



# **META Conference / 2015 IURPA**

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## **Revenue Protection Challenges in Africa**

*Presented by Michael J Rhode*

*President: Southern African Revenue Protection Association (SARPA)*



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- SARPA Mission statement
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  - Water
  - Infrastructure
- Internalizing RP
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# Setting the scene



- One regulator - NERSA
- One generator/transmitter – ESKOM
- 188 Distributors – MUNICIPALITIES & ESKOM
- Poor gets 6Kl (W) & 50kWh (E) free monthly
- Residential tariff around 11c
- No gas reticulation
- Diverse customer base



# Setting the scene





# Setting the scene



# Problem Statement



***“High electricity losses cripple a utility’s ability to properly invest in its system and provide stable service” – Bob Gohn, Pike Research***

# SARPA Mission Statement



***“Protecting revenue and assets accruing to or owned by utilities against loss, misappropriation and pilfering or willful malicious damage”***

# Challenges in Africa



Infrastructure



Water



Electricity





# Electricity



## *Globally (World bank report)*

*Total losses = 3-55%*

*Theft = US\$ 200bn/y*

## *South Africa (Worldbank, IEA)*

*Total losses = 8%*

*Theft = R 6.1bn/y*



# Electricity



***NERSA regards 10% losses as acceptable!***



# Electricity



1

- Illegal distribution/electricity sales

2

- Meter tampering/bypassing

3

- Non payment



# Electricity

3

- Non payment

- Disconnect Services
- Debt Collection
- Debt Write-off





# Electricity

2

- Meter tampering/bypassing

## ● Meter technology evolution

● → prepayment

● → Split prepayment

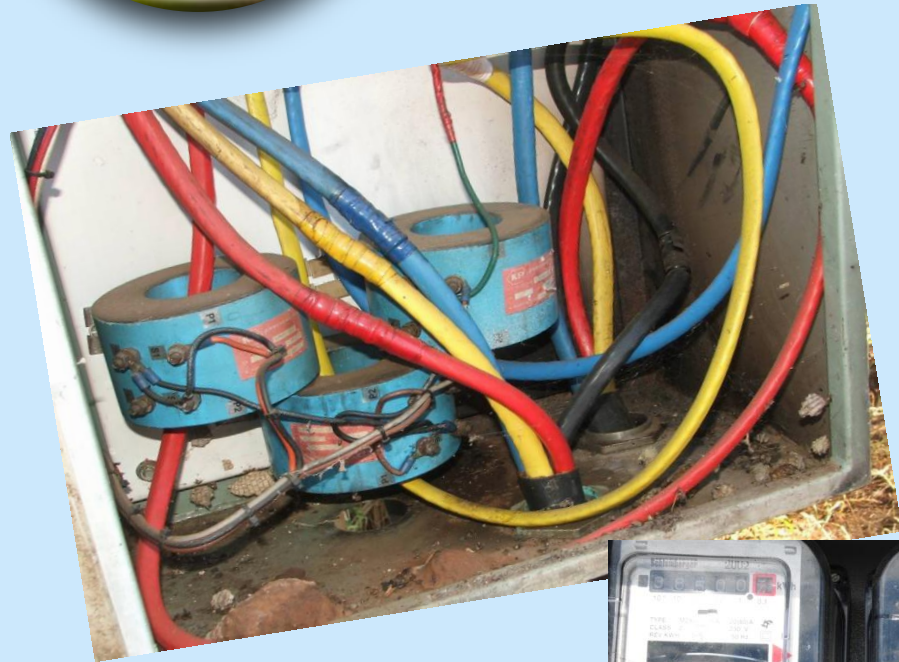
● → AMR

● → AMI

● → Prepayment with comms



# Electricity





# Electricity

2

- Meter tampering/bypassing

 Meter securing

 Regular auditing





# Electricity







# Electricity



3

- Illegal distribution/electricity sales

- Disconnect/penalty payable
- Reduce capacity
- Electrify
- Socio political issues
- No more reinstatement??
- “Ghost” vending



# Electricity





# Electricity



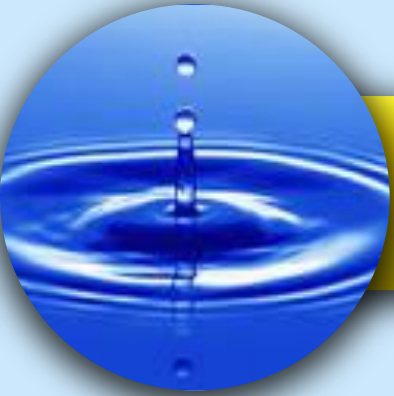




# Electricity







# Water



## *Globally (World bank report)*

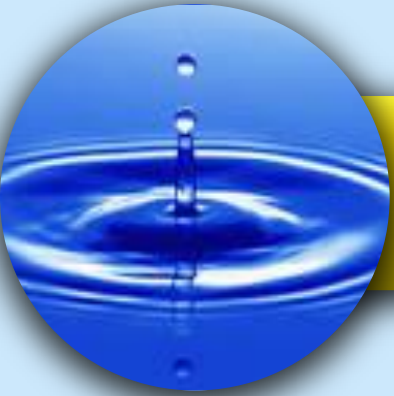
**NRW = 36.2%**

**US\$ 15bn/y**

## *South Africa (WRC)*

**NRW = 36.8%**

**R 7.2bn/y**



# Water



***Presidential directive to reduce water losses by 50% by 2015!***



# Water

1

- Irresponsible use

2

- Infrastructure failure

3

- Water theft



# Water

3

- Water theft

- Exception reports
- Immediate audit response
- (Free allocation assists)



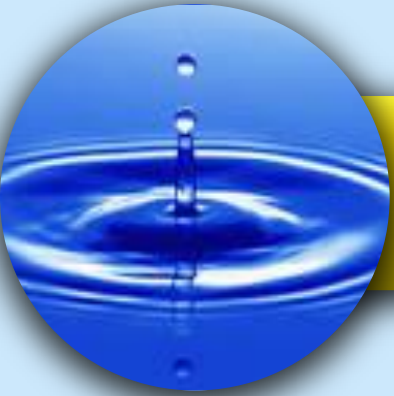


# Water

2

- Infrastructure failure

- Pressure management
- Leak detection
- Replace aging infrastructure
- Rapid response



# Water



1

- Irresponsible use

- Leakage repair programs
- Technology
  - Econo toilets
  - Prepayment metering
- Law enforcement (car wash entrep)
- Rainwater harvesting







# Water







# Infrastructure

**South Africa (SACCI – February 2015)**

**Copper theft**

**R 12.7m**





# Infrastructure

- 🌐 Epidemic proportions
- 🌐 Electrical infrastructure
- 🌐 Civil infrastructure
- 🌐 Hugely expensive to police
- 🌐 Loadshedding!!



# Infrastructure

- Second Hand Goods Act
- Directive on exportation of waste and scrap metals
- Technology
  - Cable marking
  - Cable guard
  - Camera surveillance
- Covert operations
- NTFCCC groups



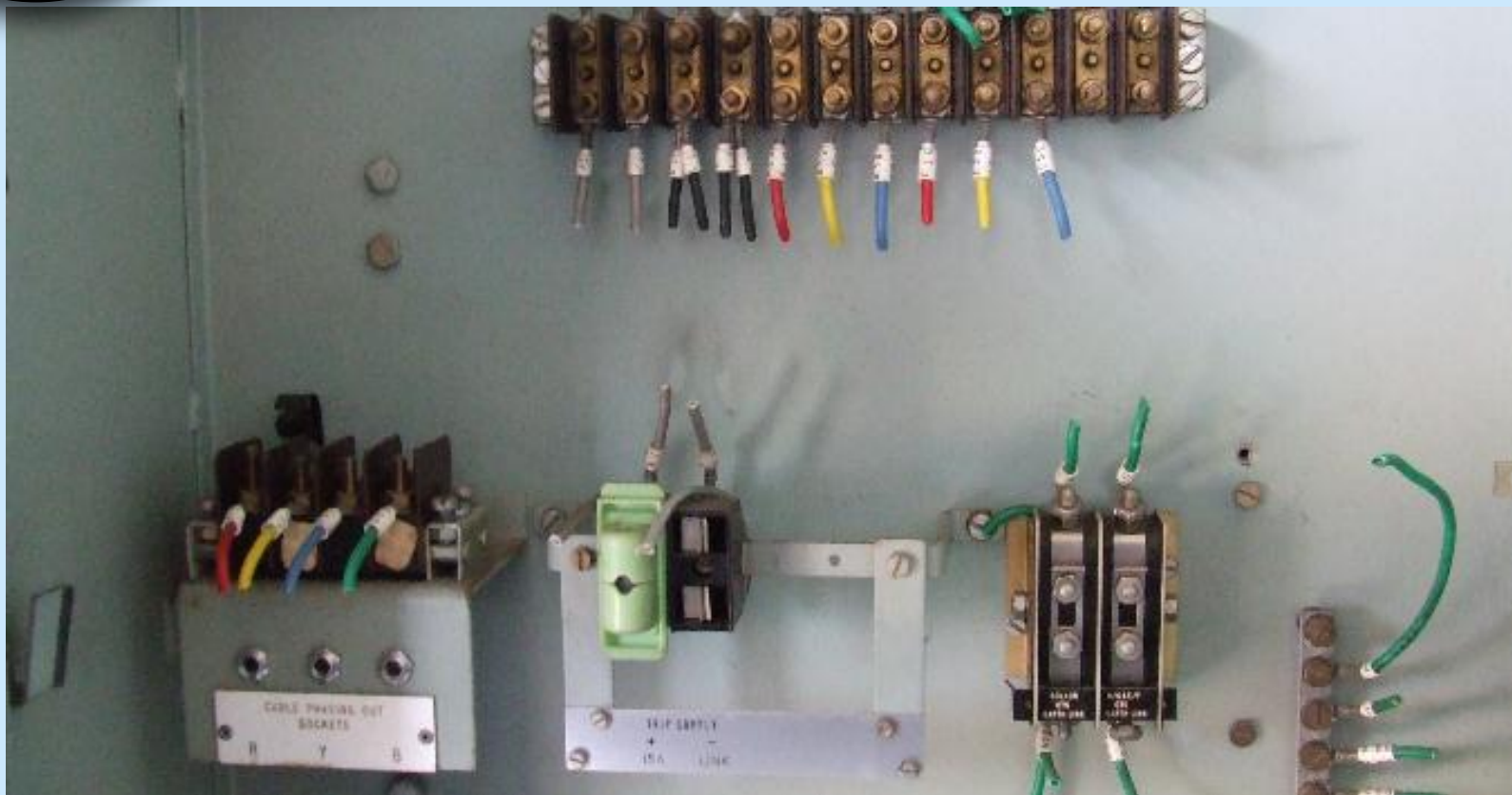
# Infrastructure







# Infrastructure





# Infrastructure





# Infrastructure





# Infrastructure







# Infrastructure





# Infrastructure







# Infrastructure





# Infrastructure







# Infrastructure





# Infrastructure







# Infrastructure



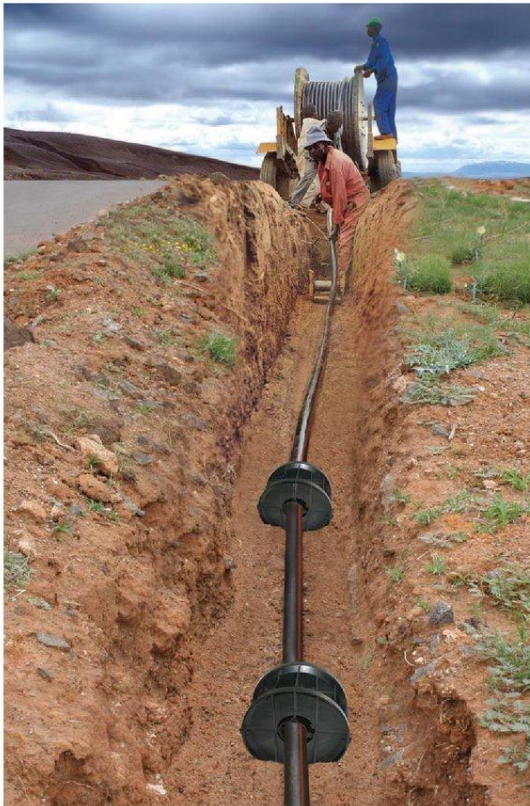




# Infrastructure

## **CableGuard™**

The cable theft protection system







# Elec, Water & Infrastr.

- Customer Education





# Internalizing RP



- Pilferage at stores



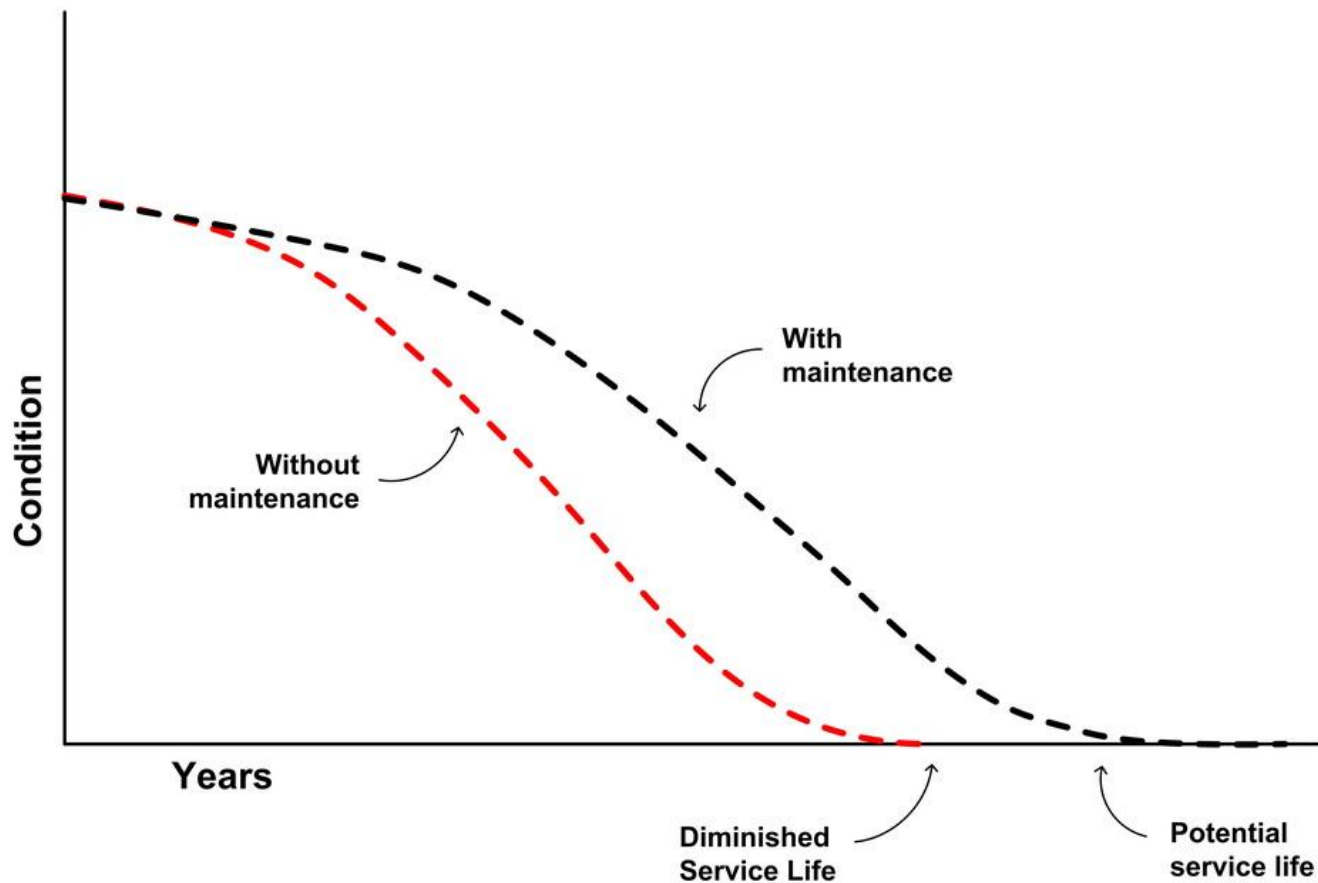
- Fraudulent Meter reading and programming



- Asset Management

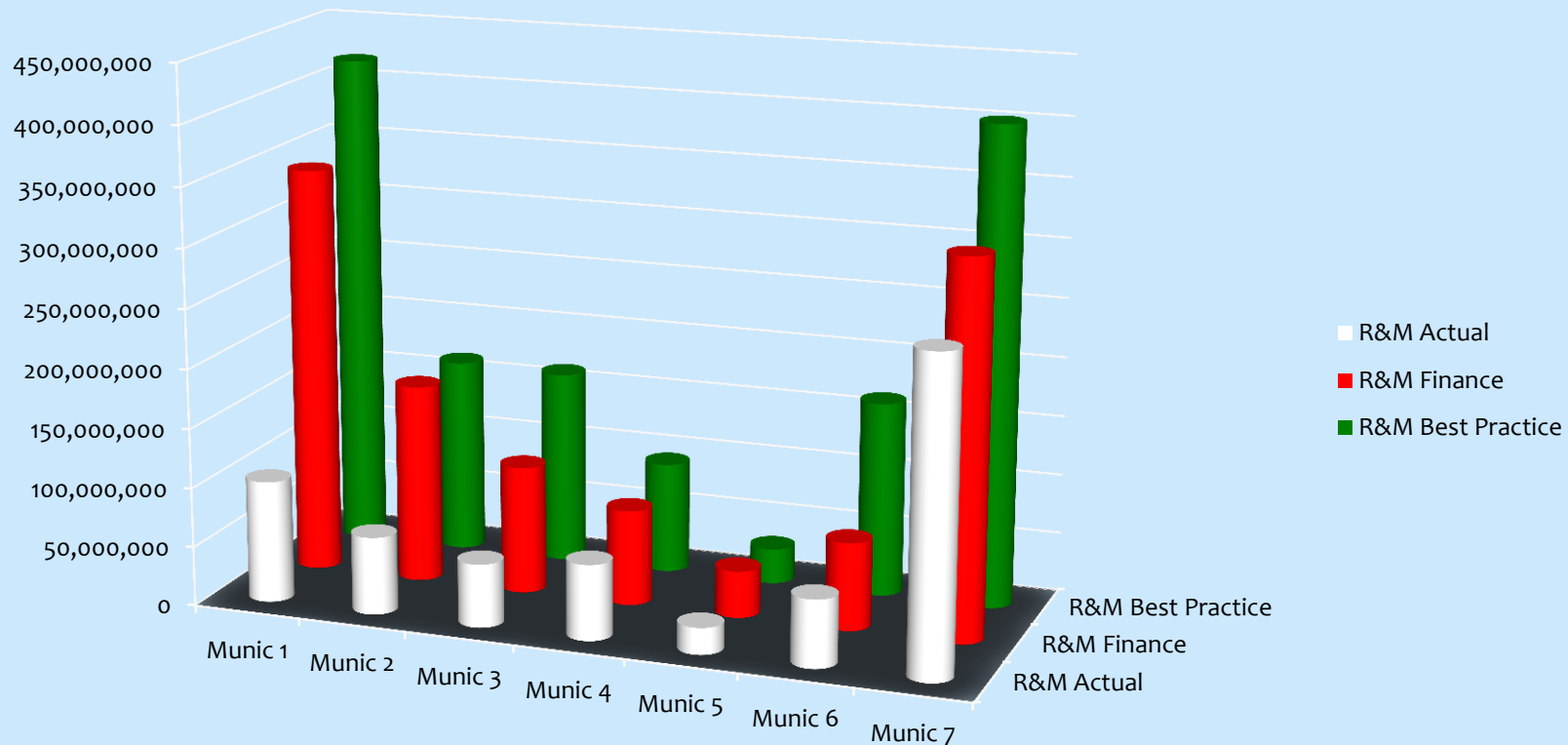


# Asset management





# Asset management





# Infrastructure Crime Convention

16-17 July 2015 / Sammy Marks Building, Tshwane

In partnership with:



SOUTHERN AFRICA REVENUE PROTECTION ASSOCIATION

# 19<sup>th</sup> ANNUAL CONVENTION 2015

*Chasing your money – Simple strategies that work*

13–14 August 2015

MBOMBELA



## Thank you

