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DBSA Vulindlela Auditorium, Midrand, Gauteng, South Africa
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Progress made with the Implementation of WCWDM within the 8 large water supply systems

Presented by: **Moloko Raletjena**

Participating and supporting organisations :



Presentation Outline

- **Status of water losses within the 8 Large Water Supply System**
 - 2016 results
- **Challenges with effecting WCWDM progress**
 - Budgets
 - Planning
 - Priorities
- **Conclusions**

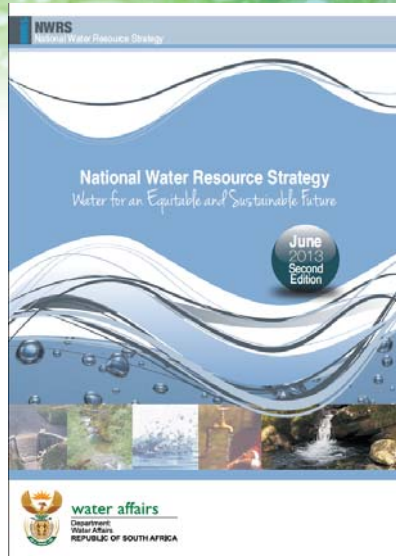
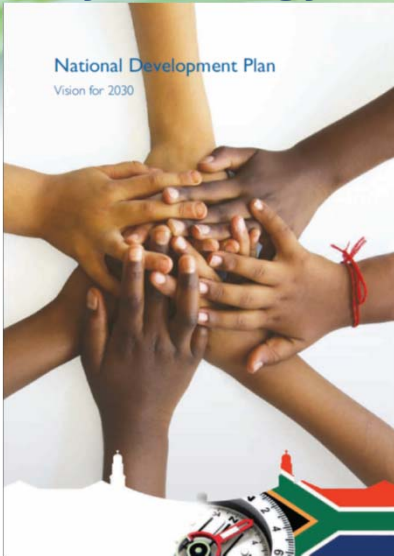


DWS APP PPI 1.4.1. Status Report on water losses within the 8 large water supply

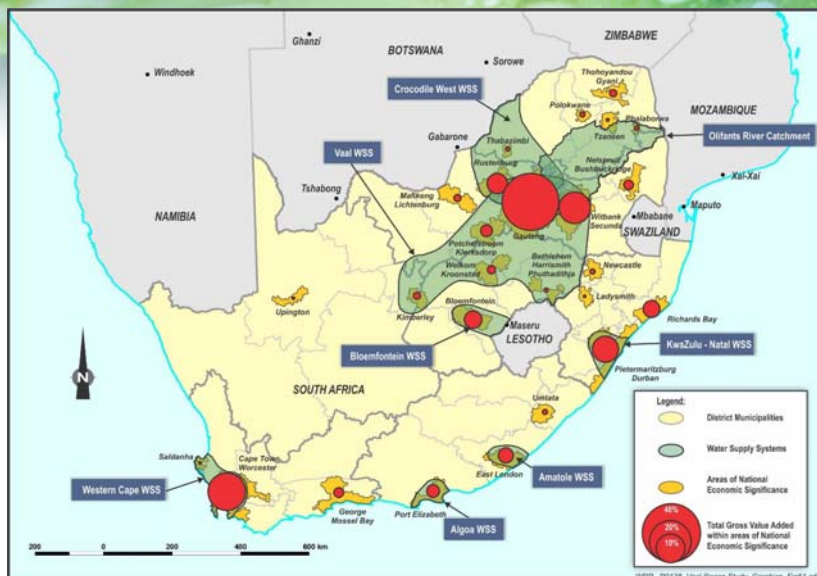
Objectives

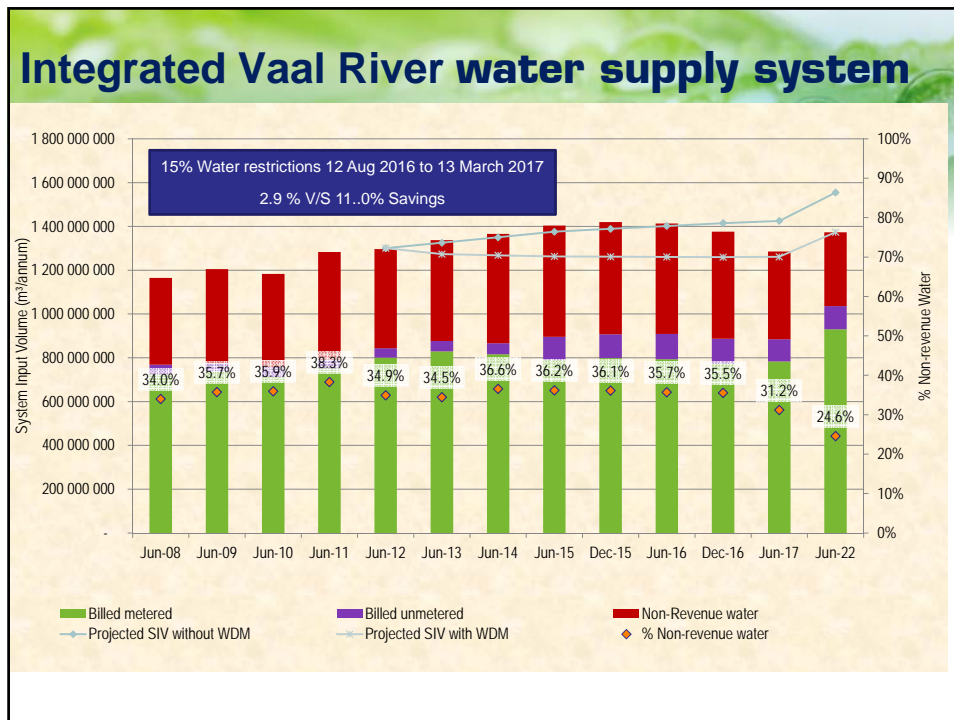
- Measure the progress made with the implementation of WCWDM interventions, within the eight large water supply systems (WSS)
- Includes Metros and most of the major cities.
- The key demand centres, have potential to reduce SIV, water losses, NRW and subsequently improve WUE
- Monitoring and reporting are very difficult if municipalities do not calculate and/or submit their water balance information

Key Strategy Documents

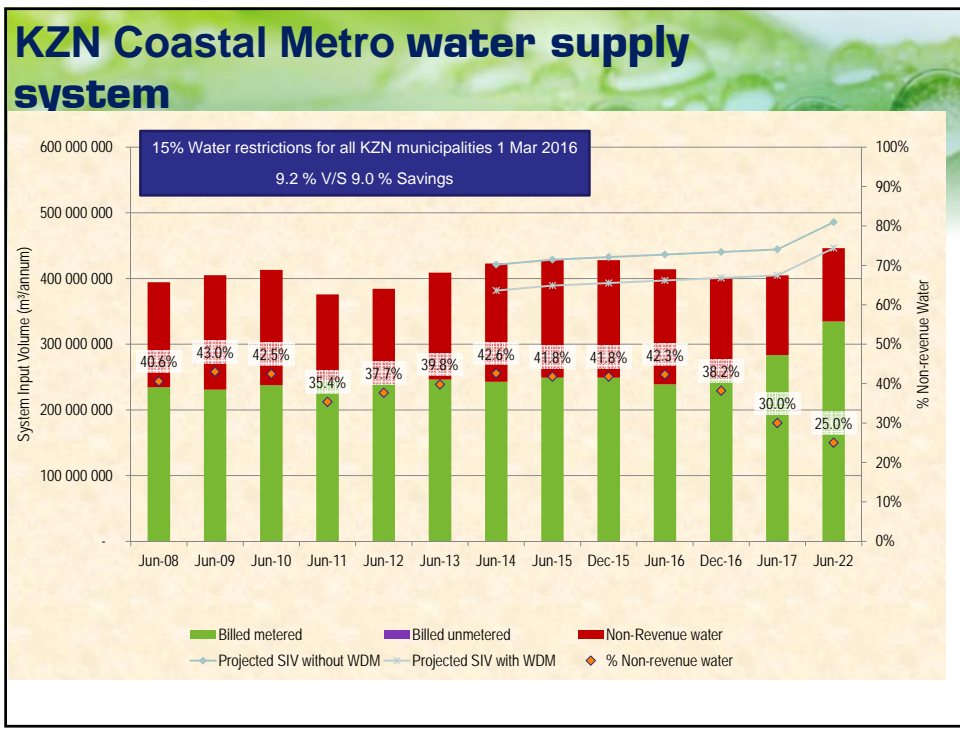
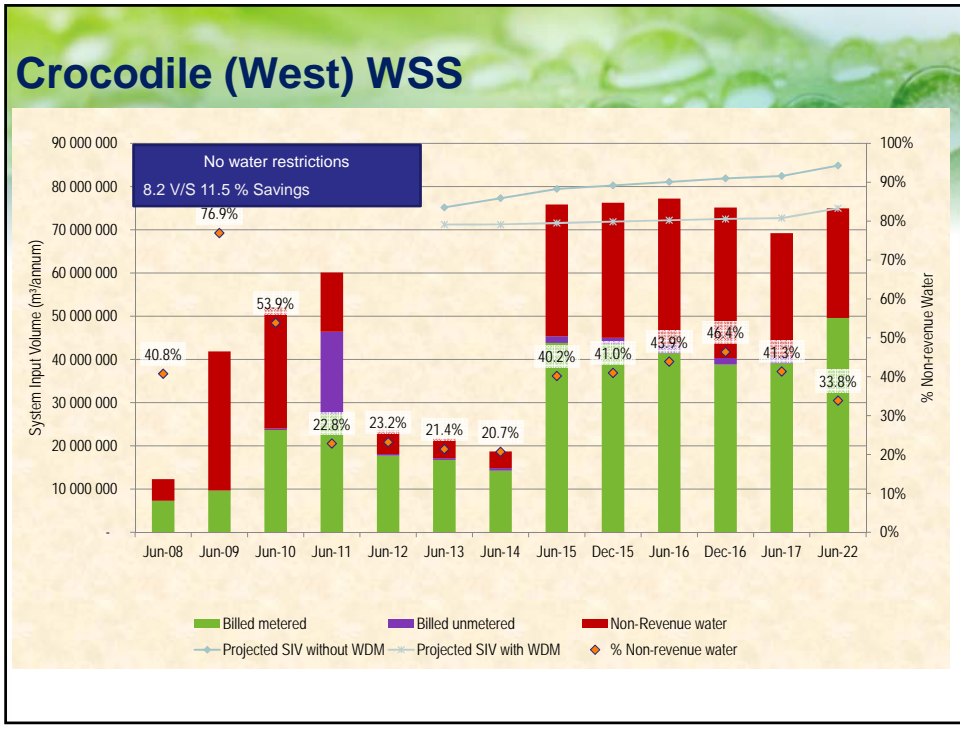


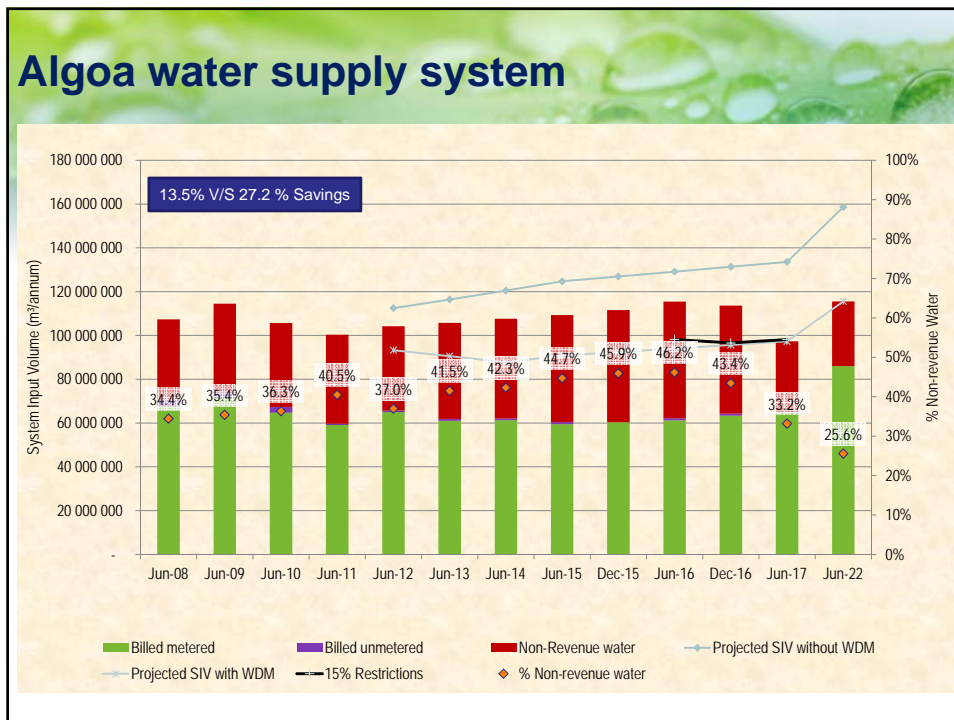
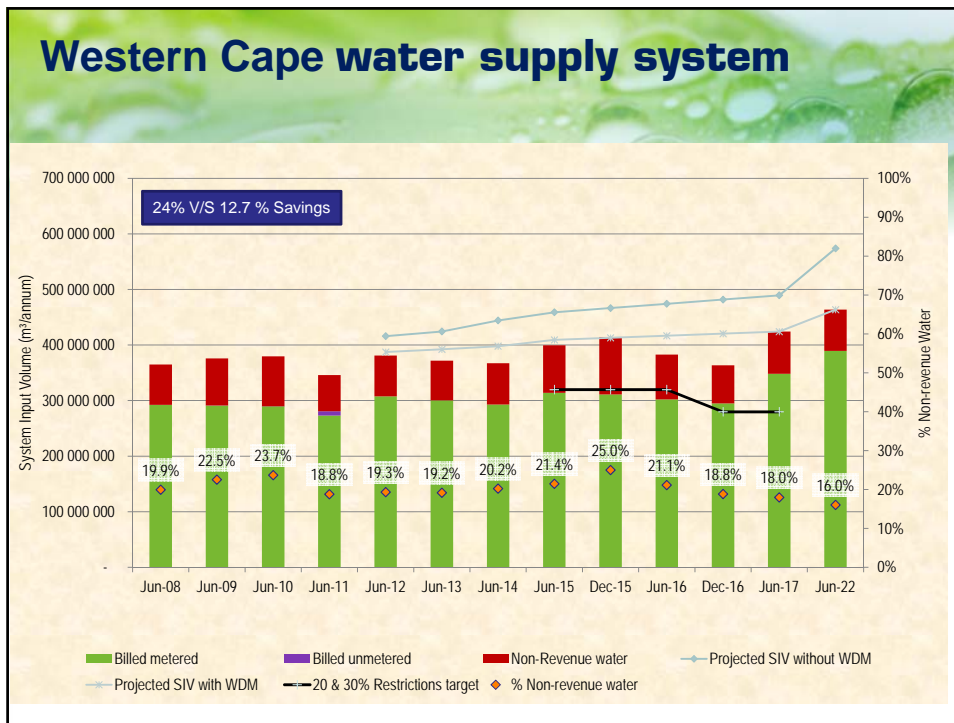
8 Large water supply system

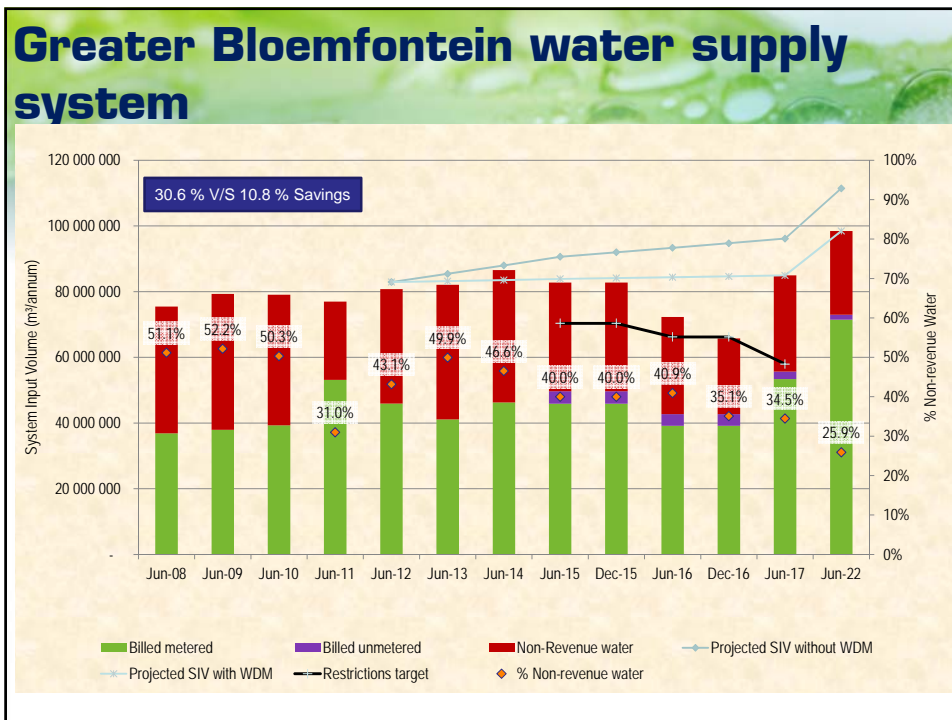
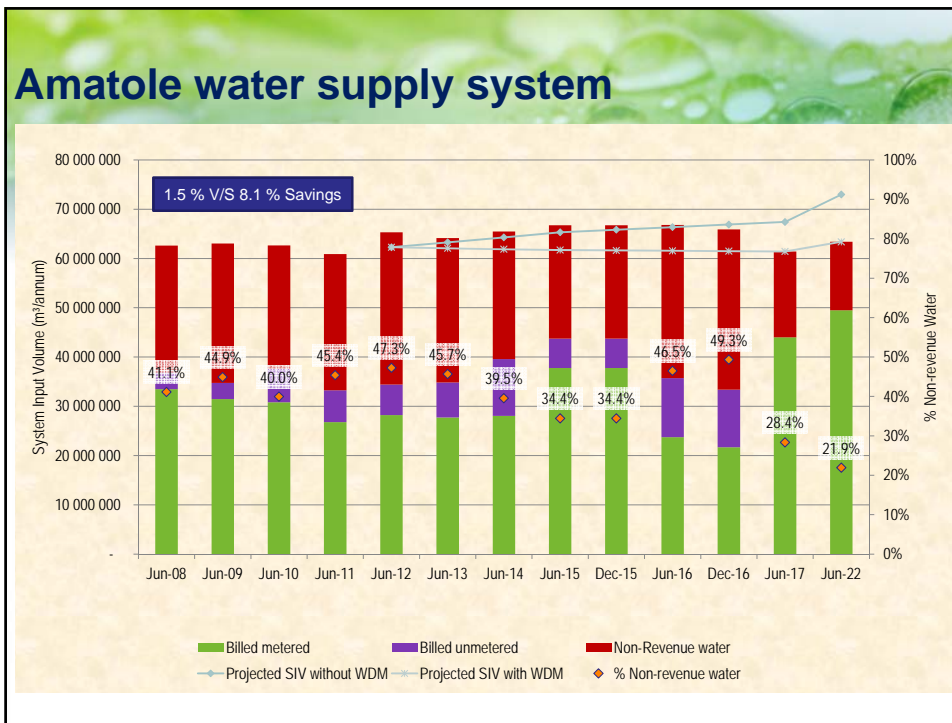


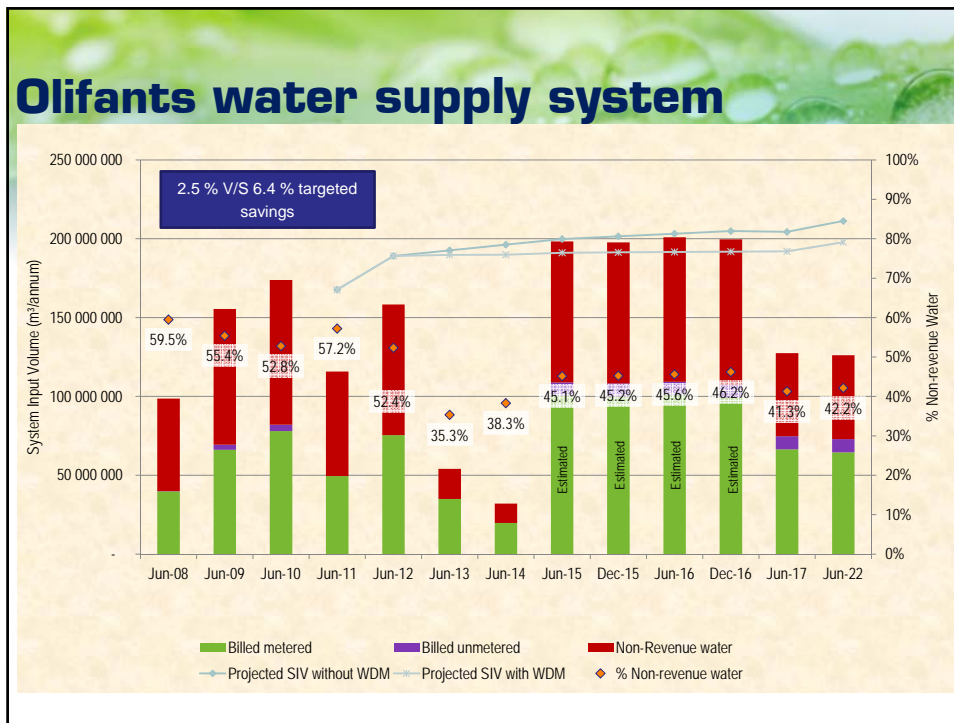


- Municipalities in the IVRS managed to reduce their annual demand by 39 M m³/a from June 2016 to Dec 2016
- Mainly through water restrictions
- The reduction in the demand is positive, considering the municipalities in the IVRS exceeded the high population without WCWDM projections by 0.8 %
- The City of Tshwane, Ekurhuleni, Lesedi and Midvaal are within reach of achieving their 2017 targets
- **It is considered highly unlikely that municipalities in the IVRS will be able to reduce their consumption by 9% to achieve their 2017 target**









Summary of targeted vs actual savings

System	Projected SIV without WDM (X) kl/annum	Projected SIV with WDM (Z) kl/annum	Projected % savings $(X - Z) / X * 100$	Actual demand (Y) kl/annum	Actual % savings $(X - Y) / X * 100$
IVRS	1 414 954 845	1 259 521 968	11.0%	1 374 064 291	2.9%
CWRWSS	81 896 986	72 505 548	11.5%	75 149 020	8.2%
KZNCMWSS	440 429 750	400 929 750	9.0%	399 750 304	9.2%
WCWSS	481 866 055	420 515 925	12.7%	363 416 316	24.6%
AWSS	131 372 286	95 678 395	27.2%	113 623 290	13.5%
AmWSS	66 893 713	61 493 713	7.2%	74 797 137	-0.6%
GBWSS	94 743 067	84 663 067	10.6%	65 780 175	30.6%
ORWSS	204 882 982	191 858 953	5.7%	199 681 021	1.1%
Total	2 917 039 684	2 587 167 319	11.3%	2 666 261 554	8.6%

Total targeted vs actual savings

Year ending	Projected SIV without WDM (X) kl/annum	Projected SIV with WDM (Z) kl/annum	Projected % savings $(X - Z) / X * 100$	Actual demand (Y) kl/annum	Actual % savings $(X - Y) / X * 100$
Jun-12	2 642 893 490	2 552 055 507	3.4%	2 493 478 837	5.7%
Jun-13	2 696 250 917	2 536 625 444	5.9%	2 450 960 227	9.1%
Jun-14	2 761 965 357	2 541 814 654	8.0%	2 465 754 174	10.7%
Jun-15	2 823 381 311	2 560 616 446	9.3%	2 764 067 385	2.1%
Dec-15	2 854 587 175	2 569 453 143	10.0%	2 797 835 573	2.0%
Jun-16	2 885 793 039	2 578 289 841	10.7%	2 743 414 339	5.0%
Dec-16	2 917 039 684	2 587 167 319	11.3%	2 666 261 554	8.6%
Jun-17	2 943 605 715	2 598 047 923	11.7%		
Jun-22	3 256 430 815	2 835 667 445	12.9%		



General challenges

Budget expenditure as at 31 Mar 2017

- Municipalities spent 61.3%, or R245.1 billion, of their total adjusted budgets of R400.2 billion. **Unlikely to spend balance of R155.1 billion (up from R141.4 billion in March 2016)**
- Municipalities spent 47.1%, or R33.1 billion, of their total adjusted capital budget (R70.3 billion) as at 31 March 2017. **Unlikely to spend balance of R 37.2 billion (up from R 35.6 billion).** Significant under performance.
- Metro water revenue billed was R18.8 billion against expenditure of R17.3 billion
- Municipal salaries and wages expenditure represents 27% or R92.4 billion of their total operational expenditure budget of R329.9 billion

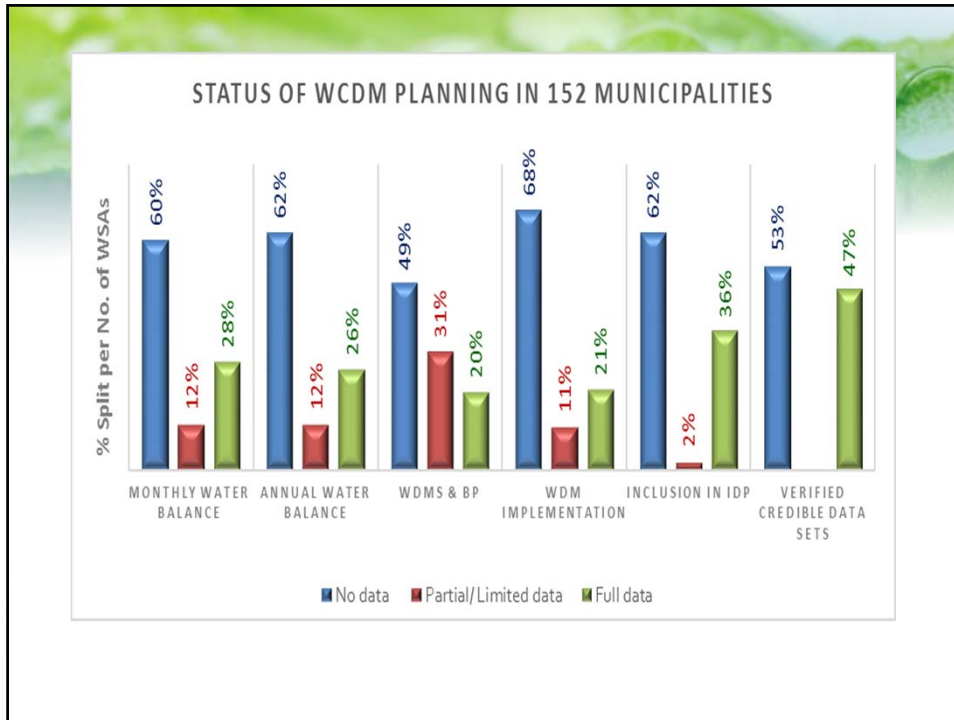
Budget expenditure...

- Aggregated municipal consumer debt was R128.3 billion. Governments owe 5.1% or R6.6 billion and **households 67.1% or R86.0 billion (up from R 66.9 billion)**
- **Realistically collectable amount (less than 90 days) is R24.1 billion (up from R22.9 billion)**
- Municipalities owed their creditors R34 billion (up from R26.3 billion)
- Overall expenditure of **conditional grants was 57.6%** or R17.3 billion against the R29.8 billion transferred

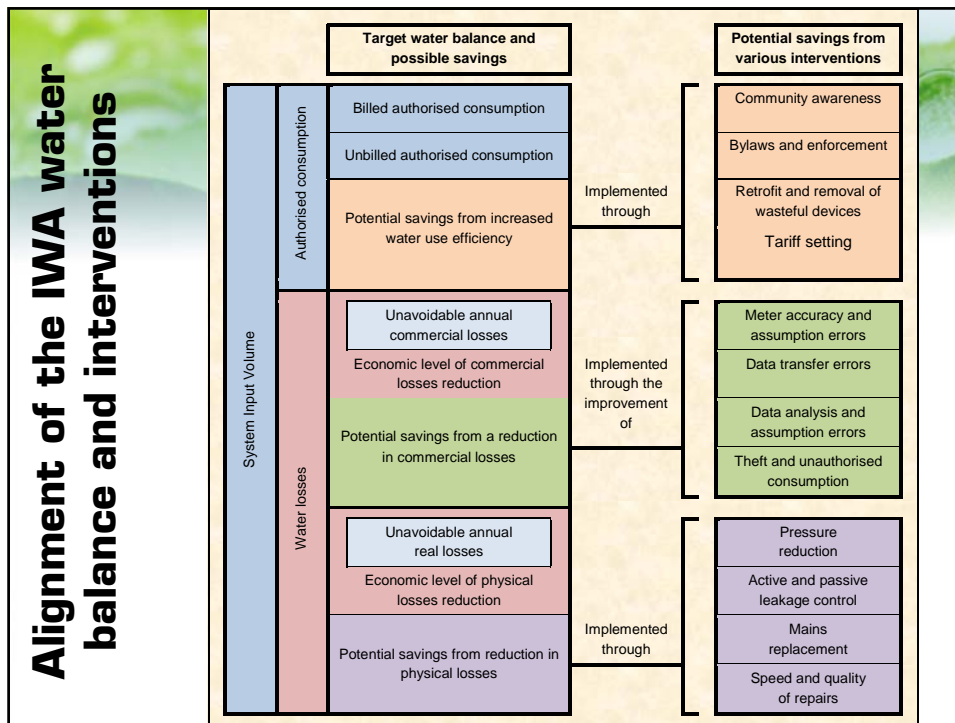
Metering and billing challenges		
Environment	Urban	Rural
Supply area	Formal – high LOS, house connections, continuous supply	Informal – low LOS, yard connections, standpipes, intermittent supply
Connections	Metered	Un/metered, informal
Meter reading	Monthly – manageable distances, continuous supply = accurate readings	Monthly – long distances, intermittent supply = inaccurate readings
Bylaws	Enforceable	Difficult to enforce
Tariffs	Usually considered affordable = cost effective	Unusually considered unaffordable = not cost effective
Billing	Easy to communicate & pay – post, e-mail, sms. Billing system easier to sustain	Difficult to communicate & pay – no post, e-mail. Billing system difficult to sustain
Demand control	Pays for service = Consumer awareness	Limited / no payment = Consumer apathy
Technology	Usually not restricted by costs, communications, skills,	Restricted by costs, communications, skills,

Funding Programmes.....

- **Budgets allocated towards new infrastructure projects through ACIP, MWIG, MIG etc,**
- **Management of these funds are fragmented with emphasis on new Infrastructure**

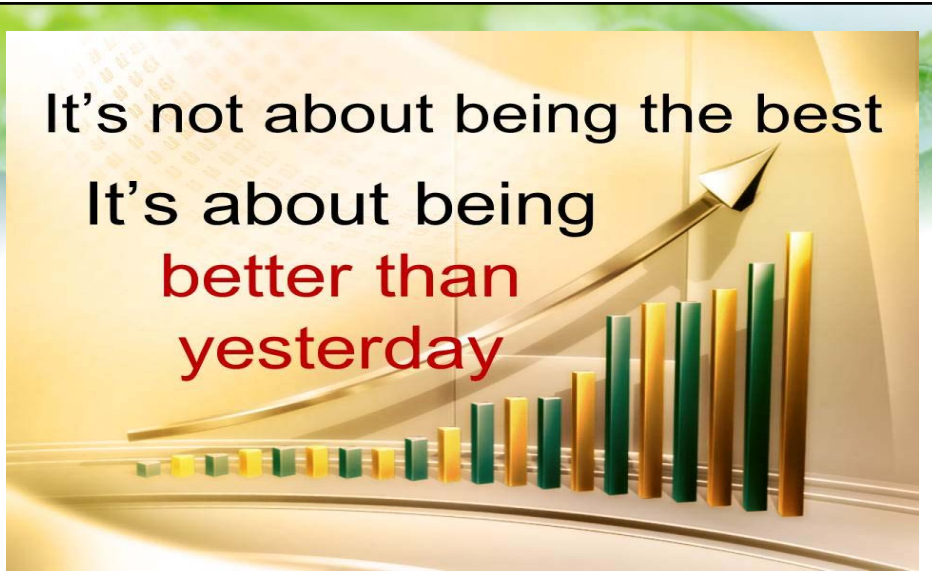


Lack of skilled personnel and capacity	Appoint and train suitable personnel on WC/WDM Current standard per municipal category? Standard: # Population requires: civil engineers /prof technologists, technicians, artisans = total technical team = 1 civil professional / ?? km pipeline	Skilled personnel on WC/WDM	SALGA, COGTA, DWS and Municipalities
None institutional prioritization of WC/WDM	Strategic prioritization of WC/WDM in the Municipalities		WC/WDM regarded as strategic priority in the Municipalities, incl in BP, PA, 2017-KPIs for MM



- ## Conclusions
- The target v/s actual savings for 8 systems combined indicates a 8.6 % savings achieved by Dec 2016
 - 3.6 % improvement in savings from June 2016 to Dec 2016, which is encouraging
 - Savings supported by water restrictions. Sustainability is a concern.
 - WCWSS, KZNWSS and GBWSS have exceeded their targets
 - Remaining systems are following the high population without WCWDM demand projections, inc IVRS
 - **Almost all Municipalities in the IVRS are cat A, B1 and B2, they should be able to prioritize and implement WCWDM**
 - **WCWDM requires and integrated approach for sustatinability**

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It's about being
**better than
yesterday**



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