Using technology to Increase your Revenue

When technology is applied correctly revenue is **protected** and **Increased** through **Accurate** and **Available** data. The purpose of this presentation is to identify the problem and to present a solution where technology can be applied successfully resulting in high revenues with continuity.

Presenter: Hugo Götze – Chief Executive Officer.

Company: Motla Engineering (Pty) Ltd.

Background: Applying data auditing techniques through the implementation of technology for meter reading purposes, can increase your revenue by up to 28%

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Identifying the problem

Corrupt data

- Ownership of the data
- No communication structure between Municipality departments.
- Processes inadequately defined.
- No centralised management.
- Single point of accountability does not exist.
- No proper integration of municipal systems and databases
- Financial work around.
- Lack of training to address the problem.

Consequences

- Bulk Provision cannot be reconciled with consumption.
- Monthly billing far less than actual consumption.
- Inadequate budget to address the problem.
- Data integrity loss like cancer – just grows.
- Inadequate budget for service delivery.
- Perception of bad service – public.

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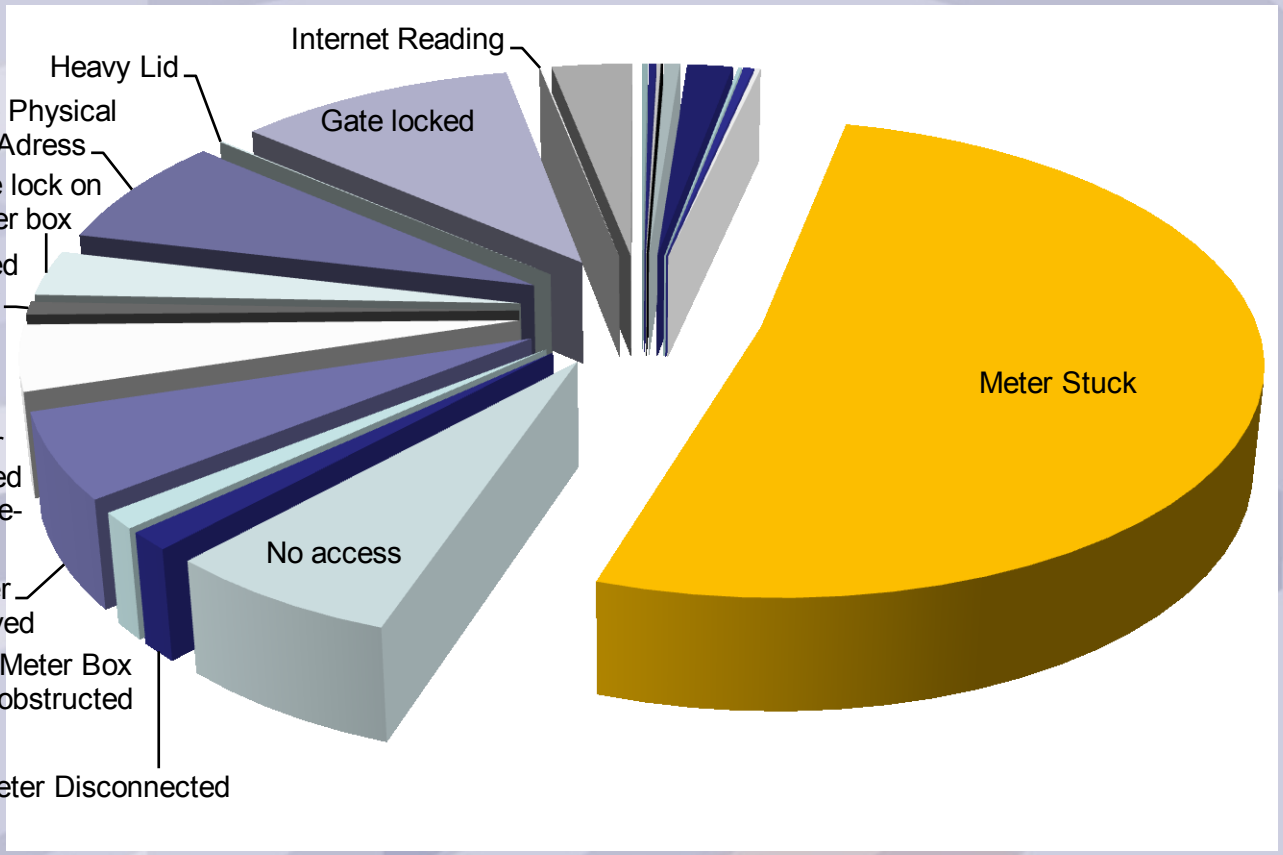
Electricity Meter Problems



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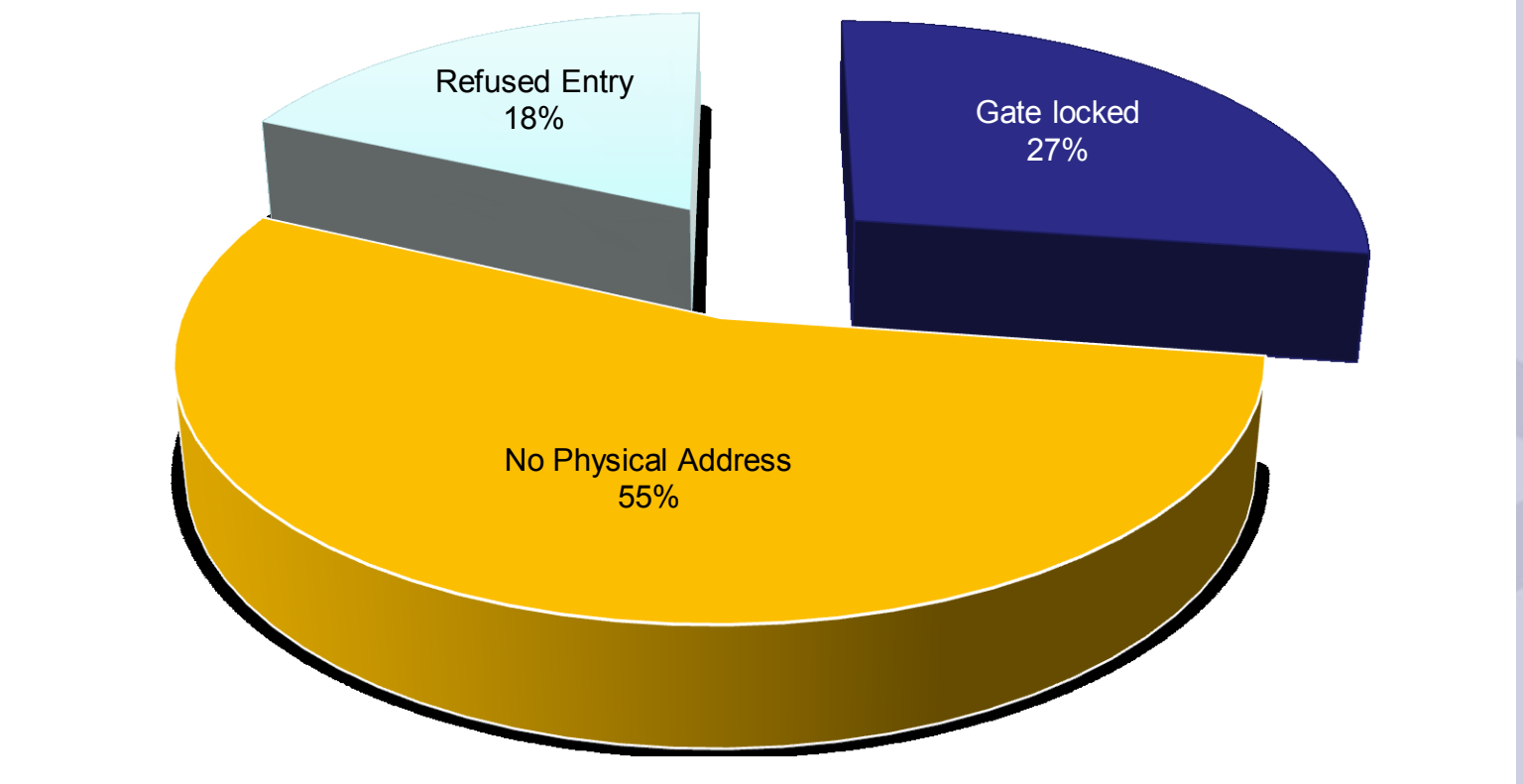
Problems Preventing Readings To Be Taken



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Real life example

Average actual figures from 4 municipality finance databases with 50,000 registered meters:

5.23% = 2615 – Incorrect or incomplete information on database.
3.44% = 1724 - Meters replaced but not updated on database.
9.17% = 4589 - Interim consumption or interim readings used.
5.58% = 2790 - Meter stuck or disconnected.
1.76% = 880 - New meters not registered in finance database.

This equates to a yearly loss of more than R50 million.

More than 25% of the data was manipulated and is inaccurate

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Step 1 : Implement Policies and Train Staff.

- Create a Revenue Management Department
- Define your targets and plan to get to these targets
- Define your plan in terms of achievable goals
- Define policies
- Train staff on all levels from management to labourers
- Implement suitable software. Change software if necessary.

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Step 2: Audit your finance database

- Perform field audit of all meters
  - Correct and complete address Information
  - Meter number, size, manufacturer, reading and tariff applied.
  - Meter types – domestic / bulk.
  - Other meters on stand.
  - GPS location of meter.
  - Registrar and town planning records on stand.
  - New developments
- Apply audit to database
- Link to GIS system

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Step 3: Apply technology to overcome losses and to maintain data

Technology 1: GIS – Location of the meter

- Using GPS coordinates for each meter
  - Keep coordinates in the database
  - Meter reader can always find the meter
  - Reading can only be captured at location
  - Maintenance teams can find the correct meter to replace.
  - Meter location can be viewed on Google earth
  - Link maintenance or reading vehicle tracking with GPS point

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Step 3: Apply technology to overcome losses and to maintain data

Technology 2: RFID Tags – Identify the meter accurately

Install RFID tags on all meters

- Permanent fixture even when meter is removed
- Write full history on tag
    - Meter no, Address, Installation date & time, name, size, type etc.
- Update tag monthly
    - Monthly reading, date & time, company, reader name etc.
- Update with audit history
    - Write auditor name, date & time, reading etc.
- Tag can be read from 3 meters distance or closer if meters are in a cluster.
- Ensures database integrity

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Step 3: Apply technology to overcome losses and to maintain data

***Technology 3: Work Flow Systems* - Less human intervention = More reliability**

- Take the human factor out of the equation to a large extent.
- All work instructions traceable and therefore better manageable.
- Communication between departments guaranteed
- No work can be left undone.
- Access can be limited and therefore accountability can be given.
- Central management of data and instructions can be achieved.
- Electronic works orders (no paper)
  - Works order on handheld with GPS & RFID capabilities
  - Read meter data and shed data from old meter.
  - Installed meter data read from RFID tag after installation
  - Write old meter data onto new meter
  - Only readings to be captured by human

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Step 3: Apply technology to overcome losses and to maintain data

Technology 4: Integrity Assurance Systems

- Implement truly identifiable seals with electronic identification capability such as bar-codes.
- Seals must have unique numbers and the issuing thereof must be captured on the system. This way the responsible person can be identified.
- Meter readers can seal meter boxes every month and scan the seal details onto the database to be checked again next month.
- All seals can be electronically scanned monthly and any changes will either red flag a change to the data or tampering, then triggering an audit.

Step 3: Apply technology to overcome losses and to maintain data

Technology 5: Internet - Public Participation

- Provide meter and billing history services online
  - Enable consumer to enquire into reading history on the web
  - Enable the consumer to check his meter data and suggest corrections
  - Submit readings on the web.
  - Submit readings over sms service.
  - Purchase Pre-paid electricity with an sms.
  - Log meter problems on the web and through sms.
  - Get access to readings schedules and information.
  - Educate consumer to take responsibility.

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High return on Investment

Cost to income recovery relationship is very high

- Cost is relatively low and can be budgeted over an extended period
- Non technical losses minimised
- Long term solution with relative short term investment
- Customer satisfaction and trust

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Summary

- Councils do not realize the extent of the problem
- All finance databases needs to be audited.
- Budget cannot be used as an excuse
- Adopting this strategy guarantees recovery in the long term
- Many other advantages such as:
    - improved technical loss management
    - improved communication with consumers
    - improved maintenance management
    - improved productivity
    - reduced stock levels
    - pro-active maintenance now possible
- Customer satisfaction
- ***INCREASED REVENUE***

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THANK YOU

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