent that often where there is limited capacity and insufficient understanding which municipal staff members have of MIG registration processes, this can cause gaps in the registration of MIG projects on the Municipal Infrastructure System (MIS) since data is often insufficient or deficient and this could lead to delays in accessing funds and commencement of project implementation phases. This also highlights the need for improved communication and collaborative working relationships between the MIG staff of Local Government Departments, DPLG at national level and MIG Project Management Units (PMUs) at local municipal level.

According to the research data gathered, in some municipalities, existing technical staff members are sometimes assigned to undertake PMU functions without any additional technical capacity being brought into the municipality, and this has just increased the existing work load even further on staff. In other municipalities, the process of compiling and approving the required MIG business plan for the setting up and establishment of a PMU has experienced long delays and this has

impacted negatively on MIG sanitation project planning and implementation due to delays in accessing and managing allocated MIG sanitation funding so as to accelerate delivery. Care should be taken not to misalign these functions and proper co-ordination of activities between the MIG PM Units and the existing technical sections of municipalities can assist in preventing internal bottlenecks and time delays in the administration and management of MIG funded sanitation projects.

Evidence shows that while many municipalities have to spend time dealing mainly with grant funding and policy and administrative affairs, most are still expected to extend their hectic schedules in order to also deal with a wide scope of infrastructure programmes. More municipal staff need to be suitably experienced or equipped as water supply or sanitation sector experts, and gain the required level of planning skills necessary to support these entities in the attainment of their objectives, since where experienced municipal staff members do clearly understand the municipal political environment and objectives they are a real asset to municipalities.

5.2.3 Establish Appropriate Institutional Arrangements, Systems and Approaches

Findings indicate that with respect to section 78 Water Service Provider (WSP) arrangements, the necessary initiatives required to cater for the servicing of dry sanitation on-site technologies are largely non-existent currently. It will be critical that if the proposed Free Basic Sanitation policy is to included servicing on-site dry sanitation, as opposed to just cross subsidizing urban water borne sewage systems, that appropriate WSP arrangements and budgets are put in place. This will obviously also require clarity in terms of the roles and responsibilities of municipalities to provide Free Basic Sanitation across all urban, peri-urban and rural contexts equitably.

Research information captured shows that conducting Section 78 processes to comprehensively determine water service provider institutional arrangements must be actively supported as a mandatory activity, with close links in terms of the Water Services Development Plans (as sub-components of the IDPs), so as to ensure that integrated differentiated approach to levels of service provision that reflect different rural, peri-urban and urban topographical and density challenges are formulated.

Evidence shows that the responsibility for ongoing maintenance of VIPs is still largely unclear in terms of national policy – many municipalities are merely trying to ensure that they do everything possible just to eradicate the sanitation household facility backlog in line with the 2010 target – and are of the opinion that the servicing of dry sanitation facilities is a household responsibility in light of limited municipal resources and capacity to address this activity.

According to the research data gathered, WSP functions to address dry on-site sanitation servicing will need finance and include the outlay of desludging capital equipment and staff training, in order to effect:

- Repositioning of existing top-structures within stands,
- Building of an alternative on-site toilet when the primary toilet is full, and
- The safe extraction, handling and processing of waste recovered from the pits.

Findings indicate that in order to address the above-mentioned activities, municipalities will need to put comprehensive plans and strategies in place and appropriate WSP institutional options and mechanisms with which to operationalise these activities.

From the consultations held it is quite noticeable that in most municipalities there are no sanitation specific support initiatives or task teams in place in order to assist municipalities with localized planning and sanitation delivery in such a way as to unravel challenges, share successes and adapt ideas in creative ways so as to achieve successful and sustainable sanitation project implementation. Such initiatives should be encouraged and increasingly be established at local municipal level since, more often than not, implementation challenges arising are quite specific to local are conditions and situations within the immediate communities and their surrounding areas, as well as to the local emerging or professional service providers present.

Sanitation projects and programmes can be implemented under various different contractual models and frameworks – where WSAs have significant in-house capacity and/or local private sector consultants or NGOs lack capacity and experience the WSA can act as Implementing Agent and ongoing service provider – in this case the Municipality (WSA) plans and implements all projects, only appointing external consultants and contractors to undertake specific non-management tasks.

In a context where WSAs have limited in-house capacity or skills, and the available local agencies (private sector or NGO) have both capacity and experience the WSA can act as an Implementing Agent, but can contract out the Project Agent function, in this case the Municipality (WSA) can contract out the functions of the Project Agent (PA) to external specialists.

In cases where the WSA does not have sufficient in-house capacity or skills, and the available local agencies (private sector or NGO) have both capacity and experience the WSA can contract out both the role of Implementing Agent and the Project Agent, in this case the Municipality (WSA) contracts out the functions of the Implementing Agent (IA) and the IA appoints a Project Agent (PA).

According to the research data gathered, in situations where the WSA is the District Municipality and has capacity and skills, and/or wishes to build the capacity of the Local Municipal Authorities falling within it's boundary, these Local Municipalities can be contracted as Implementing Agents via a "public-public partnership", in such situations the DM (WSA) may contract the LMs to act as project Implementing Agents.

Evidence shows that since management of all of the above-mentioned models does rest exclusively with the WSA (with external support available to the WSA from other sector departments where required), municipalities should therefore be able to increase their internal capacity and act on fulfilling their own mandates via their own specific institutional structures without much external intervention.

Findings indicate that a programme management approach to municipal sanitation delivery should also focus on ensuring that municipal officials are seconded to fully engage in the day to day operational aspects of the programme. Such officials would then gain competencies and skills to be utilized for future delivery of sanitation projects. Programme and project steering committees should be comprised of WSA and DM or LM officials responsible for infrastructure development and local economic development, with participation from political portfolio members – with meetings held regularly to track and assess all aspects of project implementation progress.

From the consultations held, the role of a sanitation task teams and local task teams should be to highlight and come to grips with challenges experienced so as to arrive at local solutions, and not be to directly supervise the implementation of projects. These mechanisms can also assist in

maintaining continuity within the local municipal context so as to counteract the high turnover of municipal staff which can very often lead to loss of valuable institutional memory and priceless skills and experience also being lost, which can in cases cause interruption in continuity of municipal planning and programme management activities.

Research information captured shows that political and administrative leadership (i.e. Executive Mayors, MMCs and Municipal Managers) should also be directly engaged with regards to the drafting and tabling of strategic conclusions and broad-based recommendations for implementing successful sustainable sanitation service delivery programmes in order to approve, adopt and drive detailed workable municipal sanitation delivery action plans.

5.3 Financial Resources

In terms of resources, and more especially financial resources as key factor for accelerating sanitation delivery, the following aspects have been identified as critical for any municipality to address:

- Include a sanitation specific sub-component within MIG funding allocations (national and local)
- Ensure project funding commitments are in line with delivery targets
- Align and reconcile expenditure against set delivery targets
- Establish additional funding requirements and alternative sources

5.3.1 Include a Sanitation Specific Sub-component within MIG Funding Allocations (National and Local)

Since the launch of the Municipal Infrastructure Grant (MIG) Fund as a centrally allocated conditional grant source of infrastructure funding, the potential for aligning and integrating service delivery planning and needs has been significantly boosted. There is however still some misalignment of expenditure in terms of addressing the needs of service provision to the poorest due to misinterpretation and gaps in understanding of MIG policy and application of financial administration processes at municipal level.

MIG funding is categorized and distributed nationally according to various specific groupings, of which the B Component is allocated to cover basic roads, electricity and water and sanitation services. The B Component comprises of 75% of all MIG allocations, and of this component, 72% is jointly allocated to basic water supply and sanitation services – unfortunately there is no sub-component percentage split between water and sanitation allocations in order to ensure that funding allocations are proportional with water and sanitation backlog splits.

Findings indicate that overall national MTEF allocations to sanitation over the period 2004/05, 2005/06 and 2006/07 totalled 27%, as against 73% for water (DPLG MIG Unit), yet just under one third of the national population lack access to basic sanitation facilities – note that these percentages represent the value of sanitation and water funding allocations per the MTEF period, and not actual expenditure.

According to the research data gathered, sanitation is often seen as a lesser priority at municipal level and therefore most of municipal MIG expenditure is incurred against water projects as opposed to delivery of sanitation services. This raises a question is relation to how budget allocations are reached at a national sphere if at a local sphere municipalities can expend these funds in accordance with their own local priorities, and by so doing this will no doubt negatively impact on the achievement of the 2010 target of ensuring basic levels of sanitation to the poor.

Evidence shows that in the current MTEF (2007/08, 2008/09 and 2009/10) period overall water supply funding allocations have increased by 54% with sanitation funding allocations having been increased by 45% as against the previous MTEF period. Sanitation funding allocations do however still only make up the third lowest amount of the ten MTEF infrastructure allocations.

From the consultations held, in many cases municipalities are also prioritizing the implementation of water supply projects over sanitation in an effort to try and meet the 2008 national water supply target. In so doing there is often less funding available over the 3 year cycle for addressing actual sanitation delivery projects within a municipality. In the interim the unit cost of delivery is steadily increasingly in relation to the planning which might have been done, which will no doubt mean that plans and costs will need to be revised by the time funding is made available and project construction can actually begin.

5.3.2 Ensure Project Funding Commitments are in line with Delivery Targets

MIG policy specifies that only projects listed in IDPs and WSDPs are eligible for MIG funding, and this emphasises the value of increasing the priority of sanitation planning at municipal level. DPLG MIG figures presented to the MIG Unit at the start of the 07/08 financial year showed that commitments against MIG allocations across all sectors to be at 98% for 2006/07, 76% for 2007/08 and 46% for 2008/09.

Evidence shows that once projects are listed on the IPD of a municipality the funds for the project can be accessed, but in order to do this the project requires registration with DPLG via the completion of an MIG Project Registration Form, as well as the compilation and submission of a Project Technical Report to DWAF for recommendation. In many cases municipalities lack the expertise and capacity to be able to swiftly and strategically complete the documents in line with their backlog project lists so as to prevent delays in accessing these funds.

According to the research data gathered, when MIG sanitation unit costs subsidies are amended upwards due to inflation, then delays do often occur while municipalities with approved multi-year sanitation projects try to process changes in unit costs through variation order procedures so as to ensure that the correct quantity of originally planned households to be served with basic sanitation will still all receive basic sanitation facilities. The upward adjustment of sanitation household unit subsidies will inevitably reduce the number of toilets planned per project, if the projects are approved prior to the date on which the subsidy adjustments are made – in this regard, it is also clear that there will need to be greater annual increases in national capital funding than previously anticipated.

Findings indicate that often municipalities do highlight the "lack of funding" as their only main obstacle to achievement of the 2010 sanitation target. On closer analysis it is clear that in many cases municipalities are unable to effectively spend large sums of their MIG allocated budgets within the stipulated time periods. In addition, construction snags at project level often lead to additional and unplanned expenditure which unintentionally results in a reduced number of

households per project being served with a toilet – thereby shifting the achievement of the 2010 target further backward.

5.3.3 Align and Reconcile Expenditure against set Delivery Targets

From the consultations held with municipalities, the Municipal Infrastructure Grant (MIG) makes up 90% of the capital grants and subsidies that municipalities receive. Unfortunately grant funding is often not fully utilised and / or misaligned due to inappropriate management of these funds. Some municipalities (possibly due to of a lack of available funds) do make use of MIG money for the provision of higher service levels even though MIG funding is intended for basic service provision. After grants and subsidies, municipal internal funding is the next most important source of capital expenditure (ranging between 26% and 30%). Water Service Authorities however often fail to recover their budgeted levels of internal funding due to very poor cost recovery.

Research information captured shows that if MIG funds are also increasingly utilized to deliver waterborne sanitation projects then obviously this will also impact unconstructively on the progress of delivery of sanitation to as many households without access to basic sanitation as possible, since unit cost amounts will be disproportionately increased resulting in a smaller quantity households being served.

Evidence shows that many municipalities have difficulty supplementing their MIG and equitable share grants to build and operate higher levels of water services to commercial users due to inadequate revenue, and as a result the MIG grants are often used to address the wrong beneficiary target group with delivery of these higher levels of service. It is also very important to note that capital budgets allocated do not necessarily correspond with actual expenditure achieved by municipalities.

According to the research data gathered, there is very often insufficient finance available for municipalities to expand or supplement their bulk water services infrastructure requirements and often they attempt to source this from their conditional MIG grant allocations, which are actually allocated with a focus toward addressing the basic needs of the indigent target group, opposed to being utilized for expanding bulk capital works.

Findings indicate that funding proposals and action plans for addressing area wide bulk infrastructure should be compiled, adopted and implemented (inclusive of all capital, refurbishment and or capacity upgrade costs and scope), and MIG funding allocations should take into account the municipality's ability to operate and maintain their infrastructure – and should ONLY be approved for the provision of basic services and NOT to subsidise high levels of consumption by non-poor consumers.

5.3.4 Establish Additional Funding Requirements and Alternative Sources

Research information captured shows that municipalities typically allocate 20% of their budget to capital infrastructure (water and sanitation receive roughly 4.8% of this 20%) and 80% to operations and maintenance. Municipalities spend about 20% of their capital funds on basic services and 80% on higher service levels. Sources of capital funding from budgets submitted to DPLG by municipalities indicate that 44% of capital funding is sources from grants and subsidies, 20% from external loans, 26% from internal income, 6% from donations and 4% from other sources.

From the consultations held it is evident that internal funding makes up some 86% of municipal operational expenditure. Due primarily to poor cost recovery, budgeted internal income does not often equal actual income received. Municipal customer accounts in arrears (excluding substantial amounts written off since 1994) are currently well in excess of R20 billion. It is estimated that municipalities are generally writing off arrears older than 2 financial years – in a sample of 16 municipalities investigated by DWAF, it was noted that arrears written off over a 10 year period probably exceed R100 billion. In South Africa, generally more than 1 years' worth of municipal water sales is in arrears for longer than 90 days and the level of arrears is reaching crisis proportions.

Research information captured indicates that, of all the subsidies and grants received by Municipalities, by far the most important grant is the equitable share. Unfortunately many municipalities have difficulty in supplementing their equitable share allocations to build and operate higher levels of services such as house connections and supplies to commercial users. This is again largely due to inadequate internal municipal revenue generation owing to weak cost recovery systems – consequently the equitable share is not always used for it's intended purposes.

According to the research data gathered, it is well known that water supply is an income generating activity so long as cost recovery is properly executed – unlike dry sanitation which does not readily generate income. In this regard, it is clear that municipalities will either need to receive considerable additional funding in terms of their equitable share allocations in order to assist in the implementation of free basic sanitation, or to reprioritize the use of allocated Equitable Share amounts which they currently do receive, so as to include necessary budgets for dry sanitation servicing.

Evidence shows that Municipalities currently do not have sufficient revenue to properly operate and maintain their existing infrastructure and this situation will get rapidly worse given the high rate of infrastructure delivery projected. As a result, the overall state of affairs of the basic infrastructure program is revealed to be running at a loss (i.e. un-economically viable) and this will no doubt impact on the ongoing provision of water services in the future. Sources of operating funding from budgets submitted by municipalities to DPLG indicate that 13% of total operating funds are sourced from water income, 3% from sanitation income, 7% from regional levies, 19% from property rates, 27% from electricity income, 3% from refuse removal income, 14% from subsidies and grants and another 14% from other income sources.

Findings indicate that budgeted funding for carrying out maintenance and refurbishment of higher levels of infrastructure, in particular, is insufficient and it is also alarming to note that high volumes of un-metered water is being lost through illegal connections and failing networks on a monthly basis, thereby decreasing the potential revenue basis which municipalities could be tapping on to fund such maintenance.

Research information captured shows that in situations where householders cannot afford to purchase toilet paper, they often make use of newspapers and other material which are unsuited to use with flush toilets – this mostly results in blockages of the toilet and connecting networks, which are expensive to clear out on a continual basis. In some cases toilet can remain block up for long periods of time, if the householder and the municipality have no means of funding these maintenance costs.

Evidence shows that the core financial challenges are: i) the insufficient establishment and management of internal funding arrangements, ii) the lack of proper financial and debtors'

management resulting in deficient and untapped internal sources of municipal funding, and iii) the improper water loss management which results in large sums of unnecessary operating expenditure.

According to the research data gathered, increased technical and financial support should be provided to municipalities to ensure accelerated delivery and access of currently untapped internal sources of funding (cost recovery and loans) through proper financial and debtor management, and where necessary the appointment of a professional team on a % of savings basis should be considered.

From the consultations held, it is clear that municipal water services capital expenditure will have to increase rapidly from ± R5 billion per year currently to ± R10 billion per year in 2008/09 (10 year total of R65 billion). This program is reliant primarily on grant finance and substantial borrowing will be required (± R2 billion per year at peak) to provide water and sanitation services to constituents. Current MIG subsidies are of the correct arrangement, but housing subsidies and their rollout are a large constraint.

Findings indicate that, nationally, increased funding per year (of greater than 300%) is required in order for municipalities to be able to meet the 2010 basic sanitation target. Clearly at community level there are many unemployed people who do have the necessary competencies to develop the required construction and social skills in order to be actively deployed within their local communities as part of sanitation implementation programmes. Backlog profiles do vary vastly across WSAs country-wide, with the largest percentage of the national backlog occurring in the Eastern Cape, KwaZulu-Natal and the Limpopo provinces.

Data collected during this research project indicates that, external loans are an under-utilised source of funding, making up only about 20% of capital funds spent (mostly only in Gauteng). The main sources of external loans are the commercial banks and DBSA. Commercial banks determine the credit worthiness of municipalities before providing loans. Banks usually require surety, but works such as pipelines and reservoirs do not provide much security since they cannot be repossessed. Future MIG allocations may currently not be used for underwriting loans.

Research information captured shows that currently, only the Metros and the large towns appear to be sufficiently eligible to borrow substantial capital amounts (i.e. above R10 million). Commercial banks are however under pressure to raise the level of lending under the Banking Charter, which has set a lending target of R25 billion for "social" projects (including housing and water supply). There are therefore potentially large, yet untapped, private sector opportunities to strengthen and increase the financial management capacity and credit worthiness of municipalities.

5.4 Strategic Planning

In terms of planning, and more especially strategic and integrated planning as a key factor for accelerating sanitation delivery, the following aspects have been identified as critical for any municipality to address:

- Adopt multi-year integrated programmatic macro-planning approaches
- Implement appropriate infrastructure life-cycle and cost recovery planning

- Facilitate planning inputs and support by setting up stakeholder delivery mechanisms

5.4.1 Adopt Multi-year Integrated Programmatic Macro-Planning Approaches

According to the research data gathered, the requirements of sustainably operating, maintaining and refurbishing existing sanitation infrastructure is progressively being unattended to in the light of increased prominence of the implementation on new capital sanitation projects in order to achieve the national sanitation target of 2010. Properly constructed sanitation systems which are accompanied by effective user education initiatives should ideally maximize the intended existence of these systems and ideally enable municipalities to rather intensify their efforts toward the delivery of basic sanitation to unserved households.

Evidence shows that in order to achieve a common purpose and to identify and align primary aims, enhanced tactical planning for sanitation is required. But in order to interpret such aims into substantial projects and services, it is necessary to develop more than a plan – what is needed is the development of a shared vision of the essential components required in order to effect and realize these service delivery aims.

Findings indicate that the following key "macro" considerations should also be carefully noted and considered within the context of strengthening municipal sanitation service delivery:

- It is financial un-viable to ensure delivery to widely scattered beneficiaries and at a certain juncture it becomes too expensive – new policy approaches integrated with housing programmes are required to address this spatial development challenge.

- The cost of sanitation service provision can vary drastically from area to area yet current MIG and equitable share formulas ignore this – higher funding is required for areas with challenging terrain or absence of local water sources.

- The MIG is sometimes inadequate to allow for extending and upgrading services where there is insufficient bulk water or wastewater treatment capacity available – dedicated regional infrastructure funding is required for this.

- There are substantial capital and operational cost differences between off-site waterborne and on-site dry sanitation – additional operating funds as well as capital funding will have to be made available to increase water supply capacity in some cases.

- The Strategic Framework for Water Services longer term goal is to provide 50 litres per person per day and residents are already demanding this, as well as levels of full flush sanitation, basing the demand on the argument that the current basic level does not allow a livelihoods approach and entrenches poverty rather than alleviating it.

From the consultations held, it is clear that for the longer term benefits of all of the current water and sanitation capital project implementation to be realized, the planning capacity at municipal level does require considerable reinforcement. Before inclusive integrated planning can be tackled, dependable baseline information must be captured so as to inform the formulation of strategic approach for the achievement of local aims and objectives.

Evidence shows that the capacity and capability of a municipality to properly operate and maintain sanitation infrastructure can be assessed and planned for in the context of conducting a feasibility study and plotting the entire project design life cycle requirements. The consequences of not properly taking into account the longer term requirements of delivered infrastructure could lead to shortfalls in municipal funding to effectively operate waterborne sanitation systems, insufficient capacity of water resources or waste water treatment works leading to failing sanitation systems.

According to the research data gathered, project feasibility studies and technical reports should accurately identify and assess the viability and appropriateness of levels of service and technical option choices before commencing with sanitation project delivery, and in so doing prevent longer terms financial, social, environmental and political implications. These studies can therefore provide critical planning information which may not be contained within the IDPs or WSDPs.

Findings indicate that sanitation project feasibility assessments should also address aspects of pit emptying and sludge collection, abstraction and treatment in order to avoid the costly construction of sanitation facilities which in time will comprise new sanitation service backlogs as their pits become full and they become unusable.

Research information captured shows that municipal water supply planning needs to take note of water resource management and water quality issues, including safeguard from faecal pollution, as well as making provision for regular maintenance and future upgrading of water-borne sewer systems, where feasible. Insufficient water on-site to sustain sanitation upgrading more often than not indicates that wider water provision is deficient, and that sanitation provision is probably being planned for separately from water supply. Authority and accountability for overseeing this integration of water and sanitation services – scheduling, executing, funding and sustaining – does lie with water service authority municipalities.

Data collected during this research project indicates that, differing village types each comprise of their own technical and service delivery challenges – from dense informal settlements and urban townships to scattered rural villages. The upgrading of quality of services across a range of settlement categories and circumstances in order to address backlogs, generate employment and enhance local economic development is putting municipalities under severe pressure from their constituents.

From the consultations held, it is apparent that assisting, synchronizing and integrating the collection, removal and treatment across various technologies can be challenging when the requirements of integrating across other sectors is taken into account – such as housing, roads, water supply and solid waste management, in alignment with other activities such as municipal revenue management. Specific budgeting, expertise and equipment are required to keep the various forms of sanitation technologies, per level of service, functional and free of health hazards during it's intend existence.

According to the research data gathered, integrated planning and implementation amongst sector departments and municipalities is often poor. Very often there are housing developments which are planned in isolation from water services planning and this can result in costly intervention having to be made due to lack of proximity to bulk services and grey water disposal systems. Dealing effectively with the housing backlog will require that Housing departments work closer with municipal technical sections so as to properly align the provision of basic services.

Evidence shows that on a national level, the relationship between housing and water supply and sanitation must be consolidate so that at a provincial and local level, the Housing Department can effectively deal with the housing backlog and service delivery of informal settlements, through supporting in-situ upgrades or establishment of green fields developments to which people will be relocated.

Findings indicate that in order to achieve the target of ensuring sustainable sanitation delivery for all by 2010, municipalities will need to transition from implementing many small sanitation projects to implementing scalable sanitation programme within their areas of jurisdiction. Under normal current circumstances a municipality may be managing between one and five sanitation project building an average of ± 200 VIP toilets per month each. The oversight and monitoring of construction quality and pace can be very over burdening on municipal technical section staff since projects of this nature can demand a very high level of management capacity and capability, and in order to ensure that finances are properly accounted and project objectives are being adequately met in future, municipalities will need to begin effectively managing strategic sanitation programmes as opposed to managing smaller multiple sanitation projects.

Research information captured shows that effective and successful municipal delivery of household sanitation facilities is enhanced by ensuring that the following project and programme factors are strategically planned for and adequately addressed within the scope of the preferred municipal contractual arrangements and agreements – namely, that:

- Scalable budget per toilet unit to be constructed be available (in order to ensure that service providers can sufficiently cover all cost of constructing a sanitation unit without having to subsidize the project themselves).

- WSAs plan for and embark on implementing multi-year sanitation programmes as opposed to many smaller independent sanitation projects (in order to increase the volume of sanitation units to be constructed across a number of villages simultaneously so as to harness the cost and delivery benefits arising from an economy of scale approach).

From the consultations held, it is noticeable that improved management of service levels and "new" backlogs is required and that municipalities can effect a major increase in the rate of sanitation production if they focus on ensuring local enabling frameworks for effecting sustainable sanitation delivery – they should plan sanitation implementation to be undertaken via a multi-year programmatic approach to ensure sanitation provision across broad geographic areas as opposed to only addressing the needs bit by bit in projects covering small sections of villages.

5.4.2 Implement Appropriate Infrastructure Life-Cycle and Cost Recovery Planning

Evidence shows that in order to achieve the political targets of a basic level of sanitation service to all people in South Africa by 2010, the primary focus of current sanitation service delivery is on the construction of new dry sanitation facilities, and on the upgrading of existing levels of sanitation services (i.e. connecting households who currently have a functional septic tank system, onto a waterborne bulk sewage system, etc.). Due to the fact that there are limited technical staff within municipalities, the technical capacity and experience to adequately motivate to municipal councils the need for planning and provision of ongoing funding and initiatives to address maintenance and rehabilitation of existing and new sanitation infrastructure is largely lacking.

According to the research data gathered, massive amounts of funding under the MIG programme are currently being allocated for the implementation of new capital infrastructure in an effort to eradicate all sanitation backlogs by 2010. It can therefore also be concluded that while this entire new capital infrastructure is being established, that a strategy to address the automatic increase in required operations and maintenance activities and associated funding will be in high demand. It can also be noted that strategically strengthening the sanitation component of municipalities WSDPs will be of critical importance to sustainably address the full life cycle of sanitation delivery.

Findings indicate that even within some newly constructed VIP projects it is easily notable that in the short term there are already challenges of sustainability with a number of the facilities in relation to poor quality of erection of the structures and use of non-compliant low grade materials. If adequate funding and provision for ongoing maintenance activities is not immediately put in place by municipalities to address these problems, then a large number of these toilets are likely to become ineffective as vent pipes crack, cover slab joints do not seal properly and fully lined and sealed pits rapidly fill up.

Data collected during this research project indicates that, most often, as soon as the contractor has finished with construction the responsibility for the sustainability of the toilets rests with the householder and yet there is little that the householder can do to rectify pit construction errors which are often out of sight below ground.

Research information captured shows that dry on-site sanitation construction is frequently dealt with too simply, with the focus most often being on the delivery of a top structure facility only and failure to understand the onsite workings of the pit as a mini on-site digester to be carefully constructed in accordance with locally appropriate conditions and requirements such as adequate linings in collapsible soils, and compliance with SANS specifications, etc.

From the consultations held, there are increasing cases of completed sanitation projects that do not offer the users a basic and acceptable sanitation service on a uninterrupted or continual basis since often these facilities are constructed with sealed and under sized pit volumes which rapidly fill up with no provision having been made for emptying them.

According to the research data gathered, many VIPs which have been constructed since 1994 are steadily filling up, or are already full and it is therefore clear that even before 2010 a large number of these toilets will require evacuation of the pit contents or to be substituted by alternative functioning facilities. It is imperative that some comprehensive initiatives must be put in place in order for the many VIPs which have already been constructed, as well as those that continue to be constructed, are able to be used on an ongoing and sustainable basis. Municipal interventions such as formalizing feasible pit emptying programmes with appropriate organizational and financial arrangements and also improved monitoring of the proper design construction of new pits with appropriate pit emptying consideration is imperative.

Evidence shows that as dry on-site toilet pits full up the following types of questions are being posed – Should the households be able to expect any support to be offered from the municipality or it's appointed service provider in dealing with this challenge? Should the pits be desludged, and if so, how? Who are the service providers who will take on this task of pit emptying? How will desludging of the pits be funded? How will the sludge disposal be managed? Should the top-structures be repositioned, and if so, how and by whom?

Findings indicate that the full life-cycle of any sanitation system should properly be considered and captured in the IDP and WSDP planning documents prior to implementation – this should include the capital and operation costs and related activities. With regard to dry on-site sanitation systems such as VIPs, it is clear that most municipalities have little expertise or practical experience with emptying the contents of the pits when they are full, as well as with transporting and safely disposing of the extracted waste material.

Research information captured shows that in the current context of municipal capital grant funded sanitation facilities – which are to link to ongoing free basic municipal services – there is a definite lack of clarity surrounding the various dry sanitation roles and responsibilities of householders versus government stakeholders. This challenge is most especially felt with regard to the rural dry sanitation "pit emptying" context, and is unlike the approach initially used in the DWAF Community Water Supply and Sanitation rural programme undertaken between 1994 and 2003, wherein householders did contribute financially or in kind to the construction of their own toilets with assistance from government. This demand responsive approach did also ensure that the ongoing responsibility for operating and maintaining the toilet clearly remained with the household post construction.

Evidence shows that although many municipalities do indicate that they intend to desludge the full and filling VIPs within their communities, it is also noted that very very few municipalities have ever attempted to desludge pit toilets, or have experience in overcoming the various physical constraints of actually undertaking a pit emptying exercise. The repositioning of toilet top structures is another way to deal with full VIPs, but it does also highlight the need for appropriate planning and funding in order to reconstruct a new pit, as well as the need for the original top structure to have been built from materials suitable in weight and robustness so as to be easily repositioned. Clearly municipalities do require comprehensive guidance with regard to pit emptying operations and many have expressed interest in learning from the conducting of pilot projects.

According to the research data gathered, municipalities have demonstrated a very narrow grasp of what might be meant by "Free Basic Sanitation" (FBS) – the very definition of what might be intended by this "policy" or how to go about implementing FBS is still very much unclear. No doubt the greatest challenge that the Free Basic Sanitation policy might face is being able to define how to implement FBS in a rural dry on-site sanitation context, as opposed to an urban waterborne context, where FBS would basically form a component of Free Basic Water – thereby achieving "free basic sewage" instead of free basic sanitation!!

Findings indicate that many municipalities are struggling just to deliver new capital basic service to backlog areas, and do not have sufficient additional capacity to also be able to tackle the implementation of free basic services. Currently the consequences of having to service dry sanitation facilities in rural areas in terms of municipal institutional arrangements and necessary budgets, have not yet been even comprehensively been addressed in terms of national planning an policy making so as to provide guidance to municipalities so that they in turn are able to appropriately get ready to provide this vital service.

From the consultations held it is apparent that as "free basic sanitation" policies are being drafted the following types of questions are being posed – How will such a policy be applied cross different technologies and topographic areas? – How will the implementation of such a policy be equitable, affordable and sustainable to municipalities? How does this differ from what is achievable in an

urban formal or peri-urban informal settlement? How will free basic sanitation be applied in situations where villages are scattered and located in deep rural areas?

Data collected during this research project indicates that, in many areas, constituents are advocating for flush toilets as opposed to VIPs and other such dry sanitation systems and, unless the definition of a basic facility and service are further clarified, it does seem that in future the unguided use of available funding may result in a lower number of households being served, with the allocated budget, against the planned 2010 backlogs to be eradicated.

Research information captured shows that alternative implementation models need to be investigated and implementation should be followed by sustainable operation and management based on the adoption of sound water service provider institutional arrangements achieved through the conducting of Section 78 legislative processes; and accelerated delivery must not compromise quality of implementation or sustainability of service. In order to address the extensive sanitation need various programmes dedicated to household, institutional and bucket eradication are quite critical.

According to the research data gathered, complete and proper planning with regard to water services cost recovery and revenue generation is of vital importance in order to fund the upgrade and increased demand of bulk waste water treatment works and water purification works so as to ensure compliance with drinking water quality and effluent discharge standards. This is especially critical with regard to the integration required between new housing developments as well as in the context of bucket eradication programmes.

5.4.3 Facilitate Planning Inputs and Support by Setting up Stakeholder Delivery Mechanisms

Evidence shows that there is a noticeable shortage of strategic sanitation planners and managers who are able to translate IDP and WSDP sanitation components into workable programmes to sustainably achieve 2010 sanitation backlog eradication. Unfortunately this strategic skills gap and related competency for sanitation planning, project implementation and service sustainability is for the most part quite severely lacking at municipal level.

Findings indicate that the training that most technicians and engineers receive at post schools institutions of higher learning is largely focussed on conventional urban waterborne flush systems which operate within reticulated networks using water as a mode of transportation to carry the waste matter to bulk treatment facilities where it is processes and treated for release back into the environment. The result of this is that many of the trained technicians and engineers within the water and sanitation sector do not have adequate knowledge with regard to the operating, design and user requirements of other appropriate dry and wet on-site sanitation technologies which could be implemented as alternative options beyond urban settings.

From the consultations held with regard to sanitation technology options, there are basically only two technology types – systems that desiccate or dry out the waste matter once liquid and solid are separated, and systems that digest the waste matter biologically with liquid and solid mostly remaining un-separated – there are many various aesthetic design application options of each of these two technologies which are marketed widely. The primary objective therefore of the municipal sanitation manager, would be to fully understand these technologies and to know in which particular setting and environment to apply each in relation to the situation of the community and the topography.

Evidence shows that in the majority of rural geographic areas in South Africa where sanitation delivery interventions are focused, the design option being utilized is in the majority of cases a dry on-site ventilated improve single pit toilet system – which does tend to fill up in five to eight years (depending on the quality and standards adhered to during the construction phase). The very nature of the design of a basic VIP toilet does make it a very challenging option for effecting the removal of waste material – with these toilets most often needing to be relocated or abandoned when full. There is therefore a very serious threat that if municipalities are able to begin accelerating sanitation delivery, by increasing the construction of VIPs, that the utilization of such an inappropriate and "un-serviceable" design could lead to the development of a "second generation" sanitation backlog in South Africa.

According to the research data gathered, it is evident that it is the practical support systems to act on accelerating the current slow pace of sanitation delivery progress which is required in order to complete the loop linking government's commitment to achieve better sanitation. Through the facilitated establishment of WSA Water Services "task teams", alternative implementation vehicles and models should be supported in order for municipalities to collectively fast-track their sanitation related challenges through collaboration and co-ordination at municipal level, with hands-on "project consolidate" mentorship and input from key provincial departments and specific representation of local stakeholders. Task team operational activities should focus on addressing the following aspects in terms of consolidating and fast-tracking water service delivery:

- Establishment of backlog patterns and demographics per WSA;
- Ensuring stakeholder networking and participation in terms of integrated planning arrangements – land, housing and services;
- Addressing factors in terms of service level planning and facilitating the agreement and formulation of WSA policies regarding the service levels to be adopted;
- Assessing funding arrangements in terms of funds required, funds available, funding shortfall, and compilation of a strategy to acquire any shortfall of funds;
- Consolidating various project related scope of works into a multi-year WSA programme approaches so as to achieve greater economies of implementation scale;
- Developing proper service level implementation strategies broken down into tangible implementation action plans to be assigned to service providers based on experience level;
- Ensuring procurement policies and supply chain management processes are adhered to, yet streamlined so as to allow for the sourcing of bulk material supply and contracting the most optimum combination of experience service providers integrated with emerging contractors and a locally-based community workforce so as to maximize construction output and skills transfer through on-the-job mentorship; and
- Performance managing the monitoring and reporting of implementation plan progress against set time frames and expenditure cash flow projections.

Findings indicate that municipal sanitation task teams can help to capture the creative thinking of local politicians and officials and, in so doing; group participants do increase their own level of practical experience and insight into sanitation provision and sustainability, which does have a

positive effect on local development planning in order to help municipalities solve sanitation challenges locally. The sanitation task team approach, as presented in this report, is aimed at ensuring that the local community stakeholders remain central to the delivery of sanitation services, since it is the participation of local role-players, and appropriate institutional arrangements and human relationships which keep most services working over time. The delivery of infrastructure is only one component of service delivery – in the end sustainable service delivery is about being able to successfully blend 'hard' and 'soft' aspects.

From the consultations held, new implementation approaches are needed to ensure sustainable basic household sanitation and to consider the fundamental components of sustainable services – and there is a need to look beyond South Africa's immediate "delivery" targets. Unfortunately few municipalities, or their appointed service providers, are adequately able to yet address the full range of sanitation operational and maintenance needs. Sanitation task teams can therefore assist by offering experience and their knowledge can be drawn upon when municipalities undertake assessments of their institutional arrangements with regard to raising the profile of sanitation in their integrated development plans.

5.5 Delivery Approach

In terms of delivery, and more especially with regard to adopting the most appropriate delivery model as a key factor for accelerating sanitation delivery, the following aspects have been identified as critical for any municipality to address:

- Promote understanding of appropriate sanitation technology options and increased participation in local technology choices
- Undertake skills development, mentorship and capacity building at local level
- Establish local construction and user-education performance and quality management systems
- Enhance delivery through the establishment and management of programmatic approaches

5.5.1 Promote Understanding of Appropriate Sanitation Technology Options and Increased Participation in Local Technology Choices

From the consultations held, more importance is currently being placed on municipal supply driven service delivery as per the 2003 Cabinet approved Strategic Framework for Water Services. This is a slight shift from the accent on close participation of households in sanitation improvement as per the objectives of the 2001 White Paper on Basic Household Sanitation in South Africa. In accordance with the objectives of the White Paper, the involvement of constituents via community-based ward structures and community-based project steering committees should be better established, and improved in order to ensure that the responsibility of local community members in sanitation improvement does not become even more unclear in relation to the national municipal infrastructure grant programme and it's strong focus primarily on the delivery of infrastructure.

Findings indicate that those who have the most to gain from good quality project implementation are the targeted recipients of user education and health and hygiene awareness activities, since

they are the ones who take ownership of completed toilets. Local residents are the prime benefactors of sustainable sanitation interventions and discussing and agreeing sanitation and water services issues directly with them, and their key community representatives, in a local forum committed to improving sanitation-related service delivery is critical.

According to the research data gathered, where the important aspects of user-education and / or community participation in assisting to inform technical decision making, regarding the required technology choice at planning and implementation phases, is neglected, the beneficiaries of the toilet facilities could perceive the facilities provided to be of inferior quality or functionality if they are not waterborne flush toilet systems. In areas where this is the case, it is also evident that community members may abuse or even damage the infrastructure due to feeling that they may have been deprived or sidelined in relation to the level of infrastructure being provided to them. Yet in municipalities where the majority of people live in scattered rural villages, there is generally acceptance of VIP toilets as the most suitable and practical option available since the availability of reticulated water supply required for implementing flush toilet systems is not available.

Evidence shows that when they partake personally in sanitation task teams and have a say toward local decision-making and problem-solving activities, local community members acquire a say in the municipality's project implementation and planning activities. Community ward committee members, and / or members of the community-based project steering committees are connected directly in dialogue with the municipal and provincial role-players overseeing implementation and service delivery. Sanitation task teams do offer several advantages by involving residents living in the village or community where a sanitation project is to be launched with the municipal officials and service providers, so as to minimize the possibility of implementation challenges increasing. Householders are therefore able to partake collectively and share in accountability for project accomplishments since they are not excluded from fully participating in projects.

Research information captured shows that by causing municipal officials, politicians and community representatives, service providers and other government departments to gather together in one location, the task teams can facilitate the adoption and implementation of uncomplicated integrated monitoring systems at municipal level, and investigate solutions to longer terms challenges such as the best methods of emptying full pit toilets and desludging of septic tanks. Some municipalities have established task teams in order to support the implementation of accelerated sanitation project implementation in urban and rural areas.

From the consultations held it is common knowledge that dry sanitation systems are relatively elementary applied technologies – however it is often noted that when these systems are implemented either by inexperienced contractors or by overly technical professionals, that often minor construction errors are made. These errors coupled with use of poor quality of materials, are largely the reasons why the facilities fail to operate at their optimum and therefore contribute toward many communities rejecting these types of systems at planning and implementation phase.

Evidence shows that when VIPs are incorrectly implemented with pits dug down to a depth which intersects the ground water table, then there is a risk of external seepage into the pit and also a risk of direct contact of the pit contents with the groundwater table thereby possibly allowing for the transfer of bacteria to the groundwater source and in so doing causing contamination of the groundwater. Quite often sanitation service providers aim to completely line and seal the base and walls of the pit in an effort to "prevent" groundwater contamination, as opposed to altering the pit volume or slightly raising the pit above ground level – once pits are completely sealed, they fill up

quickly and will require desludging activities in order for the toilet facilities to remain functional – it is this activity which is often not yet planned or budgeted for by municipalities.

According to the research data gathered, currently in the private sector market, many different types of biological and chemical products are being manufactured for purposes of being sold to municipalities as alternative solutions to counteract the filling up of toilet pits. The vast majority of these products have not passed through any assessment protocol of government and SANS/SABS in order to validate their composition or effectiveness. In the absence of much needed national guidance on the recommended processes and mechanisms to deal with full toilet pits, municipalities are at risk of possibly incurring fruitless expenditure on unproductive interventions.

Data collected during this research project indicates that, the White Paper on Basic Household Sanitation, which was approved in 2001, did highlight the demand responsive approach to households improving their own sanitation with the assistance of government – however the Strategic Framework for Water Services, which was approved in 2003, places emphasis now on grant funded supply driven municipal service delivery. It continues to remain unclear as to whether rural households with VIPs will be required to take responsibility for servicing their own full toilet pits, while the urban poor may benefit from the use of free flush toilets.

Findings indicate that severe demand is being placed on municipalities by communities who are advocating for the installation of no less than waterborne flush toilets in their houses – this is despite the fact that there is insufficient funding or the existence of bulk connector services in such areas; as well as the fact that the cost of the provision of such a high level of sanitation service in one village, would mean that many other villages would remain unserved for longer while additional resources would have to be secured. In situations where inadequate budgets are used for the implementation of flush toilets systems, the result is often poor quality systems which are unfortunately prone to blockage, seepage and malfunction, thereby compromising service delivery.

From the consultations held it is quite evident that the implementation of flush toilet waterborne systems will not be feasible in many scattered rural areas, neither in the medium or long term, due to the fact that piped water supply and reticulated sewage networks linked to bulk waste water treatment works would first need to be funded and constructed.

5.5.2 Undertaken Skills Development, Mentorship and Capacity Building at Local Level

Evidence shows that there are insufficient numbers of experienced and competent local service providers, and it is therefore important that initiatives be put in place to support, mentor and groom such emerging service providers, especially with on and off site sanitation specific skills and expertise. Where potential local service providers can be accessed, it is critical that appropriate municipal mechanisms such as ensuring smooth cash flows, assisting with cession agreements for the bulk purchasing of materials and supporting such emerging providers to deal with various contracting and financial requirements be effected, if these potential providers are to remain in the local market and within the sanitation sector as opposed to migrating to work in urban areas on other construction projects.

According to the research data gathered, the following recognised standard forms of contract can be used as a basis for municipalities to compile applicable tender and design documents for the procurement of service providers – the General Conditions of Contract 2004, the SAACE Form of Agreement for Consulting Services, the CIDB Standard Services Contract, the NEC Professional

Services Contract, the JBCC 2000 Principal Building Agreement and Minor Works Agreement, the NEC Engineering and Construction Contract and Engineering and Construction Short Contract, the FIDIC Conditions of Contract for Construction ("Red Book"), the GCC 1990, the COLTO 1997, or the FIDIC Short Form of Contract document.

Findings indicate that the "CIBD" approach is intended for procurement in the construction industry including the invitation, award and management of contractors as defined in the Construction Industry Development Regulations issued in relation to the Construction Industry Development Board Act (Act 38 of 2000). One of the primary aspects of this approach is that the construction component of the project scope of works does require local contractors of civil engineering works in class 1 and 2 (R300, 000 value of contract and less) to be registered with the CID Board.

Research information captured shows that in most instances the utilization of the CIDB process does also require increased professional project fees in order to design the procurement documentation, ensure advertising, conduct local contractor training, award tenders and undertake implementation programme management. It is also not yet apparent as to the overall quantity of local emerging and / or community-based contractors who have dedicated themselves to the process of CIDB registration.

Data collected during this research project indicates that, service providers and contractors are also required to have NQF level 7 and NQF level 5 resources available to be able to design and manage the procurement of contractors to build VIP toilets. The requirements for these labour-intensive projects for both the service provider and municipality do need to be clearly determined in the scope of work specifications and schedules associated with the contract and it is imperative to consider ensuring that appropriate time frames are allocated for the drafting of documents, issuing of tender advertisements, and adjudication and awarding of contract.

From the consultations held it is evident that very often important prospects for 'outcomes-based' skills transmission and learning opportunities are lost and the potential of the skills, experience and insights created through project implementation are often not optimally channelled to enhance future project implementation processes.

According to the research data gathered, the Expanded Public Works Programme does involve re-aligning line function budgets so that government expenditure is better employed in order to result in more work opportunities, principally for unskilled labour. This approach is a comparatively new one and does require a certain level of flexibility and close cooperation between the municipalities and their appointed service providers in order to achieve success. Service providers are required to use the guidelines for the implementation of labour intensive infrastructure projects under the Expanded Public Works Programme as agreed upon by the Department of Public Works in conjunction with National Treasury and SALGA for the identification, design and construction of these projects.

Evidence shows that, in the interests of building the local economy through job creation and the capacity building of SMMEs, it is also critical that appointed service provider Project Agent contractually adhere to compliance with Expanded Public Works Programme (EPWP) Guidelines and aim to sub-contract a minimum of 40% of sanitation projects to these local emerging enterprises / organisations. All labour working on EPWP projects should be employed under the Code of Good Practice for Special Public Works Programmes, since this code allows the public body to set the minimum wage on the project and allows for task based payments to labourers.

Findings indicate that municipal procurement and supply chain management processes do call for the increased employment of local service providers as opposed to those based in distant urban towns and other provinces. The core challenge that municipalities do face when aiming to appoint locally based service providers is that many of these service providers do not have sufficient administrative and technical expertise or experience in order to adequately undertake the scope of works required by the municipality and this often leads to compromises in project cost and quality of work.

Research information captured shows that basic dry on-site sanitation programmes are very appropriate for the use of large number of local emerging contractors, as they are community based operations which comprise of labour intensive activities and require very rudimentary construction skills. In many cases, it is also evident that locally based emerging contractors are more ideally positioned to undertake dry on-site sanitation programmes than "traditional" urban-based engineering companies due to their knowledge and experience in understanding and working with local community people, processes and structures.

Evidence shows that local emerging contractors can approach the construction of sanitation facilities by either building an entire unit to completion and then moving on to build the next entire unit, or by forming small building teams with each team focussed on completing specific components of the unit in "batching" processes – fortunately both of these approaches do allow for the "career pathing" of builders.

According to the research data gathered, where an emerging contractor is appointed to construct entire sanitation units to completion, the emerging contractor does management of all construction work the project, including procurement of materials, commissioning of builders, quality assurance, compilation of reports and claims, liaison with project agent and community structures; smaller sub-contractors can then oversee 2 to 3 builders, quality assurance and builder training, supply of materials to site, compilation of requisitions, reports and claims for the builders and materials; with the builders then lining the pits, casting and placing slabs, constructing the walls and roof, and installing the pedestal, door and vent pipe each unit.

From the consultations held it is clear that sufficient builder team members are required to mix concrete and mortar, cut timber to size, supply materials to where they are needed, clean equipment and assemble and strip formwork and installing of the hand-washing facility and final finishing off of the unit. In order that builder team member gain varied skills and construction experience, it is important that they be rotated between the various teams every four to six weeks.

Findings indicate that the construction of VIP toilets is generally very favourable in terms of the use of labour-intensive construction methods and the progression of ensuring local economic development (LED) goals are achieved – this means that the best possible deployment of local labour in digging and lining pits as well as constructing the toilet top structure is easily possible. The community-based approach of using sanitation Project Steering Committees (PSCs) in relation to local Ward Committees has been found to really assist appointed Service Providers in the identification and management of local community workers to be trained and contracted to perform specific sanitation project tasks in their different villages.

Research information captured shows that the delivery approach adopted by many municipalities does not adequately appear to assess aspects of community-based job creation opportunities in relation to methodology for accelerating sanitation delivery via the use of local sub-contractors and batching of pedestal, block and slab manufacture for example. On-site sanitation projects are well

positioned for the development and grooming of emerging contractors in a context where corresponding guidance and support can be given, and also present a variety of prospects to connect other secondary community-based enterprises as material suppliers, pit diggers or zone quality assessors, etc.

From the consultations held, generally procurement procedures allow for the use of local community labour or small local contractors to dig the pits, construct the pit lining, floor slabs and toilet top structure. Some of these main tasks require the identification of appropriate labour, the establishment of labour policies, the appointment and oversight of such labour and their payment for tasks finished. There should also be provision made for support in the ordering and delivering of materials, builder training, quality assessors and general construction management support.

5.5.3 Establish Construction and User-Education Performance and Quality Management Systems

According to the research data gathered, ensuring that service providers are truly delivering what they have been appointed to do is the only way that a municipality can make sure that integrated sustainable sanitation development projects are being addressed, and municipal sanitation task teams can provide a key mechanism towards ensuring this.

Effective sanitation project execution is most often hampered by the following types of challenges:

- Lack of clarity regarding the central aims of the project;
- Vague procedures and poor execution of work plans;
- Lack of sufficient interaction and synchronization between role-players;
- Poor performance management and deficient supervision;
- Limited collection and distribution of data;
- Reduced accountability, responsibility and answerability; and
- Lack of "on-the-job" training, guidance and / or mentorship.

Evidence shows that employment on sanitation projects is often not stable, so builders are often likely to move towards acquiring available work in other sectors. This does have an impact in terms of increasing the challenges associated with retaining accomplished builders in the sanitation sector and accelerated progress in reaching sanitation targets, since delivery rests heavily on sufficient builders being available to undertake toilet construction. In addition, there are currently very few mentoring programmes or activities in place to deal with this need, and where such initiatives do exist; they do not get the support or backing that they require.

Findings indicate that inexperienced new emerging contractors within the sector do need close guidance and support in order to gather the distinct skills essential to implementing a successful sanitation project. VIP sanitation projects also offer very small profit margins unless implemented at large scale (i.e. not less than 3000 to 4000 household units per project); and where project work teams cannot easily be changed over to undertake other tasks, implementation delays could lead to the economic downfall of small contractors.

Research information captured shows that in municipalities comprising of large rural sanitation backlogs, quite often there is political demand to begin project implementation in as many Ward areas as possible, as opposed to concentrating implementation plans and activities in one village and moving swiftly through the area so as to ensure that full 100% coverage of all households is achieved before moving on to commencing with a project in the next village area – thereby also

resulting in accelerated service delivery with an added benefit in terms of achieving economies of scale across the project.

From the consultations held it is apparent that very often urban sanitation programmes tend to focus mostly on the supply of bulk sanitation infrastructure and they can fail to recognise the need to share toilet user or operator information with the local residents as to how the newly implemented sanitation system functions, what it's weaknesses are, and what exactly the roles and responsibilities are with regard to the costs and activities related to the longer term operation and maintenance of the system. If householders are left to become passive bystanders in municipal service delivery programmes then it can be expected that very little lasting sanitation improvement may result, since the sustainability of any given sanitation system does also rest on the active participation and support of the people whom the initiative targets.

According to the research data gathered, in situations where community based 'ownership' of local sanitation systems is lacking; behaviour change and sustainable sanitation improvement is unlikely. Where community members are well informed and are participating in sanitation projects, they play a vital role in observing and checking the quality of construction in assistance to the municipality – and they can help in making sure that the toilets which a contractor builds per household, does conform to the nationally accepted specifications for wet or dry sanitation systems. A key gap in many municipal sanitation programmes is the communal awareness and education element, where community members are informed as to which construction quality standards to count on from the appointed service provider. One of the results of the differences between a basic dry sanitation system and a high level of flush sanitation system, is that dry systems are very often seem as lower level "disgraceful" toilets, and flush toilets are often viewed as the only 'suitable' toilet for a household to have. It is quite regrettable that "levels" of sanitation service are often confused with sanitation "technologies".

Findings indicate that in many municipalities, there is evidence of incorrectly constructed VIP pits – very often contractors and / or consultants aim to completely seal the sides and base of VIP pits so as to "prevent contamination of the environment" – yet the result of this is that they are merely constructing "holding tanks" in the ground which fill up rapidly with human waste, solid waste and grey water disposed into the pit by the householder. The consequence of this is that the municipalities do have to make alternative funding available to effect desludging and pit emptying operations where possible in order to address the maintenance aspects of these VIP / conservancy tank "combo" toilets.

Research information captured shows that the practical positioning of toilet facilities within household stands is often not very well understood, and quite often little thought is also given to the future servicing and / or upgrading options that may be necessary in this regard. Where on-site toilets may in future be linked onto waterborne reticulation networks, the positioning in accordance with future stand water and sewer connections as well as the elevation of the land must be considered during planning and construction phase. In addition, project planning and preference on health basis – settlement density, risk of contamination of groundwater, risk of disease, etc. – seems to be the exception rather than the norm.

From the consultations held it is quite concerning that so many dry sanitation facilities are poorly constructed and that errors linked to misunderstanding the construction and lining and sealing of pits are common practice due to a limited understanding of the operating requirements of dry on-site toilet systems. In many cases toilets have to be reconstructed or repaired soon after initial

construction in order to rectify such faults, yet this costs additional money and results in additional delays in the sanitation delivery process and obviously this has a direct cumulative impact on the achievement of the 2010 target (and unfortunately also undermines the use of this technology as an effective basic level of service to communities).

Evidence shows that communities do however have some basis on which to refuse receiving VIP toilet facilities if one does look at the poor construction methods and substandard quality of materials often used to build these facilities – very often it is these aspects which give VIPs an awful reputation despite the sincere intention of the municipality to ensure a basic level of sanitation service to the community. If one observes some of the second-rate VIP toilets constructed under municipal programmes, it is clear that often doors and roofs are not properly attached to the top structures, pedestals and vent pipes are often of the incorrect size and specification for dry sanitation facilities as opposed to the similar yet specific requirements for waterborne toilets; and often the size and dimensions of the pits and top structures are totally inadequate resulting in a decrease in the life span of the facility as well as limiting the number of users who could benefit from using the toilet.

According to the research data gathered, the availability of sufficient building materials timeously from local building material suppliers is also of a critical importance when undertaking a sanitation project, since workflow activities must be planned in sequence and allowances made for delivery of materials to site, and then other aspects such as the curing of slabs, etc. before top structures can be erected. Failure to secure adequate quantities to be delivered without any delay is a vital component to accelerating any sanitation project at community level.

Findings indicate that when builders and labourers working on sanitation projects are forced to sit waiting for materials, some unavoidably go off to look for other work. Building material suppliers also do not necessarily give precedence to small building material orders to be dispatched to remote settlements, and delays do mean inefficient time against project expenses. In addition, substandard roads and wet weather can make some project areas unreachable and far-off distances raise the cost of delivering building materials, thereby ever-increasing the possibility of construction delays and causing chaos with project schedules when deliveries don't happen in accord with such schedules. Generally, the further the project is from a supply base – like a major town – the greater the cost of the project implementation.

Research information captured shows that insufficient water to sustain hand-washing, regular use of hand-washing facilities and better individual and household cleanliness can undermine the health impacts of a sanitation project. Furthermore – inadequate local water supply resources required for use during construction often causes community members to have to purchase water and get it transported to site, which adds additional time and cost (not only to the project but also to the local community). Water supplies for construction or for effecting improved hygiene which are not readily available close to the site to support sanitation improvement can also lead to further delays in project implementation.

From the consultations held it is evident that an integral component of water supply and sanitation projects is user education and health and hygiene promotion – and this is emphasized in the Cabinet approved 2003 Strategic Framework for Water Services in South Africa. However, often ensuring positive results and effects of sanitation project initiatives beyond the construction of toilet facilities is very hard to measure as most user education programmes still concentrate on carry out community-based mass campaigns. The South African national Departments of Health

and Water Affairs and Forestry have recently developed a national health and hygiene strategy – and it is hoped that increasingly the proposals of this strategy will be visibly apparent at community project implementation level.

Data collected during this research project indicates that, in order to establish sound user education and awareness amongst community members and households, it is critical to engage at community level with people regarding the principles of operation and maintenance of the toilet structures. Integration and co-ordination of all municipal, community and Department of Health initiatives and health and hygiene activities and programmes at community level is critical to ensure that the correct project impacts are achieved and that there is sustained and improved health and behaviour change within communities.

According to the research data gathered, in order for efficient and well-equipped programmes to become viable at magnitude, project resources need to be used to enhance and make better use of existing community development facilitators and municipal and provincial health officers. Key health messages are defined, with approaches agreed, within a reliable agenda across all sanitation projects, and sanitation task teams then provide a forum where this standardized municipal-wide methodology to implementing user education and hygiene promotion is adopted.

Evidence shows that where health emergencies arise, such as diarrhoea or dysentery, the sanitation task team can become an additional mechanism for planning and tracking interventions and preventing further disease outbreaks from returning, through dealing with various components of a complete community-based user-education and awareness programme for sanitation upgrading. Such education initiatives consist of the use of a series of illustrated leaflets comprising specific educational messages. Where funds allow, the task teams do adapt their own sanitation user-education information and training materials to suit the local community context.

5.5.4 Enhance Delivery through the Establishment and Management of Programmatic Approaches

Findings indicate that where a primary Service Provider is contracted by the Water Service Authority to oversee all sanitation delivery in a programmatic approach and to then sub-contract a number of local contractors to implement various projects within the programme, it is critical that the primary service provider have all of the required expertise and experience in the various aspects of Project Management, Technical, Local Economic Development, Institutional and Social Development and Financial so as to ensure appropriate and sustainable sanitation delivery and health and hygiene education.

Research information captured shows that a municipal programme management model would see the WSA appointing a Project Agent; this PA would then acts as a project manager, procuring all materials and hiring all labour and subcontractors. The responsibility is then on the municipality to oversee the standard of work to ensure that the Project Agent is fulfilling all requirements and meeting the correct construction standards and project specifications. In situations where tight budget control and a flexible approach required, a Programme Management option is most applicable. This approach can also assist municipalities to deliver sanitation in an accelerated way, as well as ensure increased facilitation of lesson learning, transfer of knowledge and sharing of best practises between municipalities.

Evidence shows that a conventional consultant-contractor driven model would see the municipalities adopting the conventional construction method of implementing sanitation projects

by appointing a consultant to draft a tender document, with accompanying designs, to be put out on public tender advertisement. Under this model, the municipality does not have to allocate much time to project manage the construction, since they would rely on the consultant to oversee and manage the contractor/s' work. Due to the very nature of this approach, it is also noted that sanitation average unit cost are likely to be more elevated in relation to those of the municipal programme management model, primarily due to the involvement of professional fees and additional cost escalation on the overall project claims, as and when scope of works may need to be adjusted. This model is based on a fully contractor driven approach with a strong focus on the delivery of infrastructure according to civil engineering industry processes.

According to the research data gathered, this conventional approach can assist municipalities to rapidly implement sanitation projects by providing the technical and management support required assuming a uniform approach across the project, however, it is still advisable that a institutional and social development programme be established to run alongside the contractor driven "engineering programme" so as to ensure that ensure that the many "soft" sanitation issues such as participation in management, job creation, targeting the poor, youth, women and physically disabled, and the creation of small enterprises are addressed. The advantage of this option is that there could be accelerated delivery of toilets under one contract, with a separate parallel contract for addressing the sustainability and social development aspects.

From the consultations held, municipal procurement options for contracting sanitation service providers do need to fall within the confines of the Public and Municipal Finance Management Acts, as well as in accordance with specific supply chain management policy of the specific municipality. Over and above this, the primary criteria that could influence the preferred approach of any municipality in terms of the desired contractual approach would be – the available budget, the time frames available for developing, adjudicating and awarding successful tenders, the required pace of delivery, the local economic development principles of the WSA especially in the procurement of local labour and materials, the scope to run a pilot procurement programme within the project scope of works, and whether or not there is flexibility of approach within the client, service providers and contracting bodies to implement the project using innovative methodologies.

Findings indicate that in terms of the Municipal Finance Management Act, municipalities often do not pay out funds unless they are entirely certain exactly what expenses are being claimed for – however, at the same time they often lack the accompanying internal systems and project progress data required to accurately verify implementation information so as to allow them to process payments without delay. The lack of systems and delays in processing payments to contractors can result in project construction delays if cash flows are interrupted and contractors, in turn, have trouble paying builders and suppliers.

Research information captured shows that the current rate of delivery of basic household sanitation in South Africa is inadequate to achieve the 2010 target and extensive acceleration (greater than 400%) is required in order to achieve the basic sanitation 2010 target – one means by which municipalities may increase their delivery of sanitation facilities would be by exploring the use of alternative methodologies and technologies in order to increase their scale of implementation.

Data collected during this research project indicates that, where possible, municipalities can benefit by utilize experienced sanitation service providers, who can make use of numerous work teams in order to accelerate delivery pace through the establishment and regulation of

standardized technology in alignment with social facilitation or user-education and skills development. The procurement, cash flow and delivery of building materials to specific project sites all do require specific attention in order for the construction of accelerated sanitation units to be maximized and community level – by paying attention to and adopting a more effective and efficient administrative process, the overall target of sanitation for all in South Africa could still be achievable.

5.6 Performance Monitoring

In terms of monitoring, and more especially progress and performance monitoring as a key factor for accelerating sanitation delivery, the following aspects have been identified as critical for any municipality to address:

- Set up key performance indicators for monitoring the success and performance of delivery
- Develop tools to be utilized in order to accurately monitor the key performance indicators
- Develop mechanisms through which to centralize the use of key performance monitoring tools
- Gather data using the key performance monitoring tools and verify it against the key performance indicators

5.6.1 Set up Key Performance Indicators for Monitoring the Success and Performance of Delivery

According to the research data gathered, information captured does not always correctly reveal project progress status at community level as reported on by national and provincial government departments since it is often not supplied or confirmed by relevant municipal officials. Where recurring challenges arise during sanitation project implementation, the possibility for counter-productive examples to be set through illogical and incoherent informal and disjointed approaches to problem-solving, as opposed to utilizing experiences for widespread education and sharing of knowledge across different projects, is vast.

Evidence shows that in situations where municipalities have appointed sanitation service providers to undertake their sanitation projects, that they often only rely on the reports which they receive from their service providers in order to track and monitor delivery against expenditure and therefore have little if any external mechanisms to track and monitor the actual progress independently. This can result in unverified project progress data being reported at provincial and national levels without the accuracy of such data having been checked prior to reporting. Furthermore, the issue of not checking and verifying project report data can also lead to the municipality not being aware of irregularities at project implementation level, such as poor quality of construction, use of sub-standard materials and overpayment of contractors against actual work completed as opposed to actual funds claimed.

Findings indicate that in many instances project progress reports are incorrect or have not even been captured and so municipalities only become conscious of project execution difficulties when they are already deep-rooted at community level. Municipalities usually depend on their appointed

service providers to issue them with construction progress reports, but as the extent and tempo of implementation rapidly increases and the quantity of sanitation projects rises, this challenge of ensuring accurate and timely reporting becomes more intense. It is clear that without user-friendly reporting systems in place, the vast majority of municipal officials and their staff will not have the available capacity to visit each project frequently enough to check on the accuracy of reporting.

From the consultations held, quite often municipalities do not have accurate and efficient monitoring and evaluation systems for tracking project implementation progress. In some cases, these activities are even compiled manually as a completely independent function to the related task of actual capital project management where all outputs and performance should actually be comprehensively measured. The key challenges with the gaps evident in local progress monitoring and report systems, is that it would imply that provincial and nationally reported data may be relatively unreliable, and this could highlight further concerns and questions in relation to the proper use and administration of government funding in line with the achievement of the objectives for which it has been allocated.

5.6.2 Develop Tools to be utilized in order to Accurately Monitor the Key Performance Indicators

Evidence shows that it takes skilled specialist sanitation support to help with realistic problem solving and this is exactly why municipal sanitation staff must be enabled to work more strategically – as opposed to persistently – in order to establish a working mechanism to activate, support and synchronize all available resources at municipal level. The best sanitation project implementation objectives of municipalities are often currently compromised in a number of ways due to deficient techniques, synchronization and data capture.

According to the research data gathered, local emerging contractors often have to accept the impact of residents' discontent when municipal cash flow problems immobilize them, or when suppliers do not dispatch building materials to site on time, or when local labour or political uprisings negatively influence project progress – in the majority of these cases the projects sometimes come to a standstill due to reasons outside of the jurisdiction of the community-based contractors.

Findings indicate that when payments are postponed and projects come to a standstill due to internal municipal proceedings and communication gaps, service providers could be unjustly affected. Often payments are legitimately delayed where the required paperwork is deficient. Equally, the possibility of payments being made for inferior quality of work is high – with the possibility of payment in excess being likely in situations where the municipality's capacity to check community level project progress is insufficient. Where the relationship between financial management and operational supervision is weak, invoice claims might also not necessarily link up with the programme objectives and construction targets identified in the project plan.

From the consultations held it is clear that project implementation can also be delayed if certain interventions are not adopted – simple weekly construction progress monitoring tools are useful in forecasting possible challenges in project implementation workflow activities. Such tools can support in planning all of the tasks required to transform basic raw building materials into finished toilets, and they are also vital forward planning tools which help to allow service providers and municipalities to plan their operational funds and cash flow needs ahead of time. In addition, payment hold ups or delays in processing invoices can be highlighted and attended to before they become responsible for implementation bottlenecks or work go-slows and, with clear consideration

to this kind of detail, service providers can also alert municipal staff to possible building material supply shortages and / or prise cost escalations.

Research information captured shows that elected politicians and local leaders do have a critical role to play influencing deliberations about appropriate ways to improve sanitation delivery at community level. On the other hand, where community members do actively participate in considering their own preferred sanitation options and making knowledgeable choices, and are empowered on how to best operate their toilets, the outcome is a sustainable enhancement in the well-being and quality of people's lives. Municipal community development workers and environmental health practitioners can play a critical progress monitoring assistance and liaison function at community level, and many municipalities are using existing locally-based community health promoters to drive sanitation health and hygiene education campaigns. District health programmes are also aiming to reinforce their environmental health programmes by increasing linkages with sanitation improvement outputs.

Data collected during this research project indicates that, increasingly, a sub-component of community Ward committees function as sanitation project steering committee, with nominated committee members serving from various relevant settlements to be serviced by the project. Ward committees are the most apparent structure through which to manage user participation, so that project related expertise and support are available at community level. Bearing in mind that most municipalities are only able to offer limited service support to households, household members need to be equipped with information on how to keep their toilets functioning, and how to prolong the life of their toilet pits for as long as possible.

According to the research data gathered, local problem solving and mentoring forums where project achievements can be shared with project management and steering committees working in the surrounding villages are lacking within municipalities; and there are generally very few action-oriented sanitation task teams operational at municipal level. With each municipality having it's own distinctive topographical layout, resource challenges, and locally-based service providers, the existence of such a local task team is vital, since the majority of sanitation project implementation bottlenecks identified are very much localised.

Evidence shows that the nature and composition of any existing municipal forums varies from area to area somewhat, with some municipalities having existing forums to steer their project implementation plans, yet comparatively few municipal forums examine sanitation project progress with the intention of making joint decisions to take action in addressing bottlenecks – some regular municipal forums meet together for discussion and information dissemination and others are assembled mainly to collect data and discuss progress reports for submission by local municipal management to provincial level.

5.6.3 Develop Mechanisms through which to Centralize the Use of Key Performance Monitoring Tools

Findings indicate that local municipal sanitation task teams should be formulated to facilitate networking between sanitation, water supply and other programmes such as housing and health, in order to achieve integrated programme partnership and synchronization between technical and social project role-players and representatives of provincial and national ministries, as well as to assemble and authenticate progress data and address project challenges where necessary.

Most municipalities assemble their sanitation task teams with assistance and support from various government departments as follows:

- Officials representing water supply, sanitation, health, housing and local economic development portfolios;
- Elected portfolio members of municipalities constituted at district and local level;
- National and provincial departmental representatives such as Water Affairs, Local Government and Housing, Health and Education, etc.; and
- Applicable stakeholders such as Youth Commissions, the South African Local Government Association, locally based NGOs and relevant community-based organisations and structures.

The practical activities which are usually co-ordinated within the sanitation task teams are as follows:

- Administration aspects – site management; project supervision procedures; development and implementation assessments; and the monitoring of spending versus construction target outputs.
- Construction aspects – agreeing on cost and value targets, considering what types of price variation orders are justifiable as and when cost of building materials increase; carrying out builder training and ensuring that labour-based building methods of skills transfer and community-based contractor development approaches are enhanced; ensuring consideration of bulk connector sewer infrastructure and sufficient water resources and supply where required; helping deal with the on-site aspects linked to the eradication of the bucket toilet system; adapting of ventilated improved pits toilets to flush toilets, conducting the necessary groundwork required to ensure interventions to deal with full pit toilets – and working out challenges related to adapting pit volumes in high water table and hard rock areas, etc.
- Social aspects – planning and conducting community-based user education programmes in order to ensure sanitation responsiveness; conducting of various sanitation-related communicable disease campaigns; reinforcing the co-operation between municipal health and provincial health units; and helping to simplify the co-ordination of daily toilet operation and maintenance tasks.

Evidence shows that in order to verify that service providers are actually providing what they have been appointed to do, municipalities have established support and management systems to ensure that what is required is in fact being attended to so that sanitation services are provided at indigent households. In order to give sanitation implementation guidance and support to many of their local community-based emerging contractors, municipalities together with various national and provincial government departments have sought to adopt creative new processes via their sanitation task teams. Community-based emerging service providers appointed to execute sanitation projects do also participate in local sanitation task team meetings so as to present their project construction progress reports, to the municipal sanitation or programme manager, who ideally chairs and administrates the meeting.

According to the research data gathered, action-oriented local municipal sanitation task teams have been noted to be an influential mechanism for operational management, oversight, co-ordination and progress monitoring of sanitation projects at local municipal level. Meeting together on a monthly basis at a venue near to the site of the project, representatives of different municipal units, track project progress within the local municipality by inviting service providers to bear witness to their construction work programmes and implementation milestones.

From the consultations held it was apparent that all of the key role-players are likely to be present during sanitation task team meetings, where expert technical or policy information may be needed with regard to effectively tackling social, scientific or ecological project challenges which may have been noted as obstructing the progress of locally community-based service providers. Project site assessments facilitated by locally elected community representatives also assist with resolving certain construction implementation challenges.

Research information captured shows that during monthly task team meetings, members evaluate progress of construction versus financial spending incurred against all government grant-funded sanitation projects – whilst gathering at a location in one of the municipal settlements or villages where the sanitation projects are in progress. In this way the solution to ensuring effective and sustainable sanitation project implementation is comparatively straightforward: a sanitation working, or task group "vehicle" constituted at local municipal level in order to maximize participation and co-operation in order to give effect to the municipality's sustainable sanitation objectives.

Data collected during this research project indicates that, being capable of assisting the municipality in closely tracking the accomplishments of a service provider on site, allows community members to also gain from taking part in sanitation task team discussions associated with issues such as evaluating cost and standard of quality of the construction; as well as interacting with policy matters, so as to better understand the objectives and scope of a sanitation project. Local municipal sanitation task teams can facilitate the solution of fundamental project implementation challenges, and assist to ensure that the interface between key stake-holders shifts away from written and electronic communication towards networking and participation in task teams where opportunities can be created for evaluating options and developing a wider understanding of what sustainable sanitation actually entails.

5.6.4 Gather Data using the Key Performance Monitoring Tools and verify it against the Key Performance Indicators

According to the research data gathered, sanitation task teams are solution-oriented hands-on action groups where challenges are tackled as they occur and before they become complicated – the close monitoring of the implementation of grant funded sanitation projects is one of the primary objectives of the municipal sanitation task team.

Sanitation task teams can help to enable:

- Non-bureaucratic efficient guidance to municipal sanitation and programme managers;
- The formation of a single collaborative mechanism through which the municipality can channel and guide all of it's sustainable sanitation planning and implementation activities;
- A mechanism for facilitating sector support and data capture by national and provincial departments; and
- A vehicle for knowledge sharing, liaison and co-ordination.

Evidence shows that comprehensive project implementation reports do permit municipal staff to track monthly progress, across villages, and are a chance to make use of assembling household progress data against weekly construction programmes. One of the advantages to the municipal project management staff of partaking in a sanitation task team is that of monitoring the many unpredictable challenges which can disrupt project progress. This demands careful project tracking of actual funds spent and ensuring a steady flow of funds from provincial government ministries

through the municipality to the service provider. Municipal staff members also play a critical part in the monetary management of projects and in aligning implementation progress against financial and managerial systems.

Findings indicate that it would be of benefit to municipalities if they were to set up municipal sanitation action task teams in order to oversee and administer their sanitation programme implementation and service delivery programmes. The advantage of such an initiative could be to monitor and track the progress and performance of sanitation service delivery with the municipality, by receiving reports and updates from service providers on a weekly and monthly basis, scrutinizing them in collaboration with other community Ward representatives and sector department role-payers and then providing support interventions where required so as to keep implementation and expenditure on track against municipal and national objectives.

From the consultations held it is evident that in order to effectively monitor the distribution and spending of government grant funding, the sanitation task team does provide the perfect arena from which to prepare and execute the sanitation projects recorded in the municipality's integrated growth plan. From observing the project achievements and failures, task team members can then track progress across projects and deliberate on issues in order to compile improved implementation approaches and plans.

Evidence shows that sanitation task teams can make it possible for national and provincial departments to also gather and verify project progress data directly from municipalities for capture on their wider information systems. The task teams offer the most optimum foundation for correct project level data to be collated by the municipality since applicable and relevant 'bottom-up' project information is gathered at community project level and then tabled and confirmed or updated by local group members.

According to the research data gathered, the analysis by a variety of role-players, including municipal sanitation managers, community structures and project steering committee representatives of comprehensive weekly project progress reports tabled by sanitation service providers, and the prominence of the sanitation task team on close project monitoring is what distinguishes it from other existing municipal forums. In order to offer support, disseminate data and confirm the accuracy of locally gathered project information the representatives of national and provincial departments also participate in these task team meetings. The data required to track progress, categorize and sort out bottlenecks co-operatively can be collected through the task team mechanism, which brings the primary stakeholders together, and therefore provides a vehicle for collectively confronting a range of sanitation implementation challenges.

6. SUPPORT TOOLS AND GUIDELINE FOR ACCELERATING SANITATION DELIVERY

This section of the report contains information about the municipal support tools and guideline document which were developed based on the key criteria identified for the acceleration of sanitation service delivery – which, in turn, emerged from the findings emanating from interactions with a wide range of municipalities from across the country.

The support tools for enhancing municipal sanitation project implementation were developed across the following six broad "acceleration categories":

- Reference Data
- Human Resources
- Financial Resources

- Strategic Planning
- Delivery Approach
- Performance Monitoring

Table 7: An outline of how the fifteen municipal support tools are aligned to the key criteria identified as critical to the acceleration of sanitation delivery

ACCELERATION CATEGORY	KEY CRITERIA FOR ACCELERATING DELIVERY	MUNICIPAL SUPPORT TOOL
Reference Data	• Clearly define local levels of service and backlog definitions • Establish baseline data and backlog targets per level of service • Ensure IDPs and WSDPs properly interface and incorporate appropriate sanitation planning	• WSA Sanitation Policy Framework Tool 1 • WSA Sanitation Strategy Tool 2 • WSA Baseline Data Capture Tool 3A and 3B • WSA Waterborne Sanitation Criteria Tool 4
Human Resources	• Boost municipal capacity and technical skills and limit high staff turnover • Promote increased functionality of MIG Project Management Units • Establish appropriate institutional arrangements, systems and approaches	• WSA Sanitation Task Team Development Tool 5 • WSA Sanitation Task Team Meeting Agenda Format Tool 6
Financial Resources	• Include a sanitation specific sub-component within MIG funding allocations (national and local) • Ensure project funding commitments are in line with delivery targets • Align and reconcile expenditure against set delivery targets • Establish additional funding requirements and alternative sources	• WSA Financial Planning Tool 7 • WSA Project Expenditure Monitoring Tool 8

Strategic Planning	• Adopt multi-year integrated programmatic macro-planning approaches • Implement appropriate infrastructure life-cycle and cost recovery planning • Facilitate planning inputs and support through establishing stakeholder delivery mechanisms	• WSA Project Planning Tool 9 • WSA Technical Report Outline Tool 10 • WSA Technical Report Guideline Tool 11
Delivery Approach	• Promote understanding of appropriate sanitation technology options and increased participation in local technology choices • Undertake skills development, mentorship and capacity building at local level • Establish local construction and user-education performance and quality management systems • Enhance delivery through the establishment and management of programmatic approaches	• WSA Project Construction Programme Tracking Tool 12 • WSA Health, Hygiene and User Education Planning Tool 13
Performance Management	• Set up key performance indicators for monitoring the success and performance of delivery • Develop tools to be utilized in order to accurately monitor the key performance indicators • Develop mechanisms through which to centralize the use of key performance monitoring tools • Gather data using the key performance monitoring tools and verify it against the key performance indicators	• WSA Monitoring and Evaluation Tool 14 (including key indicators) • WSA Project Site Assessment Tool 15

6.1 Brief Overview of the Delivery Support Tools Developed (see Guideline and Tools Document)

Tool 1: WSA Sanitation Policy Framework Tool

This tool summarises an approach to establishing an effective local municipal sanitation delivery policy. It is premised on the WSA also then developing a Sanitation Strategy a component of it's

Water Services Development Plan. With assistance from DWAF, the policy could be developed through the WSA's Sanitation Task Team. The municipality should always review their WSDP and ensure that their WSDP and IDP and budget allocations for sanitation projects are aligned. With assistance from DWAF, a municipal sanitation policy can be developed, and the municipality can use this tool as the basis for planning a sanitation policy.

This tool should be used as a guide in ensuring that the sanitation options selected or identified for a specific area meet the requirements or the standard required such as the SABS standard per DWAF requirements. In order for the municipality to ensure that all the necessary policies and standards are well covered during it's planning it should ensure that it's sanitation task team also be inclusive of role players such as the Department of Water Affairs and Forestry in order to also support the municipality to accelerate sanitation delivery.

Tool 2: WSA Sanitation Strategy Tool

This tool summarises an approach to effective municipal sanitation planning. It is premised also on the WSA developing a Sanitation Strategy as a component of it's Water Services Development Plan. With the use of this tool, municipalities can turn their attention to broader strategic planning for sanitation – the intention being to develop a sanitation strategy that looks beyond just setting targets and naming projects.

A municipal sanitation strategy should provide a central reference point for the WSA, where local objectives, priorities, targets, policies and approaches are spelled out, with detail on different programme components. This should support better integration of sanitation into broader municipal planning and development, particularly with respect to housing and health.

Tool 3A and 3B: WSA Baseline Data Capture Tool

These tools comprises of data capture formats for gathering baseline information in water service backlog areas. Through effectively capturing information during IDP community consultations and by using Community Development Workers municipalities could effectively capture much of their backlog information required for project planning. The data capture tools for gathering baseline information in sanitation and water supply backlog area have been simplified in the form of a questionnaire to be used at community level so that it covers all of the necessary information needed to establish the correct backlog information required.

These tools can be used to conduct interviews with relevant community members in order to capture information needed regarding the backlog in the area during the IDP process of the municipality. These data capturing tools may assist the municipality to identify water services problems as well as the possible local solution. The community is an important role player in assisting the municipality to gather the correct information as the community can indicate it's problems or needs and thus help the municipality to assess the challenge and the relevant solution needed.

Tool 4: WSA Waterborne Sanitation Criteria Tool

This tool provides a checklist of socio-political, technical and financial criteria to assist municipalities and DWAF in assessing the feasibility of a proposed higher level of waterborne sanitation project.

Where the municipality is opting to possibly install a waterborne sanitation system in any given area, the municipality can use this tool as a reference in ensuring that current social, technical and financial conditions are fully taken into account before the system is installed. The existence and capacity of existing bulk sewers, pump stations and wastewater treatment works must be reported and be taken into account before planning to install any waterborne sanitation systems.

The approach and methods to be used for the disposal of all sewage – both solid and liquid – should be described, including the equipment to be used and the location of the disposal sites. The availability of a reliable water supply which will deliver the necessary volumes on a sustainable basis long-term must also be fully considered, as well as the level of compliance with standards of effluent discharge from existing local wastewater treatment works, and the current condition and any upgrading requirements of these works should be noted.

Tool 5: WSA Sanitation Task Team Development Tool

This tool outlines an approach to co-ordinating and strengthening municipal sanitation delivery through a Sanitation Task Team at WSA level. The Task Team tracks project progress closely, facilitates hands-on support to local emerging contractors, promotes liaison with and support by provincial and sectoral departments, and enables cross-learning and mentoring at municipal level.

This tool can be used as a reference during the establishment and structuring of a municipal sanitation task team and can aid in the identification of the responsibilities per each team member. The municipality should ensure that a wide range of role-players such as ward councillors, Department of Water Affairs and Forestry, DPLG, DLG and NGOs all form part of the task team.

This tool can assist municipalities to tackle their sanitation related challenges through collaboration and coordination at municipal level, with support and input from key provincial departments. DWAF could assist to facilitate the establishment of Municipal Sanitation Task Teams chaired by the WSA, with representation from relevant District and Local Municipality portfolio committees and sections impacted by sanitation, sector and provincial departments like the Provincial and Local Government and Housing (DPLGH), Water Affairs and Forestry (DWAF), Health, Education, Housing, SALGA and others.

Tool 6: WSA Sanitation Task Team Meeting Agenda Format Tool

This tool provides a pro-forma agenda for a WSA Sanitation Task Team. It illustrates the range and scope of issues addressed by a typical Task Team. This tool can be used as a guide when compiling the agenda for the sanitation task team meetings. This guide will enable the Task Team to be able to cover all the issues involved in the acceleration of sanitation services to the communities. In the agenda there should therefore be provision for a slot for each of the different role players to provide their inputs into the process of overseeing the sanitation programme of the municipality. The municipality should also develop an annual schedule of task team meetings in order to ensure continuity and consistency of these meetings on a regular basis.

Tool 7: WSA Financial Planning Tool

This tool outlines an approach to financial planning in relation to capital and operating requirements and should be used to ensure greater networking between municipal technical and financial sections. This financial planning tool can be utilized by the municipality to undertake a financial assessment at a WSA level to identify the most appropriate technical solution for the

municipality and it should consider the exact capital requirement; the operational cost requirement; water resource implications; sequencing of interventions to address the backlogs; and appropriate technologies.

Conducting this financial assessment should help the municipality to ensure that the backlog is addressed in the most cost efficient way possible and with the required timeframes for accessing and expending funding being known. This high level institutional financial assessment should to be conducted in order to assess the ability of the WSA to operate and maintain these assets, and the current ability of the WSA to operate sustainably (considering capacity in other departments, collection ratio's, systems in place, etc.) The above information should then inform high level sustainability assessments indicating whether the project is self sustainable which in turn could inform the proposals and approach to engaging with any potential funders.

Tool 8: WSA Project Expenditure Monitoring Tool

This tool has been developed to align and integrate a Sanitation M&E Progress Report with a "Request for Payment" which complies with MIG procedural and information requirements. It enables the WSA, DWAF and MIG / DPLG to track progress and expenditure across all parameters required for effective monitoring, accountability and regulation. This tool should assist the municipality to identify if there are any problems on the project if there is low expenditure and it will assist the LM to see if there are any shortfalls on the project.

This support tool can be used by the municipality to establish if the appointed service provider is in need of any support or if the project is proceeding as planned. The Department of Local Government should also track the progress of the municipality on all MIG project expenditure in order to assist in unblocking bottlenecks where they may exist. The municipality should develop it's own system to record all sanitation project expenditure and to do this the individual project expenditure monitoring tools could be utilized collectively.

Tool 9: WSA Project Planning Tool

This tool provides a guideline and format capturing all of the components to be considered when properly planning a sanitation project. Good sanitation project planning begins with the water services development plan (WSDP) and municipal sanitation strategy. This project implementation planning tool applies the broad municipal sanitation strategy to a defined geographical area, with it's own unique needs and challenges. Local consultation and local data verification is essential, as desktop information is frequently inaccurate or out of date.

A municipal sanitation strategy should be completed before project business and implementation plans are submitted. This project implementation planning tool should be used to guide the formulation of a project implementation plan which should also be approved by both the targeted community and the WSA and elaborate on particular items unique to the particular village, and explain why particular approaches will be followed, and then act as a tool for monitoring and evaluating progress throughout project implementation.

Tool 10: WSA Technical Report Outline Tool

This tool provides an overall outline of the required format for compiling a technical report for a sanitation project. It is a cross-cutting condition of MIG that a technical feasibility study report must be attached to every Project Registration Form – in many cases these reports continue to be

of poor quality and hence delay the DWAF recommendation required to approve, register and implement new sanitation projects.

The municipality must develop technical reports for all water and sanitation projects and submit those technical reports to the Department of Water Affairs and Forestry (DWAF) for recommendation. If the projects meet certain minimum requirements as stipulated by DWAF, they are then recommended for implementation. The Department of Provincial and Local Government (DPLG) will then approve and register the projects on verifying compliance with their departmental criteria as well. The technical reports must be compiled or developed by the service providers of the municipality with guidance from the municipalities and this tool does provide a technical report outline for use by the municipality and their appointed sanitation service providers.

Tool 11: WSA Technical Report Guideline Tool

This tool provides a comprehensive guideline and format for compiling a technical report for a sanitation project. It is a cross-cutting condition of MIG that a technical feasibility study report must be attached to every Project Registration Form – in many cases these reports continue to be of poor quality and hence delay the DWAF recommendation required to approve, register and implement new sanitation projects.

This support tool serves as a detailed guideline for the compilation of a sanitation technical report and provides minimum requirements for WSA and their Service Providers on issues that need to be covered when preparing technical reports and business plans for registration of projects on the MIG database. The issues covered range from availability of water, to suitability of technology choice including acceptability by the end users. Therefore the municipality should use this tool as a reference guide in developing technical report with assistance of DWAF where they need advice on policy issues. The service providers of the municipality should use the technical report guideline tool to develop project technical reports to the required standard.

Tool 12: WSA Project Construction Program Tracking Tool

This tool contains a weekly construction program progress report format which can include data, village by village or per project within a municipality. It shows progress week by week against targets across a range of components – pits dug, lining, production of blocks, completion of slabs, and so on. The service provider responsible for implementing the project is then called on to report, explain any deviations and discuss problems as they arise.

The format provides a comprehensive but concise overview of progress across multiple projects, enables the WSA to compare the performance of different service providers, and highlights potential bottlenecks long before they become significant problems. The municipality can use this tool as a project construction progress tracking tool. All municipal projects under construction should be visited and inspected frequently in order to ensure that they are being implemented according to the planned way stipulated during the project planning and approval stage.

The municipality should appoint a project management unit in order to oversee and ensure proper management of the project. This PMU should track the progress made by appointed service providers with construction of the project and this construction program tracking tool has been compiled for use in this regard. The sanitation Task Team appointed by the municipality should also scrutinize the progress report on the implementation of the project in ensuring that the construction program is being implemented accordingly.

Tool 13: WSA Health, Hygiene and User Education Planning Tool

This tool provides a step-by-step guideline to health, hygiene and user education, highlighting key messages and recommending methodologies that have proved effective in previous projects. Health and hygiene and user education programmes should be implemented by the municipalities during the MIG project construction phase and should be budgeted for especially in MIG projects.

This health and hygiene user education tool should assist the municipality to implement such a programme in conjunction with the municipal health and community development workers and also ensure that they include a level of community involvement in the development of the programme and ensure the participation of the community in running this programme.

In addition the links with the municipal health services and the district health system should be strengthened, and health and hygiene and user education included as part of the scope of work of all appointed service providers during the implementation of any sanitation project.

Tool 14: WSA Monitoring and Evaluation Tool

This tool has been developed to align and integrate a Sanitation M&E Progress Report with a "Request for Payment" which complies with MIG procedural and information requirements. The municipality must frequently monitor each sanitation project which is under implementation so as to ensure that there is progress on site.

This support tool is aimed at capacitating the project management unit and appointed service providers to monitor and evaluate the sanitation projects against key performance indicators as outlined in the approved and funded project business plan. This tool should enable the WSA, DWAF and DLG / DPLG MIG Units to track progress and expenditure across all parameters required for effective monitoring, accountability and regulation.

Tool 15: WSA Project Site Assessment Tool

This tool is aimed at assisting the municipality and community in appraising a Sanitation Project once completed. Once the form has been completed by municipal officials, it presents a concise summary of the key features of the social and technical feasibility of the project per household, and enables a municipal Task Team to see at a glance whether the project satisfies DWAF's sector conditions as a sustainable service.

The municipal officials should complete the project site assessment tool which presents a summary of the key outcomes of the social and technical feasibility of the project per household. After the form is completed, it should be presented to the project management unit and the sanitation task team of the municipality so as to enable this team to see whether the project meets the requirements of the Department of Water Affairs and Forestry's sector conditions as a sustainable service. The Department of Local Government and DWAF can also use this tool to conduct independent monitoring and evaluation assessments of municipal sanitation projects.

6.2 Guideline to facilitate the use of the Delivery Support Tools (see Guideline and Tools Document)

The compilation of a guideline to facilitate the use of the support tools for enhancing municipal sanitation project implementation was then undertaken by ensuring that the appropriate municipal sanitation support tools which were developed, as part of this project, based on the key criteria

identified for enhancing and accelerating sanitation delivery were then linked with the core guideline aspects of policy, institutional arrangements, project planning, financial planning and arrangements, networking and stakeholder participation, sanitation programme implementation, skills development and mentorship, monitoring, evaluating, operations and maintenance.

The guideline to assist WSAs in facilitating accelerated sanitation service delivery based on the use of the support tools developed has been developed as a practical aid alongside the support tools. From the information captured in this report, it can also be concluded that there are several key focus areas where municipalities can apply this guideline and make use of the support tools developed in order to accelerate their sanitation delivery programmes and overcome many of the bottlenecks that might impede accelerated delivery.

The content of the guideline was formulated through interactions with municipalities at implementation level as well as in liaison with sector role-players. Based on interactions with a wide range of municipalities from across the country, the guideline presents key aspects where the use of support tools can assist with enhancing sanitation delivery.

The guideline for facilitating the use of the fifteen sanitation support tools comprises the following ten sections:

- Section 1 provides an introduction to the guideline to facilitate the use of support tools for enhancing municipal sanitation programme implementation.

- Section 2 locates sanitation delivery within the context of government policy, in particular, the 2003 Strategic Framework for Water Services.

- Section 3 outlines the various institutional arrangements required to enable improved sanitation delivery.

- Section 4 highlights aspects of sanitation delivery service planning to be included in Municipal Water Services Development Plans.

- Section 5 suggests options for financial planning and arrangements for funding sanitation delivery.

- Section 6 outlines the importance of ensuring stakeholder participation and networking in the context of providing sanitation delivery.

- Section 7 sets out key aspects to consider when implementing a sanitation delivery programme.

- Section 8 provides insight into skills development and mentorship aspects of sanitation delivery.

- Section 9 provides guidance and suggestions toward monitoring, evaluating, operating and maintaining sanitation infrastructure so as to ensure the sustainability of this infrastructure.

- Section 10 contains a conclusion to the guideline document.

The guideline document is aimed at all municipal stakeholders, councillors and officials and sets out policy and strategic aspects for WSAs to consider in order to fulfil their universal obligation

to ensure sanitation delivery. The guideline document was compiled on the basis of extensive research and consultation with municipalities.

The guideline has been drafted in order to provide municipalities that are responsible for ensuring access to water and sanitation services – Water Services Authorities (WSAs) – with a series of aspects to consider when planning their localized strategies for achieving sanitation delivery.
The guideline has also been aligned with all current water sector legislation and should be read together with the Strategic Framework for Water Services (2003) and the White Paper on Basic Sanitation (2001).

In order to apply this guideline, it is strongly recommended that local assessments are undertaken to determine the circumstances of sanitation in the particular municipal area of jurisdiction. It is especially necessary to determine whether any infrastructure for water and sanitation is already in place, as this should allow for the devising of a co-ordinated strategy in line with the municipality's Integrated Development Plan.

It is true that some of the sanitation delivery challenges cannot be resolved in the short-term – such as the need to double the capital funding resources if the sanitation backlogs are to be eradicated by 2010. It is also clear that without stronger institutional arrangements at municipal level in order to plan, manage money, manage service providers and oversee service delivery more effectively, most municipalities would be hard-pressed to put this additional capital to good use anyway.

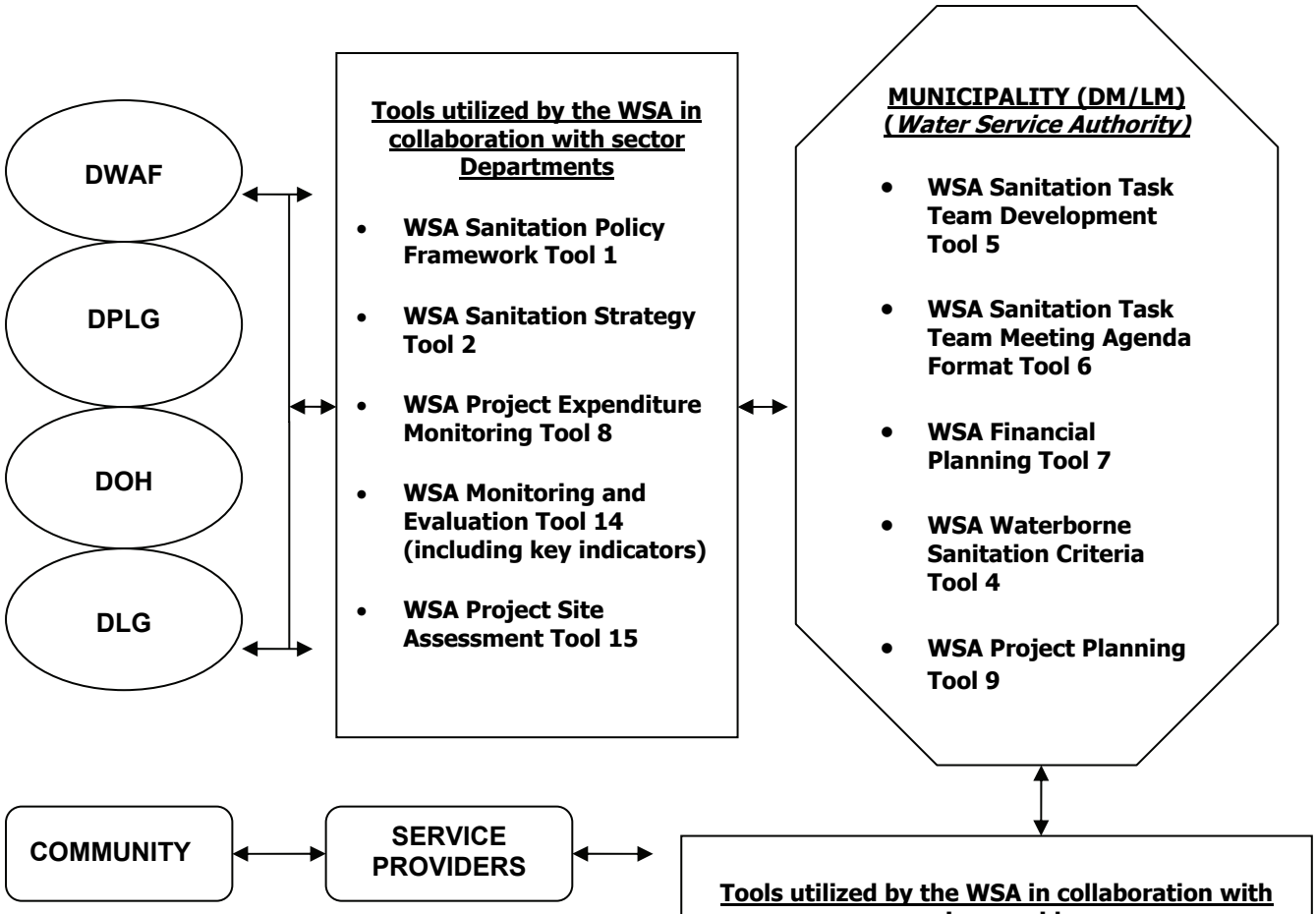
The support tools and guideline which have been developed do focus on the essential nuts and bolts of service planning and delivery at municipal level, with a strong emphasis on relationships, frameworks and systems and have been developed in relation to the identification of key criteria for accelerating sanitation delivery.

6.3 Linkages between Role-players and the use of the Delivery Support Tools

From the information captured in this report, it can be concluded that there are broad and common sanitation challenges and bottlenecks which are faced by all local government municipalities in terms of the successful delivery of sanitation services, and that despite these bottlenecks, there are effective approaches and methodologies to overcoming these challenges and accelerating sanitation delivery.

In addition, it is also important to also recognize the approach to dealing with each of these challenges is not always a uniform one, since local aspects related to topography, technology, finance, skills and politics each vary accordingly.

Diagram 1 indicates how different role-players could co-operate with each other, and with the municipality, in order to work together to overcome delivery challenges and utilize the sanitation support tools developed for enhancing sanitation delivery.



The different role players playing a significant role in accelerating sanitation delivery as indicated in the diagram above are:

- Department of Water Affairs and Forestry (DWAF);
- Department of Provincial Local Government (DPLG);
- Departments of Local Government (DLG);
- Department of Health (DOH);
- District Municipalities (DM);
- Local Municipalities (LM); and
- Service Providers and Communities.

Diagram 1: Linkages between different role-players and the municipality in order to utilize the sanitation support tools developed for enhancing sanitation delivery

7. CONCLUSION

This project has involved considerable research over a period of time. It has identified the bottlenecks which impede sanitation delivery as well as the successful approaches towards sanitation delivery. Based on this research and understandings of the context, it has identified various key criteria for accelerating delivery and developed municipal support tools and a guideline to assist municipalities to use the sanitation delivery support tools effectively in order to accelerate sanitation delivery.

It is clear that sanitation delivery should not be tackled in isolation from wider municipal and water service development plans, and in cases where municipalities recognise the value of improving sanitation, they must still also plan and budget for addressing the needs of other infrastructure service backlogs such as basic electricity supply and access roads. National targets should be aligned with locally identified needs and many municipalities indicate that it is quite a challenge to combine the achievement of the objectives as identified by their consultative IDP process, versus the national conditions of the MIG funding allocation and it's formula.

Based on the research findings, it is evident that an enabling environment must be fostered to increase the pace of basic sanitation service delivery. Access to basic sanitation has improved from 48% (1994/95) to 71% (2006/07), with South Africa having already reduced the backlog of access to basic sanitation services to the poorest of the poor by 44% since 1994. Considering annual population growth of the poor and a continuous reduction in household size, performance is further improved, and based on current performance, the Millennium Development Goal for basic sanitation should be reached in 2009, six years ahead of the 2015 target.

However, in order to meet the Strategic Framework for Water Services sanitation target, the rate of household sanitation delivery should have increased to at least 500 000 households in 2006/07, 800 000 households by 2007/08, 1000 000 households by 2008/2009, and 1200 000 households by 2009/10 and 500 000 households in 2010/2011 – under the current scenario it appears that it is unlikely that the Strategic Framework for Water Services 2010 target will be met.

The targets for delivering basic water and sanitation, as currently defined in the Strategic Framework for Water Services, should possibly be revised to 2010 and 2015 respectively, and to ensure meeting the targets government should allocate 300% to 550% more funding – however, this alone will not be sufficient, as extensive delivery acceleration of between 300% and 600% is also required. Due to the limited availability of resources and the required integration with housing projects, there is however still a real threat that these targets may only be reached by, or beyond, 2014 and 2030 respectively.

The following list of ***recommendations*** for enhancing and accelerating sanitation delivery has been compiled after the various research factors that either impede or enable the delivery of municipal sanitation services were assessed and established, and the key criteria for enhancing municipal sanitation delivery identified and a guideline document and delivery support tools developed:

1. Clearly define local levels of services and backlog definitions and establish baseline data and backlog targets per level of service.
2. Ensure IDPs and WSDPs properly interface and incorporate appropriate sanitation planning.
3. Boost municipal capacity and technical skills and limit high staff turnover and promote increased functionality of MIG Project Management Units.

4. Establish appropriate institutional arrangements, systems and approaches.
5. Include a sanitation specific sub-component within MIG funding allocations (national and local).
6. Ensure project funding commitments are in line with delivery targets and align and reconcile expenditure against set delivery targets.
7. Establish additional funding requirements and alternative sources.
8. Adopt multi-year integrated programmatic macro-planning approaches and implement appropriate infrastructure life-cycle and cost recovery planning.
9. Facilitate planning inputs and support by setting up stakeholder delivery mechanisms.
10. Promote understanding of appropriate sanitation technology options and increased participation in local technology choices.
11. Undertake skills development, mentorship and capacity building at local level and establish local construction and user-education performance and quality management systems.
12. Enhance delivery through the establishment and management of programmatic approaches.
13. Set up key performance indicators for monitoring the success and performance of delivery.
14. Develop tools to be utilized in order to accurately monitor the key performance indicators and mechanisms through which to centralize the use of key performance monitoring tools.
15. Gather data using the key performance monitoring tools and verify it against the key performance indicators.

Accelerating sustainable sanitation service delivery and ironing out project implementation blockages can be easily handled where the relevant sanitation stakeholders can come together at project level and where municipal staff can be are made aware of possible challenges long before projects run into difficulties. This is vital in order to strengthen project preparation, supervision and construction – clearly sanitation task teams can offer the best forum for supplementing stakeholders' knowledge and understanding of sustainable sanitation and are recommended as the most effective way to drive the accelerated sanitation implementation against the recommendations outline above. In summary, all of the findings show that the overall advantages of establishing a local municipal sanitation task team to implement the abovementioned recommendations for accelerating sanitation delivery is that these structures can offer:

- A constant 'bottom-up' approach across numerous projects and service providers which enables the support and improvement of sustainable municipal sanitation service delivery.

- The opportunity for community representatives, living in the villages where sanitation projects are being implemented, to engage with service providers, municipal officials and elected councillors, so as to ensure responsibility for the provision of services is handled within one municipal forum.

- Supervision of a variety of responsibilities through bringing various role-payers together on a monthly basis in one venue and thereby economizing on time and no doubt cost.

- Information sharing opportunities and a platform for debating and solving implementation challenges practically, as well as the chance to encourage knowledge and transfer of expertise between all members.

- The chance to validate and gather the comprehensive project data which municipal managers are required to report on in alignment with their integrated development and service delivery

budget implementations plans, and in so doing, verify the actual project implementation performance of service providers.

- A platform from which to enhance the achievement of the aim of ensuring labour-based construction skills transfers so as to support the municipality to groom local emerging contractors.

- The chance to strengthen the working relationships which inform collaborative governance, through encouraging hands-on team work, and employing sector approaches to municipal challenges in order to work through project implementation bottlenecks by directly linking representatives of provincial and national ministries with officials at municipal project level – in order that they also be placed in situations to directly support municipalities in adopting the best possible solution, and in so doing comprehend the delivery challenges first hand, and give advice on policy-related aspects, as well as receive project progress data directly.

Municipalities have an enormous responsibility, but also an opportunity to play a central role in promoting health, well-being and economic and social growth through their infrastructure development work. Effective delivery of integrated water supply, sanitation facilities and hygiene education will have a significant impact on the lives of vulnerable communities. It is therefore hoped that this project, through it's findings and recommendations, will promote greater commitment within municipalities to put effective infrastructure delivery arrangements in place, and that the guideline and support tools developed by the project will assist municipalities to accelerate effective and sustainable sanitation service delivery.

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Water Services Planning Documentation, Nkomazi Local Municipality.

APPENDIX 1

List of Publications emanating from this Project

LIST OF PUBLICATIONS EMANATING FROM THIS PROJECT

The project resulted in a number of unpublished reports and project deliverables.

These unpublished reports and project deliverables include:

- *Research Report 1 on Identifying the Bottlenecks which Impede Accelerated Sanitation Delivery.* WRC Project K5/1742/3, September 2007.
- *Research Report 2 on Capturing and Documenting Successful and Sustainable Sanitation Service Delivery Approaches and Methodologies*. WRC Project K5/1742/3, January 2008.
- *PowerPoint Presentation: What do we do to Accelerate Sanitation? : Project Overview and Progress Update*. WRC Project K5/1742/3, 5th February 2008.
- *Research Report 3 on Assessing the Key Criteria for the Acceleration of Sanitation Delivery including Recommendations for Implementation*. WRC Project K5/1742/3, July 2008.
- *Research Report 4 on Support Tools for Enhancing Municipal Sanitation Programme Implementation based on an Assessment of the Key Criteria for Accelerating Sanitation Delivery*. WRC Project K5/1742/3, December 2008.
- *Research Report 5 on a Guideline to Facilitate the use of Support Tools for Enhancing Municipal Sanitation Programme Implementation*. WRC Project K5/1742/3, March 2009.
- *Final Research Report on "What do we do to accelerate sanitation*?" WRC Project K5/1742/3, March 2009.
- *Final Guideline and Tools Report on "What do we do to accelerate sanitation*?" WRC Project K5/1742/3, March 2009.

APPENDIX 2

Action Research Data Gathering Schedule

ACTION RESEARCH DATA GATHERING SCHEDULE

Reference Data:

- Are you aware of the national targets for 2010 / 2014?
- Does your planning process take those targets into account?
- Do you think it's possible to reach those targets in your area by 2010 / 2014?
- How do villages get into the IDP – e.g. for a sanitation project?
- What is the process of consultation?
- What are the criteria for prioritising one village or one area over another? For example, do you focus on cholera prone areas?
- Do you have a WSDP?
- How well does it align with your IDP?
- Does it adequately cover sanitation planning aspects?
- What process do you use to define sanitation backlogs?
- How accurate are the backlog figures in the WSDP?
- Have you heard about the Free Basic Sanitation policy? What does it mean to you?
- Do you have a plan to implement it – For urban areas? For informal settlements? For rural areas?
- To what extent do your planning activities look beyond basic dry on-site sanitation?
- What does regulation mean to you?
- Are you aware / familiar with any national sanitation policies?
- Does your municipality or province have a sanitation strategy in place to governing sanitation delivery?
- Has this document ever been applied / implemented?
- Does this document need to be revised in relation to MIG?
- How do these municipal plans and strategies tie up to a provincial sanitation strategy? For example, does the provincial strategy talk to higher levels of service?

Human Resources:

- What does collaborative governance look like in your municipality and province in the sanitation sector?
- Are the departments working together to support you? If not, why not? What sort of issues? If yes: *how* are they supporting you: Implementation guidance and support: do you *see* DWAF and DPLG coming to help you (site meetings; project evaluations)? Planning; do DWAF and DPLG give you face to face practical support in helping you develop your sanitation strategy and resolving complex problems?
- Do you participate in Municipal and Provincial Sanitation Task Teams? Masibambane sector forums? P-MITT?; Which are helpful to you, and why?
- Is a Programme Management Unit in place in your Municipality? Is it helpful? If yes, in what ways is it helpful? If not, in what ways is it not helpful?
- How do you engage with your DLG counterparts? How often, where, and around what issues?
- How do you connect with other provincial counterparts?
- What are the key municipal and provincial co-ordination mechanisms within your province?

- Is there a municipal or provincial sanitation task team?
- Who drives it?
- Who participates?
- How is that structure transitioning in line with the MIG structures and new developments?
- What role does a Masibambane forum play in your province?
- Are you at all involved in the MIT3 or P-MITT structure in your province? How do these meetings assist sanitation co-ordination in your municipality and province?
- How is the restructuring of your regional DWAF office affecting your role in sanitation?
- How does this play out in terms of National vs. Provincial roles and loyalties? [For example, National Sanitation vs. Provincial-DPLG linkages]
- How do you know what technical advice to give? What is your department doing to support you to develop the skills you need?
- What do you feel are the biggest challenges facing municipalities in meeting the 2010 /2014 targets?
- How does the municipality and province provide the skills support needed by municipalities? Where should that capacity be based? Are special intervention programmes needed, and how should they be structured?
- How do you assist in developing sound implementation skills within the municipalities and their service providers?
- What are the mechanisms that your office is using to support sanitation implementation?
- Regular meetings with municipalities? Where do you meet with other municipalities – at DWAF or in municipalities? How often?
- Is the establishment of the P-MITT and MIT3 on track in line with your schedule of milestones?
- Is the P-MITT and MIT3 functioning well?
- Were you aware of any Municipal and Provincial Sanitation Task Teams? Are they functioning?
- Are they useful, or not?
- What is the progress in setting up a PMU in your municipality?
- How are PMUs be regulated to ensure they align with municipal and provincial objectives?
- Are you satisfied with the technical expertise provided by DWAF in appraising the technical report component of the MIG project registration plan; and then providing on-site implementation support?
- What plans are in place? How does this links to Project Consolidate?

Financial Resources:

- How do you align your money with your plans?
- Do you have a medium and long term plan, broken into phases – so that you can speed up or slow down according to how much money is made available?
- Do you have enough money allocated to achieve the 2010 / 2014 national targets?
- Is MIG money going to projects identified in IDPs, or to other projects?
- Where is most of the MIG sanitation money going – on big urban works, or rural backlog projects, or what?
- What's your sense of how well MIG money is flowing from DPLG to WSAs?
- Is there a formula around sanitation component of allocations in your municipality?

- Are the conditions and guidelines for using MIG funds for basic sanitation sufficiently clear to be useful, or is further clarification needed?
- How do you know how the money is being correctly spent, and that it is impacting on the 2010 / 2014 targets? That is, how do you assemble data to track performance in meeting targets, using MIG funds?
- Are you aware / familiar with any national policies and / or provincial sanitation strategy governing sanitation delivery?
- Are the conditions and guidelines for using MIG funds for basic sanitation sufficiently clear to be useful, or is further clarification needed – either for MIG managers or by municipalities?
- What parameters are you using for spending on non-hardware aspects of sanitation improvement? Is DWAF providing adequate guidance here on norms and required outcomes / deliverables?

Strategic Planning:

- How do you plan for different levels of service?
- Will all backlog areas get VIPs, or how do you plan for different areas?
- If you put in flush toilets, how do you ensure there is enough water to make this work?
- How does your sanitation planning link with water planning?
- How does your sanitation and water planning link with projects of other departments?
- For example, if Housing puts in a development with flush toilets, how does that affect your sanitation and water planning?
- How do you co-ordinate with other municipal programmes?
- How achievable are your implementation plans?
- Do you have enough competent service providers?
- Can they scale up if more funds become available?
- How do communities participate in the planning process?
- How do you ensure that what you are planning is affordable to the people who will get those services, and that they are willing to pay?
- What provision are you making for long-term maintenance – high levels of service – repairs / preventative maintenance / upgrading / expanding existing infrastructure? Basic LOS – movable top-structures / desludging / rebuilding?
- How will you fund O&M for on-site dry sanitation?
- No billing mechanism…use Equitable Share?
- How will you tackle O&M? Will you do it in-house? Will you outsource it? [Section 78]
- Any plans for upgrading pit toilets to VIPs and to higher LOS
- How do you plan for different levels of service? Do all urban areas get the same level of sanitation service?
- What are your policies for informal settlements and new RDP housing settlements? And outside of urban areas?
- Are you putting in any dry on-site toilets?
- How are you appraising new MIG BPs and Feasibility studies?
- Do you assess them within DWAF, or are you liaising with other departments to ensure the BPs conform to the new conditions? [viable, sustainable, affordable, etc.]
- What are the challenges you encounter with the MIG BP, compared to the previous DWAF BPs?

Delivery Approach:

- How do you appoint Service Providers – tender, or nominated?
- Do you have special criteria when making appointments?
- Are you able to support local emerging contractors and big companies? How do you weigh skills and experience?
- Availability?
- Distance?
- Reliability of suppliers – on time / quality?
- Pricing?
- All smooth without delays? Good municipal processes? Good PSP management?
- Builders?
- Health promoters? Standardised materials and approach?
- How do they know if it's reliable and effective?
- Do DOH and EHPs monitor effectiveness of training?
- Do you record the ID numbers of people trained? Do you use these to track people to work on other projects?
- Road access for deliveries?
- Ground conditions – e.g. height of water table?
- Do you have mechanisms, and access to expertise, to resolve technical problems? For example, pit problems
- Are there effective linkages between the community or ward structures and the municipality – to support good project management?
- Do your service providers use job cards and provide you with detailed records and GPS co-ordinates of toilets built?
- Do you align with EPWP and LED policies? How?
- Career pathing into sanitation?
- How are aspects of skilled / semi-skilled and unskilled builders dealt with?
- Are you able to retain trained builders? [links to wage rates]
- Does the municipality monitor compliance with it's own wage and labour policies?
- What is a living wage in this area? Per day?
- Do you provide any kind of user education – health and hygiene, household responsibilities, O&M, etc.?

Performance Monitoring:

- What mechanisms do you use to check service providers are on schedule, in budget, and delivering good quality? Monthly construction plans? Check progress on site? How often?
- Check value for money (amount invoiced vs. work done?)
- Performance on non-technical aspects – e.g. training of peer educators
- Benchmark costs per toilet?
- Expenditure per slice for hard / soft / management
- How do you monitor if the service provider stays within the cost breakdown?
- Do you use a standard format for invoicing per component?
- Does it allow you to see how many units have been completed?

- How does the municipality capture and synthesize municipal sanitation project data to feed into MIG and other reporting systems?
- How do they capture information one-time?
- How do you monitor the quality of each toilet?
- How do you know / ensure implementation conforms to policy principles – LED, gender, community participation, HandH, user education?
- How do they know it's not just pure contractor approach
- What are the policy gaps you are struggling with?
- Know how to ensure current policy is captured and reflected in municipal plans – so that policy informs implementation
- How well are you able to liaise with DWAF daily around sanitation project information, cash flows, multi-year budgets, etc.?
- What communication mechanisms do you use?
- Do you have a clear mechanism for working together with DWAF on new MIG project approvals?
- What mechanisms do you use to track actual monthly performance and expenditure on sanitation?

Municipal Sanitation Task Teams:

- Please could you provide an overview of how your Municipal Sanitation Task Team is working – how often does it meet, who participates, who chairs it, what are the main issues raised and discussed, does it lead any programmes or initiatives?
- What plans does the team have for this year? – programmes, activities, workshops, etc.?
- How does it relate to the WSA Sanitation Task Teams that have been established in your municipality and province?
- What are the main concerns and issues raised by municipalities in these meetings? What do you feel are the main challenges facing municipalities in the province around sanitation?
- Which provincial departments participate in the Municipal Task Team meetings, apart from DWAF? What role do they play? For example, do they take the lead on issues, follow up, make things happen, etc.?
- How do you see the role of the WSA Sanitation Task Team – As a forum for sharing practical information and experience between practitioners? As an effective forum for co-ordination and joint planning between role-players – between departments, between municipalities? As a forum for debate to inform high-level policy and decision making?
- If issues are raised within the Task Team meeting that need to be taken forward, how are they taken up with provincial or national role-players? Does the WSA Task Team report or account to any provincial structures?
- How does the WSA Task Team interact with other provincial initiatives – like Masibambane, provincial local government co-ordinating structures, MIG structures, etc.?

Municipal Sanitation Strategies:

- Does your WSA have a Municipal Sanitation Strategy? When was your strategy drafted?
- What was the process you used to draft the strategy?

- Has your strategy been ratified?
- What are the strategic objectives and focus of your strategy?
- What activities are covered by your strategy?
- What are the key challenges emerging from your strategy?
- What approach do you use to apply and implement your strategy?
- Has this strategy been reviewed or revised? Are there aspects of it that should be reviewed or revised? What should change?
- We understand that the Masibambane process has been developing water sector strategies for each province. What do you know about the sanitation component of this sector strategy? What does it say, and how was this sanitation strategy developed? Was the PSF involved in developing it? Are you happy with the content of the sector strategy for sanitation? If yes, why? If no, why?
- If the WSA Sanitation Task Team was not involved, who developed the sanitation section?
- How effective is the WSA Sanitation Task Team in shaping thinking about sanitation improvement in the municipality and province? Where are the real decisions about sanitation service levels and policy being taken in the municipality and province?

APPENDIX 3

Municipal Action Research Case Study Summaries

ACTION RESEARCH CASE STUDY CONDUCTED AT SISONKE DISTRICT MUNICIPALITY: KWAZULU-NATAL PROVINCE

The study was conducted at Sisonke Local Municipality in the KwaZulu-Natal Province.

Details of person interviewed

Name: Mr. B. Makwakwa

Job title: Executive Technical Director

The aim of the study

To identify the bottlenecks of implementing sanitation projects within the Sisonke Municipality.

Methodology used to obtain data

- Formal meeting was held
- Interviews were conducted

Background of the Sisonke Local Municipality

The Sisonke district municipality is situated in the central coastal of KwaZulu-Natal province. Within it's area of jurisdiction it has the following local municipalities

- Ingwe local municipality
- Kwa Sani local municipality
- Greater Kokstad local municipality
- Ubuhlebezwe local municipality
- Umzimkhulu local municipality

Sisonke municipality has a population of roughly 300000 and it is a rural municipality and approximately 15000 people reside in farming and 250000 people reside in rural areas .It has a poverty level of between 76% and 90 % and the poverty level is expected to rise further with regard to the demarcation that has taken place regularly at Umzimkhulu area. The municipality has a huge backlog of roughly 68% water and 60% sanitation

Sanitation status / provision at Sisonke Municipality

The sanitation standards at Sisonke municipality are affected by the pattern of water provision in the municipality. The rural areas and farming communities falling below RDP standards are characterized by pit latrines and in some areas the community is still using open veld.

This District has the lowest population density at approximately 35 people per square kilometre and a large sanitation backlog of 60% exists and a budget of R12 million was made available by the District and three municipalities to address this aspect.

Table 1: Municipal Profile: Sisonke Sanitation Backlog Households (Below RDP)

Sanitation Backlog – Households (Access Below RDP)					
District Municipality	**Sanitation Below RDP HH – April 1994**	**Sanitation Below RDP HH – Oct 2001**	**Sanitation Below RDP HH – April 2006**	**Sanitation Below RDP HH – April 2007**	**% Backlog**
Sisonke District municipality – DC43	71,996.00	76,983.00	47,221.00	42,031.00	6.00

Table 2: sanitation service level per local municipality under Sisonke District

Municipality	RDP sanitation levels(actual number of households)	RDP sanitation service levels (%)	RDP sanitation backlogs (%)	RDP sanitation backlog as % of the district	RDP sanitation backlog as % of the province
Ingwe local municipality	5062	25.73 %	76.27 %	38.82 %	1.77 %
Kwa Sani local municipality	1982	44.89 %	55.11 %	5.81 %	0.26 %
Greater Kokstad local municipality	13608	69.34 %	30.66 %	14.36 %	4.65 %
Ubuhlebezwe local municipality	5414	25.28 %	74.72 %	38.19 %	1.74 %
Umzimkhulu local municipality	5089	14.04 %	85.96 %	74.34 %	3.46 %

Sanitation project bottlenecks / challenges identified at Sisonke Municipality

1. Distribution of building material

Sisonke municipality has a large undeveloped rural area and due to this there is high backlog in the municipality. Some areas are not easy to be reached as they are far apart from each other and poor quality and lack of access roads makes the distribution of building materials a real challenge and this can result in slow project implementation.

2. No accurate municipal water services backlog data and no WSDP info

The municipality does not have a WSDP and this results in the municipality not having accurate water and sanitation backlog data, therefore the municipality will not be able to address backlogs of the whole area as there is no accurate information and this lead to slow eradication of backlogs.

3. Lack of capacity and skills within the municipality

The other challenge is that the municipality is faced with the problem of accessing skilled personnel because the municipality is too rural and under developed. This problem is due to fact that it is extremely difficult to attract skilled personnel to this municipality. Often the salaries are not competitive and a small town does not have the kind of attraction that would appeal to skilled people. Therefore due to lack of capacity and skills in this municipality project implementation, monitoring is a problem the reason being that staff are not sufficient and the municipality depends on the consultants to implement their projects and those consultants are not properly monitored.

4. Incompetence of service providers

The municipality appoints the big engineering companies with the condition that those companies appoint local emerging contractors to implement projects.

This results in the following challenges:

Most of the time those big companies appointed are not from the local area and therefore they don't manage the contractors effectively and problems are always identified in the projects. To correct this problem always takes time as companies / consultants take time to come to the municipality to fix the problems.

Most of the appointed service providers have many projects in other places and pay less attention to projects in the municipality and this delays project implementation.

Other challenge is that contractors who are appointed most of the time are not sufficiently qualified and it takes time for them to know the job and sometimes they make construction mistakes which need to be corrected and this wastes the project budget of the municipality.

5. Local labour challenge

The department of labour assists the municipality in training the contractors to develop sufficient skills but this is a challenge since most of the time the programme of the labour department training does not go hand in hand with the projects. Most of the time training is done when projects finish which is the waste of time as more money was wasted to rectify mistakes in projects due to lack of skills in contractors.

6. Addressing services on privately owned land

The municipality does not have accurate information on backlog figures on privately owned land and as a result the municipality does not know the current level of service provided at those privately owned land. Therefore because of this lack of information, it is difficult for the municipality to assist in addressing backlog in those private land areas thus leaving the areas with unattended backlogs.

ACTION RESEARCH CASE STUDY CONDUCTED AT AMATOLE DISTRICT MUNICIPALITY: EASTERN CAPE PROVINCE

The study was conducted at Amatole District Municipality in the Eastern Cape Province.

Details of person interviewed

Name: Mr. B. Mossick

Job title: PMU Manager

The aim of the study

To identify the bottlenecks of implementing sanitation projects within the Amatole District Municipality.

Methodology used to obtain data

- Formal meeting was held
- Interviews were conducted
- Site visit was conducted

Background of Amatole District Municipality

Amatole District municipality is situated along the coastline of the south-eastern part of the Eastern Cape Province and it comprises of the former homeland areas of the Ciskei and Transkei, as well as former Cape Provincial Administration areas. The Amatole district municipality comprises of the former magisterial districts of Willowvale, Idutywa and Elliotdale (Mbashe); Butterworth, Nqamakwe and Centani (Mnquma); Komga (Great Kei); Keiskammahoek, Cathcart and Stutterheim (Amahlathi); East London, King William's Town, Zwelitsha and Mdantsane (Buffalo City); Peddie (Ngqushwa); Fort Beaufort, Alice, Middledrift and Seymour (Nkonkobe) and Bedford and Adelaide (Nxuba).

Amatole has the second largest population in the Eastern Cape after O.R. Tambo and has the third highest population density, which is 70 people in one square kilometre.

The Amatole district is comparatively poor district in terms of poverty measures and the population is mostly African (92.49%) and white population makes the second largest (4.08%).

Approximately 33.4% of population is below 15 years of age. Almost 46% of the population is below 20 years. This is an indication of economic under development of this district. Due to high child dependency, women outnumber men in the Amatole district municipality: 46% of the populations are males and 54% are females.

Sanitation status / provision at Amatole municipality

Table 1: Municipal Profile: Amatole Sanitation Backlog Households (Below RDP)

Sanitation Backlog – Households (Access Below RDP)					
District Municipality	**Sanitation Below RDP HH – April 1994**	**Sanitation Below RDP HH – Oct 2001**	**Sanitation Below RDP HH – April 2006**	**Sanitation Below RDP HH – April 2007**	**% Backlog**
Amatole District municipality	240,821.00	238,495.00	173,481.00	162,074.00	28.00

Sanitation project bottlenecks / challenges identified at Amatole Municipality

1. Shortage of staff

Amatole municipality is very rural and this results in a lack of local service providers being present within this municipality. Due to this situation the municipality is unable to recruit experienced staff with adequate skills. At Amatole there is problem in monitoring of the projects because of the shortage of staff and this result into the projects going slowly because there is no proper supervision. In some areas projects delays occur due to insufficient capacity of technical staff.

2. Poor road construction and inaccessible areas

Areas in Amatole district are far apart from each other and because of the rural nature of this municipality there are lot of problems experienced due to poor road construction and even inaccessible roads. The problem arises in most cases because the contractors are in some cases having difficulty in obtaining building materials in time and some cases materials have to be delivered by hands to inaccessible areas. Therefore due to this the project completions delays and sanitation is not accelerated.

3. Social challenges and poor planning

In some areas of Amatole municipality the community also expects the municipality to build flush toilets for them inside the houses during housing projects and because the area have shortage of water problems arises and flushing of the toilets become a problem resulting into hygienic problems. In some most areas during sanitation projects, the municipality is forced also to help the community with sanitation facilities where there are hygienic problems and therefore this delays the progress in building other toilets for other needy community and this does have an effect on the pace of eradication of backlog.

4. Unskilled contractors

Another challenge is that contractors who are appointed most of the time are not sufficiently qualified and it takes time for them to know the job and sometimes they make construction mistakes which need to be corrected and this leads to ineffective use of the project budget of the municipality.

ACTION RESEARCH CASE STUDY CONDUCTED AT MATJHABENG LOCAL MUNICIPALITY: FREE STATE PROVINCE

The study was conducted at Matjhabeng Municipality in the Free State Province.

Details of person interviewed

Name: Mr. Kenneth

Job title: PMU manager

The aim of the study

To identify the bottlenecks of implementing sanitation projects within the Matjhabeng Municipality.

Methodology used to obtain data

- Formal meeting was held
- Interviews were conducted
- Site visit was conducted

Background of the Matjhabeng Municipality

Matjhabeng Local Municipality is the largest local municipality within Lejweleputswa District in Free State province. This municipality comprises of 62 % of total population in this district and 15 % within the Free State province. Matjhabeng municipality is urban in nature with 95.79 of it's household being urban and however it also has largest percentage of rural areas in the District.

Matjhabeng Municipality incorporates the city of Welkom and the towns of Odendaalsrus, Virginia, Hennenman, Allanridge and Ventersburg with a combined population of more than 500 000 people. The economy of the Matjhabeng Municipality area centred on mining activities located in and around Allanridge, Odendaalsrus, Welkom and Virginia. Manufacturing aimed at the mining sector exists to a limited extent in the above towns. Other manufacturing activities are limited. Matjhabeng municipality is the densest area with 495 people per square kilometre.

Sanitation status / provision at Matjhabeng Local Municipality

Sanitation backlog in Matjhabeng municipality comprises 48% backlog within the Lejweleputswa district and 13 % backlog of Free State province. The bucket system is still a prevalent method of sanitation as well as the pit or VIP latrine system with the water-borne system with lower prevalence in the region.

Table 1: Sanitation levels in Matjhabeng municipality

Water-borne	Septic tank	Pit or VIP latrine	Bucket system	None	Percentage
74770	0	6552	17536	11543	89.54%

Table 2: sanitation service level under Matjhabeng Local Municipality

Municipality	RDP sanitation levels(actual number of households)	RDP sanitation service levels (%)	RDP sanitation backlogs (%)	RDP sanitation backlog as % of the district	RDP sanitation backlog as % of the province
Matjhabeng local municipality	74754	62.15 %	37.85%	10.85 %	13.30%

Sanitation project bottlenecks/challenges identified at Matjhabeng Municipality

1. Poor project planning

In most of the bucket eradication projects, contractors do not plan the projects accurately and due to this in many projects the contractors open lot of trenches and leave them open for long time. Most of those open trenches have pipes already laid without covering them. During rainy conditions those trenches are filled up with water and therefore resulting into pipes being filled with soil. This is a challenge or bottleneck in the project as it delays the project because before the contractors closes those trenches, they first have to take out the soil in the pipes to avoid future blockages and therefore this delays time and has huge financial implications as in some instances the pipes are already broken and have to be replaced.

2. Financial challenges

In majority of projects because of poor planning of projects there are huge financial implications encountered. For example leaving trenches open with pipes inside it result into high cost implications because the pipe have to be empted from soil and in some cases new pipes have to be bought. This can delay the projects as new materials have to be bought and this results in a shortage of the funds to complete the projects.

In some cases the quality monitoring of toilet construction is not being done on time and later when the municipality inspectors realize that the toilets do not meet the SABS standards, those toilets have to be demolished and new toilets have to be built. This also delays the projects since the municipality wastes a lot of time fixing the problems in the same areas than continuing to build toilets in other needy areas of the municipality.

The fixing of problems or mistakes which occur in the projects due to poor planning and management can have bad impact on the finances of the projects and therefore result into a shortage of the funds to finish projects and causing delays in acceleration of sanitation.

3. Social challenges

Communities in some areas also delays the projects as in some instances they demand services of high quality which need lot of money and this delays the implementation of the projects. The municipality experiences problem in choosing the service levels for community as most time the community reject those services and force the municipality to go along with their choice even if it may have bad impact on the community.

In some bucket eradication projects the community makes it difficult for the contractors to work, for example the contractors are times instructed to build toilets according to the way household member want and not according to the SABS plan requirements and this becomes a problem in cases where during inspection or monitoring the toilets have to be demolished because of not meeting the standards. Therefore because of social challenges experienced by contractors in projects delays in the projects can be very high.

4. Job creation problem

If the job creation initiative is not included in the project from the start with proper planning, it can cause delays in projects. In some cases at Matjhabeng local people are employed in projects as part of job creation and the orientation takes a long time since training has to be done. It can take a long time for an employee to be able to do work on the project without making construction errors, and this therefore delays the continuation of most of the projects.

5. Capacity and experience of staff

The lack of capacity and inexperience of municipal staff does pose a challenge in the implementation of the projects. This is because some of the staff especially from the project monitoring section of the municipality does not have sufficient time to be able to conduct frequent project site monitoring visits. This leads to challenges on site being identified late, for example bad quality toilets which need to be demolished and therefore cause financial implications to the project. If construction monitoring could be done more frequently problems and challenge could be identified in time and progress on projects could not be delayed.

ACTION RESEARCH CASE STUDY CONDUCTED AT LETSEMENG LOCAL MUNICIPALITY: FREE STATE PROVINCE

The study was conducted at Letsemeng Local Municipality during July 2007.

Details of person interviewed

Name: Mr. Poe

Job title: Technical Director

The aim of the study

To identify the bottlenecks of implementing sanitation projects within the Letsemeng Municipality.

Methodology used to obtain data

- Formal meeting was held
- Interviews were conducted
- Questionnaire was used
- Site visit was conducted

Background of the municipality

This municipality forms part of Xhariep district and is situated in the south-western Free State. According to statistics of 2000/2001, Letsemeng is estimated to have 42979 population, this is about 31, 78 % of the total Xhariep population.

In Letsemeng 30, 4% of all people are unemployed. This is the highest of all the towns in Xhariep. From these figures it is clear that poverty is also a problem in Letsemeng. A high crime rate is normally a problem that is associated with poverty.

Application for funding to start poverty alleviation projects has been made with various institutions. The Department of Water Affairs and Forestry has also embarked on a programme to employ the jobless to eradicate invasive trees and vegetation.

Sanitation status / provision at Letsemeng

Approximately 20% of the urban residents at Xhariep district are estimated not to have access to a basic level of sanitation. Letsemeng is a municipality where many of the residents do not have access to a basic level of sanitation. This high number of households without basic sanitation is due to rapid urbanization as people move from farms to urban areas in an attempt to escape poverty.

Table 1: Levels of sanitation within Letsemeng Local Municipality

Level of sanitation	Households
Flush toilet (connected to sewerage system)	7232
Flush toilet (with septic tank)	185
Chemical toilet	27
Pit latrine with ventilation (VIP)	445
Pit latrine without ventilation	915
Bucket latrine	730
None	2465
Total number of households recorded	11999
% Backlog	34.25%

Sanitation project bottlenecks/challenges at Letsemeng municipality

1. Houses situated in rocky areas/excavation process

Some of the areas are situated in the rocky area and therefore excavation challenges can lead to:

- Improper construction of the toilets leading to poor quality of toilets
- Delays of projects due to slow excavation process
- Falling toilets due to poor quality
- High costs as contractors move the rocks and stone first and then construction of toilets follows afterwards

2. Lack of interaction between technical department and housing department within the municipality

There are some houses with two toilets due to the housing department programme of building houses with inside toilets not going "hand in hand" with the municipal technical department programme of building toilets

This leads to:

- Some households not accessing toilets due to lack of available funds
- Delays in addressing backlogs

3. Poor projects planning

The municipality is rushing to try and meet the sanitation targets set by government and therefore they do inadequate planning and build toilets without considering issues such as:

- Water capacity of the area in terms of technology choice
- Sanitation level of service per area based to topography and local ground conditions

4. Staffing capacity and experience

Projects are not often monitored and duplication of services and building of VIP toilets in rocky places is a problem in this area and this is due to lack of capacity, skills and experience of municipal staff.

This is a stumbling block to projects because of the following:

- Due to poor monitoring of project construction, there can be a duplication of services through the building of two toilets in one house, leading to delays in other householders getting toilets.
- Due to lack of planning skills in projects contractors build toilets in rocky areas and later these toilets require demolition and repairs which causes extra cost from the municipal budget and delays the construction of toilets for other people.

5. Change of staff

There is a frequent change of staff in the municipality and this result in lack of information exchange causing delays in project implementation since there is not enough time for exchange of information from the person leaving the municipality and the newly appointed person. This means that the newly appointed person must compile new work plans for project management and this delays implementation and causes gaps in construction monitoring since the new recruits must first focus on familiarizing themselves with village areas and projects under construction.

6. Lack of technical capacity

There are delays in technical report submission and approval due to lack of accurate information contained in the technical reports and this is often due to lack of capacity within the municipality. In addition, poor project implementation can also result from lack of monitoring due to lack of staff.

7. Lack of information and knowledge on health and hygiene

Due to lack of available sanitation information at community level, often the community does demand that that municipality should build outside toilets for them even if they have inside toilets and this duplicates services and delays the eradication of backlogs.

The reason that the community requests toilets to be outside, is that the community does experience that the toilets inside very often smell if they are not constructed properly or do not have sufficient water supply.

The building of flush toilets in areas where there is a shortage of water causes these toilets smell badly and the community often refuses to use these toilets, yet other community members do use them and thereby increase the bad odours and unhygienic conditions.

8. Inaccurate sanitation information in the WSDP

Due to a lack of adequate sanitation coverage and backlog information in the WSDP of the municipality, project planning and approval delays do result, since there is no accurate backlog information and projects don't cover the backlog of the whole area due to inaccurate information.

ACTION RESEARCH CASE STUDY CONDUCTED AT NKOMAZI LOCAL MUNICIPALITY: MPUMALANGA PROVINCE

Details of person interviewed

Name: Mr. T. Siboza

Job title: Technical Director

The aim of the study

To assess successful sanitation project approaches within the Nkomazi Local Municipality.

Methodology used to obtain data

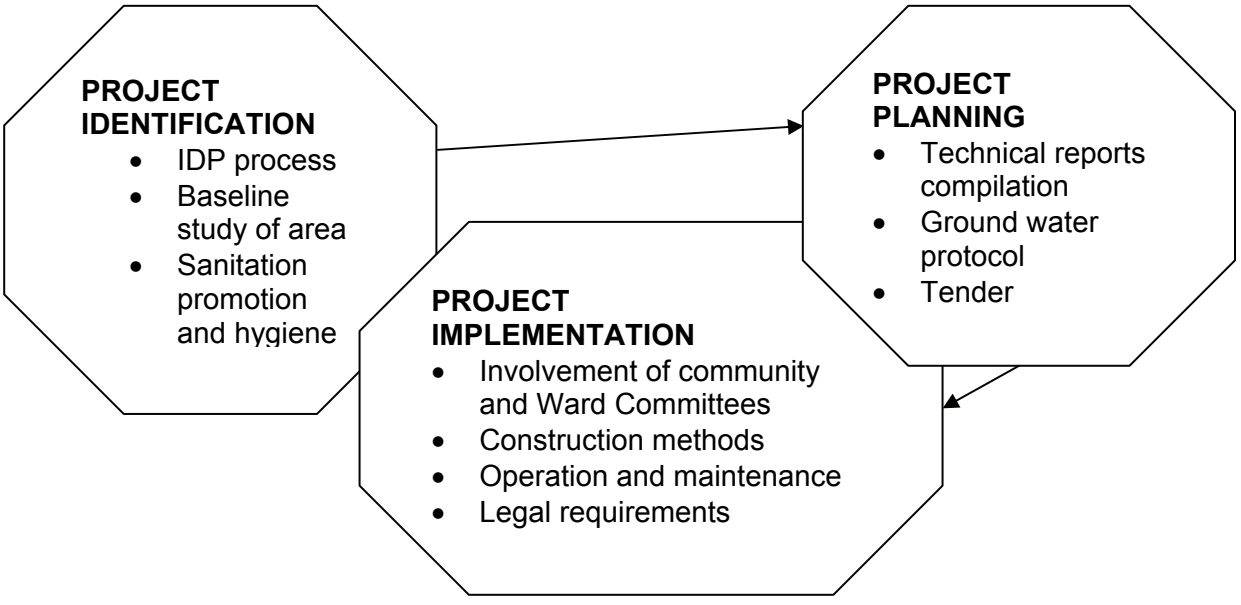
- Formal meeting was held
- Interviews were conducted
- Site visit was conducted

Background of the Municipality and sanitation status

Nkomazi is located approximately 350 km east of Gauteng province and it consists of part of the land in-between the Kruger National Park (north), Mozambique (east), Swaziland (south) and Mbombela and Umjindi municipal areas. Nkomazi municipality forms the eastern part of the lowveld area of the Mpumalanga province. This municipality is made up of two areas with very different characteristics in terms of economic and social development.

The area of jurisdiction of Nkomazi Municipality consists of the amalgamated areas of Malelane, Marloth Park and Komatipoort Traditional Local Councils and the area of the previous Nkomazi East and West Traditional Rural Council. The household density is estimated at an average of 6 persons per household, and most of the households make use of the VIP sanitation system (55%), 20% have pit latrines and 25% have no basic services at all.

Diagram 1: Sanitation Project Life Cycle



Project Identification

The provision of sanitation in the Nkomazi is prioritized by the municipality, through the process of the IDP preparation for the implementation of projects in the community. The IDP process involves taking of projects priorities by the municipality to the communities, with the joint effort by municipal officials, councillors and other relevant stakeholders.

A base line survey is done in the municipality with assistance from the Department of Water Affairs and Forestry, in order for the municipality to appoint their own service provider to assist the municipality in compiling the overall backlog figures of the whole municipality so that it is easy for the municipality to plan it's sanitation programme accordingly.

Project Planning

Millennium targets planning

The Nkomazi Municipality has prioritized planning for all their sanitation infrastructure provision to cater for all their citizens by the year 2010, in response to the millennium targets. The municipality has prepared two multi-year business plans for the implementation of the rural sanitation programme to eradicate their entire backlog in the rural areas by the provision of basic levels of sanitation.

Ground water protocol

The municipality has conducted a groundwater protocol study to determine the suitability of the areas for installation of the VIP toilets. This has helped the municipality to plan and evaluate in advance the suitable sanitation options to be implemented in the areas and does therefore make the projects to be successful and also limits the health and environmental risks.

Tender procedures

Tenders are compiled and called for by the municipality and are evaluated against the national guidelines and the preferential procurement policy of the municipality. The municipality ensures that the procurement of the tenders is done fast and so that it does not delay the implementation of the projects, and contractors are appointed in time to avoid delays in project implementation.

Conducting of training to project steering committees

During the baseline study the training needs assessment is done and this helps to plan for the training of the project steering committee in order to fulfil their roles effectively. The community members are trained on specific procedures for sanitation projects. This training assists the municipality in the implementation of the projects as these trained people ensure that the project run smoothly and without problems.

Project Implementation

Training of builders

Instead of building demo toilets which is takes time and money, the training is done during the first toilets construction. Plans and drawings are given to each builder. As it is not so easy to build

a correct VIPs in one week training, a daily follow up is done by the municipality until the end of the construction of these toilets.

Control of the number of toilets built per village

This is done by recording each VIP position by GPS. Mapping of the village is done and a map with all the toilets built is given to the Municipality at the end of the project. In this way, it is also easy to follow the construction during field visits.

The second control is a sheet where all the people involved in the construction of the VIPs are recorded. This record sheet is important because at any time it is possible to trace who has done what tasks and by when. This also helps to facilitate payments to workers since VIP construction is divided by task and paid by task.

Health education

New sanitation facilities do not automatically lead to an improvement in community health and the effects of a construction project will be limited unless they are accompanied by efforts to improve hygiene. The most significant impacts on health are likely to come from improvements at the household level.

Two visits per household are usually done per health peer educator as follows: The first visit is during the construction of the toilet to identify problems and the second visit after the completion of construction. A final pamphlet with instructions on how to use the VIPs is installed inside each toilet door and these toilet-user recommendations are explained to the household members.

Conclusion

The successes of implementing sanitation projects in this municipality are achieved through cooperating together – the Municipality as an implementing agent with the service provider. The acceleration of the delivery of sanitation depends on learning from each other.

ACTION RESEARCH CASE STUDY CONDUCTED AT CAPE WINELANDS DISTRICT MUNICIPALITY: WESTERN CAPE PROVINCE

Details of person interviewed

Name: Mrs. A Cele

Job title: Director Municipal health services

The aim of the study

To assess successful sanitation project approaches within the Cape Winelands District Municipality.

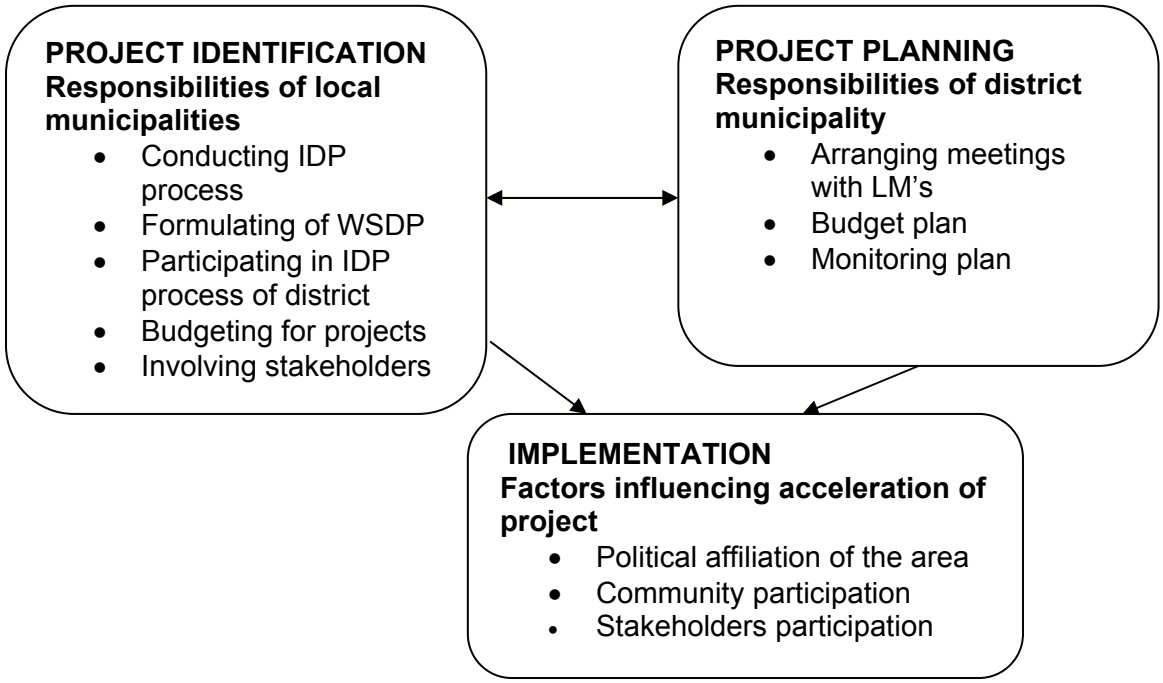
Methodology used to obtain data

- Formal meeting was held
- Interviews were conducted
- Site visit was conducted

Background of the Municipality and sanitation status

The Cape Winelands District Municipality covers the Witzenberg, Drakenstein, Stellenbosch, Breede Valley, and Breede River / Winelands Local Municipalities. District municipalities administer and make rules for a district, which includes more than one local municipality. The purpose of district municipalities and local municipalities sharing the responsibility for local government in their areas is to ensure that all communities, particularly disadvantaged communities, have equal access to resources and services. This will help some local municipalities who don't have the capacity (finances, facilities, staff or knowledge) to provide services to their communities. It also helps to cut the costs of running a municipality by sharing resources with others – the 'richer' areas then also help the 'poorer' areas.

Diagram 1: Project Delivery Approach



Project Planning

Each local municipality prepares it's own WSDP for it's area of jurisdiction. The local municipality identifies the projects during IDP process through participation of the community. The district environmental health assists the local municipality by planning the health education campaigns to educate the community on sanitation issues and therefore identifying the community needs also.

The municipalities ensure that the surveys are done in their areas to obtain accurate backlog information and therefore making it easy to plan the project based on backlog figures and community needs.

The district municipality arranges meetings for senior technical and political representatives of the district municipality, funding agencies and the representatives from local municipalities to meet and consider ways in alignment of the resources and to ensure that the implementation of the strategies pertaining to sanitation are as described in the plan within the context of the IDP. This process of the meetings makes it easy for the district and local municipalities to work hand in hand in planning and implementation of the projects.

Funding for the projects are obtained from funding agencies, provincial MIG funds and district funding. On the technical level the district technical water and sanitation task team is formulated to investigate and ensure that:

- Each WSA within the district makes a fixed percentage of it's annual budget for water and sanitation.
- WSAs also make available a percentage of their budget on water and sanitation for prioritization categories such as planning, use of existing structures and backlog verifications.

Project Implementation

Continuous on-site project monitoring

The District appointed project managers to assist in conducting of onsite project monitoring on daily basis to ensure that the project implementation is going accordingly and there are no mistakes in the project and that if there is any problem it is attended to as soon as possible.

Health education

District environmental health conducts the training and health awareness in the communities and this is done by conducting community house visits. The first visit is conducted during the construction of the toilet to identify problems and the second visit after the completion of the toilet.

Political affiliation of the area

There are different political parties and this makes politicians to be very accurate in provision of services to the people as they know other political parties are monitoring them – this accelerates the service delivery.

Collaborations of DM and other sector partners

There is good relationship between different departments and the municipality and this accelerate the service delivery to people as co-operate governance is of high quality in this municipality.

ACTION RESEARCH CASE STUDY CONDUCTED AT DIPALESENG LOCAL MUNICIPALITY: MPUMALANGA PROVINCE

Details of person interviewed

Name: Mr. L. Msibi

Job title: Director Technical Services

The aim of the study

To assess successful sanitation project approaches within the Dipaleseng Local Municipality.

Methodology used to obtain data

- Formal meeting was held
- Interviews were conducted
- Site visit was conducted

Background of the Municipality and sanitation status

Dipaleseng municipality is one of the municipalities within Mpumalanga Province and this municipality is located in the Gert Sibande District Municipality of this province. Dipaleseng municipality has a geographical area of 2615 square kilometres with population estimated to be 49 235 people. The main towns falling within the municipal boundaries of Dipaleseng are Balfour, Greylingstad and Grootvlei.

The towns within Dipaleseng municipality are regarded as formal towns and the smaller settlements in-between are regarded as rural and farms which are regarded as "deep" rural.

The Dipaleseng municipality is ideally located, in close proximity to the commercial and industrial heartland of South Africa, and is approximately 70km from the Johannesburg CBD and Johannesburg International.

Population

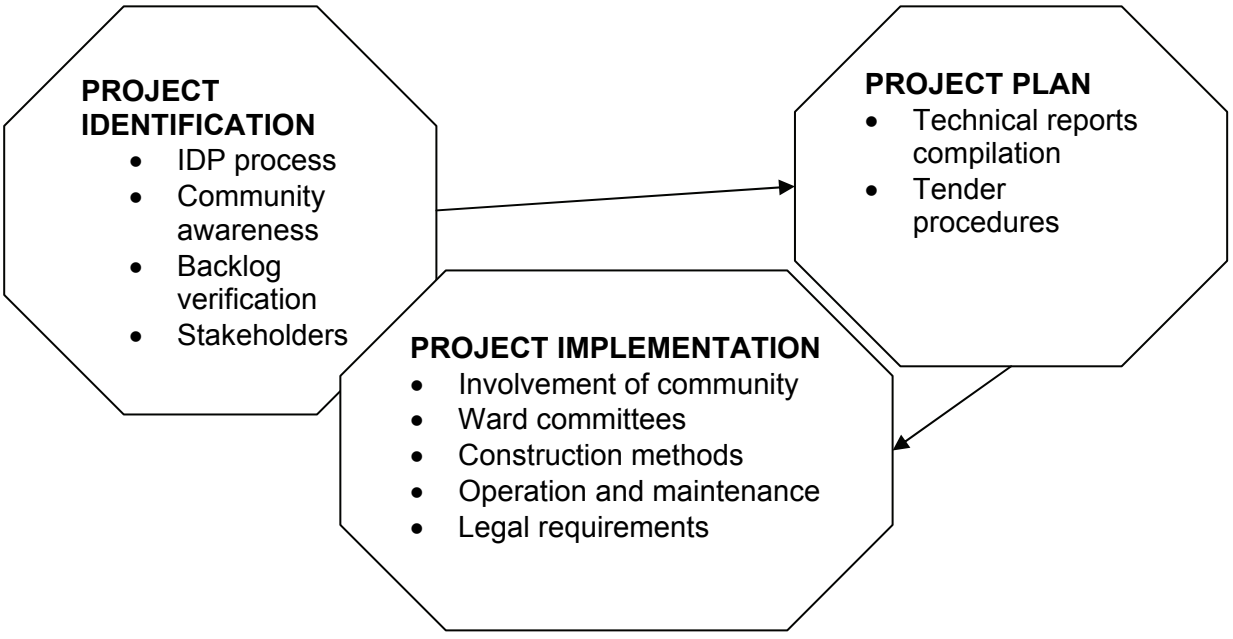
The population figures of Dipaleseng municipality are based on Census 2001 and the registration figures for the last municipal elections.

Table1: population figures summary and percentage for 2006 indigents for 2006

Township	Population(2006)	Percentage indigents	No of Stands
Belfour	12,230	50	3,000
Siyathemba	24,460	80	6,000
Greylingstad	4.077	60	1,000
Nthorwane	5,707	85	1,400
Grootvlei mine township	2,446	90	600
Grootvlei extension1	815	90	200
Total	**49,235**		**12,200**

Dipaleseng municipality aims at eradicating all sanitation backlogs by 2010 and the cost recovery system will be fully operational and consumers will pay for the level of service they have.

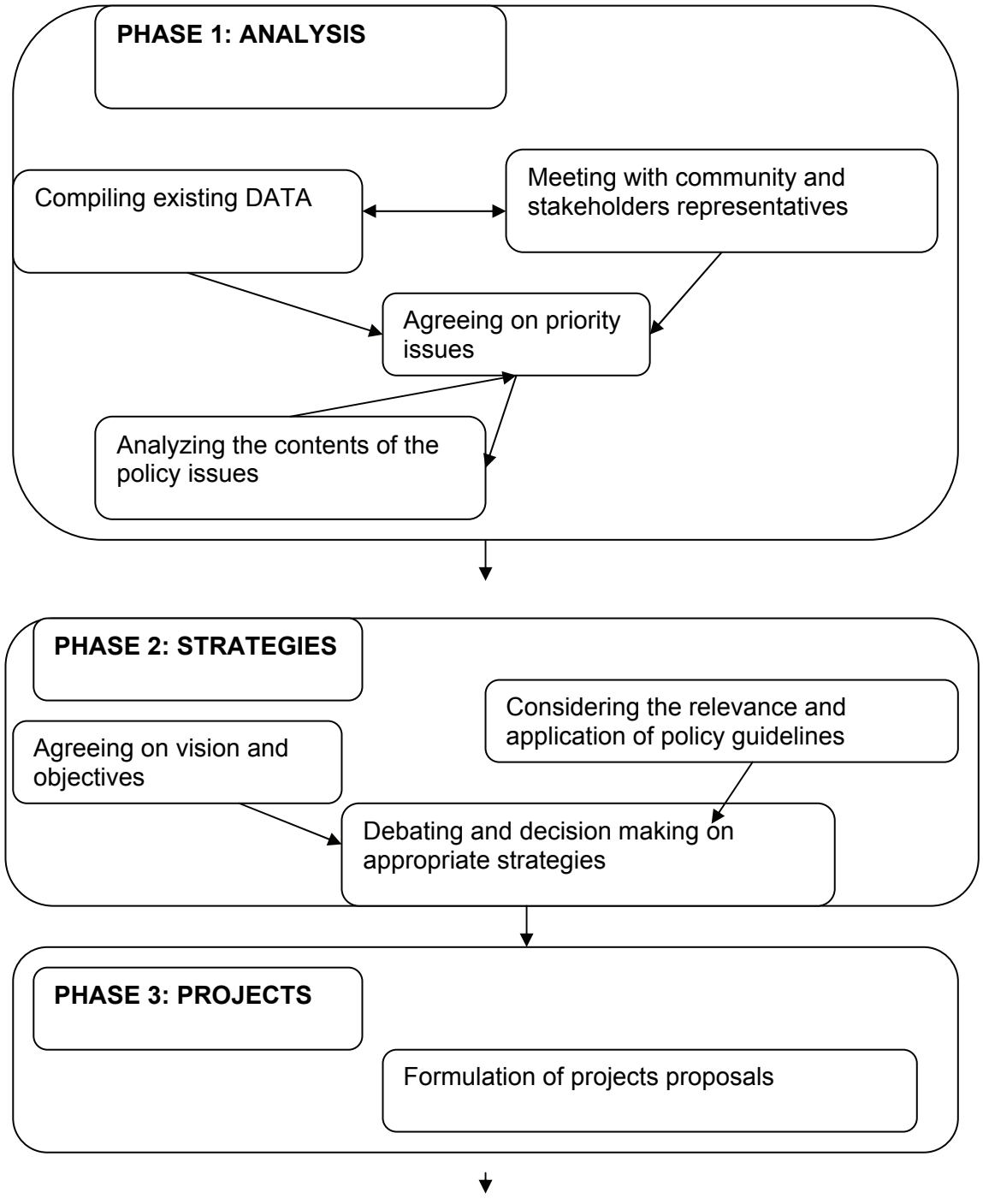
Diagram 1: Life Cycle of a Sanitation Project

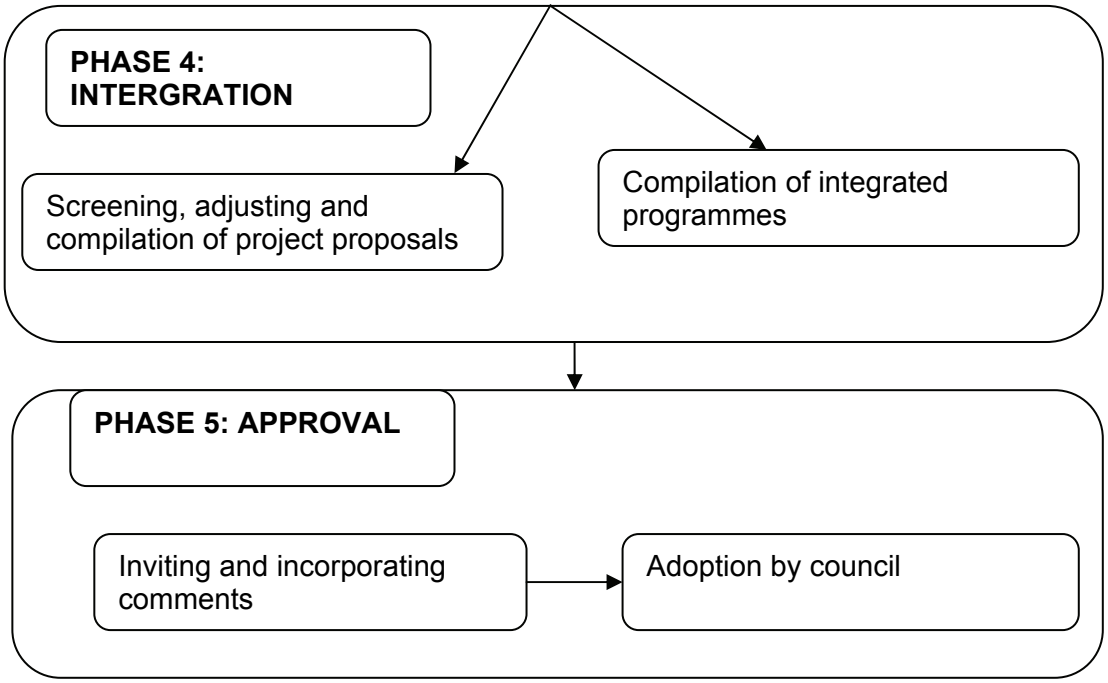


Project Identification

In order to identify the needs of the community and to establish the sanitation backlog figures in the community, Dipaleseng municipality follows the IDP process. The methodology followed by the IDP process is stipulated in the table below. This methodology of needs identification makes it easy for the municipality to know it's entire backlog in order to plan accordingly for project implementation to speed up.

Diagram 2: IDP Process of the municipality





During the IDP process, the municipality ensures that the decisions will be based on the community people's priority needs and problems, knowledge of available resources and how to access them according to the priority needs of the community with a specified time frame, are critical.

Community participation

The level of community awareness in terms of the infrastructure development is high. Only projects reflected on the IDP are implemented and the community is well represented in the IDP process through it's project steering committees. In the IDP processes the representatives of the community highlight sanitation problems in the community and advise the municipality on the priorities of the community.

Stakeholder participation

The Department of Water Affairs and Forestry does also assist the municipality in compiling the overall backlog figures of the whole municipality so that it is easy for the municipality to plan it's projects accordingly. During this verification of backlog, ward councillors and community development workers assist a lot in verifying the situation in the community. Therefore this makes the project plan successful and helps the municipality to speed up the sanitation implementation process.

Project Planning

Technical reports

The municipality assesses the status of the existing infrastructure in the municipality and uses the information of the backlog of the area done during backlog verification process to compile multi-year technical report for the entire sanitation need of the municipality.

The projects identified in the multi-year technical reports are categorised according to the budget and funding available. The municipality uses both the municipal infrastructure grant and District

funding to implement the projects. The compilation of one multi-year technical report does assist the municipality to implement projects faster without the delay of compiling new technical reports each financial year.

Tender procedures

Tenders are compiled and called for by the municipality and are evaluated with the CIDB guidelines and the preferential procurement policy of the municipality. The municipality ensures that the procurement of the tenders are done fast and don't delay the implementation of the projects.

Project Implementation

Legal requirements

The municipality implement the projects according to the minimum requirement formulated by department of water affairs and forestry. The environmental requirements (EIA) and occupational health and safety requirements are adhered to with the implementation of projects.

Involvement of community structures

All the towns in the municipality are divided into wards with ward councillors who act as chairperson for the various ward project steering committees. The project steering committees are represented by the community.

Each ward also has a labour desk which operates during the implementation of the projects. The labour desk is also responsible for the identification of unemployed people in the community to participate in the implementation of the projects. This helps to fast-track the implementation process of the project as there are enough people participating in the project implementation.

The ward committees hold monthly project meetings in order to identify the challenges and to speed up the implementation through recommending solutions to the challenges identified.

Construction methods

The labour intensive construction method in accordance with the EPWP guidelines is used for the installation of the infrastructure. The community members are also employed in the projects and training is done in the planning phase of the project, so as to ensure that the employees are familiar with their work to enable it to be possible for the project to be finished efficiently.

Operation and maintenance issues

Due to the diversity of the projects, the maintenance cost per year is estimated at approximately 25% per year of the total capital cost of the projects.

Conclusion

The project identification, proper planning and adequate implementation of sanitation projects at Dipaleseng municipality make these projects successful and speed-up the delivery of the projects. The municipality receives huge support and participation from the community and other

stakeholders and therefore the management of the projects are successful. The community take full ownership of the project and assist the municipality in managing the projects.

ACTION RESEARCH CASE STUDY CONDUCTED AT UMZINYATHI DISTRICT MUNICIPALITY: KWAZULU-NATAL PROVINCE

Details of person interviewed

Name: Mr. M. Dlodlo

Job title: Chief Project Co-coordinator

The aim of the study

To assess successful sanitation project approaches within the Umzinyathi Local Municipality.

Methodology used to obtain data

- Formal meeting was held
- Interviews were conducted
- Site visit was conducted

Background of the Municipality and sanitation status

Umzinyathi District Municipality is located in the northern central area of KwaZulu-Natal and it consists of four Local Municipalities, which are Endumeni, Nquthu, Msinga and Umvoti municipalities. The District includes some of the poorest and most underdeveloped rural areas of KwaZulu-Natal, mostly within the Msinga and Nquthu Municipalities. More developed urban areas include Dundee located at Endumeni Local Municipality and Greytown which is at Umvoti Local Municipality.

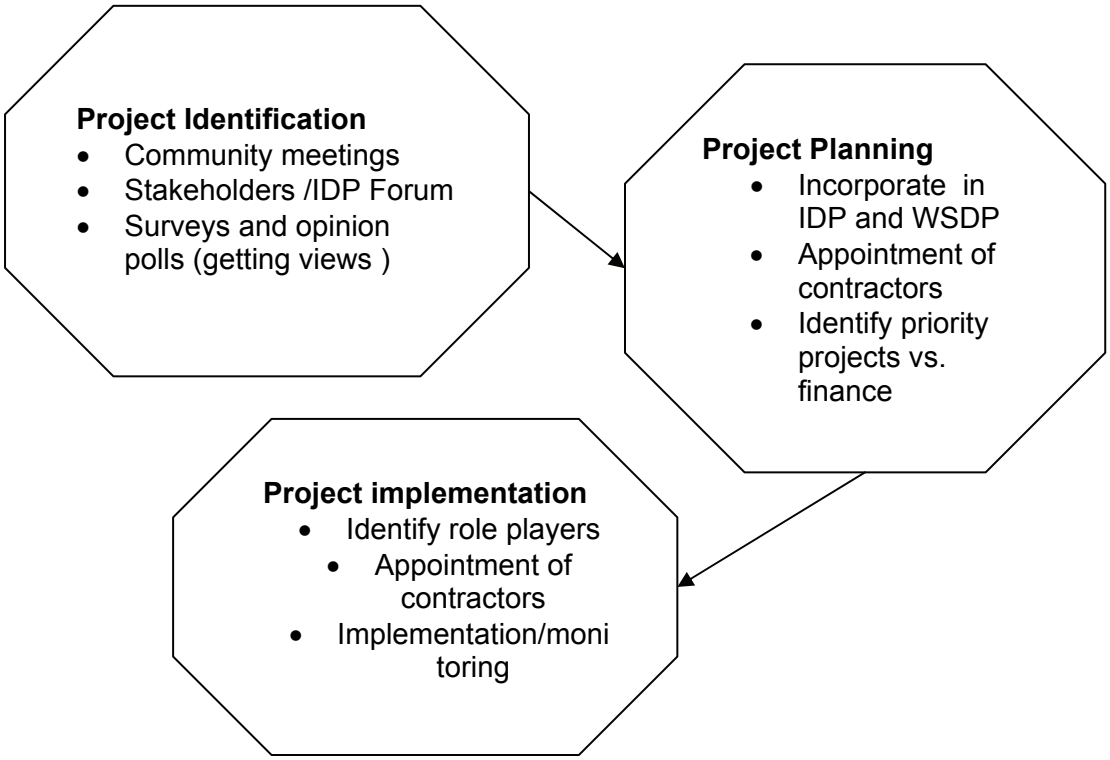
The District has a population of 427 052 and has 77 540 households. The population of the District is spread throughout the Municipalities. The highest population is Endumeni with approximately 178 500 people, and the Municipality with the lowest population is Umvoti with approximately 117 000 people.

The key services of concern in the Umzinyathi district municipality are water and sanitation. The urban areas of Endumeni are relatively well provided for however the remainder of the District requires the provision of affordable basic services. The present Umzinyathi Water Services Development Plan being undertaken should be utilized to address this issue.

Table 1: Municipal Profile: Umzinyathi District Municipality: Sanitation Backlog – Households (Access below RDP)

Sanitation Backlog – Households (Access Below RDP)					
District Municipality	**Sanitation Below RDP HH – April 1994**	**Sanitation Below RDP HH – Oct 2001**	**Sanitation Below RDP HH – April 2006**	**Sanitation Below RDP HH – April 2007**	**% Backlog**
Umzinyathi District municipality	294,267	335,138	165,449	146,670	100.00

Diagram 1: Life Cycle Phases of a Sanitation Project



Project Identification

Deferent local municipalities within Umzinyathi District elect people from their municipality to represent them in the IDP forum. Those elected people together with the councillors go to the community and conduct mass meetings and identify community needs through the help of participation of the community.

In the community meetings, the department of health participates through conducting health education on the importance of sanitation to the community. This health education assists the municipality to identify the real sanitation situation in the community, the needs of the community and assists in the choice of a suitable sanitation option for the community with the participation of the community. The meetings with the community are organized by community councillors. The meetings are attended mostly by community members, traditional leaders in the community, different stakeholders and NGOs.

In the community meetings, the elected IDP forum members in different local municipalities also conduct house to house surveys to identify the community sanitation needs and get opinions from the community on sanitation options. During those house visits the backlog is also verified and the Ward councillors also assist in identifying the backlogs in their wards in the community. Therefore the municipality gets accurate backlog figures in specific areas and this makes the identification of the projects easier.

Project Planning

All the IDP forum representatives from Local municipalities meet in the District together with the District IDP co-coordinators and compile district IDP which contains all identified projects arising from the community needs survey done in the local municipalities.
The District WSDP is always updated and speaks to the IDP of the municipality since all the projects identified during the IDP process are included in the water service development plan which is used to plan and implement these projects. The WSDP, although not 100% completed currently, is being updated to include all the information on sanitation and water aspects

All sanitation and water projects are categorized according to the priorities of each community. Different sanitation options chosen by the community are also tabled and discussed. After decisions are made on different sanitation options, the district assesses the budget on projects and allocates funding accordingly.

The district assesses it's budget in order to see if it is going to be enough for the projects. In a case where the budget is little, the district municipality contacts other stakeholders and departments for assistance on the financing of the projects.

Appointments of service providers/contractors

Appointment of service providers is done through tenders. The financial manager of the District assists the technical manager to ensure that correct procedures are conducted according to the financial management act. The procurement policy is used and the appointment of service providers is based on the policy. There is only one officer fully committed to the procurement procedure and this speeds up the procurement process as this person is focusing entirely on the procurement process.

The Department of Labour assists the municipality in training the contractors to build sufficient skills to assist them during implementation phase of the project. The training commences before the start of the project in order to avoid delays during implementation phase.

The Department of Health conducts training to community field workers, who do conduct health education in the community once the projects start. This education to the community will help them to best maintain their toilets and to take ownership of the projects to be conducted.

Support from other stakeholders

The District contacts DPLG for funding and it also uses it's own budget to implement projects. Roles of different stakeholders are identified in the projects.

Project Implementation

The community based project approach is used during the implementation of the project. The community members are hired to work in the project by the appointed contractors. The reason for the appointment of the community members in the projects is to help the community in gaining skills and taking ownership of the project.

District sanitation co-ordination forum

There is a district sanitation forum established by the municipality which is conducted on a monthly basis. This forum includes different stakeholders and NGOs and is aimed at discussing project progress and identifying gaps and making recommendations. This co-ordination forum is conducted by district and is attended by relevant stakeholders.

Continuous on-site project monitoring

District appointed project managers conduct on-site project monitoring on a daily basis to ensure that project implementation is going accordingly and there are no mistakes on the project and that if any problems arise, that they are attended to as soon as possible.

Health and hygiene education and monitoring

On the completion of toilets, community field workers conduct house to house health and hygiene education. After the health and hygiene education is completed, The Department of Health's environmental health practitioners conduct monitoring to ensure that the health education conducted was adequate**.**

Roles and Responsibilities of Different Stakeholders

Municipality

The municipal IDP and WSDP guide the development plans of the local municipal projects to be implemented. The procurement process of the municipality also influences the rate of the project implementation.

The Umzinyathi municipality has employees appointed specifically for ensuring the procurement process of the project to avoid delays in the projects.

The municipality also has project co-coordinators appointed to monitor the work of the appointed contractors and fast track the project progress.

Councillors

Councillors make decisions based on the needs and aspirations of community constituencies. They base their decisions on the IDP and WSDP.

Communities and other stakeholders

The IDP is based on community needs and priorities. Communities have the chance to participate in identifying their most important needs.

The IDP process encourages all stakeholders who reside and conduct business within a municipal area to participate in the preparation and implementation of the development plan.

National and provincial sector departments

Many government services are delivered by provincial and national government departments at local level-for example: police stations, clinics and schools. Municipalities must take into account

the programmes and policies of these departments. The departments participate in the IDP process and projects implementation so that they can guide how to use their resources to address local needs.

Project Successes

Effective use of scarce resources

The IDP process approach of identification of needs is utilized by the municipality help the local municipalities to focus on the most important needs of local communities taking into account the resources available at local level.

The local municipality aims to find the most cost-effective ways of providing sanitation services and money is spent on the prevention of problems in local areas.

It helps to speed up delivery

The IDP identifies the least serviced and most impoverished areas and points to where municipal funding should be spent. Implementation is made easier because the relevant stakeholders have been part of the process, and the municipality is able to develop realistic project proposals based on the availability of resources.

It helps to attract additional funds

Government Departments and private investors invest funds where a municipality has clear development plans and this speeds up the project implementation because the municipality can access additional funding.

Strengthens democracy

Through the active participation of all the important stakeholders, decisions are made in a democratic and transparent manner and therefore any problems arising in the projects are easily solved and the projects becomes completed quicker.

Helps to overcome the legacy of apartheid

Municipal resources are used to integrate rural and urban areas and to extend services to the poor and this accelerates the delivery of services to the community

Promotes co-ordination between local, provincial and national government

The different spheres of government are encouraged to work in a co-coordinated manner to tackle the development needs in a local area.

APPENDIX 4

List of Action Research Key Respondents

LIST OF ACTION RESEARCH KEY RESPONDENTS

Action Research Key Respondents in Eastern Cape Province:

Name	***Designation***
Mr B Mossick	PMU Manager, Amatole District Municipality
Mr C Thompson	Amatole Water
Mr K Dweba	Technical Services, Alfred Nzo District Municipality
Mr E Dzide	Water Services, Alfred Nzo District Municipality
Ms A Machimane	Deputy Director Water Services, DWAF Eastern Cape Region

Forums /Meetings

Provincial Sanitation Task Team

Action Research Key Respondents in Free State Province:

Name	***Designation***
Mr Kenneth	PMU Manager, Matjhabeng Local Municipality
Mr Poe	Technical Director, Letsemeng Local, Municipality
Ms P Mohapi	Acting Regional Director, DWAF Regional Office
Ms T Tshabalala	Water Services Co-ordinator, Mantsopa Local Municipality
Mr D Spangenberg	Technical Services, Mantsopa Local Municipality
Mr T Mokhethoa	Manager: Water Services, SeSotho Local Municipality
Ms P Ngobeni	Deputy Director National Sanitation Unit DWAF Head Office

Forums /Meetings

Provincial Sanitation Task Team

Action Research Key Respondents in Western Cape Province:

Name	***Designation***
Mrs A Cele	Municipal Health Services Director, Cape Winelands District Municipality
Mr P RodgersEnvironmental	Health Practitioner, Cape Winelands District Municipality
Mr R Humphreys	EHP, Drakenstein LM Area, Cape Winelands District Municipality
Mr C Bostander	EHP, Breede River LM Area, Cape Winelands District Municipality
Mr S Mashicila	Deputy Director Water services, DWAF Regional office

Forums /Meetings

Provincial Sanitation Task Team

Action Research Key Respondents in KwaZulu-Natal:

Name	***Designation***
Mr BD Makwakwa	Executive Technical Director, Sisonke District Municipality
Mr M Dlodlo	Chief Project Co-ordinator, Umzinyathi District Municipality
Mr Mdaweni	Councillor, Umzinyathi District Municipality
Mr Zungu	Environmental Health Manager, KZN Dept of Health
Ms M Chauke	WSA Sanitation Officer, Umgungundlovu District Municipality

Forums /Meetings

Provincial Sanitation Task Team
Umzinyathi District Sanitation Forum

Action Research Key Respondents in Mpumalanga Province:

Name	***Designation***
Mr L Msibi	Executive Technical Director, Dipaleseng Local Municipality
Mr L Cindi	Executive Technical Director, Lekwa Local Municipality
Mr D Hlanyane	Municipal health Services Manager, Gert Sibande District Municipality
Mr MJ Wells	Director Water and Sanitation, Gert Sibande District Municipality
Mr T Siboza	Executive Technical Director, Nkomazi Local Municipality
Mr E Motshoeni	Regional Project Co-ordinator, DWAF Regional Office
Ms E Mahlalela	Environmental Health Practitioner, Mpumalanga Dept of Health

Action Research Key Respondents in Gauteng Province:

Name	***Designation***
Mr A Pieterse	PMU Manager, Nokeng Tsa Taemane Local Municipality
Mr J McGlashan	SAICE Deployee, PMU, Nokeng Tsa Taemane Local Municipality
Mr M Mashabane	Technical Services, Randfontein Local Municipalit
Mr M Armstrong	SAICE Deployee, Municipal Infrastructure, Kungwini Local Muni

Forums /Meetings

Provincial Water Sector Targets Forum

Action Research Key Respondents in Limpopo Province:

Name	***Designation***
Mr Make	Municipal Manger, Mopani District Municipality
Mr S Nkoe	Water Services Co-ordinator, Lephalale Local Municipality
Mr DT Seroka	Chief Director, Municipal Infrastructure, Dept of Local Government
Mr R Matukane	Regional Sanitation Co-ordinator, DWAF Regional Office