



Smart is Here!

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manage energy better

The famous Africa at night picture



This image represents different things to different people.

So why is it here!!!!!!!!!!!!

- To this conference it means \$\$\$\$\$
- Energy generation opportunities
- Energy metering opportunities
- Smart metering innovations which were lying dormant for quite sometime

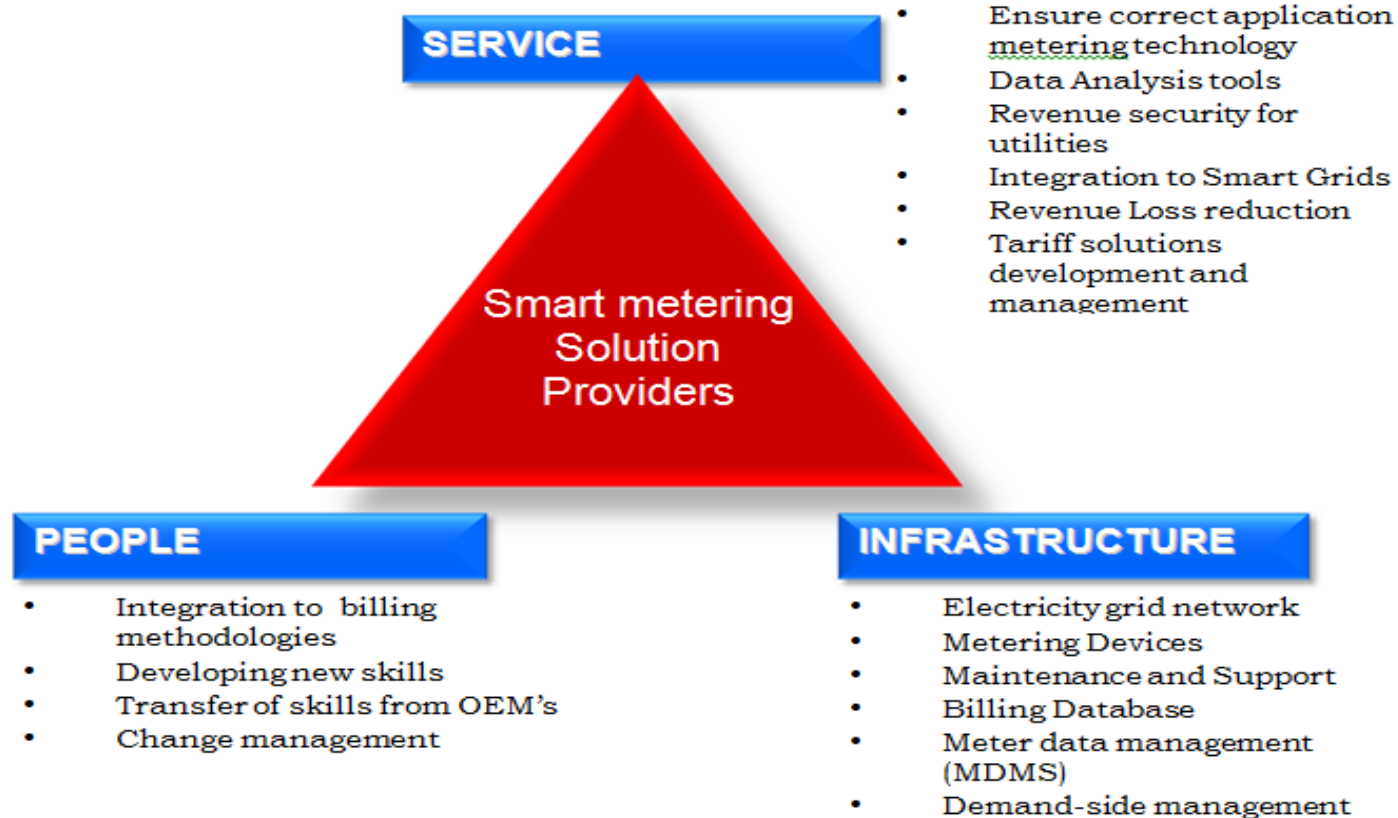
- In 2002 there were **49m** mobile devices in Africa
- In 2012 there are about **500m** mobile devices in Africa
- First mobile device in 1973 costs \$3995.00
- Current average cost of mobile device in Africa is about \$15.00
- Prepaid cell phone first developed in Africa
- MPESA – revolutionised East Africa non-banked sector
- Prepaid metering first pioneered in Africa and played key role in electrification drive



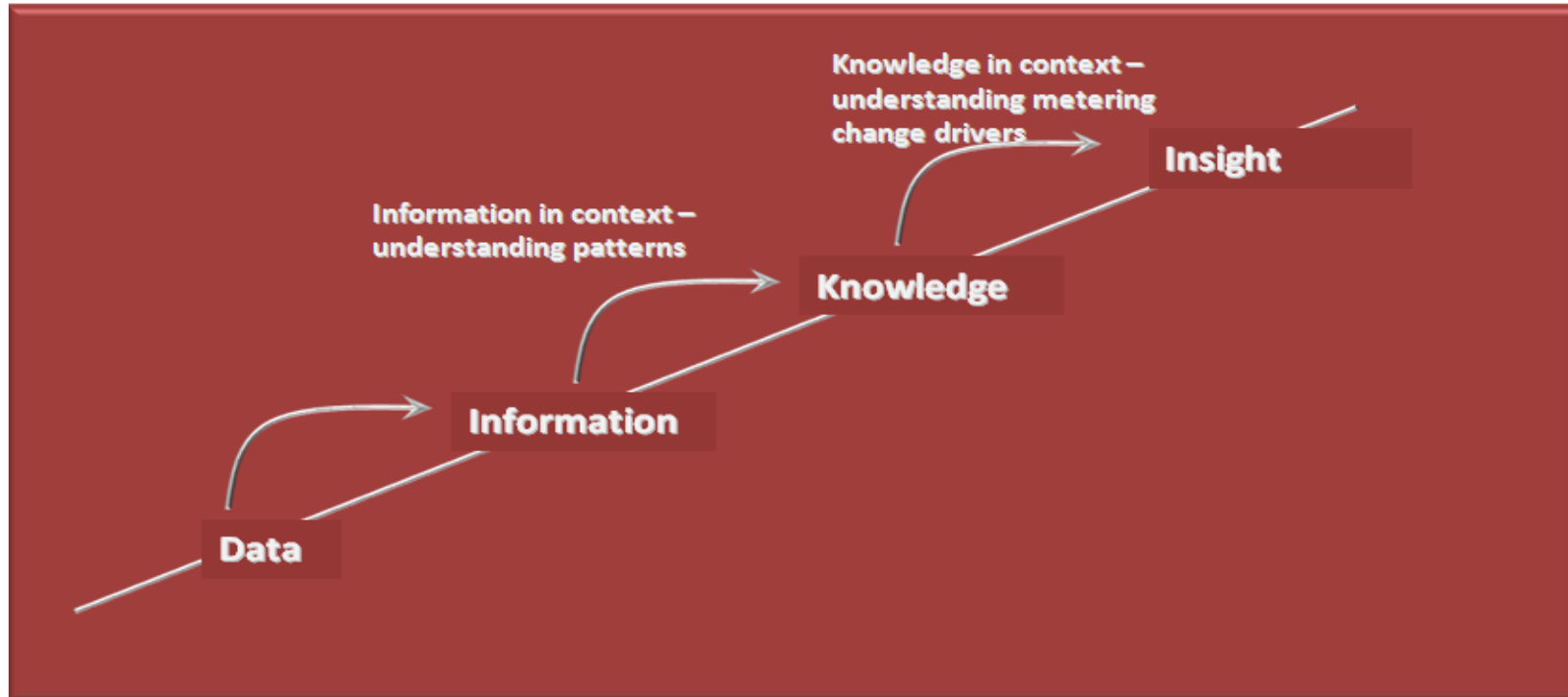
What comes next for Africa metering

- Do we understand what Africa means by smart metering?
- What have we learnt from the success of the telecom mobile sector?
- How do we make smart metering devices and solutions affordable thus accessible to utilities ?
- Do we understand why TOU if customers can't shift load also do we even need TOU at this point in time?
- Do we need demand response with customer incentives as opposed to TOU?
- Are we designing smart metering devices and solutions for Africa with a touch of innovativeness or are we just saying
“It worked in Europe and USA so it must work in Africa’

Suggested solution approach

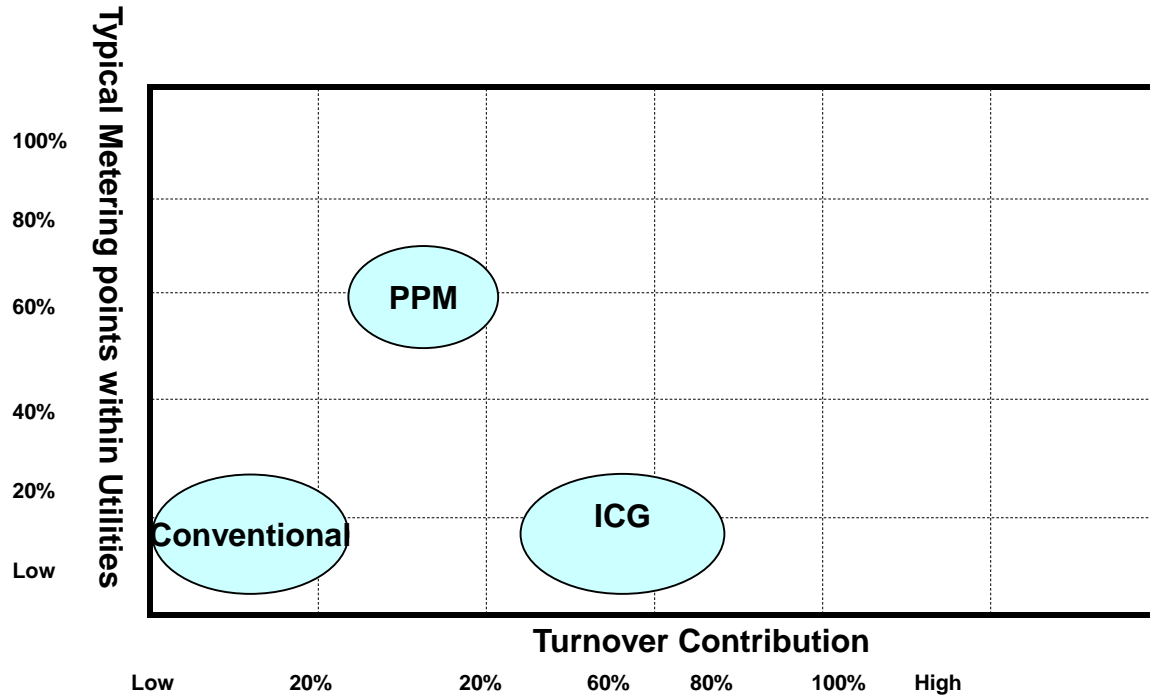


Suggested Solution approach cont.....



It is imperative that we understand what drives African utilities smart metering initiatives and impact of standardisation

Current Metering Trend Analysis within African Utilities



Remarks:

- The figures given are typical of total turnover patterns per type of metering methods within African utilities
- Prepayment is increasing driven mainly by electrification initiatives and also convenience i.e. affordable to deploy and upfront cash flow benefits it brings to utility
- Conventional type Smart Metering Solutions has huge growth potential but deployment costs are currently high
- ICG meters if well managed contribute a bigger portion of utilities turnover. With growth in African industry and commercial sector these metering sector must be smart AMR to secure utilities revenues

Solution Overview

The AMI solution offering is a complete end-end system, from Meter Data Management systems, to head-end systems down to the metering and load management components:

- Meter Data Management System
- Smart meter management systems
- Three Phase meter for point-point communications
 - In Home Display
- Work order management system (for installations and maintenance)
- Data Concentrator (for smart meters and LM)
- Three and single phase smart meters
 - In-Home Display/s
- Remote Load Switches
- Hybrid Load Switches (for both PLC and ripple systems)
- Load Management and Ripple Control (where existing)

In-Home Displays



Overview

Designed to inform and educate customers,

Empowers the customer to be in control of their energy usage and enables them to manage energy better.

Needs to be integrated to other existing customer communication platforms like SMS etc.

Benefits

- The customer can view the current and historical data usage such as total daily consumption, consumption during the last 7 days, the last 28 days and the last 12 months
- Consumption statistics are provided by bar graphs
- Demand indicators offer the customer a quick way to monitor how much energy is being used around the home
- AMI system can send a text message to the consumer IHD

Data Concentrators



Product Overview

The Data Concentrator manages communication between the AMI system and the smart metering devices and also the load management devices

Benefits

- The concentrator reads metering data automatically and stores meter data for later retrieval by the metering system
- The concentrator communicates with the metering devices via a power line network using various protocols
- Transfers messages to and from the AMI system using the standard TCP/IP communication protocol with its pluggable GPRS/UMTS modem or internal Ethernet port and various protocols

Industrial, Commercial & Grid (ICG) Meters



Solution Overview

The AMR / ICG solution offering is a complete end-end ICG solution, from Meter Data Management systems, to head-end systems down to the ICG metering components:

- This is where utilities can implement Smart AMR solutions with shorter turn-around on ROI
- This systems must at the heart of implementation, offer customers web access
- They can be used effectively by customers to project energy usage
- Utilities can use the smart AMR to facilitate efficient and effective online bill presentment and payment thus improving utility cash flow and financial stability.

Meter Data Management System



Product Overview

An MDMS and Head End System solution connects all of existing different data collection points, interfaces, and other systems together in order to create usable and accurate data for revenue and systems planning and billing. This is critical for efficient and financial management of any utility

Designed to enable utilities to manage their energy better and to enable smart grid

Benefits

- A common integration point, common source of validated data – a source for sending metering alarms
- Interfaces with multiple head-end and other external systems
- Data validation engines to provide highly accurate billing data
- Command & control for on-demand meter reads, remote disconnect and connect and much more....
- Creates an organisation view platform from the perspective of “meter-cash”
- Integrates into CRM and Billing systems
- Accurate real-time energy consumption, event and power quality information from external systems

- As shown at the beginning of this presentation there are huge smart meter opportunities in Africa but we will have to :
 - ✓ Make the solutions innovative and affordable to increase accessibility
 - ✓ Find innovative ways to meet African utilities requirements
 - ✓ Think about inter-operability
 - ✓ Secure funding to roll-out these smart meter solutions while continuing with existing electrification initiatives



THANK YOU