Revenue Protection Unleashed:
End-2-End Solutions Utilizing Prepayment

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1-4 Oct 2018
Revenue Protection unleashed: End-2-End Solutions utilizing Prepayment - Agenda

- Introduction:-
  - Prepay Trending and Introduction
  - Todays Prepayment Society
  - Revenue Protection
- Definitions:-
  - Prepayment, Revenue Protection, Thin & Thick Prepayment
- Key questions to be addressed today?

- Honeywell’s Utility Prepayment Systems.
  - Connexo Prepay - Intro
  - Water Prepayment
  - Electricity STS Prepayment

- Revenue Protection System

- Connexo Prepay and Revenue Protection Analytics
  - Connexo Prepay Overview
- Communication Technologies and there impact.
- Revenue Protection Principles

- Summary
Introduction
Worldwide trending of prepay energy & water

Running in over 40 countries for years

- **UK**: 13% of customers in the UK prepay for their energy (Accenture)

- **South Africa**: Over 6 million people pay before they use energy and water.

- **South-East Asia**: Over 60% use their mobile phone to pre-pay for energy (Papua-New-Guinea)
  Indonesia deployed STS prepayment over 20 million units
Benefits to Utilities of Prepayment

- Establish a better customer experience
- Achieve an improved cash flow.
- Easily manage debt and recover old debt
- Manage customer move-in/outs
- Avoids having to charge high fees upfront and/or writing off non-paid regular bills.
- Through Prepayment securely and accurately charge your customers upfront.
- Prepay solutions can be integrated with your current billing system,
- Provides immediate and timely data for finance and General Ledger.
- Assist in Revenue Protection activities
- Flexible, adaptable tariffs and price models
- Greater transparency of consumption and costs
- More flexibility with debt reduction and recuperation
- Ability for online customer engagement (warning, alerts, campaigns, coupons)
- Easy, customer friendly top-up across many channels, incl. applications
- Quick to deploy with limited investment & hassle-free account mgmt. for customers
- Easy servicing and engaging of customers

- Drive Revenue Security
- Provide a stronger P&L
- Realize Efficiency Gains
- Reach new customer segments
- Drive customer behavior through incentives
Todays Prepayment Society

• Prepayment is everywhere in our society.

- Mobile Phones
- Rent
- Medical Aid
- Insurance
- White Goods
- Groceries
- Car Fuel
- Etc….

*We pay before we receive
or consume a good or service!*
The Key Questions to be explored today?

1. How can Honeywell’s prepayment solutions help in revenue protection?

2. Can adoption of new communications technology and Honeywell e-2-e prepayment solutions assist in attaining this objective?

*source: Northeast Group, LLC, May 2017

“Electricity Theft and Non-Technical Losses: Global Market, Solutions and Vendors.”
Definitions
Definitions

- **Prepayment** - payment made before a good or service is received or consumed, or before a debt becomes due.
  - Thin Prepayment – Smart Meter including control device (Valve or Contactor) with 2 way comms with back office system driving the prepayment solution.
  - Thick Prepayment – The credit handling Intelligence is in the meter hardware that dispenses for the utility and applies the tariffs. Payment (Credit) tokens are entered into the meter locally or remotely.

- **Revenue Protection** – Utility activities that ensure losses are minimized from a revenue or cost perspective.

Prepayment is Moving towards 2 Way Smart Solutions (both Thick & Thin)
Honeywell's Prepayment Solutions
Connexo Prepay Solution

Key Business Processes

1. Meter Read File Processing
2. Meter Control Provisioning
3. Notification Message
4. Customer & Account Management
5. Top up via Vending / Payment processing
6. Reporting

See Demo Stand 5e – Ronald Hermans
Legacy Water Prepayment Solutions

Two main solutions

- STS Customer Unit via local RF link into Water Controller.

- Dallas Tag
Customer Tops up at store or on-line and token generated by STS approved vending system

Vending Infrastructure
Connexo Prepay & Revenue Protection Analytics
Connexo Prepay

HONEYWELL APPLICATIONS

- Multi-vendor data collection
- RF mesh data collection
- Data management

PARTNER APPLICATIONS

- Prepayment
- Utility analytics
- Utility security
- Other

Connexo Pulse

- System administration
- Business process modelling
- Report design

MDC/MDM in a single user interface
Plug-in with partner applications
Standards based
Any data source
Any device and sensor
RF mesh, GPRS, LPWAN, NFC & powerline

Multi network
Multi device
Multi source
Connexo Prepay Examples

Full Demo at Stand 5e
Main Solution Components

- Connexo Prepay Components

- Meter control & data mgt
- Prepay account & account control

Self-care Payment Account top-up

Customer

Customer
Complete End to End Functionality

- Complete and E2E functionality

**Connected Suite**
- Customer interaction
- Customer & account mgmt
- Meter reading & control
- Reporting & analytics
- Rate plan & price mgmt
- Vending and top-ups

**Honeywell**
- Command mgmt
- Reading mgmt
- VEE
- Data Storage
- Monitoring & KPIs
- Unification

**Honeywell**
- Automated Readings & Commands
- Analytics & Revenue Protection
Communications Technology

&

There impact.
Connexo Prepay

RF mesh, GPRS, LPWAN, NFC & powerline

Multi network

LPWAN providing new comms applications and use cases
Revenue Protection Principles
Honeywell’s Revenue Protection Solution Principles

**ADVANCED ANALYTICS**
predict and identify likely energy theft

**BEHAVIORAL CHANGE PROGRAMS**
educates on energy efficiency and dangers of theft

**HARDWARE**
data points for line tampering & physical protection of meters from tampering and theft

**PREPAYMENT**
ensures payment ahead of use

**CASE MANAGEMENT TOOLS**
document for prosecution

**UAV LINE INSPECTIONS**
provides safety for theft documentation in high crime areas
NON-TECHNICAL LOSS SOLUTION
CONCEPTUAL ARCHITECTURE

DATA LAKE LAYER
- Property Tax
- Micro-Economic
- Weather Alerts
- Crime Statistics
- Social Media

HONEYWELL SENTIENCE
- NTL Models
- Thermostat Models
- Aero Sensor Models

REUSABLE ANALYTICS MODEL LAYER
- Mobile
- NTL Application on Server
- MDM Application on Server
- Transformer Monitor

UTILITY PREMISE
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Connexo Prepay benefits
Thank You
Back Up
Connexo Prepay Core Components

Open Reports
- View System Data and Reports

Retail Admin
- Create retailers and aggregators
- Manage credit limits
- Calculate commissions
- Confirm deposits
- Set credit limits
- Manage Sales Agents
- Register new point of sales
- Manage point of sale users

Consumer Mobile Admin
- Configure and Manage Users
- Manage Credit & Wallet Top Ups
- History & Consumption Data

Access control
- Create new users profiles
- Manage passwords
- Assign access rights to users
- Set security rules

Connexo
- MDC & MDMS
- Configure System
- Integrate into Utility Systems

Meter Management
- Manage meters
- Manage tariffs
- Manage customer information

End - 2 - End Prepay Solution integrated with Banking and EPOS Systems