Finding your customers to reduce losses
A Case Study

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The challenge

▪ Nigerian Power Sector privatised in 2012
▪ New owners of one of major DISCO’s met with stark reality
  – 56% Accumulated Technical Commercial & Collection Losses
  – ~700,000 customers in billing & vending systems
  – Only ~500,000 shows activity
  – Anticipate more than 1,000,000 consumers on network
The challenge cont.

- Unmetered customers @ 65%
- Direct billing
- Marketers
- Shared Accounts
- Untidy networks & poor data
The challenge – infrastructure
Solving the problem - Where to start?

- At the people using your service
- Where are they
- How do they connect to the network (CNL)
- Are they paying you
- Are they paying you enough

Utility does not have the correct information on their customers and networks to launch any kind of loss reduction initiative
Property

Supply Point

Consumption Information

Network

Customer Information

Address Information

Meter Information
Broad Project Scope

- Capture all utility point of connections
- Clean slate approach
- Collect details on location, building, connection, customer
- Pre-requisites - Meter number (prepaid) and account number (post-paid)
- Paperless
Logistics

- **Requirement:**
  - 1.1 million sites over 24 months
  - 60 data items per site
  - Revisits (10%)
  - Distances to area of work
  - 6 hours productive field time/day

- **Field:**
  - 126 field teams (252 people)
  - 7 teams/platoon = 18 platoons
  - 9 busses
  - 126 mobile devices
  - Data

- **Office**
  - 42 back office data technicians
  - Desktops
  - Data
Project Dashboard

Field Application

Work Specification

Call Centre

Quality Assurance

Spatial Modelling

Bringing ideas to life
Mobile App
1st Quality Assurance
# Work Specification

## New Record Job Card

<table>
<thead>
<tr>
<th>Id:</th>
<th>21320</th>
<th>Enum Number:</th>
<th>12620</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related Job Cards:</td>
<td>21304 - Enumeration; 21321 - RT Investigation Job card; 213 Job card</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billing Customer:</td>
<td>TRUE</td>
<td>Vending Customer:</td>
<td>FALSE</td>
</tr>
<tr>
<td>State:</td>
<td>FCT (FEDERAL CAPITAL TERRITORY)</td>
<td>Region:</td>
<td>FCT SOUTH</td>
</tr>
<tr>
<td>Area Office:</td>
<td>LUGBE</td>
<td>Service Center:</td>
<td>LUGBE TUDUI</td>
</tr>
<tr>
<td>Street Name:</td>
<td>BESIDE ROCK OF CHRIST</td>
<td>Street Number:</td>
<td></td>
</tr>
<tr>
<td>Premise Name:</td>
<td>BESIDE RESTORATION</td>
<td>Premise Category:</td>
<td></td>
</tr>
<tr>
<td>Premise Type:</td>
<td></td>
<td>Building Name /</td>
<td></td>
</tr>
<tr>
<td>Unit Name:</td>
<td>0</td>
<td>Floor:</td>
<td>1</td>
</tr>
<tr>
<td>Linked POC No (Vending):</td>
<td>9.000800262</td>
<td>Linked POC No (Billing):</td>
<td>7.368465498</td>
</tr>
<tr>
<td>Lat:</td>
<td>9.000800262</td>
<td>Long:</td>
<td>7.368465498</td>
</tr>
<tr>
<td>Connection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># Phases</td>
<td>1</td>
<td># Phases Connected</td>
<td>1</td>
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<tr>
<td>Supply TRF Name:</td>
<td>OPEN FIELD S/S</td>
<td>Connection Type:</td>
<td>Overhead</td>
</tr>
<tr>
<td>Feed Number:</td>
<td>3</td>
<td>Pole Number:</td>
<td>8</td>
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<tr>
<td>Connection Billing Type:</td>
<td>Un-metered</td>
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<td></td>
</tr>
</tbody>
</table>

## Account

- Occupant Name: NIL
- Occupant ID Number: NIL
- Contact Mobile: NIL
- Contact Other: NIL
- Gen Kva: 5.5
- Occupant Role: LANDLORD
- Account Name: ABDUL AZEEZ
- Account Number: 988384202001
- # Occupants: 1
- Shared Account?: FALSE
- Existing Tariff: R2
- Recommended Tariff: R2
- Linked Account ID (Vending): NIL
- Linked Account ID (Billing): NIL

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### Specific Instructions

Add Customer to Billing System

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### Photos

- Image 1: Electrical panel with wires and switches.
- Image 2: Close-up of a label with numbers and text on a wall.
- Image 3: A document with handwritten notes and a barcode.
Management Dashboard

Congratulations on reaching 1,000,000 unique enumerations!

1,008,357
Total Unique Enumerations

930,305 (92 %)
Successful Enumerations
688085 with no meter(s) (68 %)

78,052 (8 %)
Total Notices

4,219 (0 %)
Total Suspected Tampering

13,261
Total Distribution Transformers

Platoon K

CLICK AND DRAG IN THE PLOT AREA TO ZOOM IN

Day of Enumeration

Enumeration Count

0 25 50 75


fe k1 fe k2 fe k3 fe k4 fe k5 fe k6 fe k7 fe k8

Reset zoom
Spatial Modelling
Notice 0061954
Customer not available

Premise
Premise Name: Angwa Sarki
Location: 8.8945015310751.7.57304649800062.0m
Street Address: Na
Outcome to date

- 930,000 fully completed enumerations
- 290,000 shared accounts (~200,000 new customers)
- 688,000 customers not metered
- ~15,000 incorrect tariffs
- ~15,000 hand written accounts
- ~500 people reported paying marketer
Key Take Away

- Role of systems
- Maximise value
- Quality assurance
- Value of photos
- Mobile phone technology

- Web based approach
- Fixed Site Reference (PoC)
- Customer sensitisation
- Accurate CNL has advantages beyond revenue protection
- Responding to findings
Thank you