



# **REVENUE MANAGEMENT INCLUDING REVENUE PROTECTION IS KEY TO IMPROVING THE FINANCIAL HEALTH OF MUNICIPALITIES**

Therefore our vision is for Singapore to be a Smart Nation – A nation where people live meaningful and fulfilled lives, enabled seamlessly by technology, offering exciting opportunities for all. We should see it in our daily living where networks of sensors and smart devices enable us to live sustainably and comfortably. We should see it in our communities where technology will enable more people to connect to one another more easily and intensely. We should see it in our future where we can create possibilities for ourselves beyond what we imagined possible.

*Transcript of Prime Minister Lee Hsien Loong's speech at Smart Nation launch*

# Introduction

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## *About the Paper*

The presentation will highlight:

- The negative impact of the deteriorating financial position of municipalities on service delivery
- Past reforms to address poor performance
- NT'S measures to deal with the financial distress at municipalities
- The development of a holistic end to end revenue management solution to improve the finances of municipalities:
  - Asset verification, Data Cleansing, Revenue Enhancement and MDTT'S
  - Debt recovery
- The importance of keeping one eye on the rear view mirror to keep track of the developments regarding smart grids using smart meter technologies and the Internet of Things to deal with water and electricity losses.

*"The most important investment you can make is in yourself. "Warren Buffet*

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## THE GOOD THE BAD AND THE UGLY

*“In the world of business, the people who are most successful are those who are doing what they love.” Warren Buffett*

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# Loss Statistics

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Extracts from reports published by National Treasury and the AG:

- On 30 June 2017, metropolitan municipalities recorded water and electricity losses amounting to R 3.6 billion (2016 R2.8 billion) and R 6.5 billion (2016 R7.2 billion) respectively.
- Electricity losses increased significantly with R1.7 billion, from R5.5 billion in 2014/15 to R7.2 billion in 2015/16.
- Municipal consumer debts amounted to R128.4 billion (compared to R128.3 billion reported in the third quarter) as at 30 June 2017.

*“Risk comes from not knowing what you are doing.”*  
*Warren Buffett*

# Metro's Water and Electricity Losses

Electricity and Water losses for the Metros as at 30 June 2016 and 30 June 2017:  
*(Significant water losses may be attributed to aging infrastructure)*

<b>Municipality</b>	<b>2016 Water Rm</b>	<b>2017 Water Rm</b>	<b>2016 Electricity Rm</b>	<b>2017 Electricity Rm</b>
Nelson Mandela Bay	170 000	170 000	291 100	326 200
Buffalo City	116 720	100 799	180 455	218 819
Manguang	146 393	217 748	180 249	162 586
Ekurhuleni	111 363	787 774	1 649 908	1 335 074
City of Johannesburg	895 500	1 093 400	2 220 583	1 970 946
City of Tshwane	549 289	561 500	1 347 408	1 578 014
eThekweni	710 900	654 900	828 000	632 000
City of Cape Town	98 860	112 410	496 200	524 050
<b>TOTAL</b>	<b>2 799 025</b>	<b>3 689 261</b>	<b>7 193 903</b>	<b>6 547 689</b>



# Loss Statistics (cont.)

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- The AG in his MFMA audit outcomes report as at 30 June 2017, reports that the inability to collect debt from municipal consumers is widespread. In these circumstances, it is inevitable that municipalities will struggle to balance their books.
- The reality is that in an economy which has been shedding jobs, the SARS taxation revenue collection has slowed down and with increasing government debt to be serviced from tax revenues there will be no Bailouts. Municipalities may therefore in the medium term be on their own.
- Municipalities must therefore improve revenue management by collecting all monies due to the municipality and protecting its revenue base as well as reducing wasteful expenditure by introducing cost containment measures.

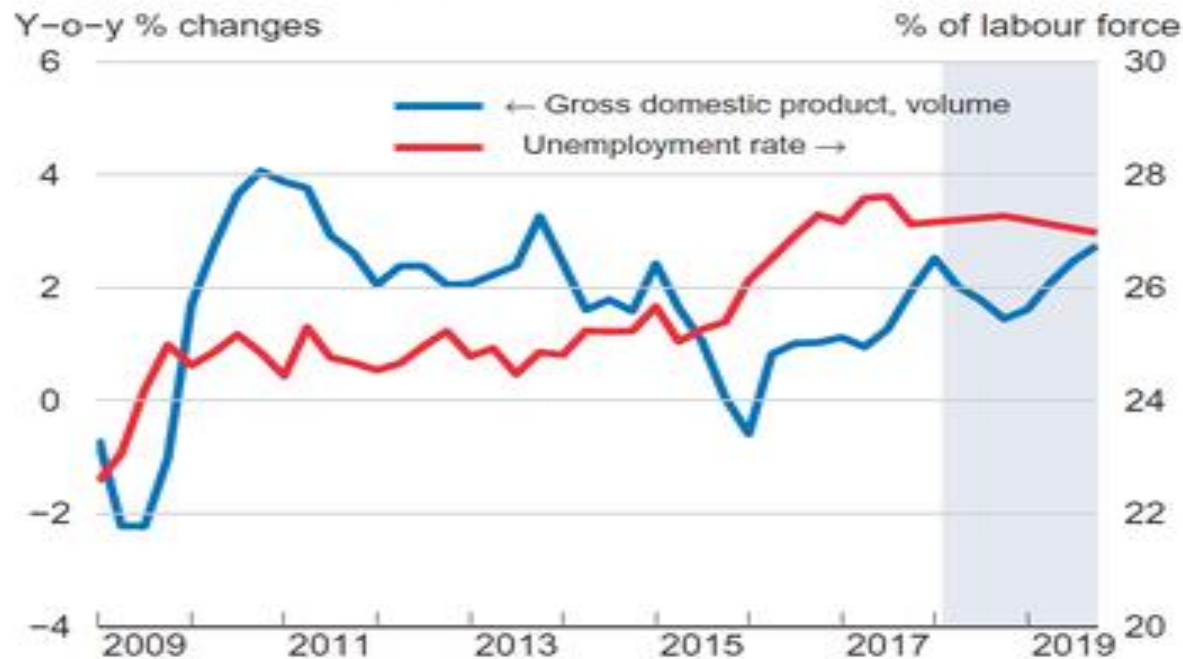
*“There seems to be some perverse human characteristic that likes to make easy things difficult.”*  
*Warren Buffett*

# Gross Domestic Product/Unemployment/Inflation

OECD WEBSITE

## South Africa

Growth is picking up but unemployment remains high



Inflation has remained within the target range



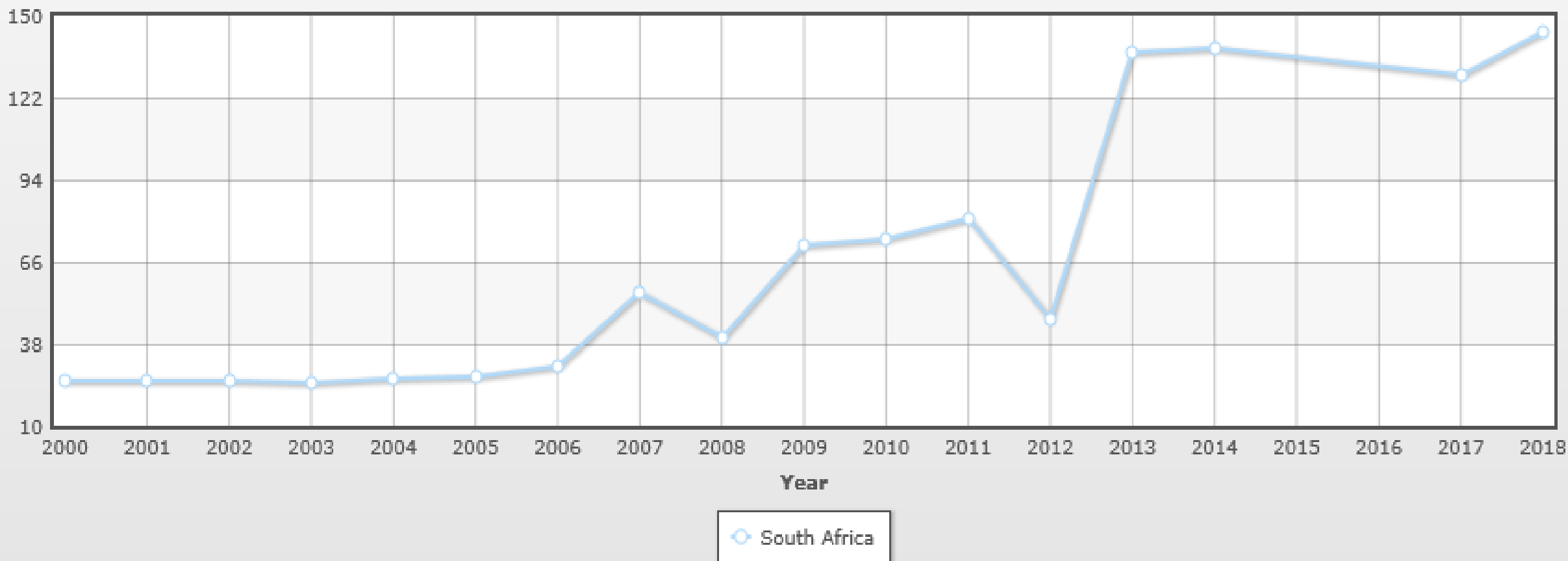
1. Consumer price index in urban areas, excluding food, non-alcoholic beverages, fuel and energy.

Source: OECD Economic Outlook 103 database; and Statistics South Africa.

StatLink  <http://dx.doi.org/10.1787/888933730560>

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# Debt – External (Billion US\$)





# RSA GOVERNMENT DEBT TO GDP

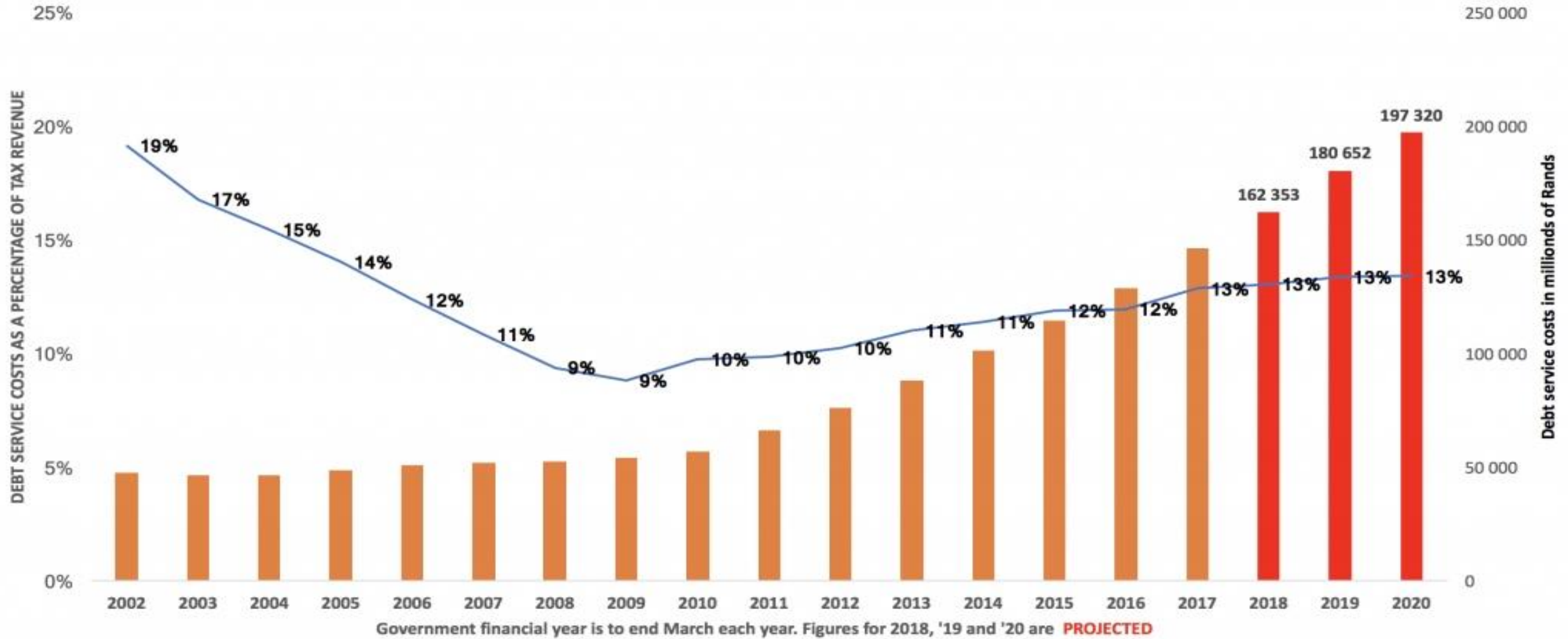
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## SOUTH AFRICA GOVERNMENT DEBT TO GDP



SOURCE: [TRADINGECONOMICS.COM](https://tradingeconomics.com) | NATIONAL TREASURY, SOUTH AFRICA

## Debt service costs as % of tax revenues



# Negative Impact of Accountability Failures on lives of Citizens

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- The Auditor General reports that local government accountability failures result in municipalities not achieving their service delivery objectives, which in turn has a negative impact on the lives of citizens.
- The poor economic climate plays a role in the deterioration of municipalities' financial health, however many are just not managing their finances as well as they should.
- One of the main contributing factors to the poor financial health of municipalities is **POOR REVENUE MANAGEMENT**.
- It is clear that the many gaps existing in the Revenue Management Value Chain and absence of effective Revenue Protection measures is also contributing significantly to the current poor financial health of many municipalities.

# Government Capacity Building Initiatives

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Government has initiated a number of capacity building initiatives to support municipalities:

- Capacity building grants-FMG (Since 2004)
- Municipal Finance Improvement Programme (MFIP) Phase II
- Province-specific strategies
- Cities Support Programme (CSP)
- Standard Chart of Accounts for Municipalities (m SCOA)
- The Back to Basics approach (in September 2014) – Creating decent living conditions; Improving Good Governance; Public Participation; Financial Management and Institutional Capacity
- Financial Management Capability Maturity Model (FMCMM) (An assessment was conducted in all municipalities and their entities in 2015)
- NT measures to deal with financial distress at municipalities (see NT website)

*“Insanity is doing the same thing over and over and expecting different results.”*  
*Albert Einstein*

# Reasons for the Accountability Failures

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The AG's report singles out the following as some of the major contributors to the accountability failures and the regression in audit outcomes:

- Vacancies and instability in key positions slowed down systematic and disciplined improvements. Inadequate skills led to a lack of oversight by councils (including the mayor) and insufficient implementation and maintenance of financial and performance management systems by the administration.
- Political infighting at council level and interference in the administration weakened oversight, hindered dealing with consequences and made local government less attractive for professionals to join.
- Leadership's inaction, or inconsistent action, created a culture of 'no consequences', often due to inadequate performance systems and processes.
- At some municipalities there was a blatant disregard for controls (including good record keeping) and compliance with key legislation, as it enabled an environment in which it would be easy to commit fraud.



# Staff turnover at the senior management at the top of list of reasons for failures at municipalities

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- There is no doubt that no institution can perform without skilled, dedicated and committed leaders with vision and the ability to do the job.
- Maybe it is time to recognize that changing of Directors at senior management level every five years (fixed term contracts) is a major cause of instability at municipalities impacting negatively on the performance of municipalities.
- It is suggested that Directors of municipal departments who should be technical experts in their professions should be appointed on permanent employment contracts.

*“Forecasts may tell you a great deal about the forecaster; they tell you nothing about the future.” Warren Buffett*

**In 2017, 173 demonstrations were recorded in total.**

**In 2018, 144 demonstrations were recorded from January 2018 to June 2018.**

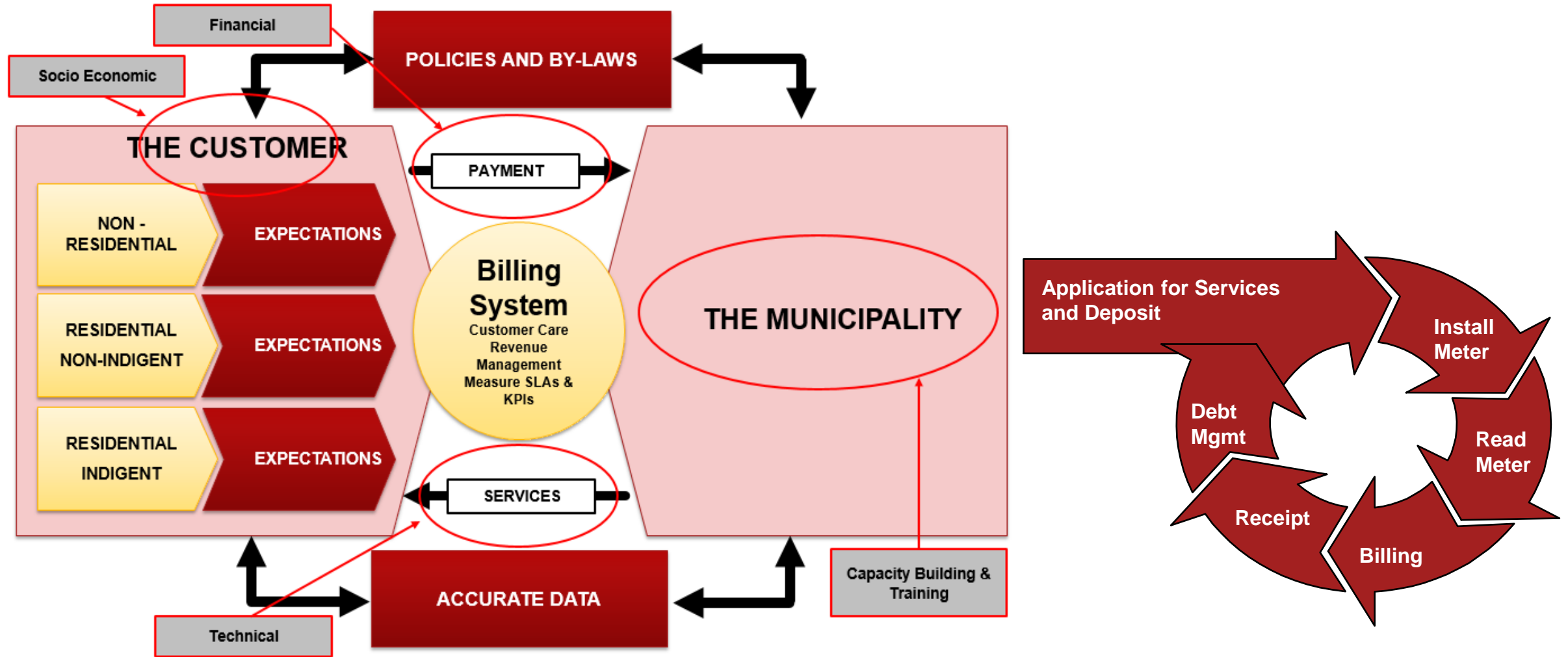


# REVENUE MANAGEMENT VALUE CHAIN ANALYSIS

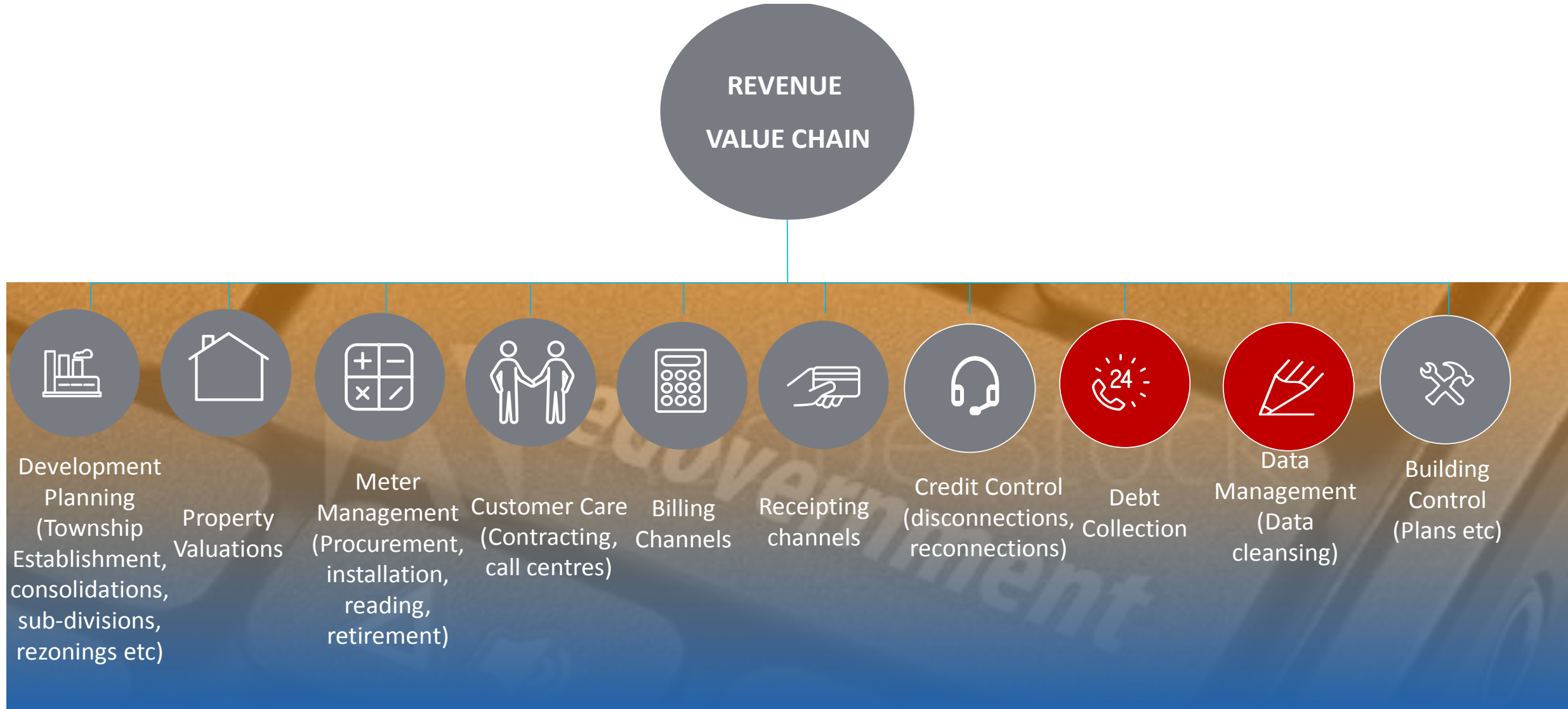
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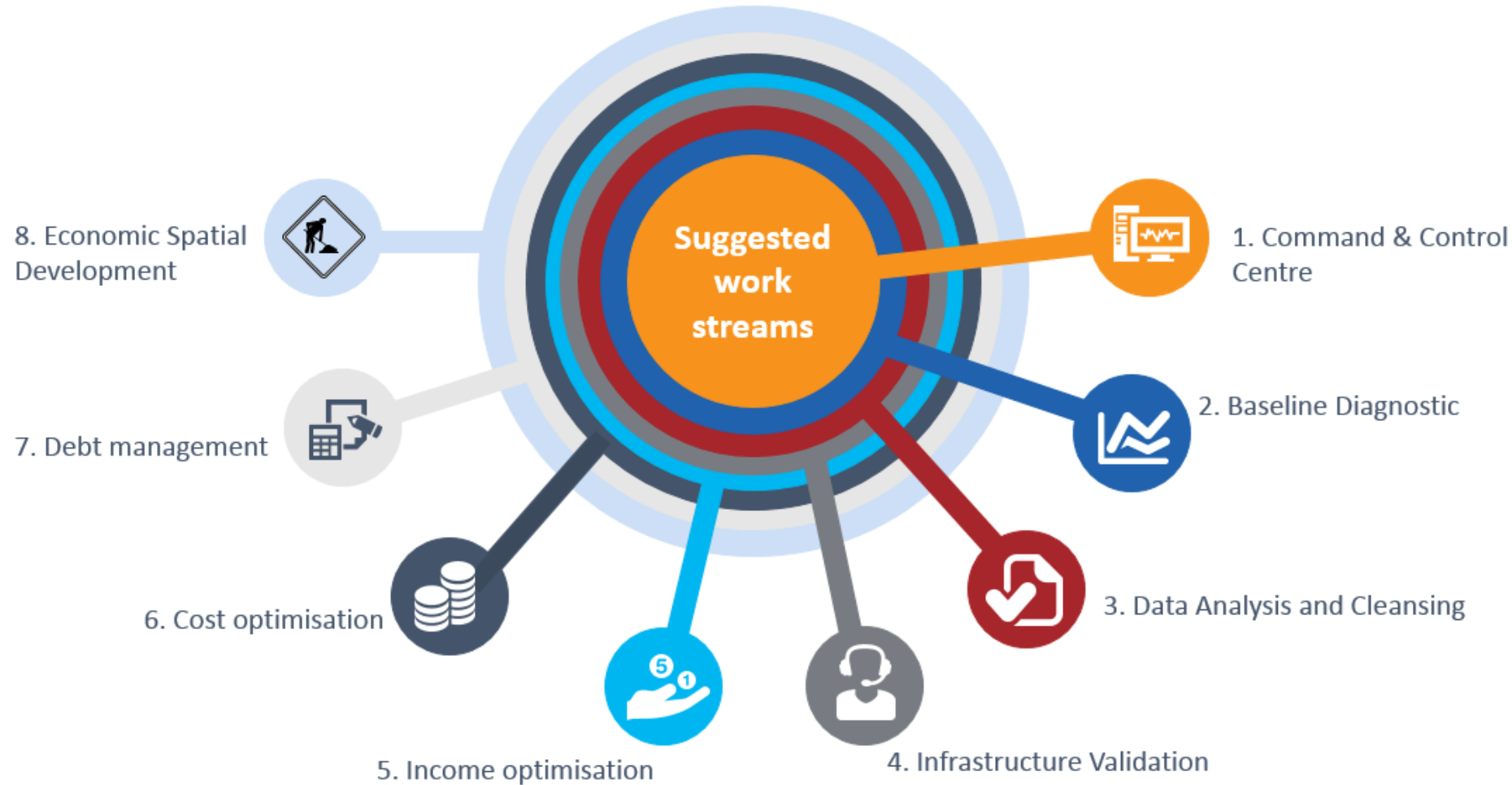
# Revenue Management Business Model



# Revenue Management



# Work Streams - A Model To Consider





# DATA CLEANSING AND ANALYSIS/ ASSET VERIFICATION

A close-up photograph of a microscope, showing the objective lenses and the stage. The image is partially covered by a large, semi-transparent red overlay on the left side, which contains the main title text. The microscope's objective lenses are labeled with numbers like '14', '30', '25', and '365'. A bright light is visible at the point where the objective lens meets the stage.

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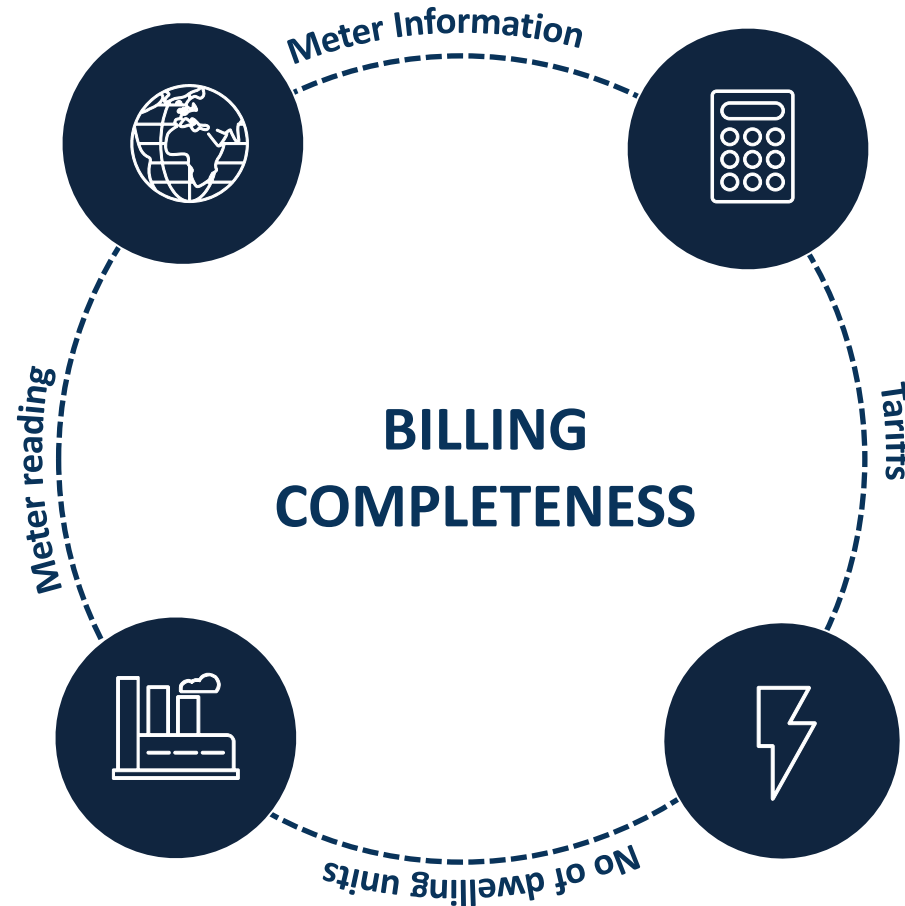
# Data Cleansing and Analysis

## PROPERTY RATES

- Valuation Roll
- categorization
- GIS
- Tariffs

## REFUSE & SEWER

- Field vs billing
- Tariffs



## PREPAID METERING

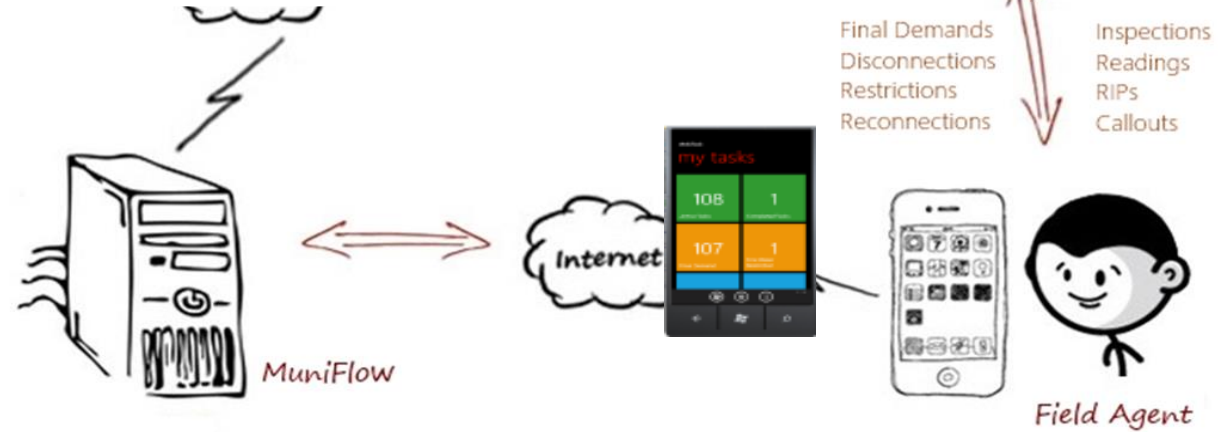
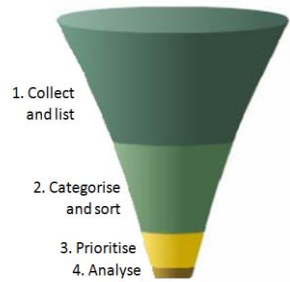
- Reconcile with billing system
- Ensure all meters linked to stand/account
- Baseline analysis
- Tariffs

## WATER & ELECTRICITY

- Asset verification/Field vs Billing
- Tariffs
- Type/size

# Asset Verification (Field Visits)

## Methodology- Data Collection And Comparison To Cbs





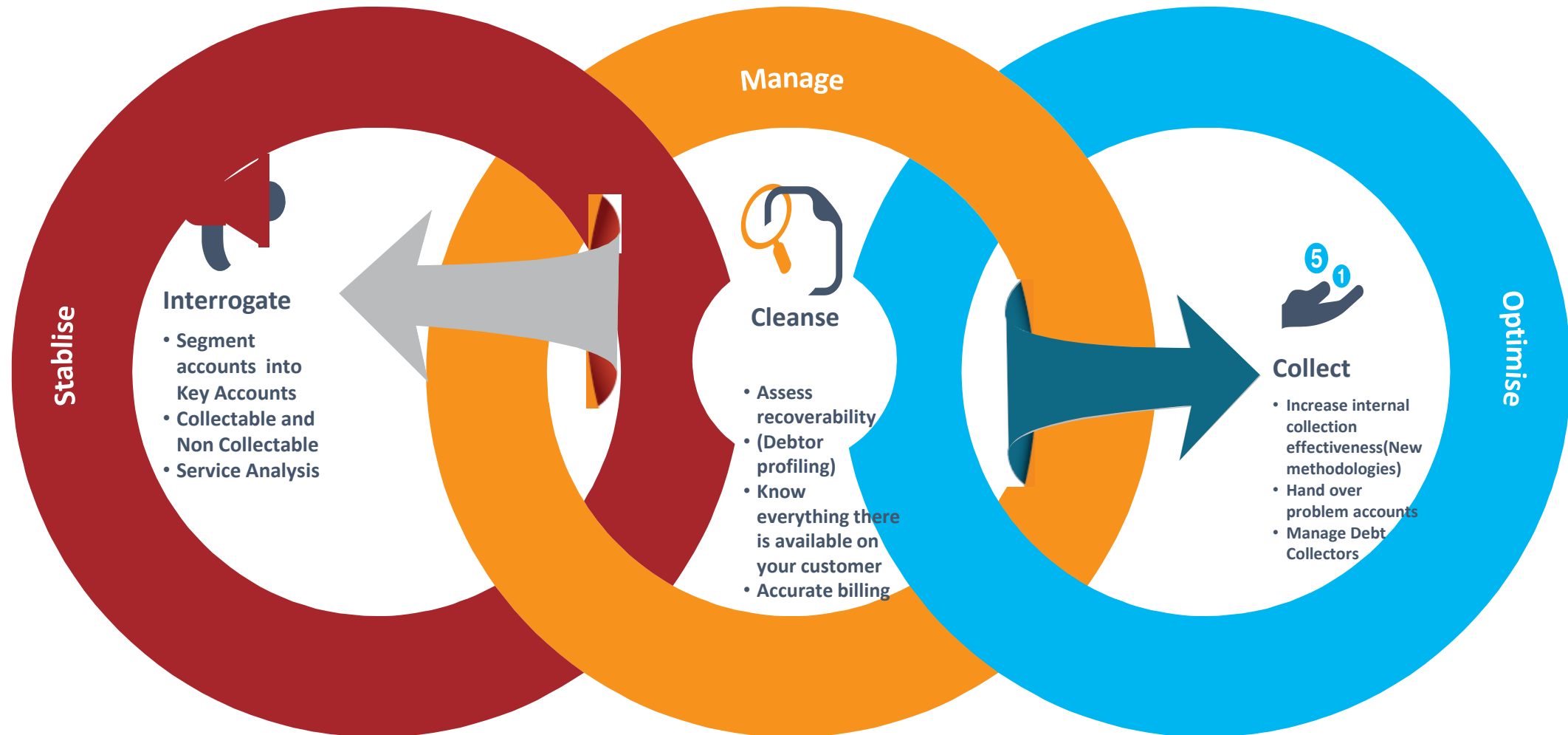
# DEBT MANAGEMENT



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# Debt Management Approach



Enhanced Customer Experience = Paying Customer



# The pressure applied must be progressive

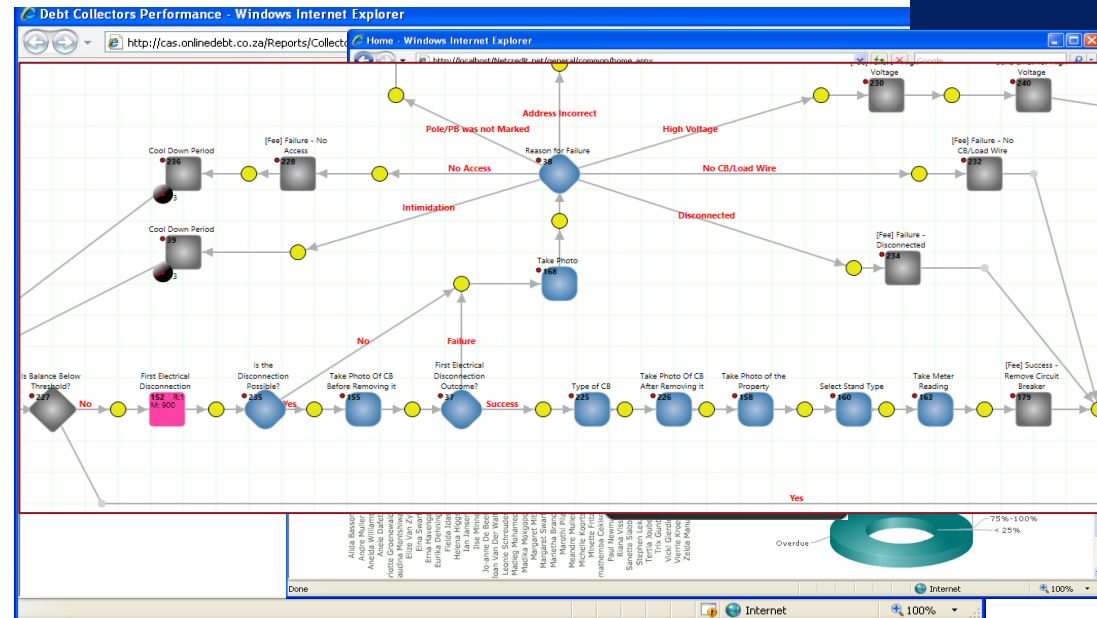
*“Creditors have better memories than debtors.” Anonymous*



Recovery	Litigation 120 DAYS LETTER OF DEMAND SUMMONS SALE IN EXECUTION	Pre litigation 60 TO 120 DAYS 45 DAYS CUT ELECTRICITY	Soft Collections 30 DAYS
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PRESSURE-DEBT COLLECTORS SPECIALIZING ON SOFT AND LITIGATION

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# REVENUE PROTECTION – *MULTI- DISCIPLINARY TASK TEAMS, SMART METERS, SMART GRIDS AND THE IOT*

WE NEED NEW DISRUPTIVE FORCES IN  
MUNICIPALITIES TO CHALLENGE THE CURRENT  
STATUS QUO. RPU CAN BE ONE OF THESE  
FORCES.

# The MDTT Approach includes:

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- A structured Revenue Protection Unit(MDTT) in municipalities should ideally consist of regional offices and field teams reporting to each office. The focus should be on reducing losses over the entire meter base.

The audit must be conducted by a team consisting of at least the following members:

- Team Leader (Managerial level);
- Finance Officers
- Electricians
- Plumber
- Plumbing Assistant
- Building Inspector
- Law Enforcement Officers
- Other Protection (If the situation dictates)





# Revenue Protection and Multi-Disciplinary Task Teams (MDTT)

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- The establishment of Multi-Disciplinary Task teams to audit sites is an effective means of combatting electricity and water losses as well as identifying properties where owners are not complying with town planning and land use regulations.
- It may be advisable to adopt a phased approach to creating the MDTT and establishing a pilot project would be advisable.
- The follow up action addresses the remedial field work identified by the initial audit, and therefore processes and systems should be in place to coordinate these actions and to ensure that all transactions are recorded in the financial and billing systems. These operations should be executed by a specialised remedial team responsible for the remedial actions.

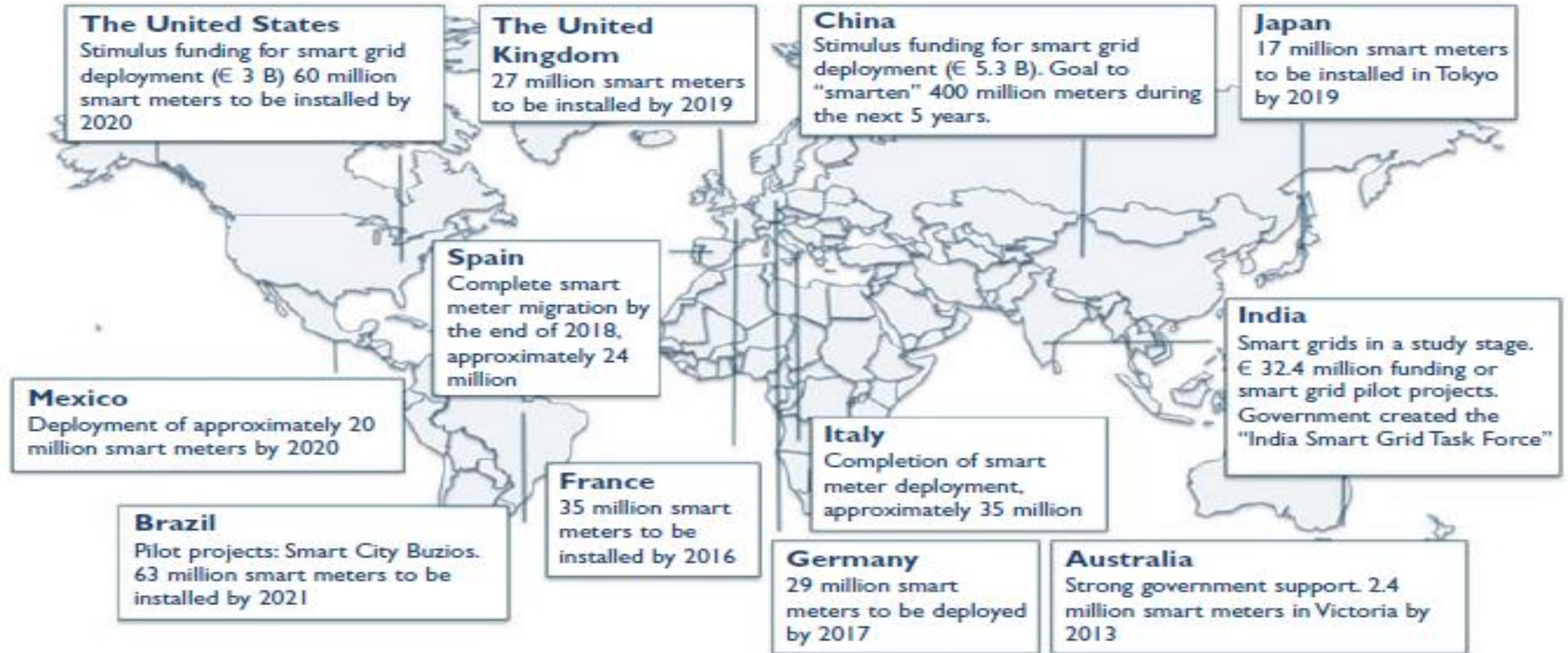


# Smart Grids and Smart Metering an Integral Part of Smart Cities

*How many municipalities have done their smart technology maturity assessment?*

- Provides customers with the information they require to become energy savvy and make smarter decisions about energy usage (CIU)
- Split metering, tamper sensing, remote fraud monitoring and events
- Smart meters enable remote auditing of meters –from the utility office
- Provides suppliers with the means to better understand and service their customers
- Distributors with an effective tool to better monitor and manage their networks
- Provides automatic reading, processing and transmission of metering data
- Remote disconnection and reconnection using smart meters (in smart post-payment mode)
- Possibility of bi-directional data communication in real-time
- Remote update of meter firmware to enable new services
- Load limiting made possible by smart and prepayment meters

## Figure 4: Smart Metering Projects



Source: Frost & Sullivan analysis

# Immediate Next Steps To Establish the RPU

- Political Buy-in & Approval of concept
- IDP and Budget provision
- Change in Organisational Structure –Unit should be independent reporting to the MM\HR Process
- Local Labour Forum buy in
- Policy Review
- Communication of concept (Internal and external)
- Preparation of draft Implementation Plan
- Documentation & information gathering
- Pilot project
- Monitoring and reporting - evaluate impact



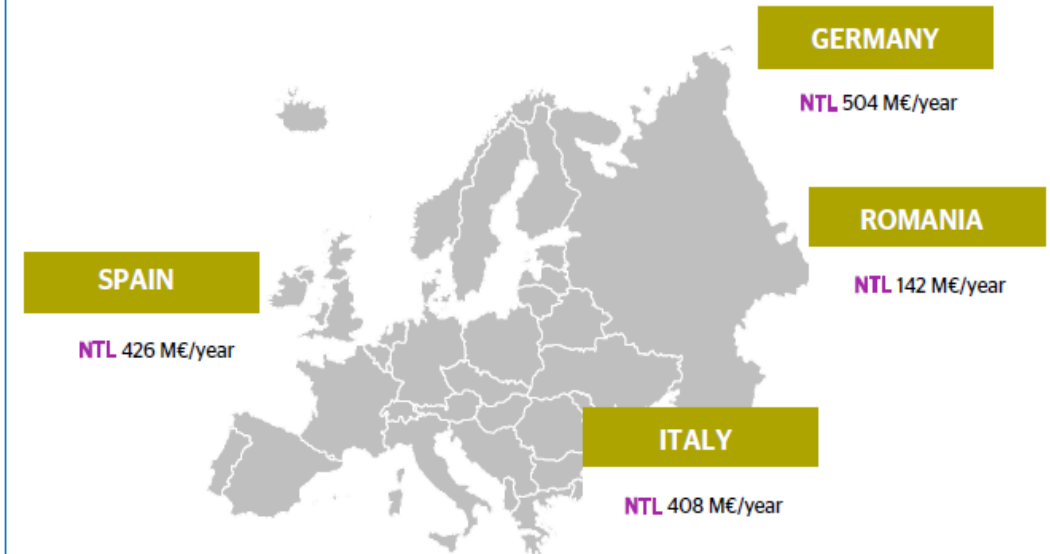
# Functions of RPU in a Command and Control Centre

- Establish a revenue protection program
- Conduct revenue loss detection audits including Big data analysis
- Conduct theft and fraud investigations
- Recover lost revenues
- Implement new Procedures, Policies and Standards
- Curb utility infrastructure theft and vandalism



## Power Non-Technical Losses (NTL)

(Source: Eurelectric 2011)



Electricity theft and other non-technical losses cost European utilities €3.7 billion annually

# Summary and Conclusions

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- Electricity and water losses are unsustainable and the cost of municipal services are becoming unaffordable
- Long outstanding debt needs to be recovered urgently by using innovative approaches
- The establishment of RPU in all municipalities to protect revenue and water and electricity losses is an urgent priority and managed and overseen in the CM'S office
- Provision for Smart cities and smart grid projects should be included in the IDP and Budget
- The improvement of metered consumption systems and billing accuracy can change the attitudes and willingness of customers to pay for services.
- The inclusion of Revenue Management KPI'S and targets in the Performance contracts of senior management should be an integral part of Revenue Management Strategy
- LET'S DO THE RIGHT THING





Contact Details:

Daniel de Lange

082 557 2064

[Daniel.delange@eoh.com](mailto:Daniel.delange@eoh.com)

*Thank you for your attention*

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