National Water & Sewerage Corporation

HARNESSING ICT TO ACCELERATE SUSTAINABLE WATER & SANITATION FOR ALL IN AFRICA

PRESENTED BY:

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Presentation CONTENT

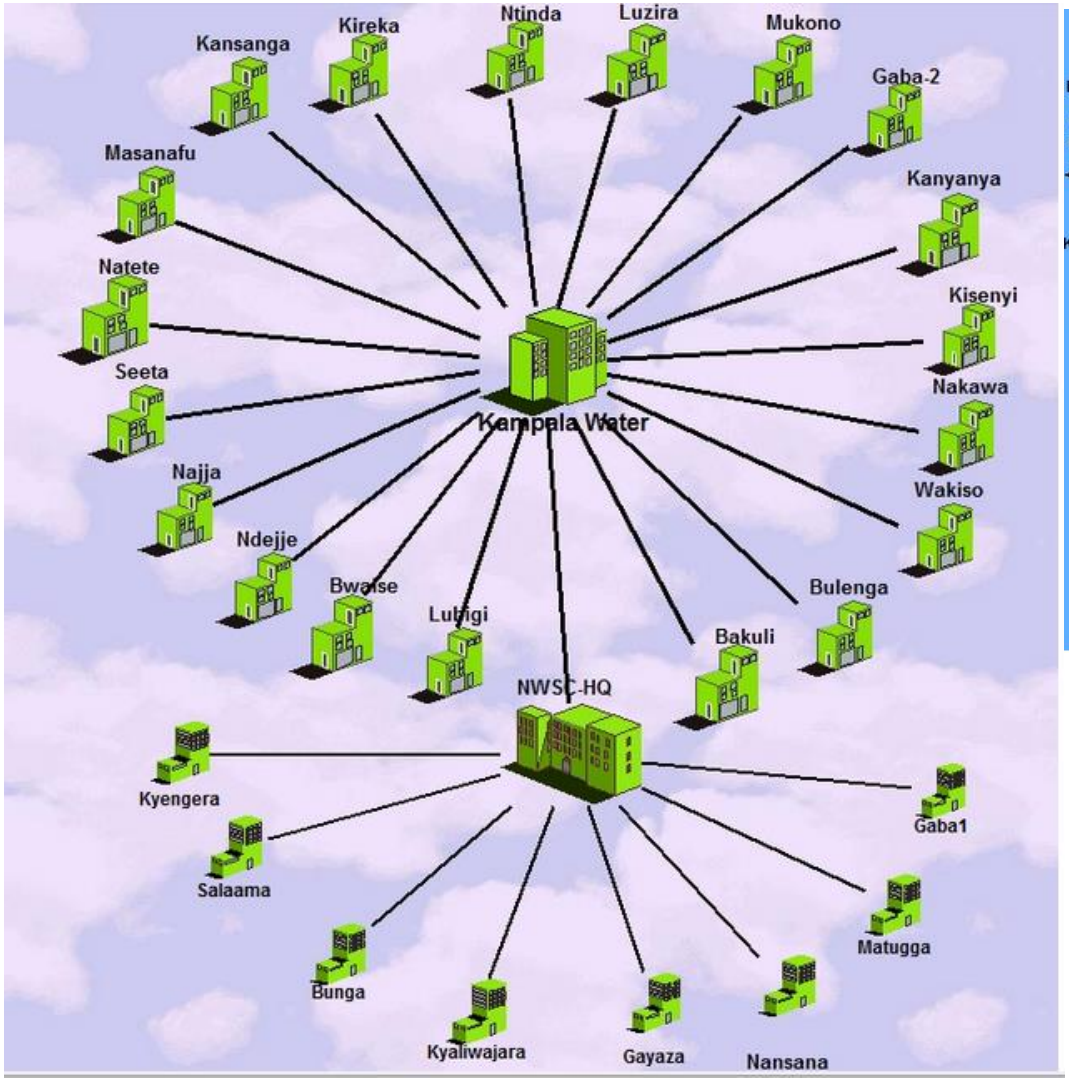
- Brief History of IT Evolution in NWSC
- Deployment of Centralized and Integrated IT Systems
- Computerization of Core Business Processes
  - In-house developed IT Solutions
  - Innovations on-going
- Future Plans
- Q&A

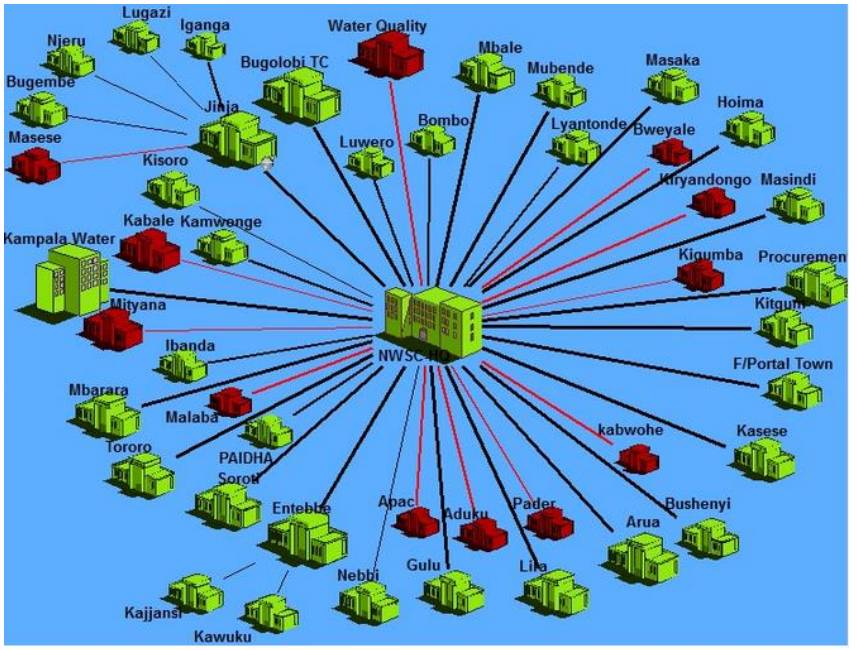
A Brief History of IT Evolution in NWSC

Year	Description of IT Development
~1990	Pilot Block mapping exercises for Kampala
~1993 - 95	• Introduction of computerized Billing system (Hi affinity/Custima) in Kampala starting with Big consumers. • Implementation of Scala Accounting System at head office
1999-2000	Review of Scala Implementation under Small Towns Project, Increase Scala modules, User licenses and Increase coverage to area offices
~2001 - 03	▪ Expansion of Country-wide WAN ▪Remote access to Scala Accounting System at Head office, using CITRIX ▪ Corporate Website and email systems
~2004 - 07	•Call center implementation, Upgrade of Billing systems, Corporate Telephony System (VoIP)
~2008-16	• Multi Company Setup of Accounting system, •Handheld Meter reading device implementation, • In-house development of systems(e-water,Billing,E-procurement,CRM,e-inventory,..) • SMS / Mobile Solutions
~ 2017-18	• Developed on-line leave,Mobile Apps(CRM,Fuel approvals,Win on-spot billing) •On-going in-house developments(Pre-paid Mgt software, IoT for smart meters, Doc Mgt, Booster and Reservoir monitoring)

Deployment of Centralised and Integrated IT system

Centralised IT system – NWSC Infrastructure





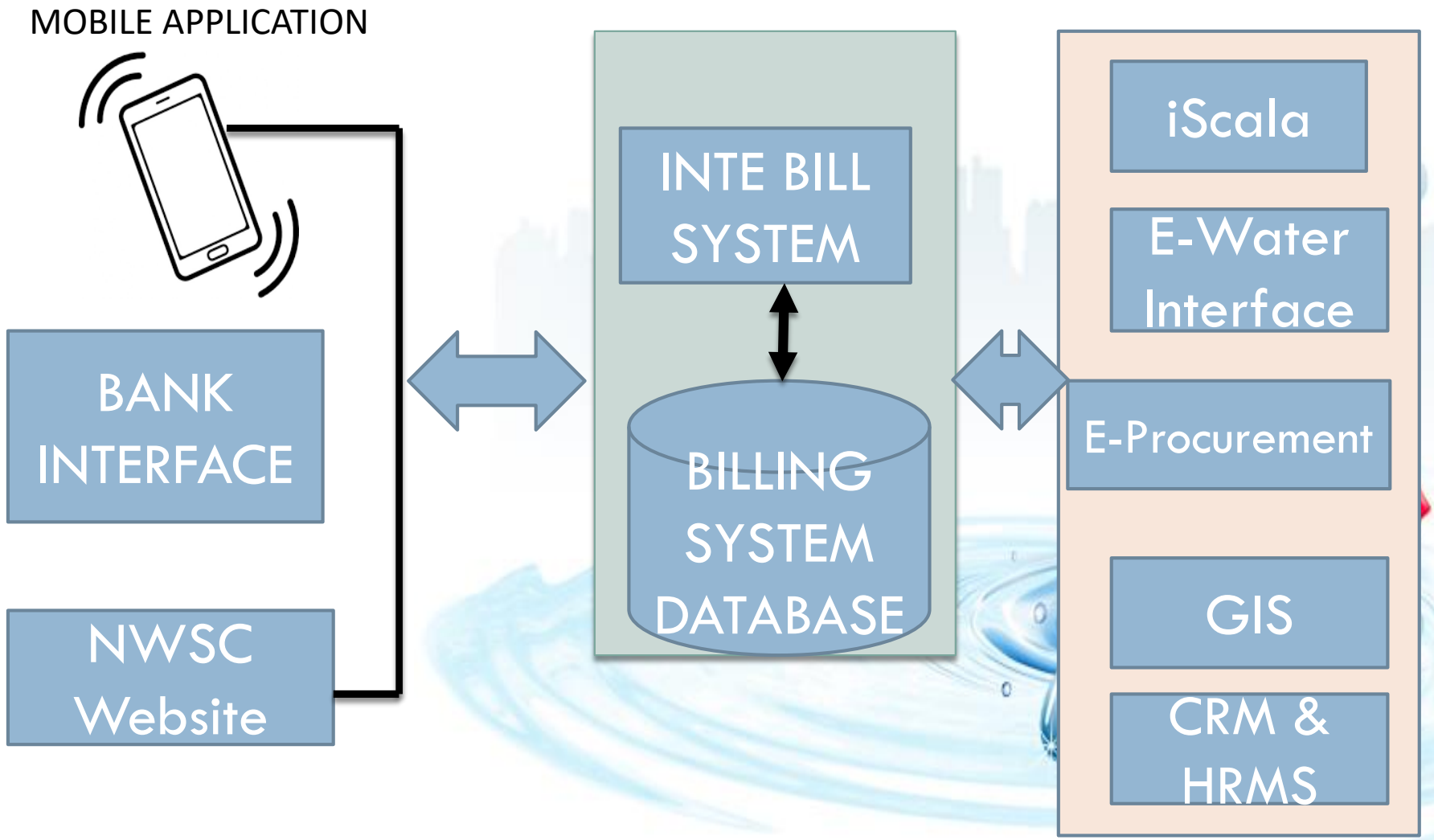
…Systems used across all 240 NWSC offices…managed and monitored centrally. Primary & backup

Deployment of Centralised and Integrated IT system Cont..

Centralised IT system – NWSC Data Centre

Deployment of Centralised and Integrated IT system cont…

Integrated IT Systems - NWSC



Deployment of Centralised and Integrated IT system Cont..

Benefits to NWSC

- **Facilitates Swift Expansion of coverage at Minimum cost**
  - No need to buy servers for billing and IT service operations
  - No payment of licenses for customers Added
  - Customisation of Billing requirement for an Area taken over takes Less than six hours to have it ready
  - No need to deploy IT experts in Areas taken over
- **Facilitates extraction of global Reports for informed Decision Making by Mgt**

Computerisation of Core Business Processes

Some of the Core Processes Computerised at NWSC

- New Connection and Billing
- Customer payment management and Monitoring
- Accounting and payroll management
- Human Resource Management
- Customer Relationship Management
- Procurement and Inventory Management
- Metering Management
- Production, supply and Distribution management plus monitoring

Computerisation of Core Business Processes Cont…

IT Innovations at NWSC (In-House Developed Systems)

- **Billing System**
  - New Connection Module
    - Apply at Office
    - Apply on-line through NWSC Website
  - Readings Module
  - Billing Module
    - On-site billing
    - Field Billing using “On-spot billing App”
  - BI/Reporting Module

Computerisation of Core Business Processes Cont…

IT Innovations at NWSC (In-House Developed Systems)

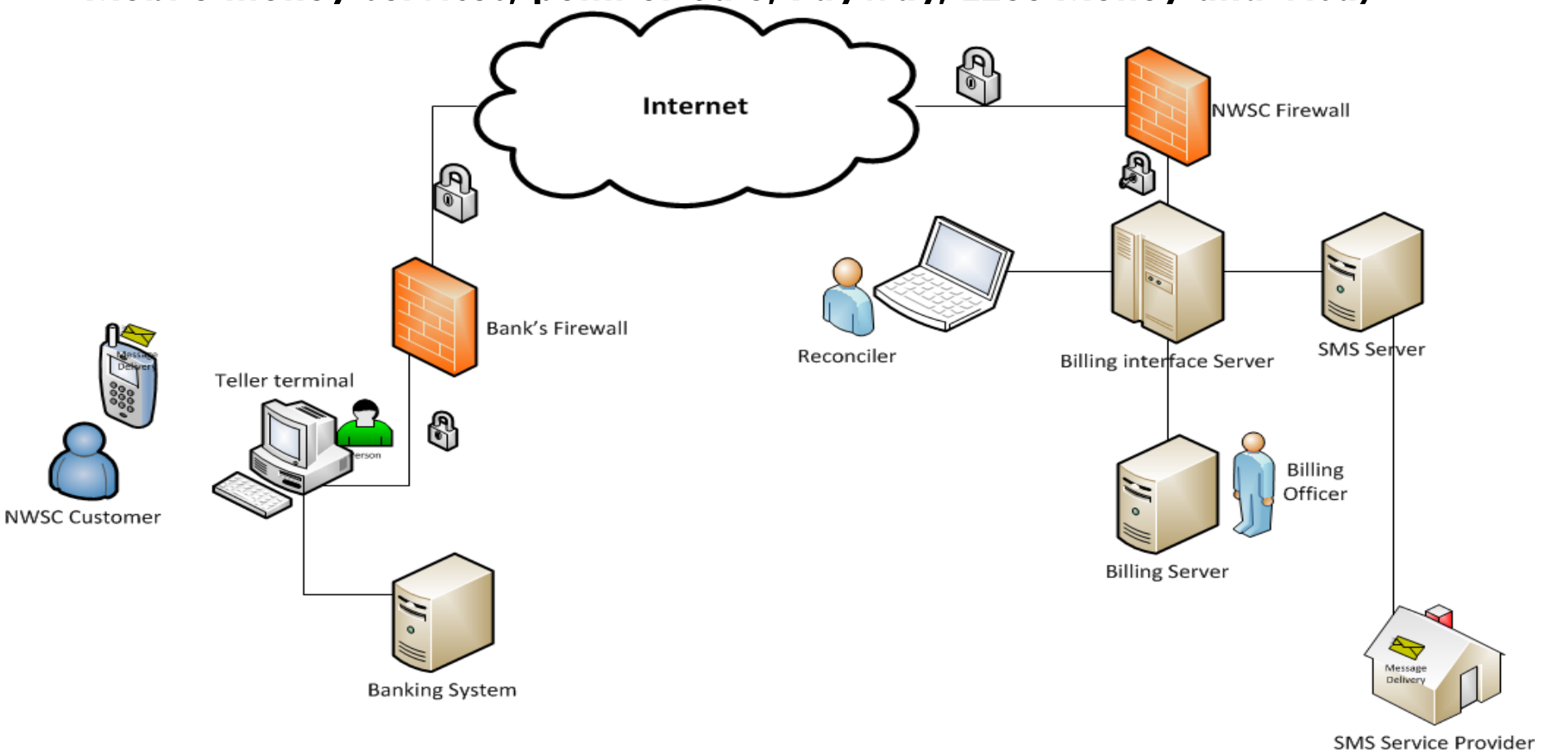
Field Billing/On-Spot Billing

Bill Printing on Handheld Thermal Printer

Computerisation of Core Business Processes Cont…

IT Innovations at NWSC (In-House Developed Systems)

- **Customer Payment Management and Monitoring(E-water)**
  - **Implemented with Integration of collection channels(Banks, Telecommunication Mobile money services, point of Sale, Payway, Ezee Money and Visa)**



Customer Payment Management and Monitoring (E-water System) Cont...

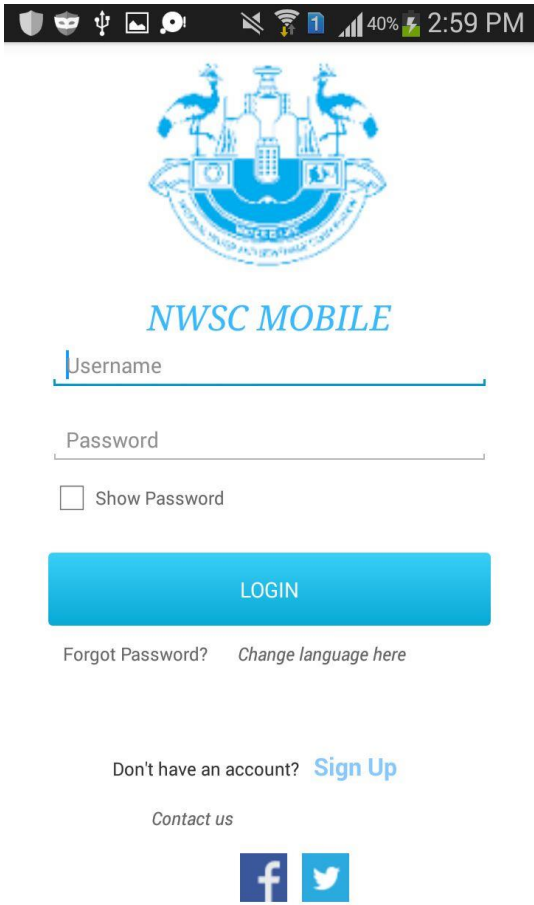
Benefits to NWSC

- Efficient management and monitoring of Payment from customers through a centralised portal
- Improvement of collection performance
- Reduction of operation costs for cash office
- Reconciliation Management
  - Automatic reconciliation with e-bank statement
  - Automatic Update of the Accounts in billing after reconciliation
  - Easy Follow-up of unreconciled transactions

Computerisation of Core Business Processes Cont…

IT Innovations at NWSC (In-House Developed Systems)

- **Customer Relationship Management**
  - For Incident Recording, Assignment, Monitoring and completion of Jobs
  - Used by call centre and internal staff
- **Mobile App** (Windows and Android platform)
  - Increased customer interaction/feed back
  - Allowed Customers access balances
  - Enable customers access their statements
  - Comments captured and integrated with CRM for immediate attention



Computerisation of Core Business Processes Cont…

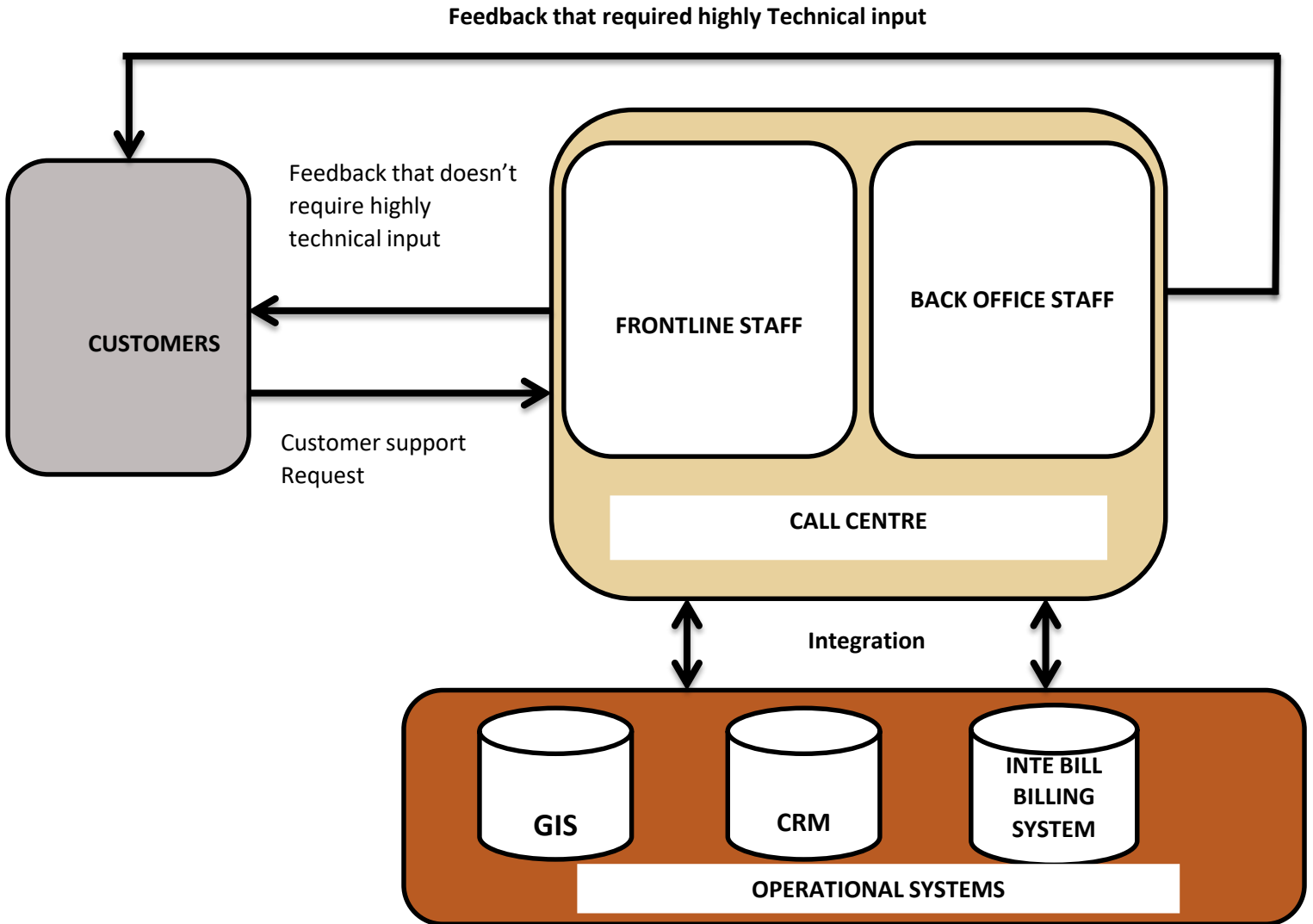
IT Innovations at NWSC (In-House Process Re-engineering)

- **Stakeholder Engagement and management**
  - Implementation of Toll Free Lines with Major Telecoms – Facilitates reporting of Anomalies in the field plus need of Services
  - Social Media Engagement through Various Media; Whatsapp, Twitter, Facebook, etc

Social Media Team Engaging Customers

Computerisation of Core Business Processes Cont…

IT Innovations at NWSC (In-House Process Re-engineering Call Centre Setup)



Computerisation of Core Business Processes Cont…

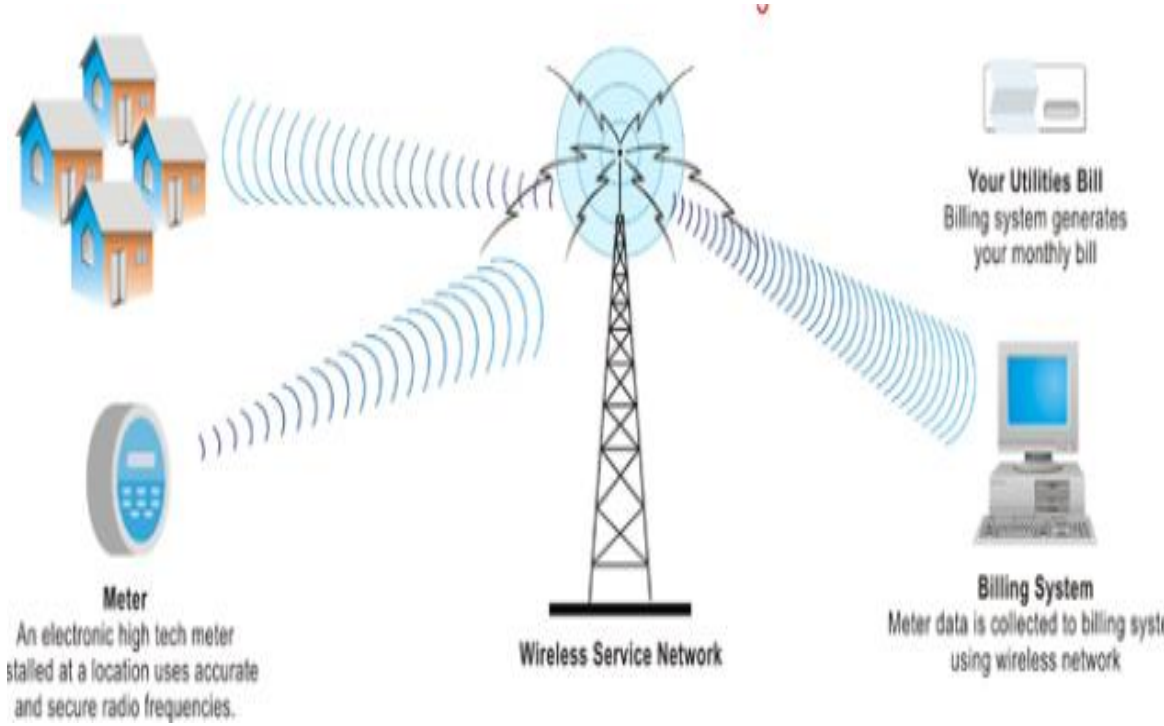
IT Innovations at NWSC (In-House Developed Systems)

- Human Resource Management system
- E-procurement
- E-inventory
- Geographical Information System(GIS)
- Booster monitoring, to be enhanced to monitor reservoir levels

Computerisation of Core Business Processes Cont…

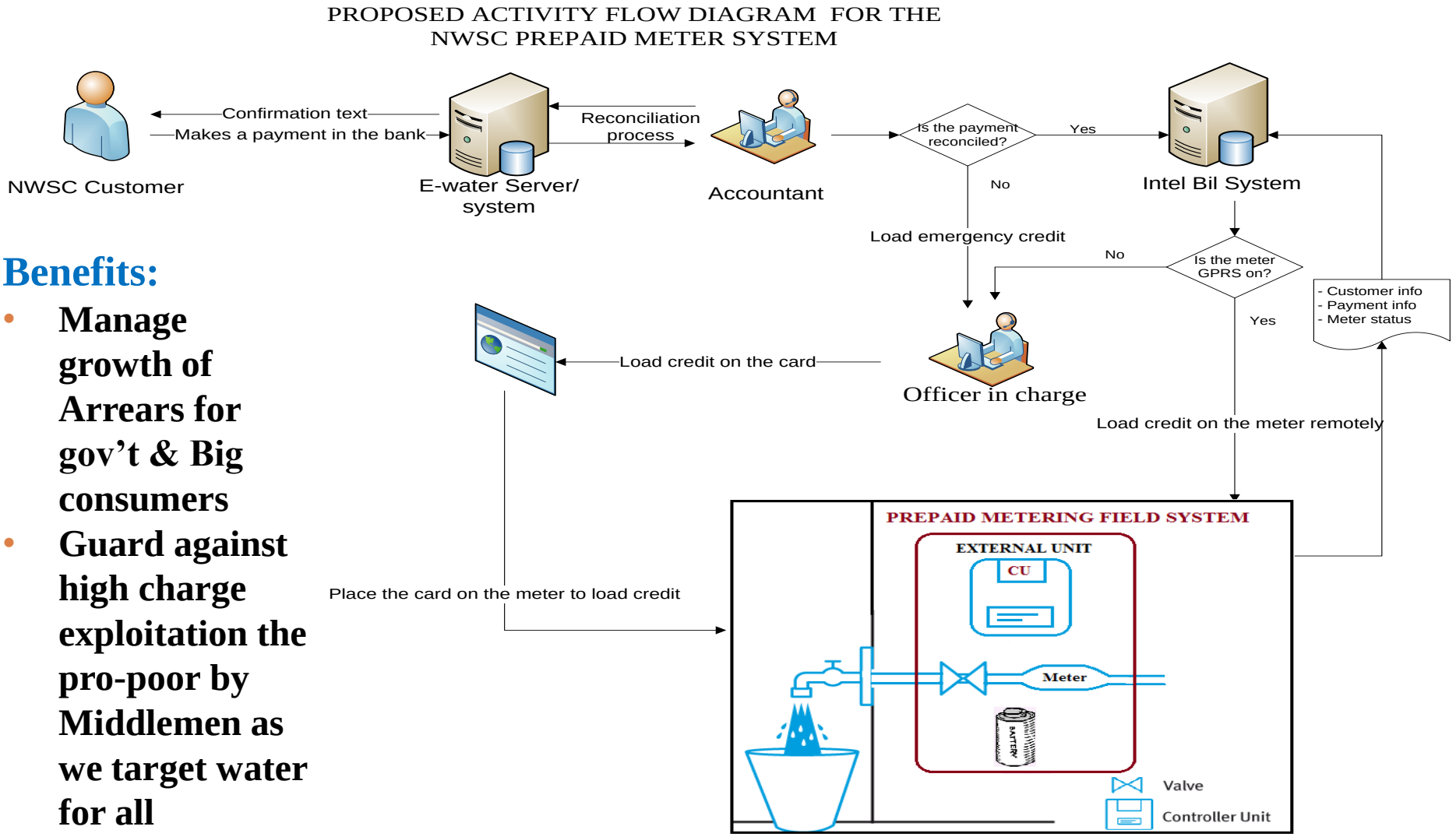
Metering Management – On-going Innovations

- Implementation of Smart Water Meters that uses Accurate and Secure Radio Frequencies



Computerisation of Core Business Processes Cont…

Metering Management – On-going Innovations

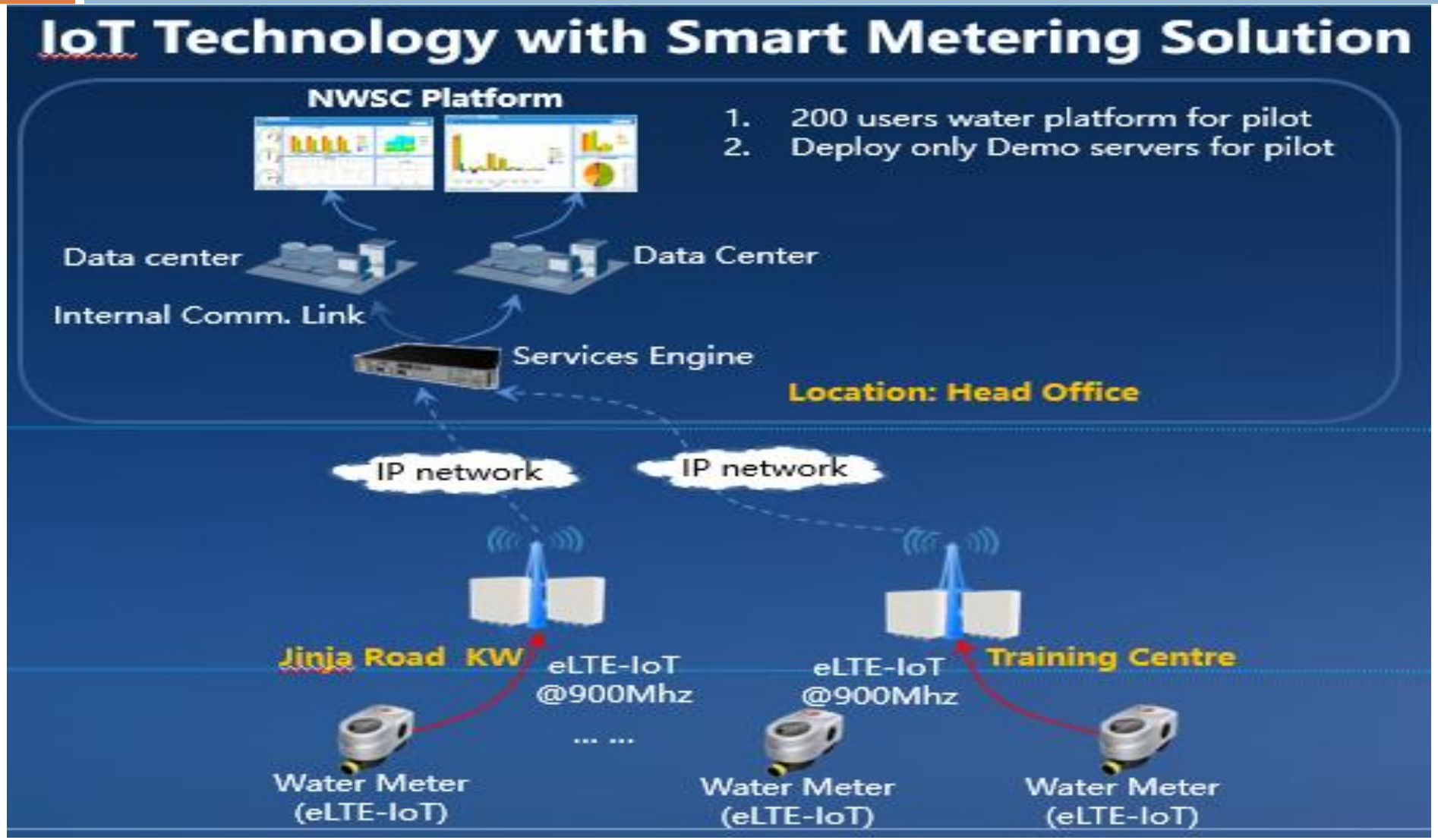


Benefits:

- **Manage growth of Arrears for gov't & Big consumers**
- **Guard against high charge exploitation the pro-poor by Middlemen as we target water for all**

Computerisation of Core Business Processes Cont…

Metering Management – On-going Innovations



FUTURE PLANS

- Cloud Computing for some critical live systems & Disaster Recover

FUTURE PLANS CONT…

- Adopt Smart networks ie Optimise the GIS to monitor; Dry zones, Locations with high concetration of bursts, leaks , etc
- Implementation of Fleet management system with GIS integration
- Adopt Scada systems for automated control of production plants in all the big towns

Thank you for Listening

Q&A

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