The case of South Lebanon Water Establishment

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Agenda

• Introduction

• Management Re-structuring & Capacity building

• IT strategy

• Results so far
Introduction

• Quick Indicators
  • Area: 2200 KM$^2$
  • Population: 300 Households
  • Water network: high geographic distribution.
  • Water production: water availability, distributed production.
  • Customer database covers less than 50% of real users. Collection is less than 40% of current clients.
  • High energy cost and intermittent electrical supply (reliance on diesel generator increase costs drastically)

• Initial evaluation at SLWE
  • Reliance on outside contractors for operation.
  • More than 19 different NGO’s working on various programs (non-Aligned)
  • High bureaucracy
  • Some IT infrastructure (Basic ERP)
  • No NRW program
  • Very basic technological tools
Management restructuring & capacity Building

• Quick actions
  • Hiring of 45 new engineers
  • Firing of more than 60 inefficient contract employees
  • Submitting to the ministry a new management structure (flat structure)
  • Introducing outside management consultants for General management, ISO & processes, Operation and maintenance. Next is the introduction of waste water consultants.
  • Formation of 26 teams to follow up on collection and illegal connections, on a continuous basis.
  • Communication and coordination strategy with municipalities, parties, citizens, media… to align campaign objectives with expectations.
  • Centralization of water related projects under SLWE umbrella (previously under CDR, South council, Ministry and NGO related projects...).
Management restructuring & capacity Building

• Initiation of major new Programs
  • IT strategy Program
  • Re-evaluation of outside contracts.
  • New offices layout along back office/front office approach.
  • New master plan along strategy of centralization of pumping stations, larger reservoir/solar energy daily pumping increase.
  • Scada program to move excess production employees to operation and maintenance (reduce outside operators).
  • Leak detection program (4 mobile teams+2 central teams).
  • New operation and maintenance program.
  • New waste water unit capacity building.
  • New smart meter program with new tariffs structure
IT strategy: Systems overview

• Identification of needed systems
• Identification of priorities from ERP add-Ons to GIS then call center integration. To be followed by Scada integration and BI.

• Identification of needed tools from handhelds (android) to surveying equipment (leak, flowmeters, cameras...), to GIS mapping (aerial photos, drones mapping...).
IT strategy: Players alignment

• Formation of task force to align the multi donors of the various IT needs:
  • US-Aid: Navision ERP + predictive maintenance
  • GVC (miyahokon+Acwua): GIS
  • Unicef: Call center + hardware
  • SLWE: MIS, Handheld programming, add on design, Integration requirements, process design...

• Cost share programs with new donors for Scada and BI
• Sharing programs with other water authorities (BWE, NLWE)
IT strategy: System analysis

- Requirements by department and functions (input, output, integration)
- Analysis & suggestions:
  - Addition of Fixed assets (O&M), Document Management, Project Management modules to ERP.
  - Call center with Navision CRM.
  - GIS cadaster and customer ID mapping requirements.
  - GIS Database structure
  - GIS new aerial photos +drone map for urban areas.
  - Scada integrated one source approach
IT strategy: Process analysis

• Analysis of As-is processes and process re-engineering with ISO study.

• Suggestions & implementation:
  • Launched new process with document management for diesel ordering
  • Launched new process with document management for HR
  • Launched new process with document management for RFQ & procurement
  • Re-evaluation for O&M processes, inventory…
Results so far - IT

- Surveyed 4 pump stations and their network
- Launching of pilot project in January
- Designed Customer ID coding format.
- Launching customer database study (with Acwua) in January
- Launching CRM in February
- Install Call center in March
- Launched document management
- Launching of O&M module in February
- Surveyed 4 pump stations and their network
- Launching of pilot project in January

- GIS
- Nav-ERP
- Call center
- Scada
Results so far - Other Programs

- Cost reduction of more than $M2
- Increase collection by $M5
- Moved from $M2 loss to $M7 profit in 10 months

- Tendering for 5MW solar energy.
- Optimization of Emergency generators

- Launching Leak detection in Jan
- 10,000 New subscribers (continuous campaign)
- Launched 5000 Smart meter in Jezzine & Bint Jbeil
- Launching of 20,000 smart meters in 2019

- New modern network in Kfar fila area
- Launching of Tyre remain pumping station rehabilitation