

معكن ع طول الخط

WHY DSP PROJECT

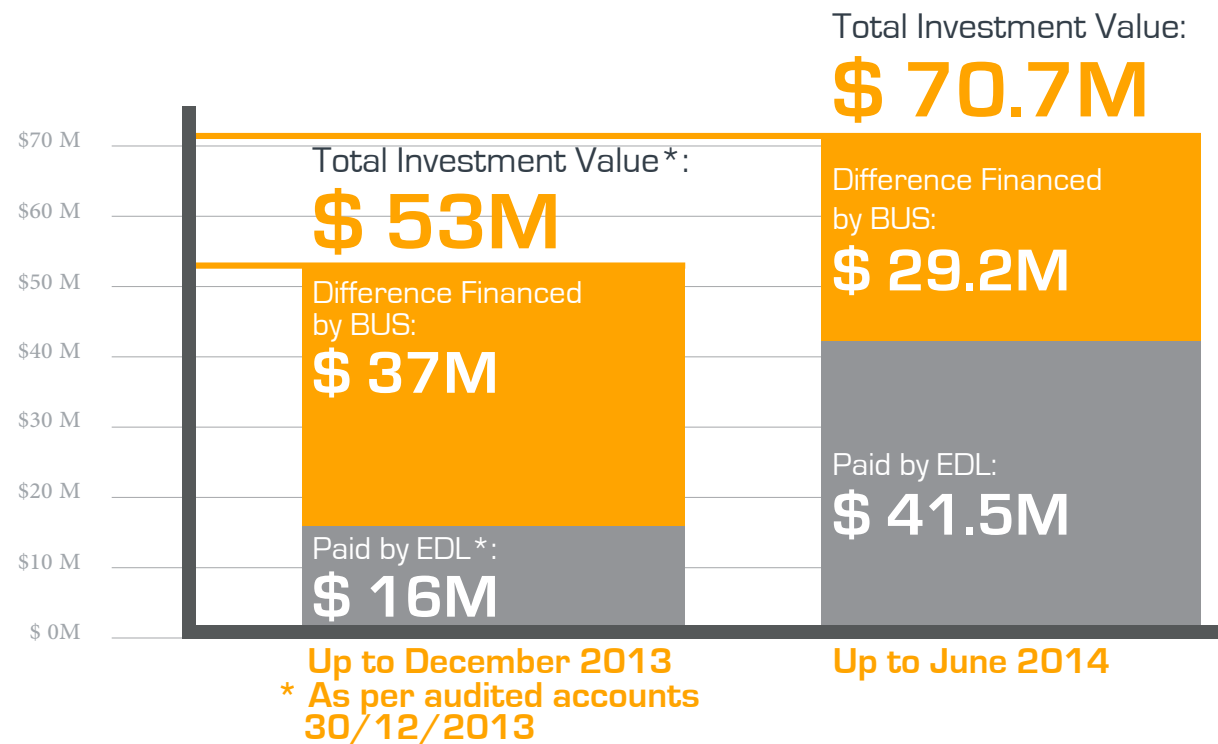
PUBLIC PRIVATE PARTNERSHIP (PPP)

- Reforming the power sector in Lebanon is a priority.
- Non-technical losses in Lebanon cost the state-owned electricity company \$300 to \$400 million annually. They reach an average of 25%.
- The current situation of the network: Voltage Drops up to 50%, Overloads up to 44% and Technical Losses around 15%.

WHY DSP PROJECT

PUBLIC PRIVATE PARTNERSHIP (PPP)

EDL commissioned BUS to upgrade the distribution Grid and Services in the North and Mount Lebanon. The Lebanese Government benefits from the PPP through the deployment of resources by the Service Providers and the financing provided for the project.



BUS

THE COMPANY

BUS is a privately owned company specializing in utility services and environmental projects. BUS was commissioned by EDL to maintain and operate the electrical distribution network and to provide customer services, planning and design, meter reading and bill collection services.

850 employees, including:

- 10 PMO Consultants
- 45 Engineers
- 290 Technicians
- 300 Meter Readers & Bill Collectors
- 45 Customer Service Specialists
- 20 Call Center Operators
- 140 Administrative Staff

+15
Experts/Expats
Deployed
By Partners

BUS

THE SERVICES

- Planning & Design
- Operations & Maintenance
- Construction
- Advanced Metering Infrastructure
- Meter Reading & Bill Collection
- Customer Services
- Non-Technical Losses Prevention

BUS

THE PARTNERS

BUS is 90% owned by BUTEC GROUP and 10% owned by El Sewedy Electrometer (Egypt).



Provides AML meters and solutions.



Supports on assets management, including planning and design, construction of new facilities, network operations and maintenance.



Supports in program management, meter reading, bill collection, customer care and non-technical losses.

BUS

THE INVESTMENT'S GUARANTEE



**Multilateral
Investment
Guarantee
Agency**

Our guarantee agreement covers two main risks:

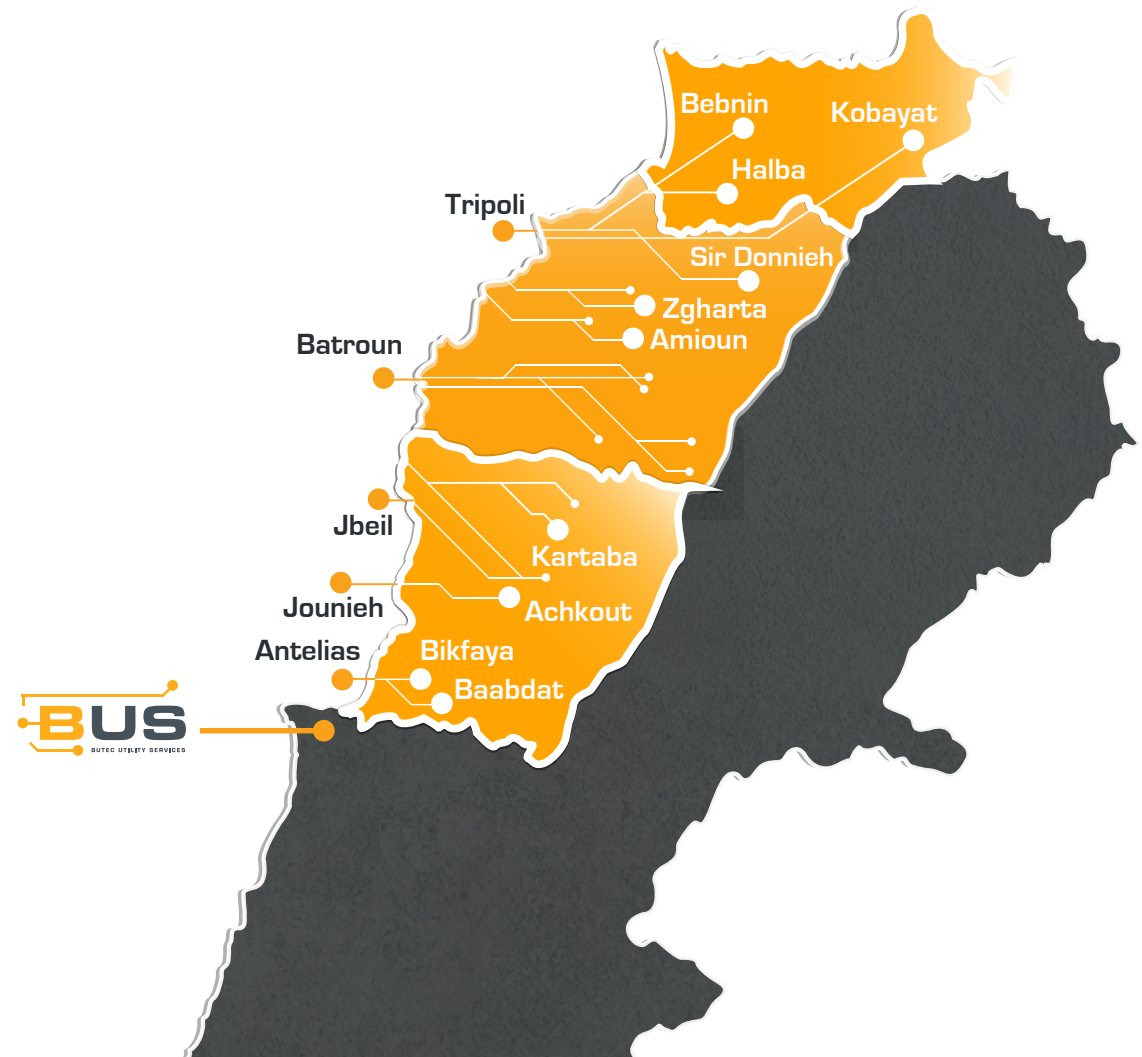
- **War & Civil Disturbance**
- **Non-Payment by Government**

- BUS is the first in Lebanon to sign a contract with MIGA, member of the World Bank Group.
- MIGA provides insurance guarantees to promote foreign direct investment in developing countries.

BUS

THE COVERAGE

With a **Head office** in **Sin El Fil** region for management, administration and planning, **BUS** operations **cover** around **30%** of the **Lebanese territory** extending from **northern** part of **Greater Beirut** till **northern borders**.
(Lot 1)



BUS

HEALTH SAFETY & ENVIRONMENT

- BUS is committed to providing a safe working environment for its personnel and for the Public in general.
- BUS will strive to conduct its operations in a manner that is environmentally responsible and in line with all applicable local regulations and international standards.

• BUS

HEALTH SAFETY & ENVIRONMENT





BUS

MOBILIZATION

- 
- EDL Centers Rehabilitation
 - Resources Mobilization

BUS

CONTACT CENTERS REHABILITATION



BEFORE



AFTER

BUS

SELAATA FACILITY MOBILIZATION

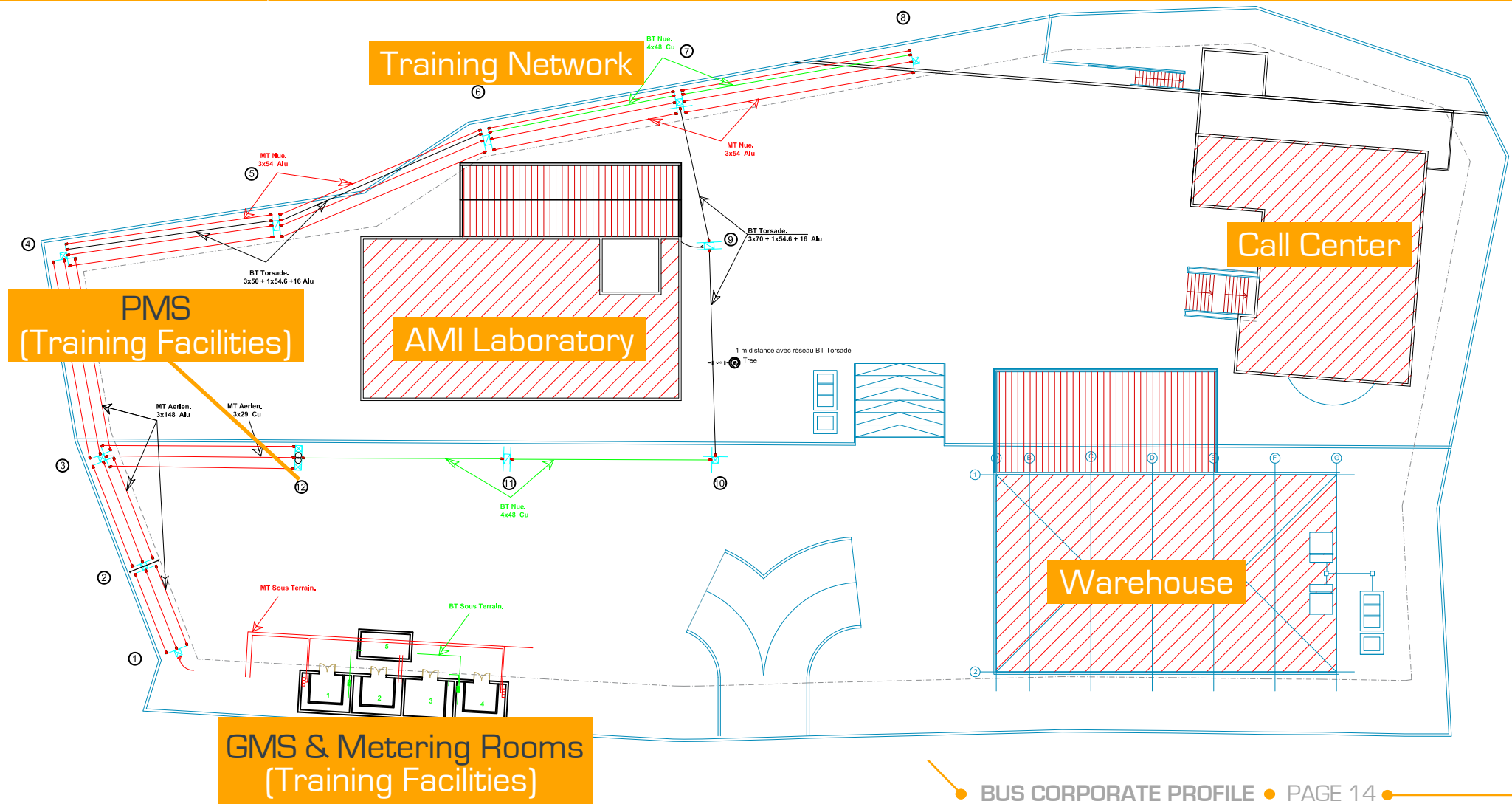
Selaata facility consists of:

- **24/7 call center**
- **Smart meters laboratory**
- **Warehouse**
- **Training center** (including the pedagogic network essential for the employees' continuous professional development)

BUS

SELAATA FACILITY GENERAL LAYOUT

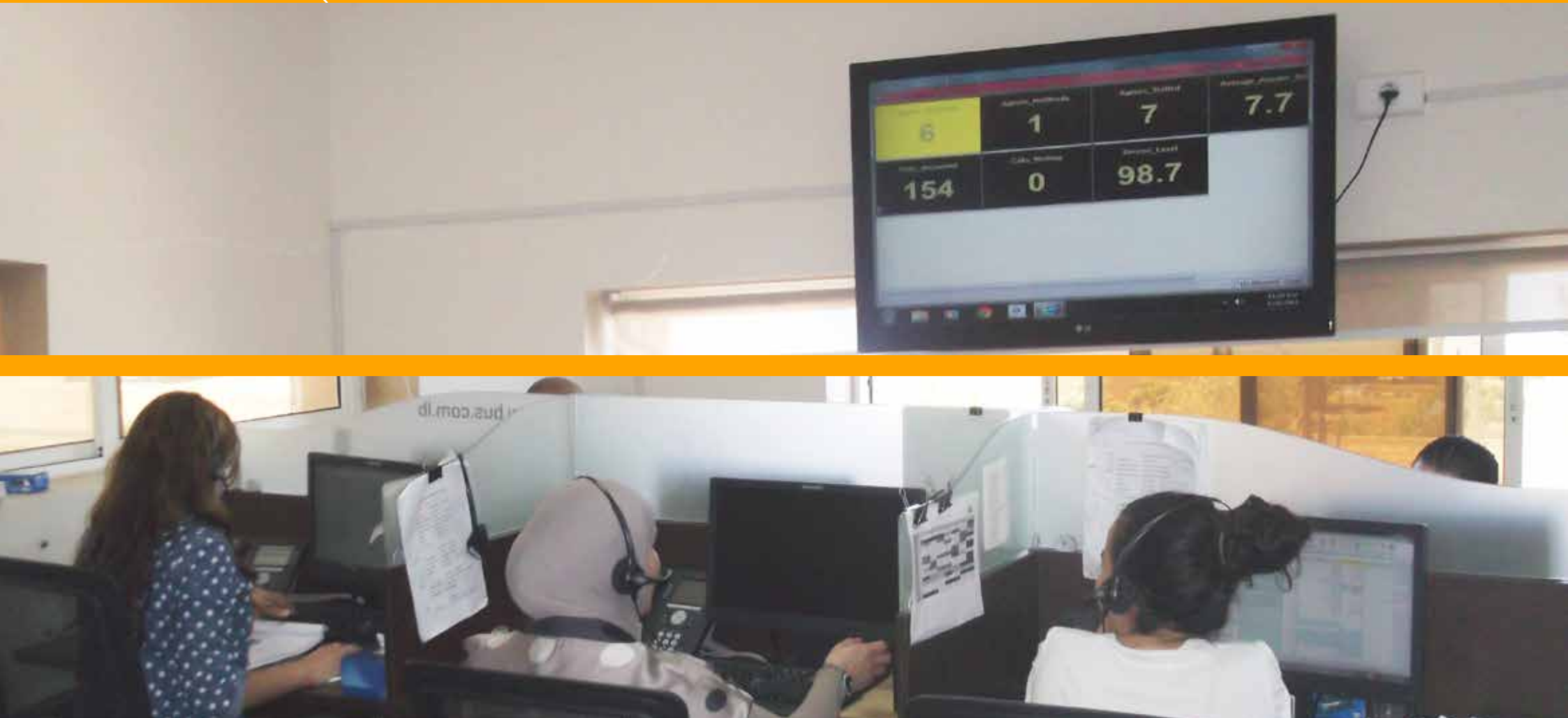
6000 m² OF BUILT UP AREA



BUS

SELAATA FACILITY

24/7 CALL CENTER



BUS

SELAATA FACILITY

SMART METERS LABORATORY



BUS

SELAATA FACILITY

WAREHOUSE



BUS

SELAATA FACILITY TRAINING CENTER



BUS FLEET

100 VEHICLES WITH TRACKING SYSTEM



BUS

FLEET

BUCKET TRUCKS



BUS FLEET

UNDERGROUND FAULT DETECTOR



BUS

METAL WORKSHOP



BUS

TRAINING (1/2)

1. MRBC

- . Safety
- . Work Procedure
- . PDA Hand Held Unit

2. CUSTOMER SERVICES

- . Safety
- . Work Procedure
- . Computer Literacy
- . Call Center Software
- . Customer Interaction

3. CONSTRUCTION

- . Safety
- . Network Design
- . Construction Practices

BUS

MRBC TRAINING ON HHU



BUS

TRAINING (2/2)

4. OPERATIONS & MAINTENANCE

- Safety
- Electrical Risks
- Measuring Procedures
- Manoeuvring Personnel Training
- Aerial Commissioning Officers Training
- Underground Commissioning Officers Training
- Cable Tracing And Detection Procedures (Rd 8000, Zenith)
- Network Survey Training: Network Components Discovery
- General Maneuvering Code
- Pedagogical Training For Future Trainers
- Training For Aerial Works
- Operating Officers Training
- Training For Underground Works
- Operating Agency Managers Training
- Underground Fault Detection

BUS TRAINING





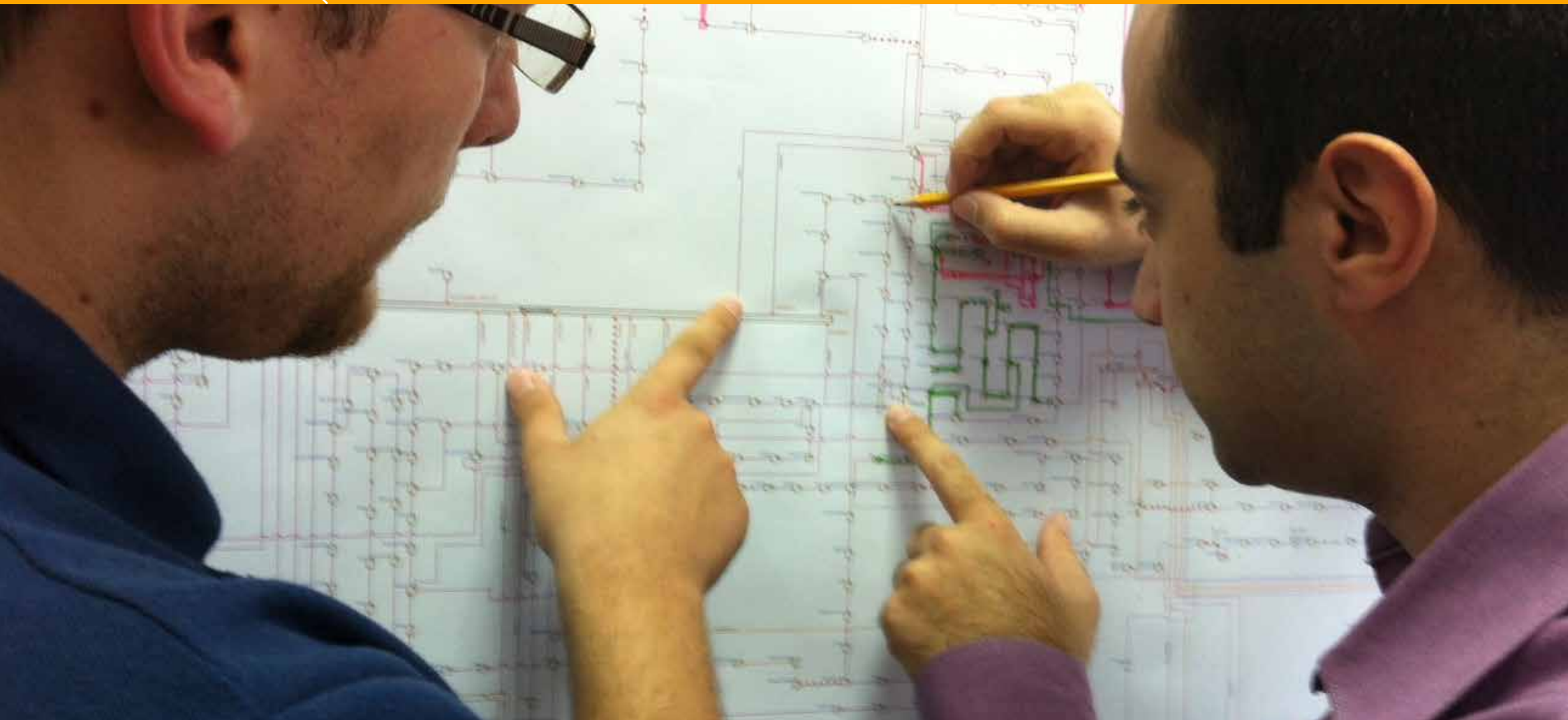
BUS

PLANNING & DESIGN

- 
- Network Reconfiguration
 - Network Reinforcement
 - Power Flow Optimization
 - Design of Substations
 - Design of Overhead Lines & Underground Cables

BUS

PLANNING & DESIGN



BUS

PLANNING & DESIGN

6 Electrical Engineers
supported and trained
by **ERDF experts**

Created conceptual
design for network
reinforcement
and optimization
(Investment Plan)

Lot 1 has been divided into
6 Electrical Study Zones:

Halba/ Berkayel/ Kolayaat/ Kobayat

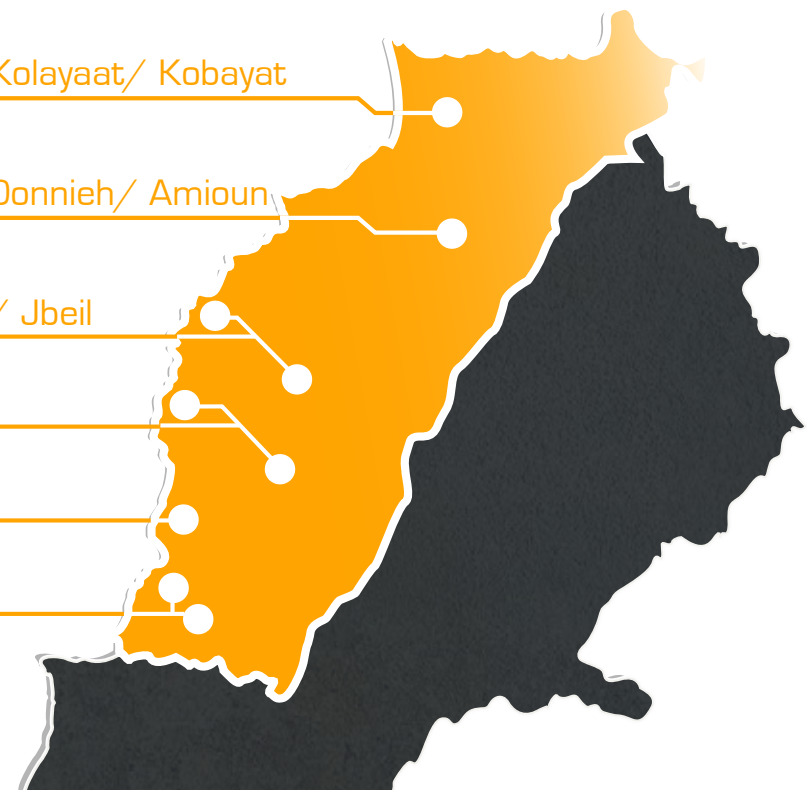
Zgharta/ Tripoli/ Donnieh/ Amioun

Batroun/ Kartaba/ Jbeil

Jounieh/ Achkout

Antelias

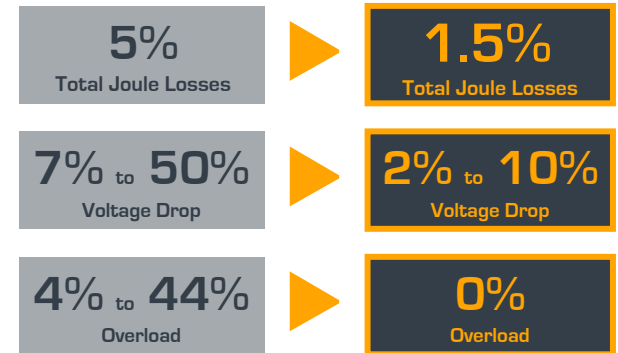
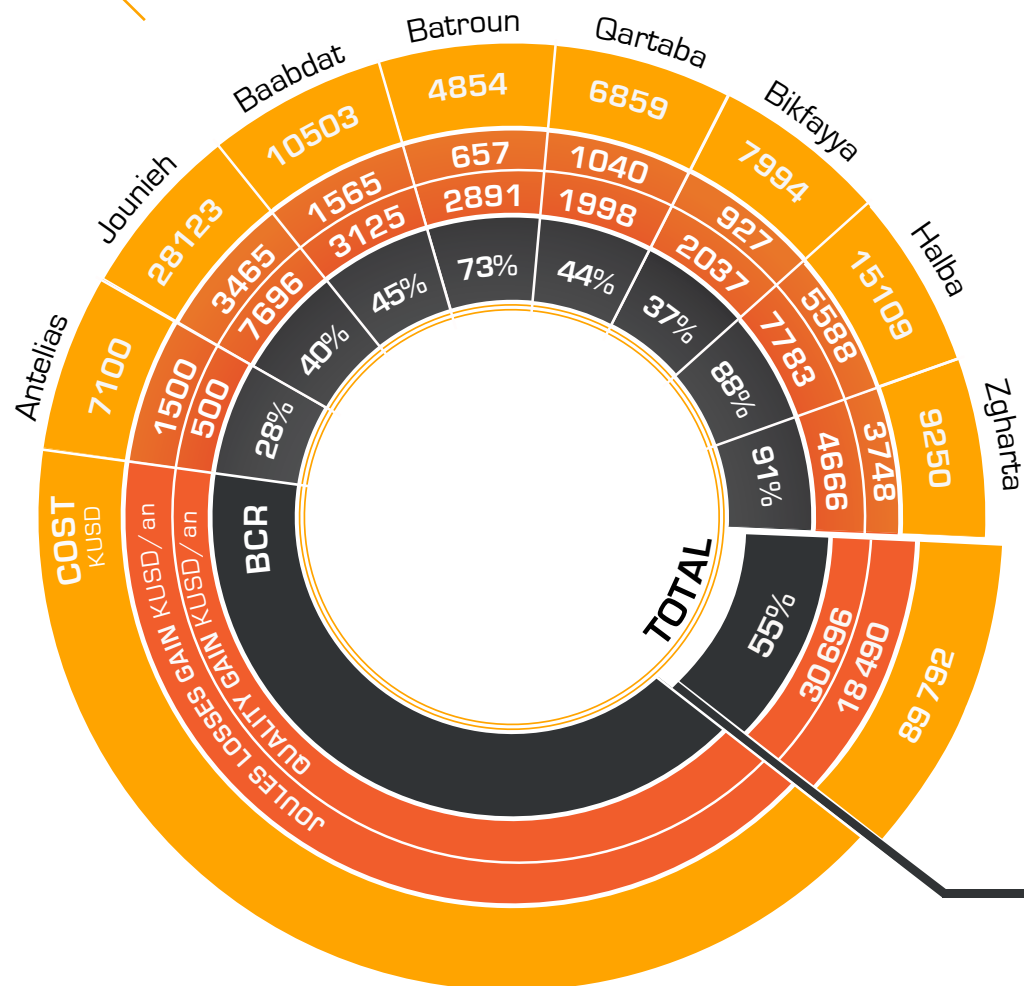
Bikfaya/ Baabdat



BUS

MV INVESTMENT PLAN

EFFICIENT DISTRIBUTION NETWORK



- 4 Projects Already Completed
- 3 Ongoing Projects

55%

Almost **Two Years** To Recover The Cost
And **Five Years** For Joules Gain Losses Only



BUS

CONSTRUCTION & AMI

- Construction of New Distribution Facilities:
Overhead & Underground Networks
 - MV/LV Substations
 - Customers' Connections
 - Advance Metering Infrastructure
- 

BUS

CONSTRUCTION & AMI TEAM



BUS

CONSTRUCTION WORK EVOLUTION



In Parallel

6006
Executed
out of
6284
New Work Orders

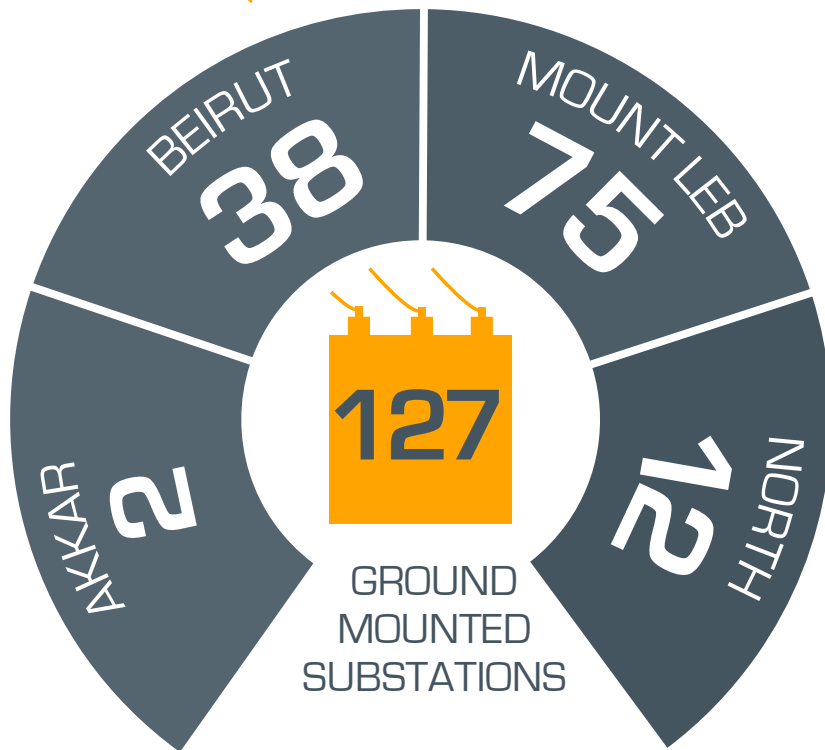
KPI
Key Performance
Indicator
34 Days

* As per annual reconciliation for year one by end of 2013

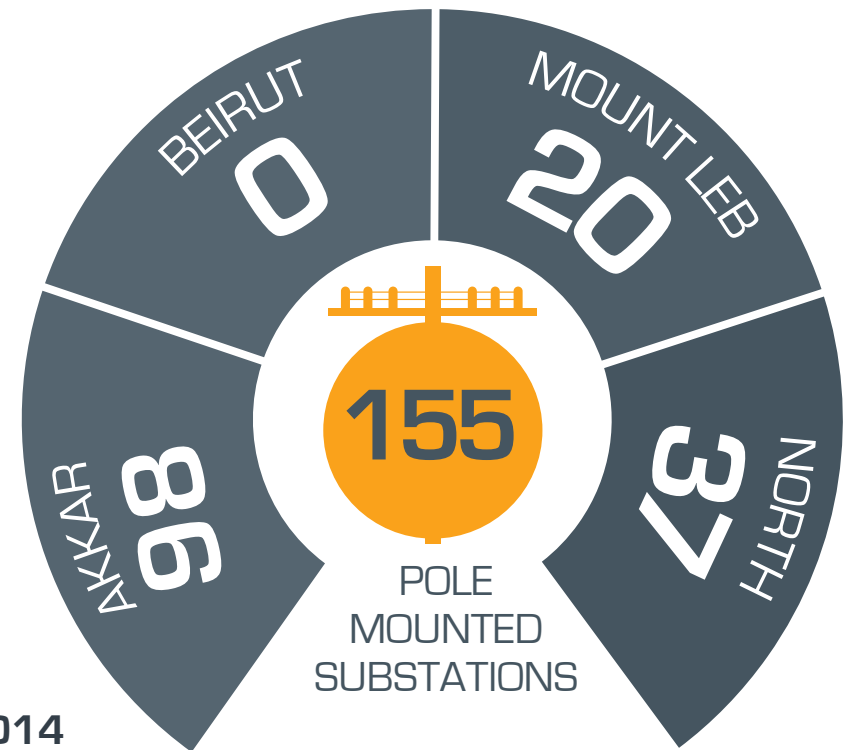
BUS

CONSTRUCTION

GROUND / POLE MOUNTED SUBSTATIONS



Up to
May 30, 2014

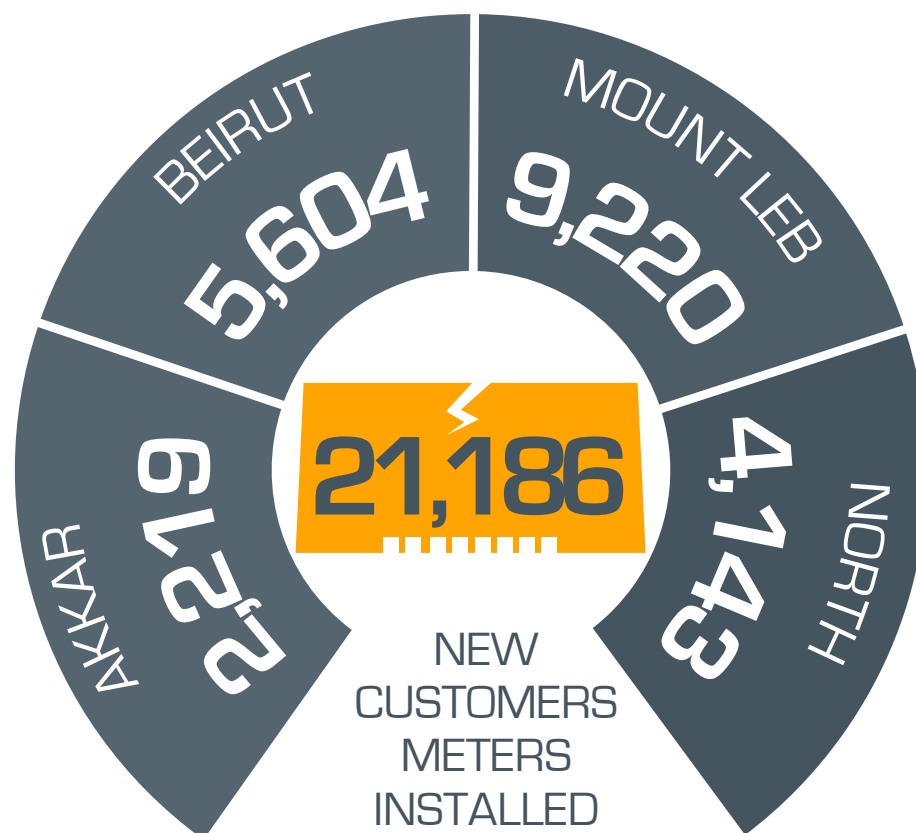


Additional 100 MVA installed

BUS

CONSTRUCTION

NEW CUSTOMERS METERS INSTALLED

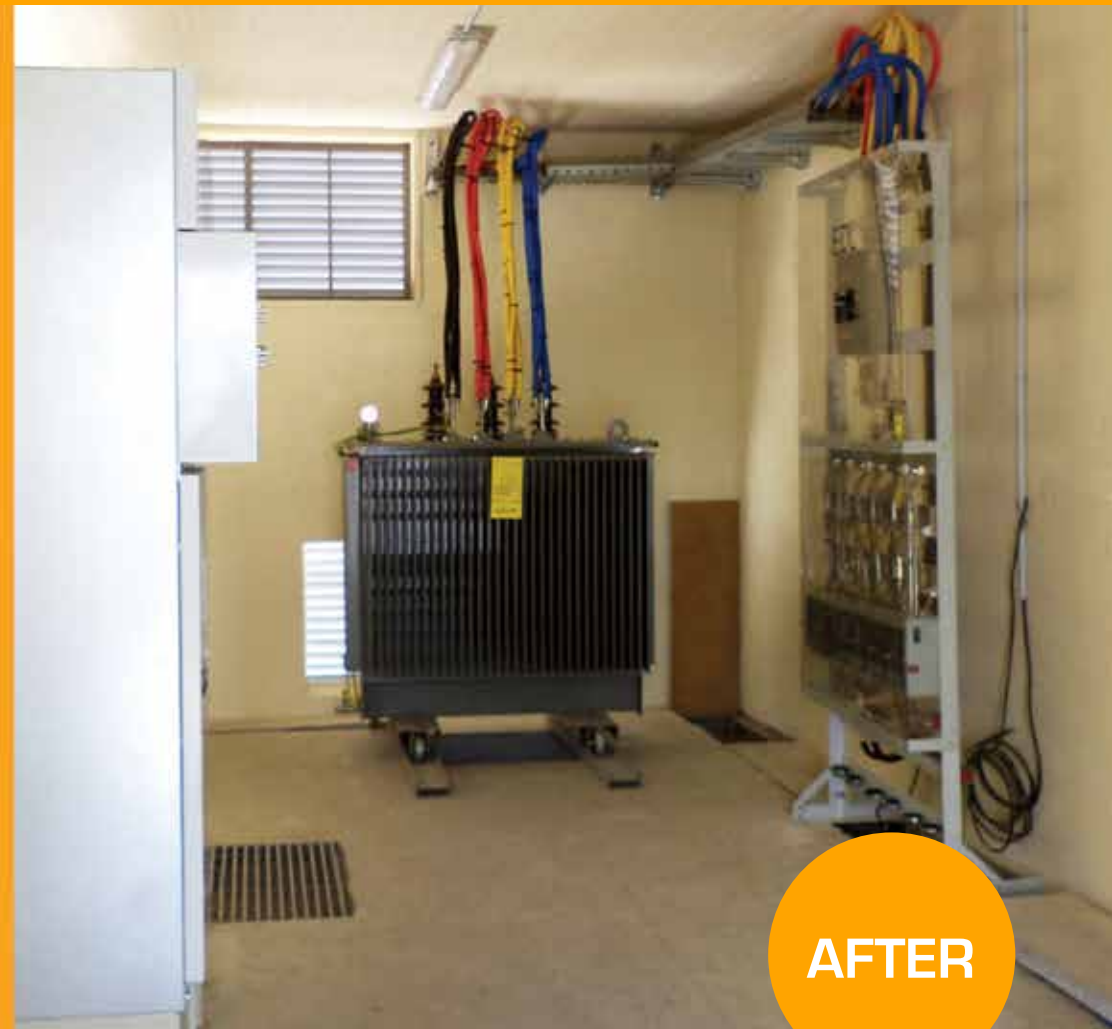
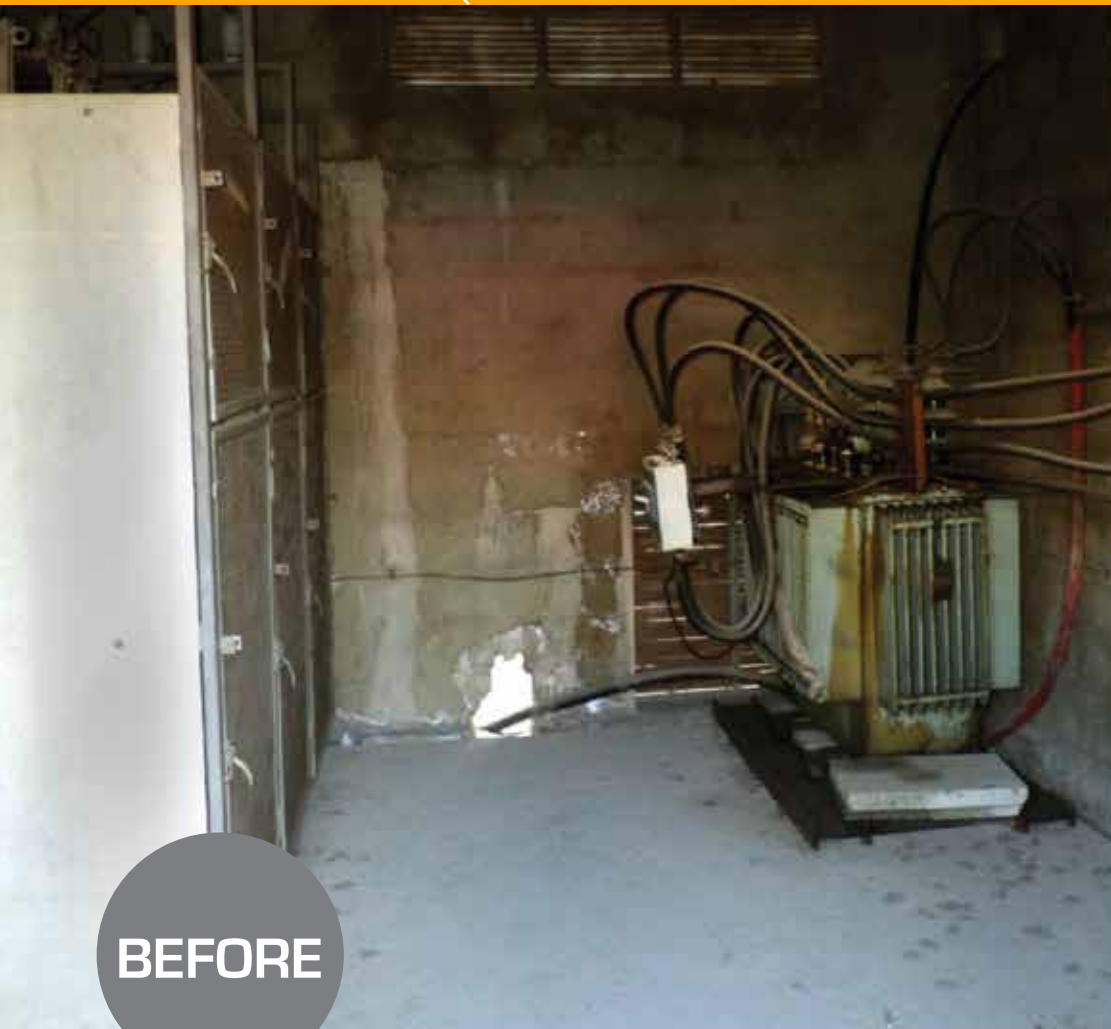


Additional 122 MVA installed

BUS

CONSTRUCTION

GROUND MOUNTED SUBSTATION



BUS

CONSTRUCTION

POLE MOUNTED SUBSTATION



BEFORE

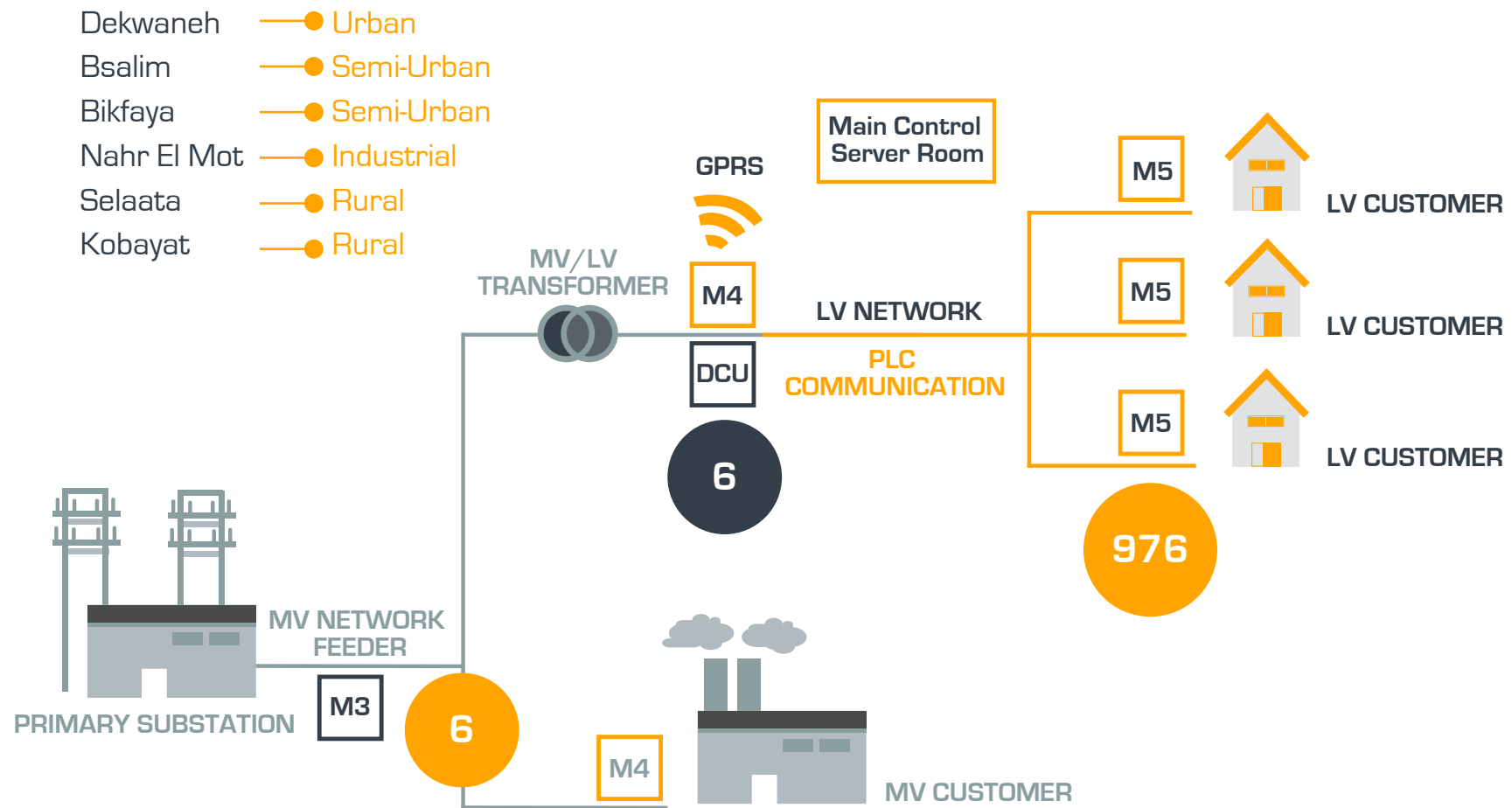


AFTER

BUS

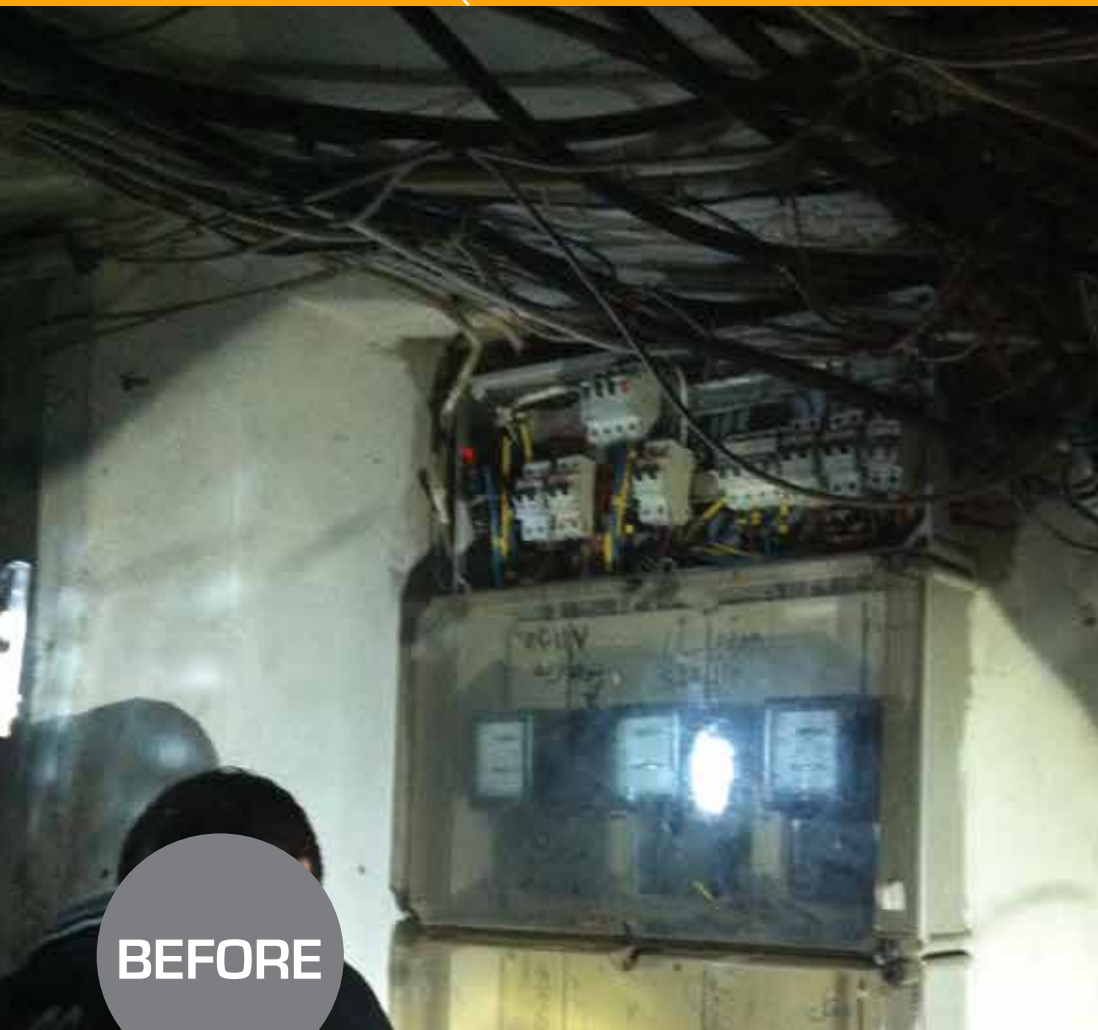
AMI PILOT PROJECT

SMART METERS INSTALLATION



BUS

M5 SMART METERS INSTALLATION



BUS

READING COMPARISON

Case 1: Naher el Mot

Installation: 0432697140001
Branch: 537632

\$14 000
EDL LOSSES
FOR ONE CLIENT
OVER ONE YEAR

SMART METER



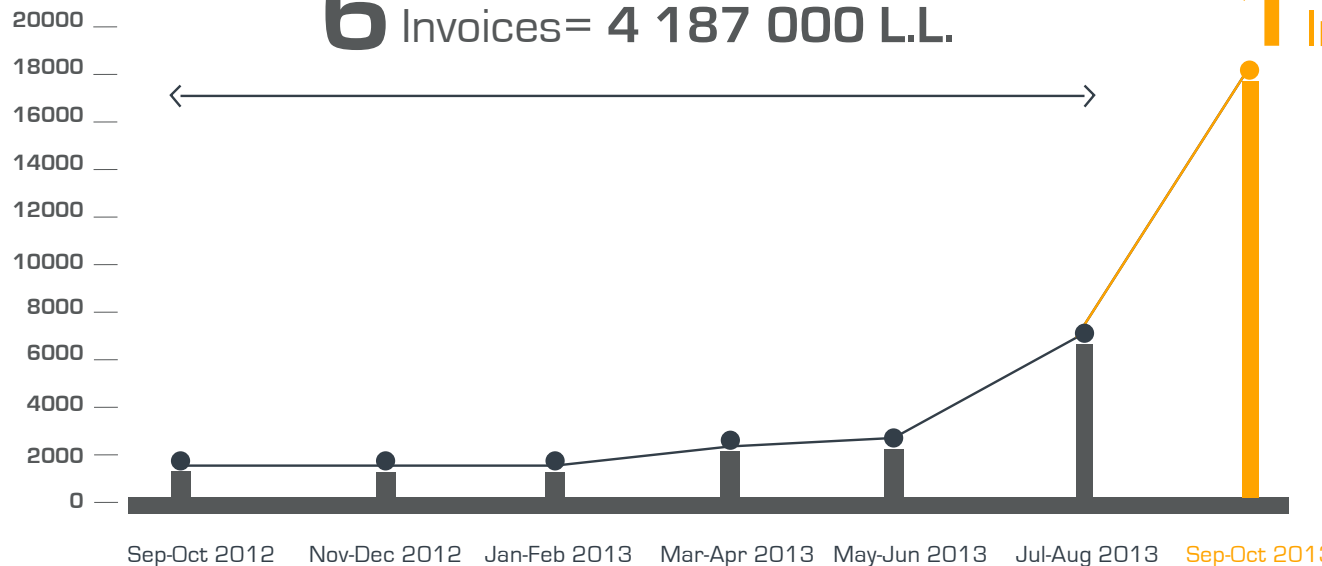
+ 500%

1

Invoice = 4 200 000 L.L.

KWH
Consumption

6 Invoices = 4 187 000 L.L.



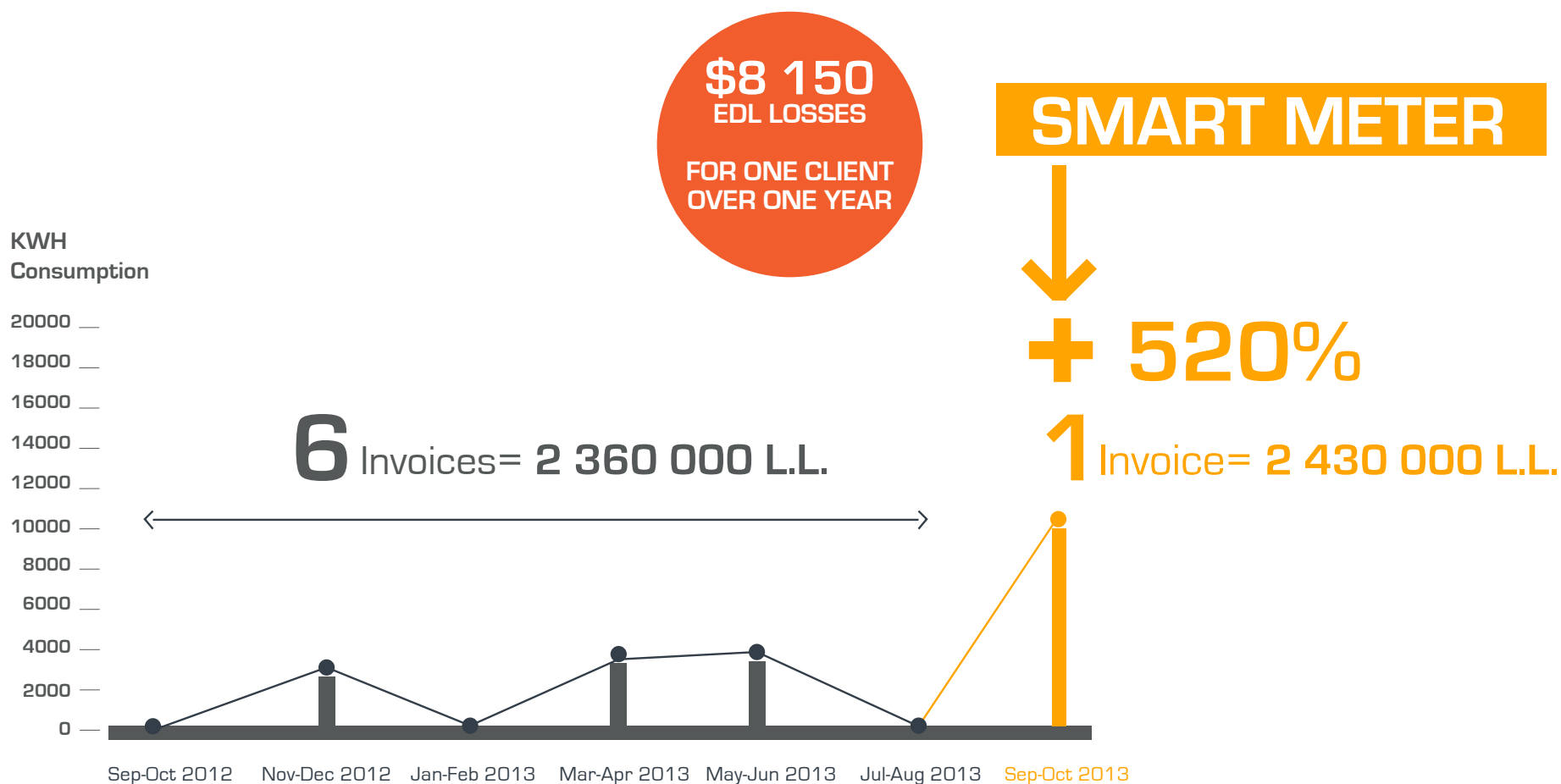
BUS

READING COMPARISON

Case 2: Naher el Mot

Installation: 0432635000001

Branch: 501144



\$8 150
EDL LOSSES

FOR ONE CLIENT
OVER ONE YEAR

BUS

M3 METERS INSTALLATION

ON MV FEEDERS IN PRIMARY SUBSTATIONS

195

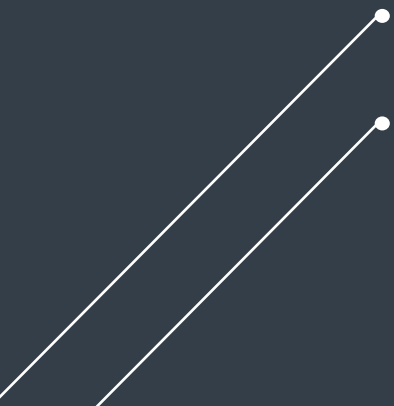
M3 Meters
Installed





BUS

OPERATIONS & MAINTENANCE

- 
- Efficient Operation of The MV & LV Distribution Network
 - Minimization of Unplanned Interruption

BUS

OPERATIONS & MAINTENANCE TEAM

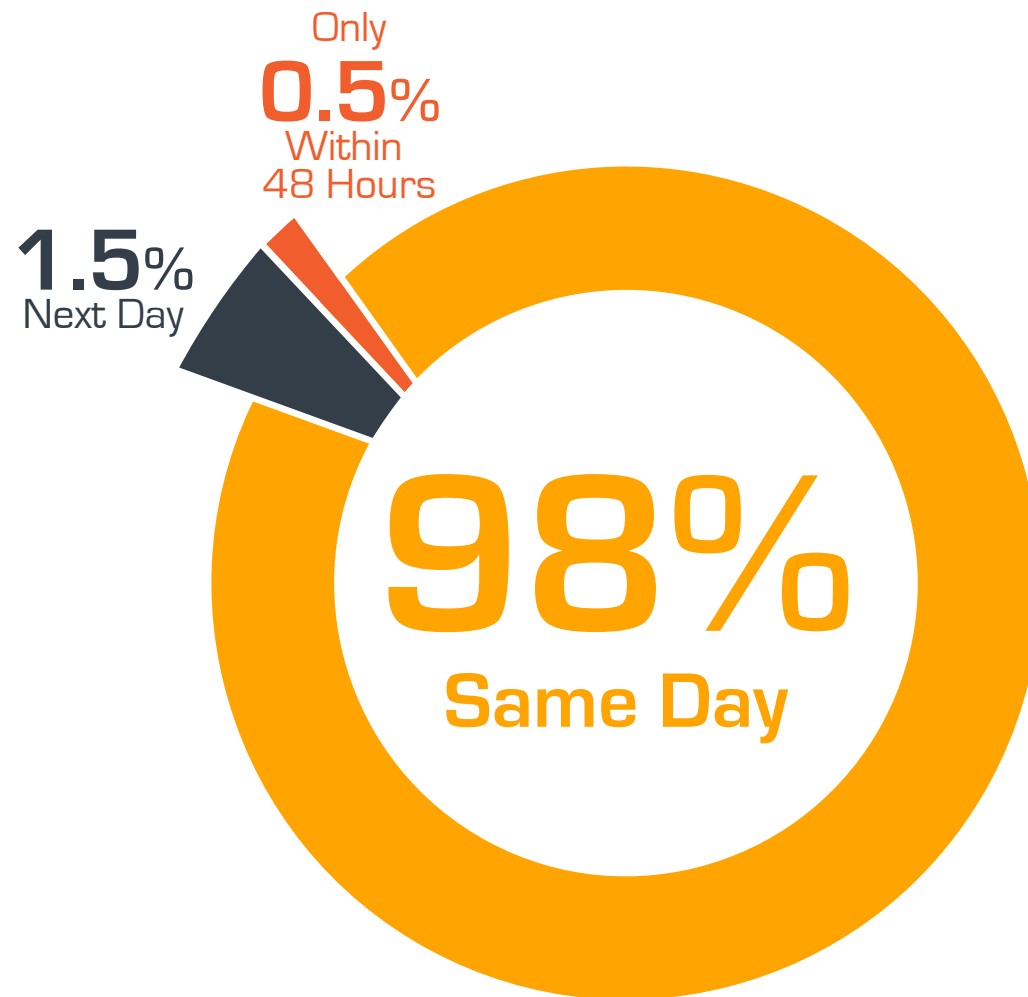


BUS REPAIRS



BUS REPAIRS

MORE THAN **2000 REPAIRS** PER MONTH



BUS

PREVENTIVE MAINTENANCE





BUS

READING & COLLECTION

- 
- Customer Meter Reading
 - Collection of The Bills Issued by EDL

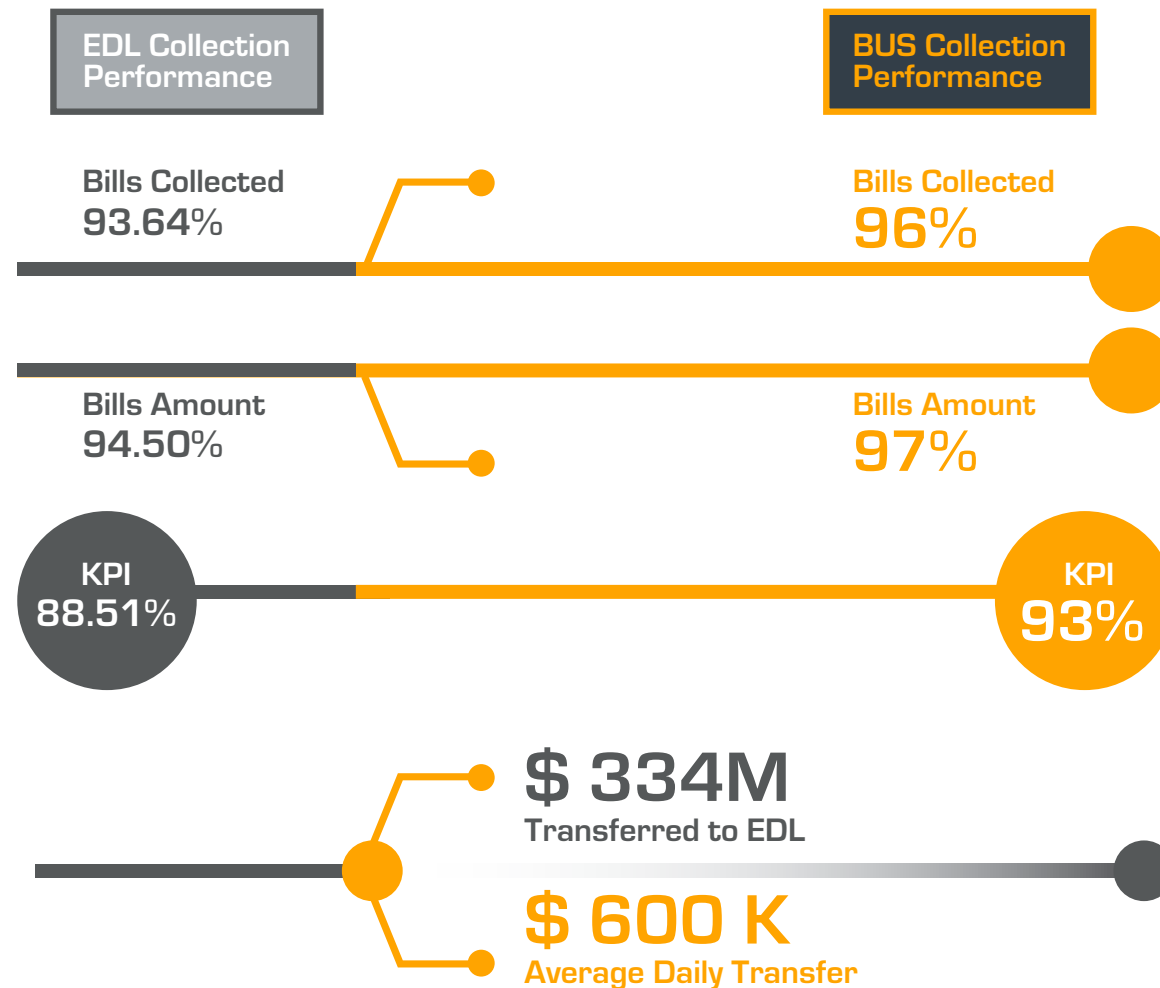
BUS

READING & COLLECTION TEAM



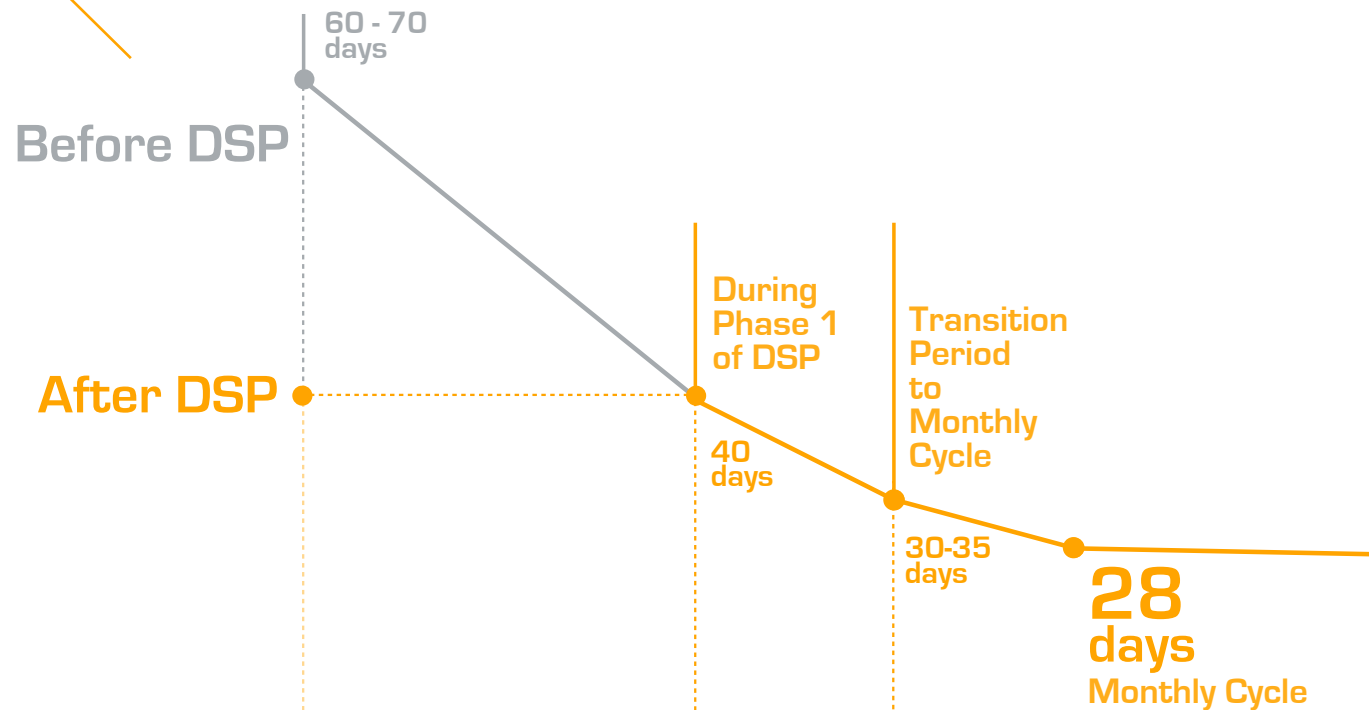
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BILLS COLLECTION (1/2)



BUS

BILLS COLLECTION (2/2)



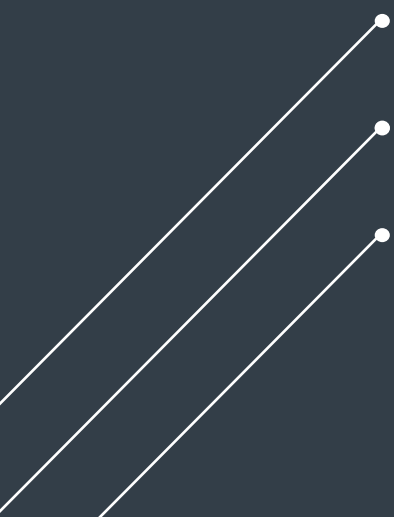
Better Cash Flow:
Same Amount
Of Money Collected
In Half The Time

* Monthly Cycle Already Started In:
Jounieh, Jbeil, Baabdat, Batroun,
Qartaba, Amioun, Achkout, Bikfaya,
Zgharta, Kolayaat, Kobayat, Halba,
Berkayel, Tripoli, Donnieh.



BUS

CUSTOMER SERVICE

- 
- Managing
 - Analyzing
 - Responding All Customers' Complaints & Requests

BUS

CUSTOMER SERVICE TEAM



BUS

CONTACT CENTERS & CALL CENTER

15

Customer Services
Contact Centers

34 277

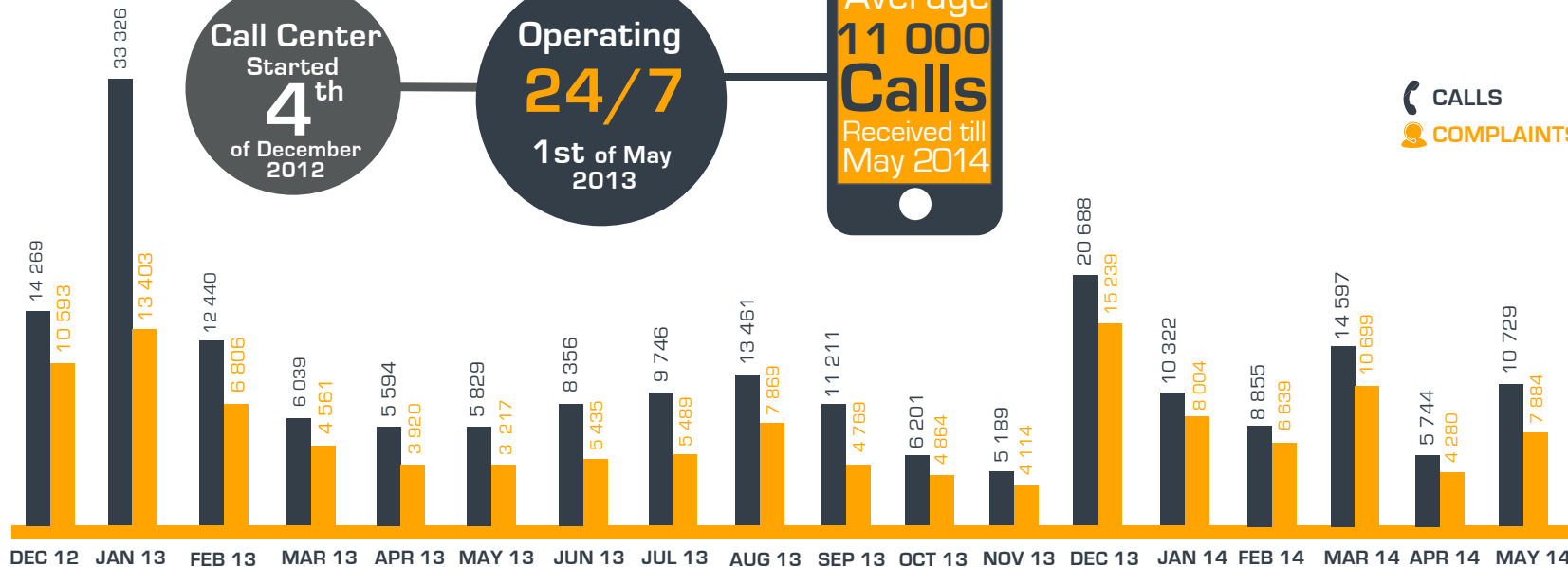
Customers'
Requests
Handled in
2013

Call Center
Started
4th
of December
2012

Operating
24/7
1st of May
2013

Monthly
Average
11 000
Calls
Received till
May 2014

CALLS
COMPLAINTS

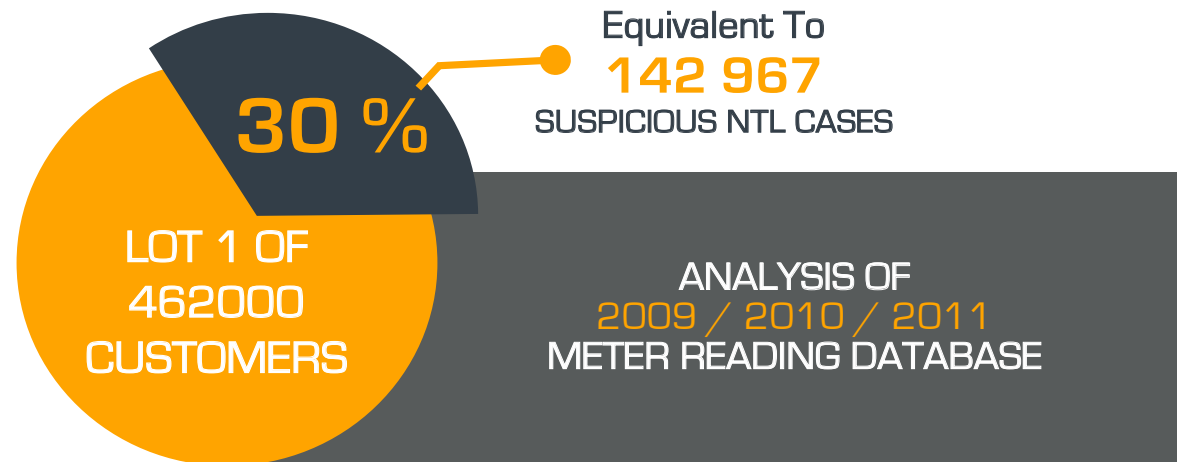


BUS

NON-TECHNICAL LOSSES CAMPAIGN

Based on 5 Meter Reading Analysis Criteria:

- Zero Readings
- Repetitive Readings
- Multiples of 100
- Drop in Consumption
- Suspiciously Low Consumption



12 Teams

Accompanied With EDL Sworn Officers

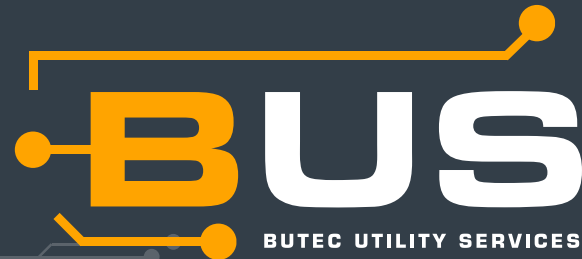
Since April
2013

4900 Cases Detected

BUS

RECOGNITION





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T 961 6 642 742 (Selaata Call Center)

F 961 1 512 444

W www.bus.com.lb

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