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*Lead AMI Projects, Process,
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Title

Current Landscape, Roll-out Strategy & Current KPI of K-Electric AMI

Name

Fazal-e-Rehman

Affiliation

**Lead AMI Projects, Process,
Governance & Support at K-
Electric**

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KE Overview

The only vertically integrated power utility company in Pakistan, KE has a **robust network to ensure sustainable and reliable power supply to Karachi and its adjoining areas**



Customers
3.2 Million



Area
6,500km²



LS Exempt
78%

Presence Across the Entire Power Value Chain



Generation

Installed generation capacity of own plants to increase to **2,817 MW¹** with addition of 900 MW power plant. Further, has arrangements of **1,800+ MW** via external sources

Transmission

Over **6,536 MVAs** Capacity, **71** Grids, **172** Power Trafos, and **1,350 km** of lines

Distribution

8,153 MVAs capacity, **1,937** feeders, **29,702** PMTs and **10,283km** HT lines

KE Overview

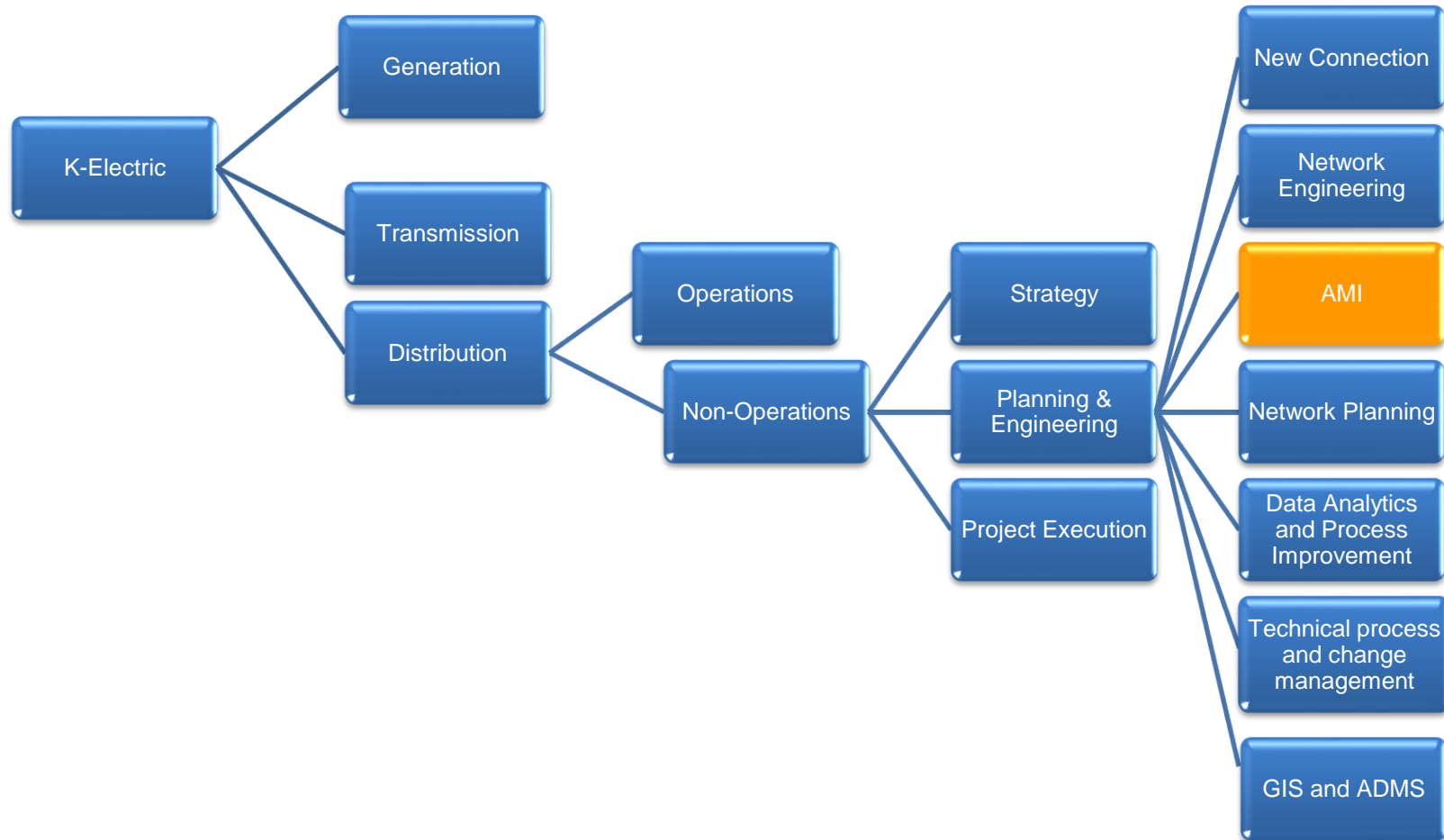
Our Vision

- To restore and maintain pride in KE, Karachi and Pakistan.

Our Mission

- Brightening lives by building the capacity to deliver uninterrupted,
- safe and affordable power to Karachiites.

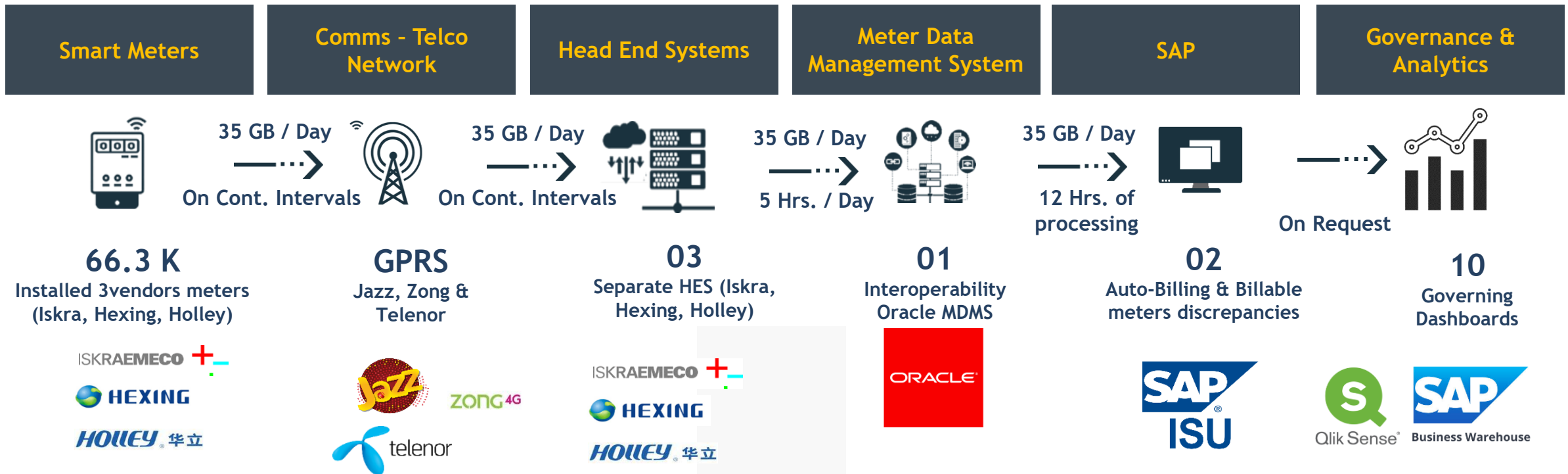
General Overview



Advanced Metering Infrastructure

AMI is an integrated system of smart meters, communication networks and data managements system that enables two-way communication between utilities and customers.

Our vision is to revolutionize K-Electric's Metering Infrastructure of Todays and Tomorrow by Enabling Smart Metering Solution



Smart Metering Roll-outs



Karachi

2022 ↑

DINRAIL ROLL-OUT

- 270 3-Phase, 1-phase and check meters Install at 3 different locations.
- 55% space constraint issue resolved.
- DCU improves meter data availability from basement meters

2020 ↑

NET Metering

- MDMS Go Live
- Auto Billing Go Live
- Analytics Go Live
- Net metering roll-out

2018 →

INDUSTRIAL & PMT ROLL-OUT

- Coverage of High-end Industries
- Energy Accounting to a lower hierarchal Level (PMTs)
- ISKRA HES 2nd Up-gradation
- Revamped rollout process on SAP-PM
- 30k meters industrial meters and 15K PMT meters

2014 →

RESIDENTIAL PILOT

- Introduction of 2 new HES Vendors
- Installation of Hexing & Holly Meter
- 6k Meters Rollout

2014 →

INDUSTRIAL PILOT

- 1.5k Meters Rollout for Industrial Meters' Pilot Project
- First ISKRA HES Up-gradation

2010 →

FEEDER METERS

- Installation at Feeder Level -
- 2k Meters Rollout -
- Dist. Loss Monitoring by SM data

2008 ↓

INCEPTION OF AMS

- Comprised only 8 members -
- Commissioning of ISKRA HES -
- Meter Installation at GN & TX -

2009 ↓

GN & TX COVERAGE

- 100% Coverage at GN & TX -
- Visibility of Running Generation -
- TX Loss monitoring by SM data -

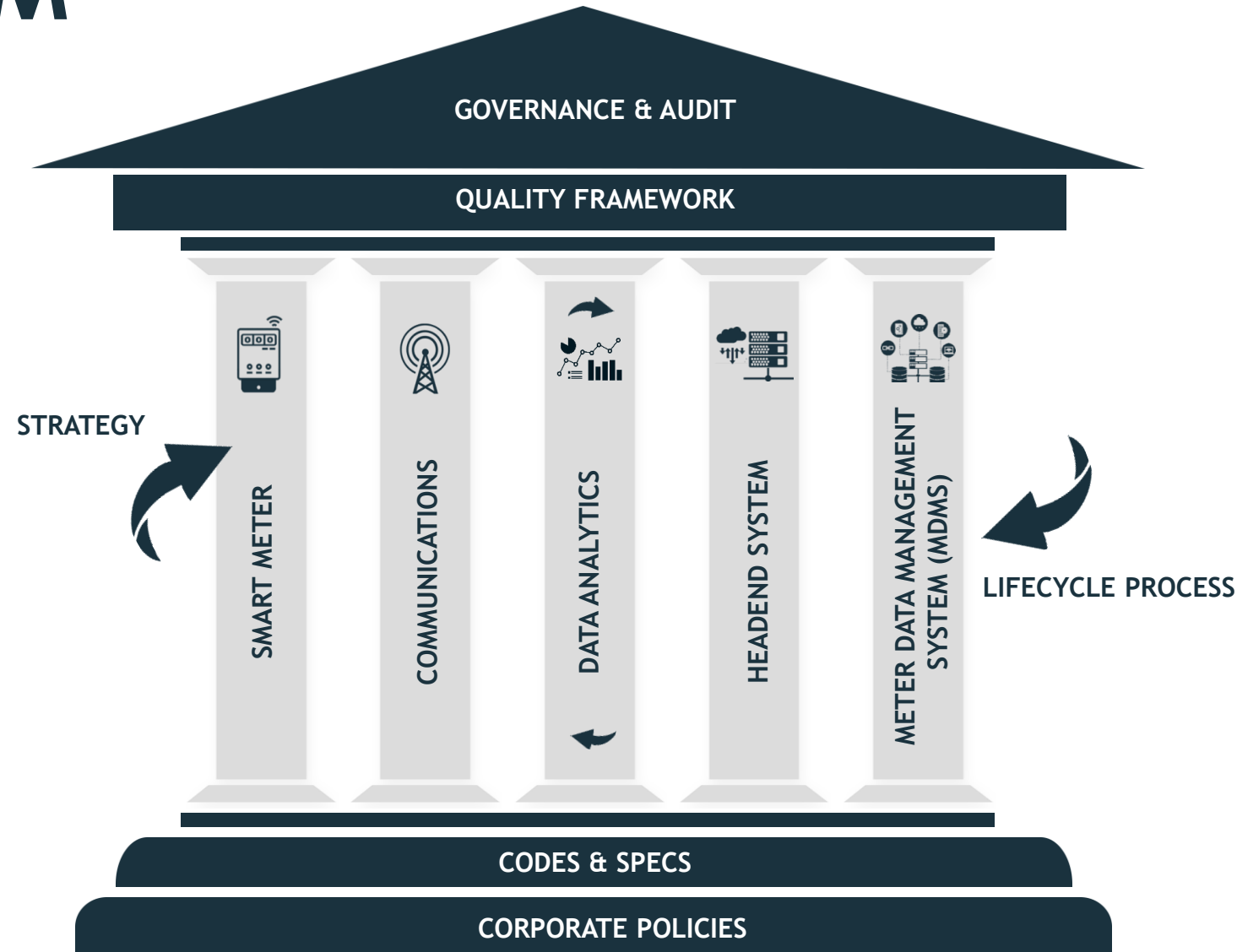


AMI WORK SYSTEM

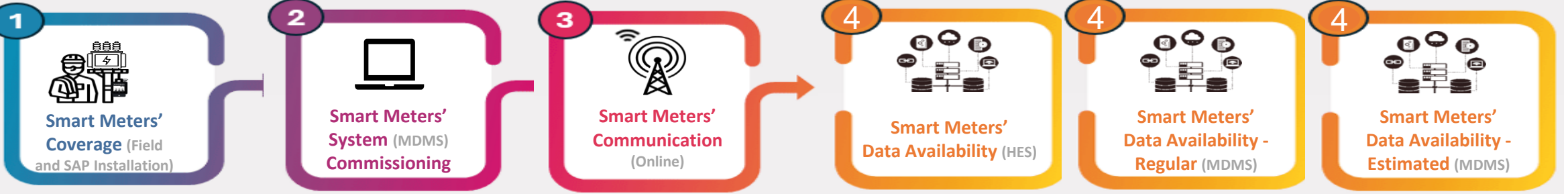
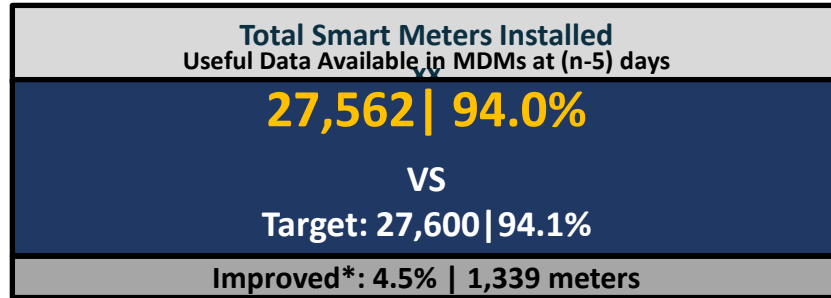
A Comprehensive framework that integrates hardware, software, and communication technologies to manage utility services effectively. The system is designed to improve the efficiency, reliability, and sustainability of utility services. The benefits you mentioned are outcomes of implementing an AMI work system. These include cultural integration, effective change management, streamlined operations, and reduced turnaround times through digital transformation.



- 28** Policies
- 30** SOPs
- 15** Codes & Specs
- 2** Mobility Apps
- 8** Dashboards



AMI Governance KPIs



Smart Meter Coverage in SAP

29,311 | 100%

VS

Target: 29,184 | 99.5%
Rolling Count: 0 vs 147

Improved: 0.5% | 152

Smart meters installed in Field
and in SAP

MDMS Commissioning

29,326 | 99.8%

VS

Target: 29,036 | 99.5%
Rolling Count: 64 vs 295

Improved: 0.57% | 172

Smart meters installed in SAP
and commissioned in MDMS

Communication

27,604 | 94.1%

VS

Target: 27,864 | 95%
Rolling Count: 1,727 vs 1,466

Improved: 0.8% | 229

Online Smart meters installed
in SAP

Data Available in MDMS

27,696 | 94%

VS

Target: 27,600 | 94.1%
Rolling Count: 1,769 vs
1,731

Improved: 2.7% | 786
meters

Useful Data Availability in
MDMS

Data Available in MDMS

27,696 | 94%

VS

Target: 27,600 | 94.1%
Rolling Count: 1,769 vs
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Useful Data Availability in
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Thank you