

deect

wireless technology



DECT NR+ Webinar Series

28 November 2024





DECT NR+ webinar series

- Welcome from the DECT Forum
- Speakers today:

- Nathan Savage



- Joseph Wamicha



Some notes

- The presentation will take around 30 minutes
- Questions:
 - Can be asked by using the 'Questions' button in the bottom righthand corner
 - Following the presentations we will answer as many of the questions as possible
- The webinar will be recorded and made available to all who have registered
- FAQ page: <https://www.dect.org/news.aspx?id=390>



Metering Solutions for Africa: “Alternative to PLC and Cellular Technologies”

Who we are



- Located in Cape Town, South Africa
- Assisting Customers with their Metering Strategies
- SustainTech—Technology developer and Systems Integrator

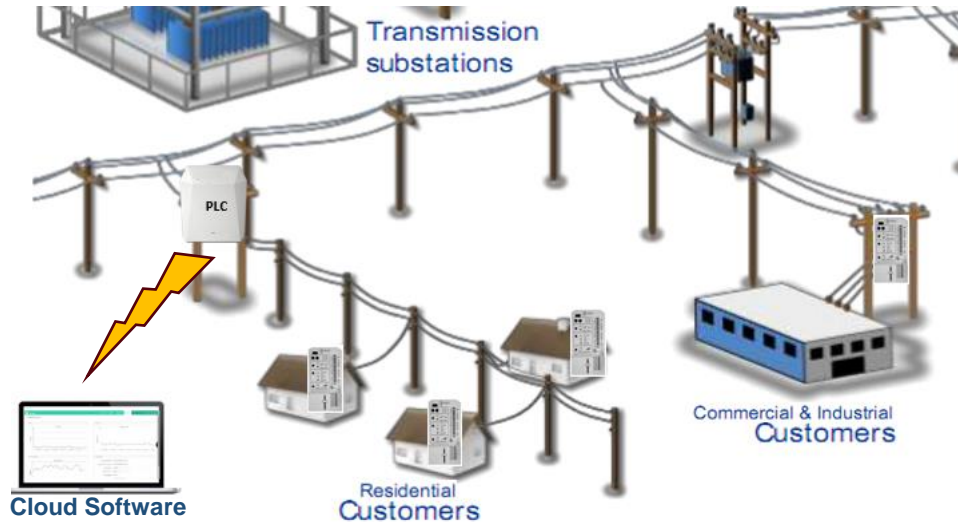


Some humour to start us off!!

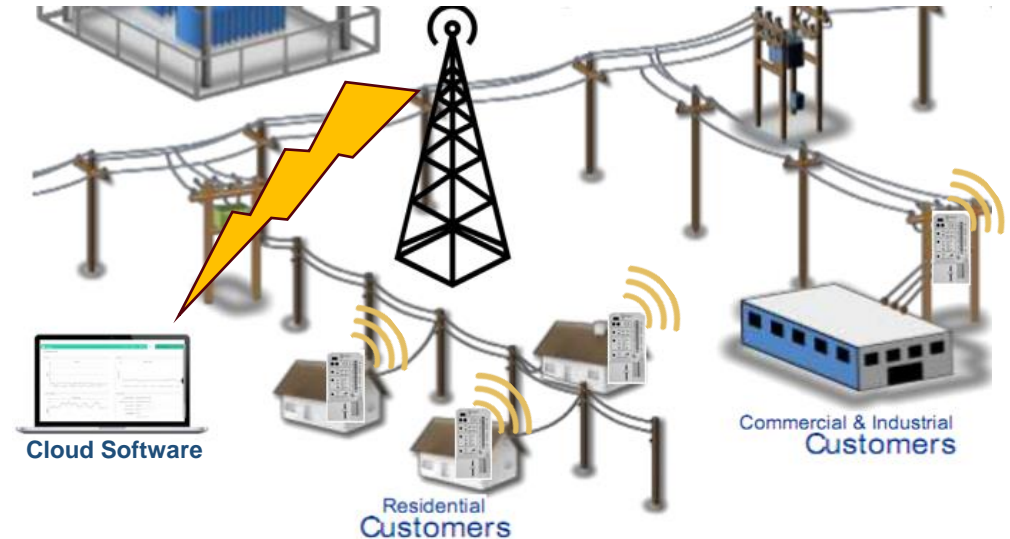


- No Magical Solutions.
- Predominant Technologies in Use in Metering in Africa are PLC (Power Line Carrier) & Cellular.

Typical PLC Network

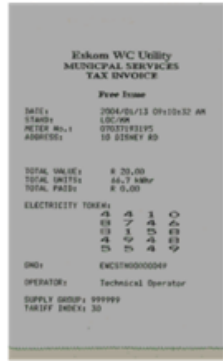


Typical Cellular Network



Meter Technologies

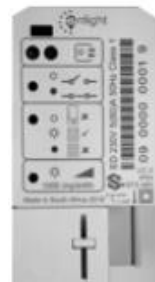
- Prepayment Metering



- Split Metering



Customer Interface Unit (CIU)



Metering Control Unit (MCU)

Typical Meter Installations

- Pole Mounted
- Kiosk
- In the home



The GOOD

- PLC and Cellular have great adoption in the market
- Technologies are proven and deployed in millions of Devices
- Both technologies allow automated transmission of meter data

The BAD

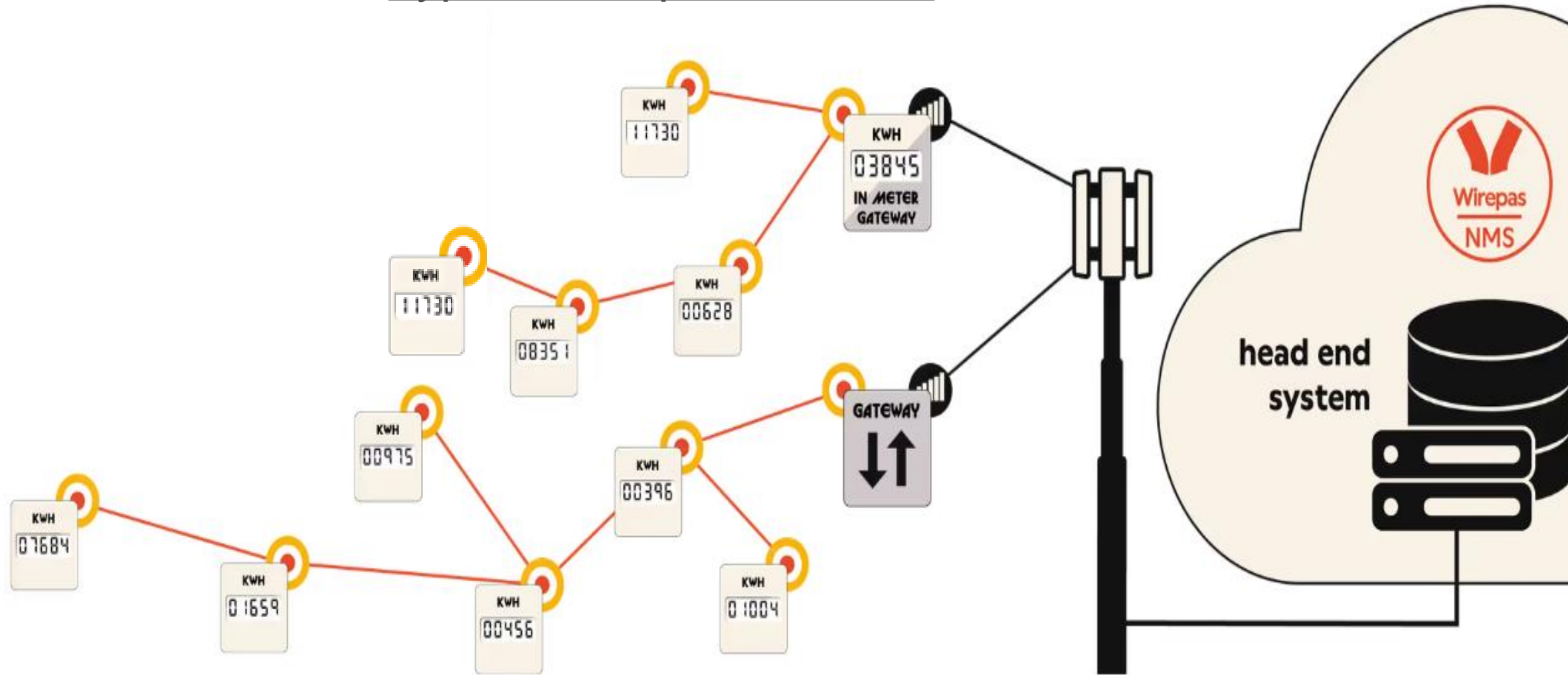
Cellular

- Each cellular meter requires a SIM card.
- Sim cards are a nightmare to manage for utilities. Lost/stolen/data costs.
- Black Spot areas where there is no communication coverage.

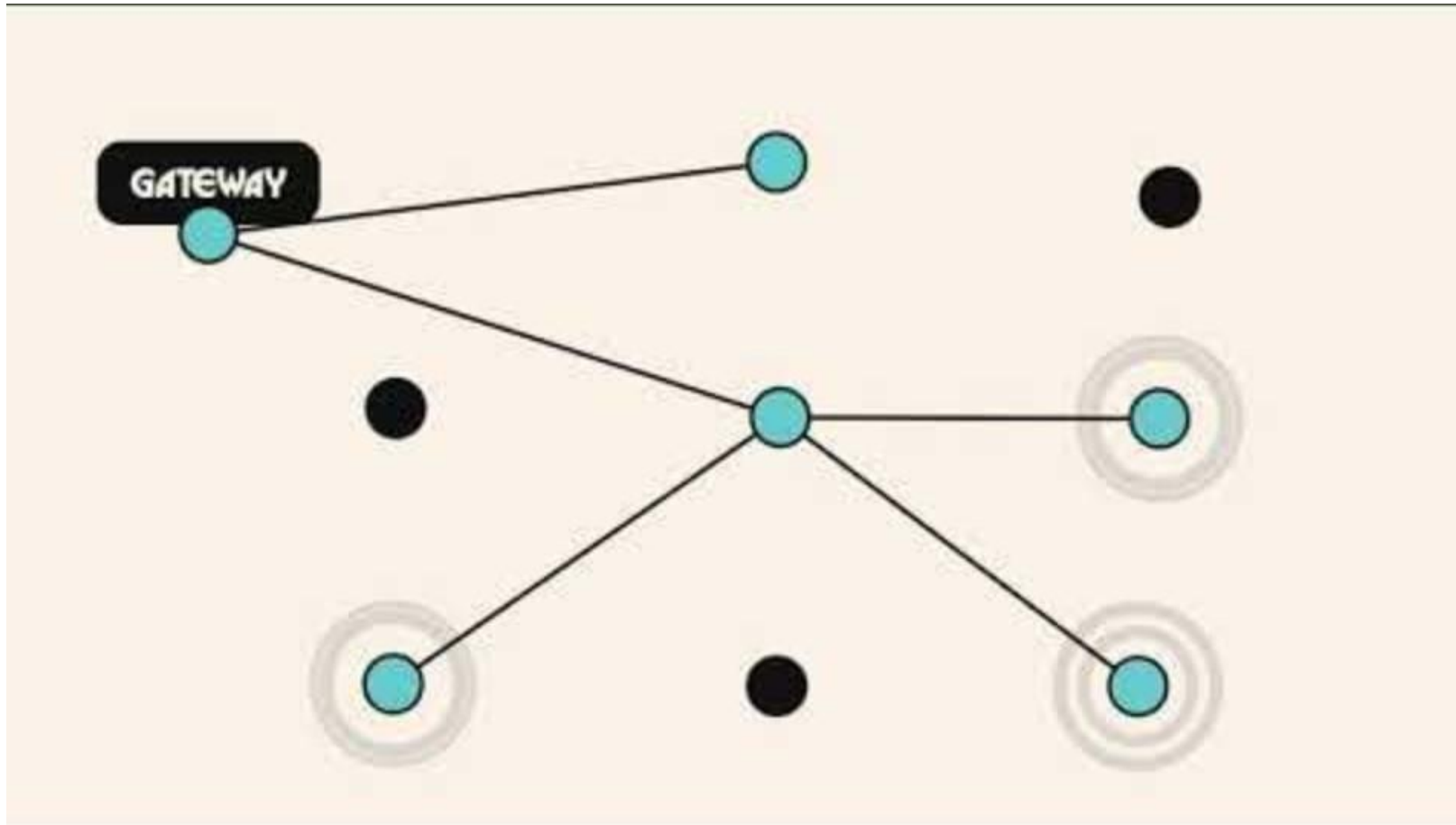
PLC

- Majority of utilities in Africa suffer power outages. PLC does not work well under those conditions.
- Renewables/small-scale embedded generation affects PLC comms.
- DCU quantity is high affecting the overall cost of implementation

Typical Wirepas Network



How it works!



Product Portfolio

1 Our Product Overview - Hardware

Dani M1

In prepaid meter upgrade to a smart meter for effortless tracking of energy usage and automatic token top-ups after purchase.



Dani G1

Transform your geyser into a smart device to optimize energy consumption, reduce costs, and enhance convenience with automated on/off switching tailored to your needs



Cona M1/MR1/MP1

Instantly upgrade meters to smart meters for real-time energy consumption tracking and automatic top-ups tokens after purchase.



Cona N1

Get instant access to inverter data for precise monitoring of energy usage, storage, and production.



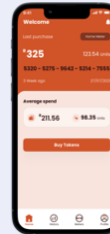
Cona G1

Transform your geyser into a smart device to optimize energy consumption, reduce costs, and enhance convenience with automated on/off switching tailored to your needs



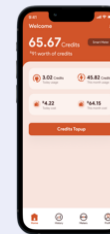
Pawa Ne Prepaid

A convenient app for purchasing energy tokens directly from mobile devices, allowing users to track their energy consumption based on purchase patterns.



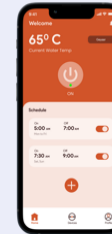
Pawa Ne Smart Prepaid

Get instant notifications for low balance and purchase tokens that are automatically injected, all while monitoring your current balance and daily energy consumption hour by hour through the app.



Pawa Ne Geyser

Remote control your geysers, schedule heating, and receive real-time usage insights to optimize energy consumption and reduce electricity costs.



Pawa Ne Dashboard

The Pawa Ne dashboard enables property owners and municipalities to track energy consumption across all users and provides control over geysers.



Pawa Wise

Get comprehensive insights into energy consumption patterns, enabling effective tracking of usage, accurate monthly bill predictions, and informed decisions to enhance efficiency and reduce costs.



Wirepas RF Mesh Technology:

- Over 10 million devices deployed globally.
- Proven in areas with limited network coverage.

South African Deployment Example:

- Integration of Non-Cellular 5G Mesh (DECT NR+) in DIN rail prepayment meters.
- Operates at 21 dBm transmit power with 1 Mbps bandwidth and up to 2 km connectivity.
- One gateway supports data from 1,000 meters with one-minute block readings.

Special Use Case:

- Geyser Control for Demand Side Response - Developed for private utilities in South Africa.
- Remote switching via RF Mesh for prepayment meters.

A gateway with NIC cards in DIN Rail Box;
RF Mesh in NMS;
Geyser control Device

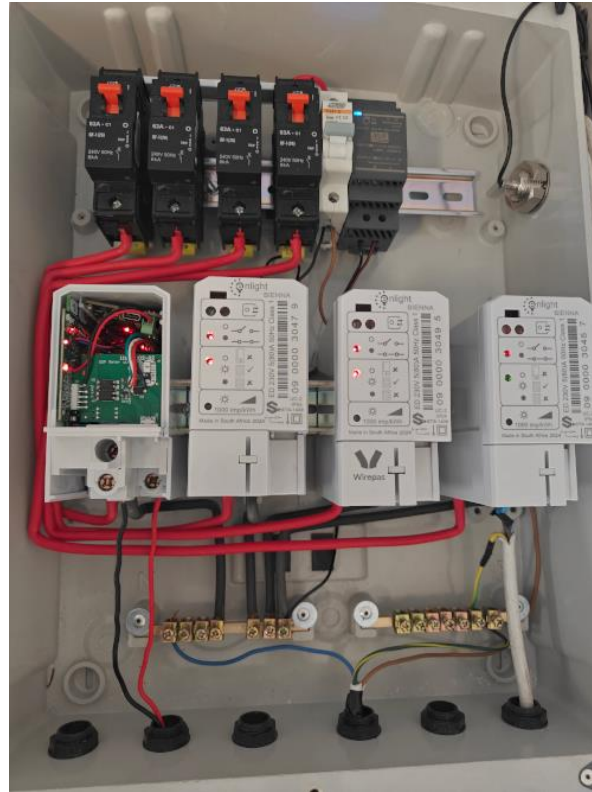




RF mesh Topology in Network Tool with Comms parameters for Monitoring purpose



The Projects



- Projects Q1 2025
- Public Municipalities
- Private utilities
- Utilities in South Africa
- Outside of South Africa

Meter makes to be integrated with



THE END

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