GIS &
Geo
Solutions

Duroob - DEWA GIS Mobility Application

Optimizing Fieldwork through Mobility

Dubai Electricity & Water Authority
Innovation & The Future

Sep 2020

Duroob - DEWA GIS Mobility Application

Agenda

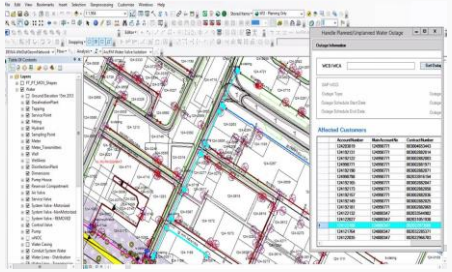
- GIS Transformation Roadmap
- Enterprise Implementation methodology
- Adopted Applications
  - Explorer for ArcGIS
  - Collector for ArcGIS
  - Survey 123
  - Tracker for ArcGIS

Duroob - DEWA GIS Mobility Application

GIS Transformation Roadmap

Bayanat Portal (2017)

- Portal for ArcGIS
- 10 Business Applications using Web App Builder



System of Record (2018)

- 1st ArcFM 10.6.1 Implementation worldwide
- Standard Data Model

System of Engagement (2019/2020)

- Duroob mobile
- Outage Management
- Duroob Augmented Reality

Duroob - DEWA GIS Mobility Application

Enterprise Implementation Methodology

- Check Devices Compatibility
  - Android Operating System
  - Processor, GPS Accuracy, RAM…etc.
  - Reliability in Harsh environment
- Deploy Mobile Data Management
  - Groups and Profile Management
  - Remote Setup
  - Control Application Access
- Secure VPN Tunneling

airwatch® by vmware®

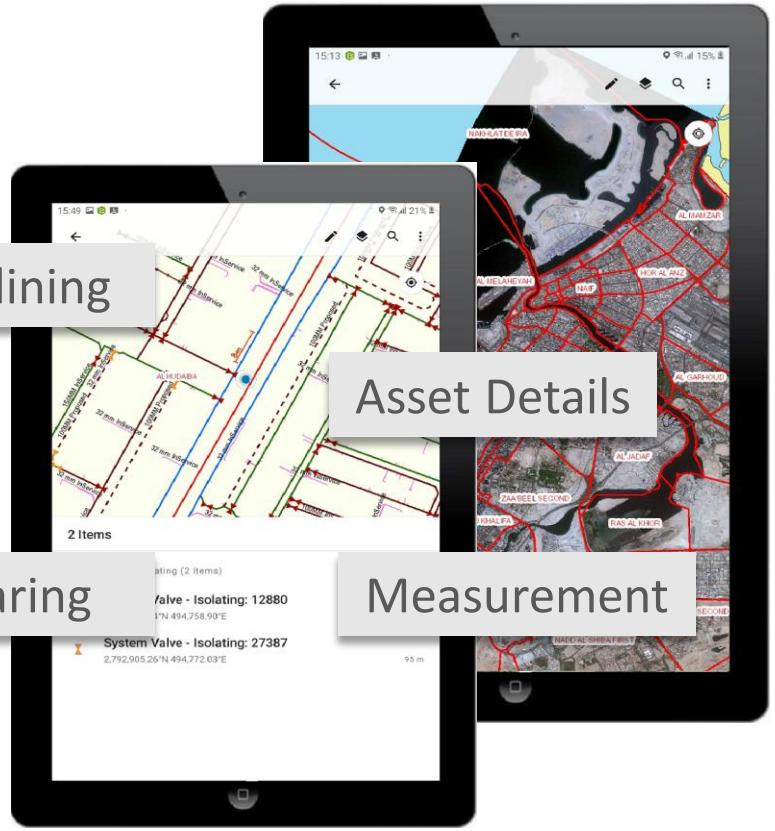
GIS & Geo Solutions

Explorer for ArcGIS

Water Division

- Water Operation
- Water Lap
- Water SCADA
- Water AMI
- Water Metering
- Well Field
- Water Maintenance
- Water PSR
- Water House Connection

Live Since March 2020



Redlining

Asset Details

Sharing

Measurement

9 Web Maps

386 User

GIS & Geo Solutions

Collector for ArcGIS

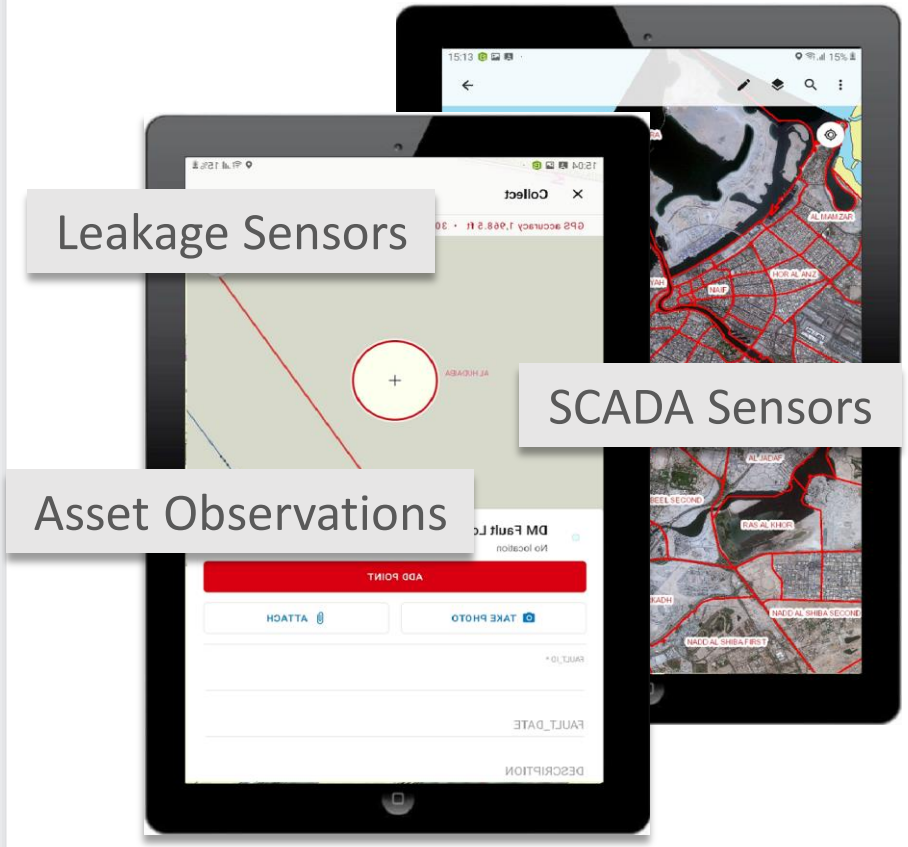
Water Division

Water SCADA

Water AMI

Water Metering

Live Since March 2020



GIS & Geo Solutions

Explorer for ArcGIS

Distribution Power Division

Distribution Operation

Distribution Asset Management

Distribution Project Execution

Distribution Field Maintenance

Distribution Connection Services

Live

In Progress

Redlining

Asset Details

Sharing

Measurement

6 Web Maps

420 User

GIS & Geo Solutions

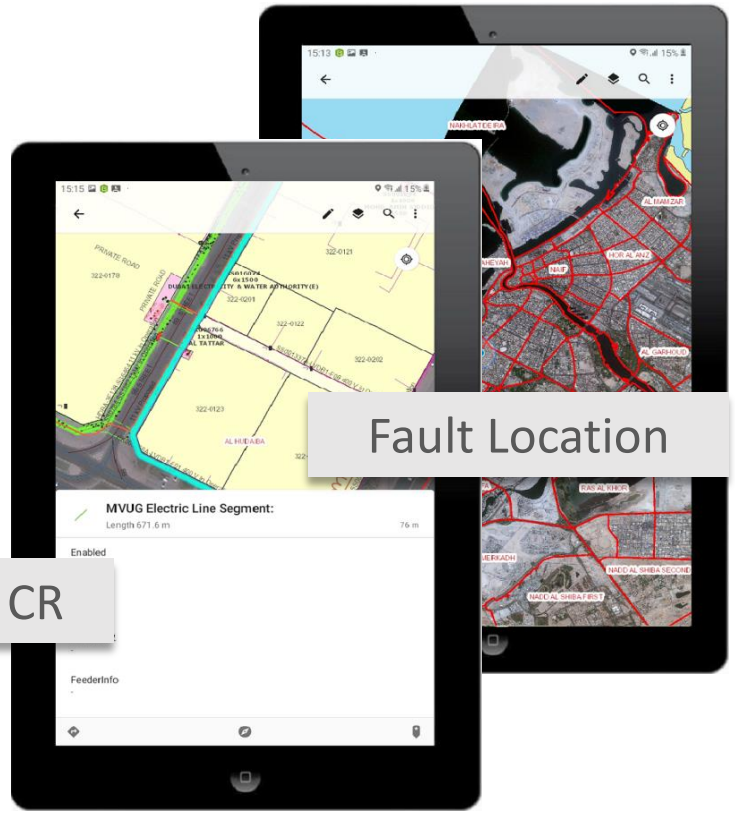
Collector for ArcGIS

Distribution Power Division

- Distribution Asset Management
- Distribution Project Execution
- Distribution Field Maintenance
- Distribution Connection Services

Live

In Progress



Fault Location

Map CR

6 Web Maps

420 User

GIS & Geo Solutions

Explorer for ArcGIS

Transmission Power Division

- Transmission Maintenance Patrolling
- Transmission Cable Maintenance
- Transmission OHL Maintenance
- Infrastructure Information & Permits
- Operation Technology

Live

In Progress

5 Web Maps

111 User

GIS & Geo Solutions

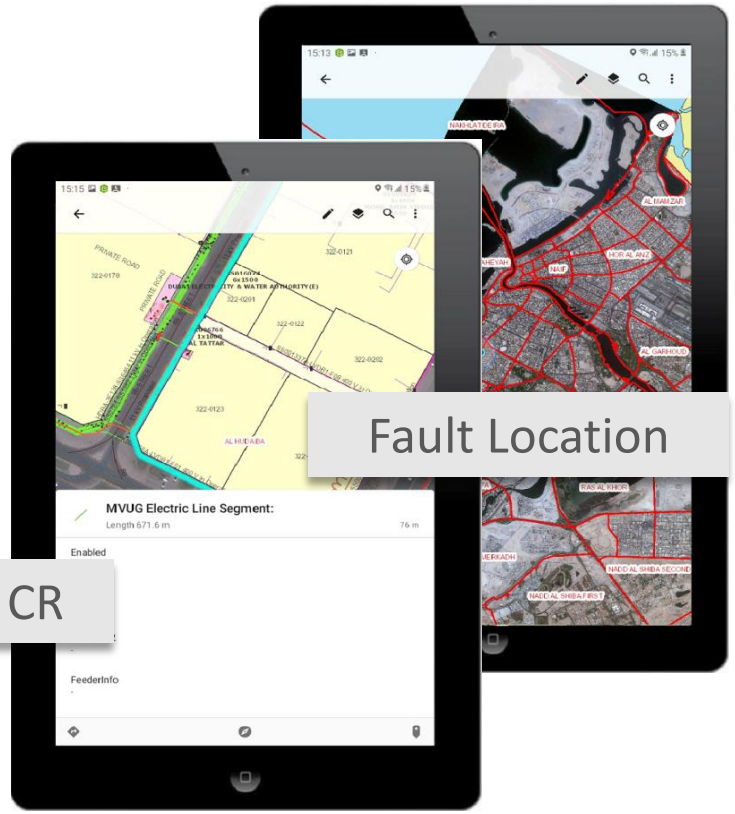
Collector for ArcGIS

Transmission Power Division

- Transmission Maintenance Patrolling
- Transmission Cable Maintenance
- Transmission OHL Maintenance
- Infrastructure Information & Permits
- Operation Technology

Live

In Progress



Fault Location

Map CR

5 Web Maps

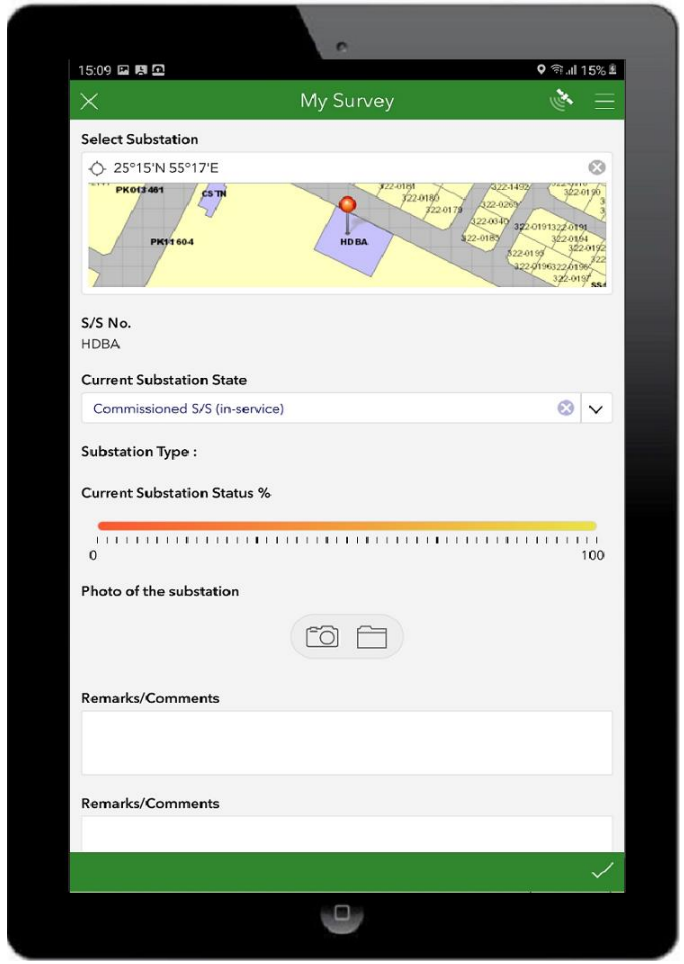
111 User

GIS & Geo Solutions

Survey 123

Distribution Power Planning

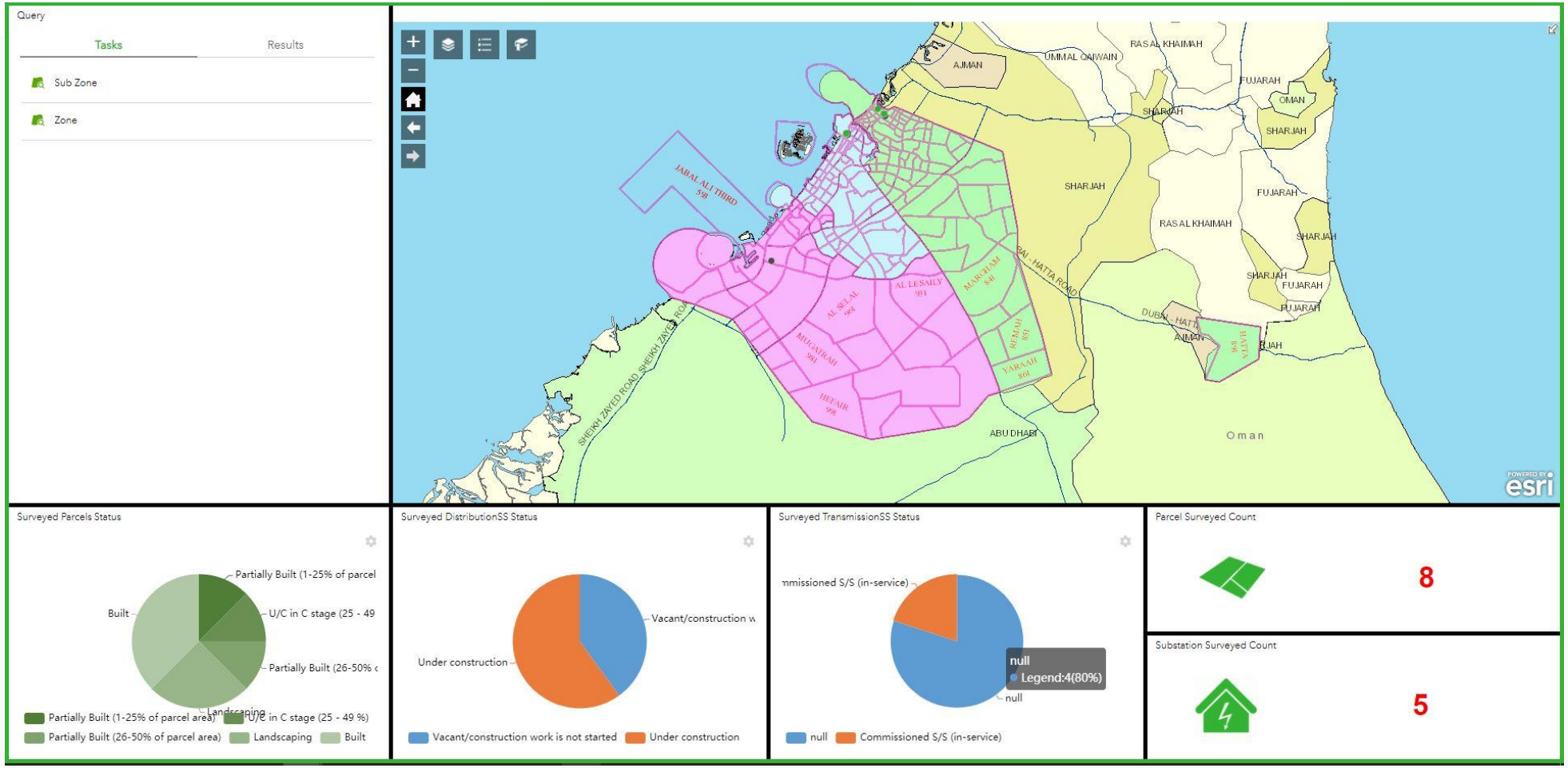
- Used by Distribution Power Planning for
  - Parcel Construction Survey
  - Substation Construction Survey
  - Major Project Status
- Optimize Power Supply
- Prioritize Substation Commissioning



GIS & Geo Solutions

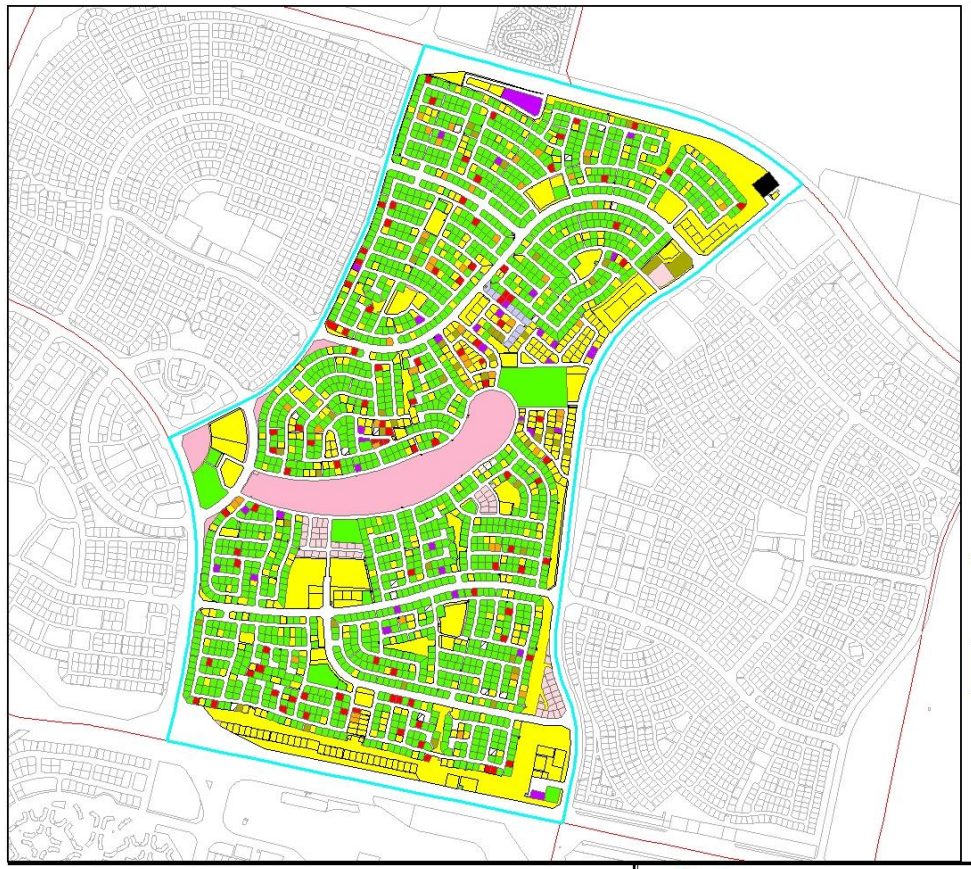
Survey 123

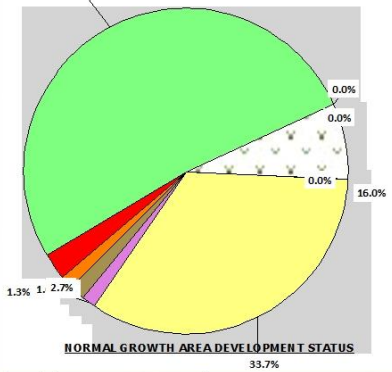
Provide necessary data to Parcel Status Dashboard



GIS & Geo Solutions | Survey 123

Create Area Report





NORMAL GROWTH AREA DEVELOPMENT STATUS

Installed Capacity : 00.0 MVA	Existing Peak Load : 00.0 MVA
Proposed Capacity : 00.0 MVA	Expected Area Peak : 00.0 MVA
DCP Inservice : NA	DCP Proposed : NA

Substation Panel Status

S/S Name	Built By	Peak Load (MVA)	In Service	Booked / Proposed	Adv. Booking	Free
MAHA 132/11kV	DEWA	00.0	0	0	0	0
GZLE 132/11kV	DEWA	00.0	0	0	0	0

* PANEL WILL BE FREE AFTER LOAD TRANSFER

LEGEND

132 & 33KV S/S	WORK STOP	VACANT	FENCE - 24%	25 - 49%	50 - 79%	80 - 100%	BUILT-25%	BUILT-50%	BUILT	LANDSCAPING	WATER AREA

GOVERNMENT OF DUBAI

هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority

DISTRIBUTION PLANNING DEPARTMENT
(POWER & WATER PLANNING DIVISION)

PREPARED BY	DPL / AAH	DATE:	August 2020
CHECKED BY	HRS	DATE:	August 2020
APPROVED BY	GJA/AAA	DATE:	August 2020
DWG. TITLE			

Drawing Scale NTS | Sheet No. 49 NDB MAR 2018

Crew Tracking

Crew Tracking

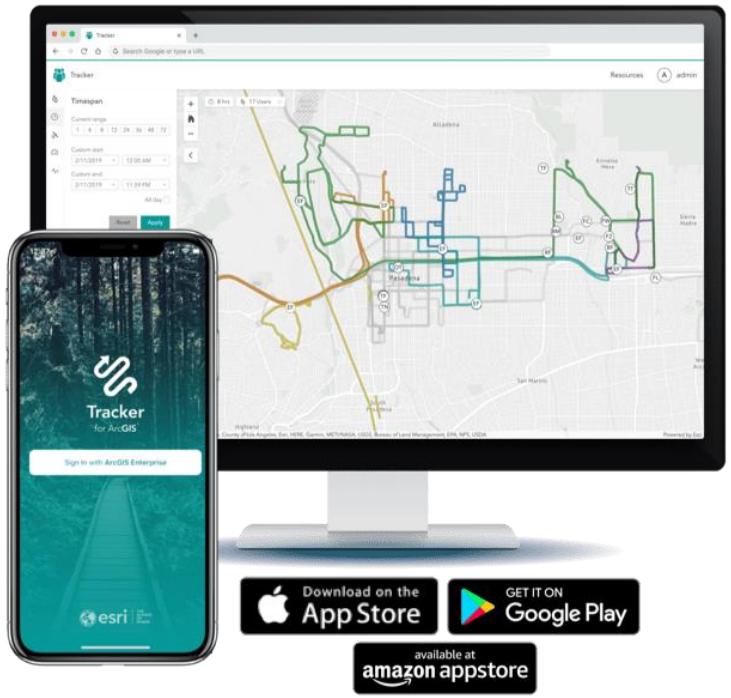
- Tracker for ArcGIS and ArcGIS online
- Fixed Login for each device
- One time Login by Admin and then Mobile Data Management will prevent users from turning tracking off

GIS & Geo Solutions

Crew Tracking

Control Center Tracking Application

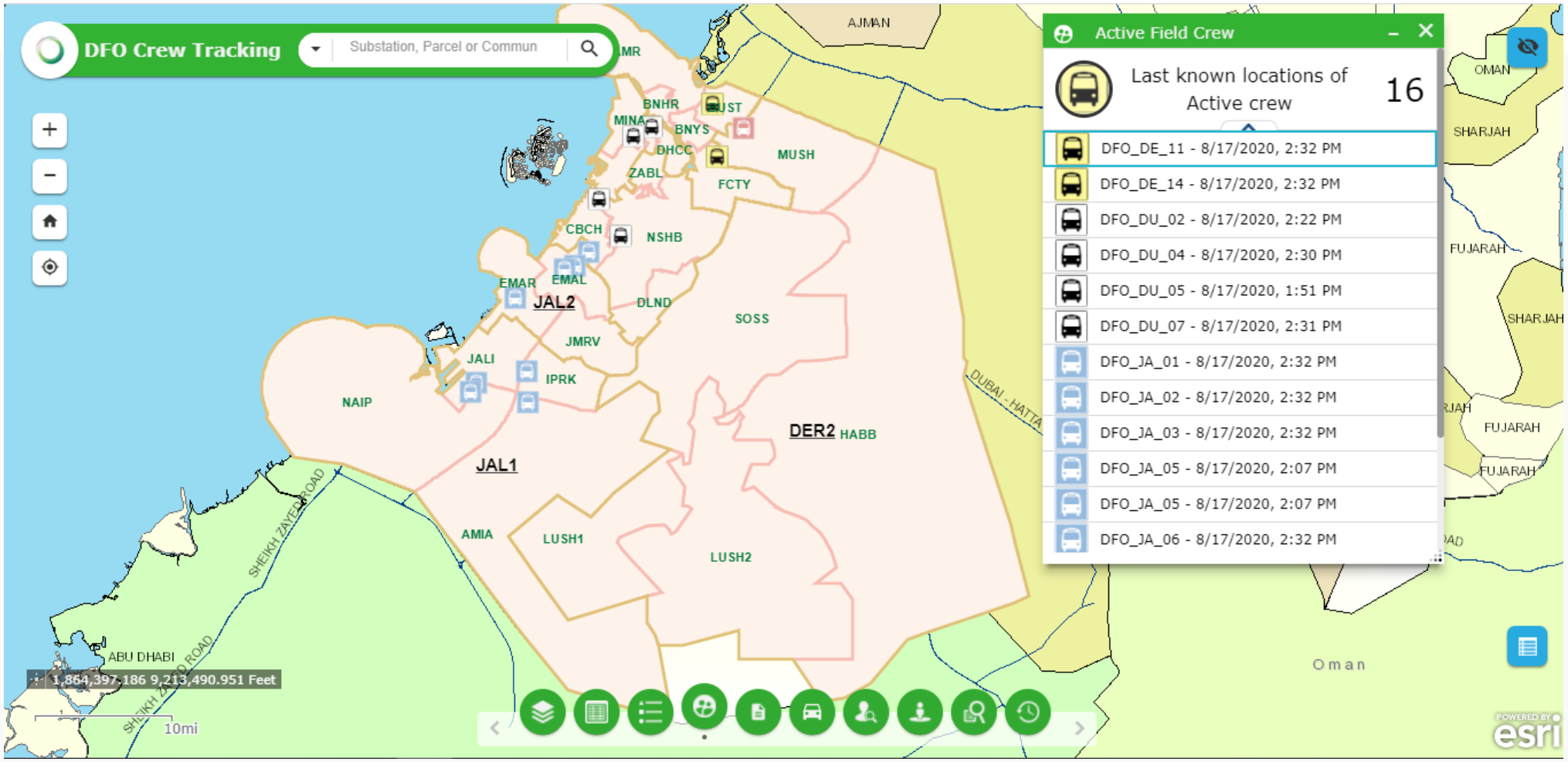
- Show Active Users within 45 minutes.
- Show tracks for past 12 hours, 24 hours up to 30 days.
- Show Crew near to specific Substation.
- Assign Devices to Crew.
- Search by Operation Zones\Subzones.
- Playback animation.
- Assign Symbols for Crew based on their Operating Zone.



GIS & Geo Solutions

Crew Tracking

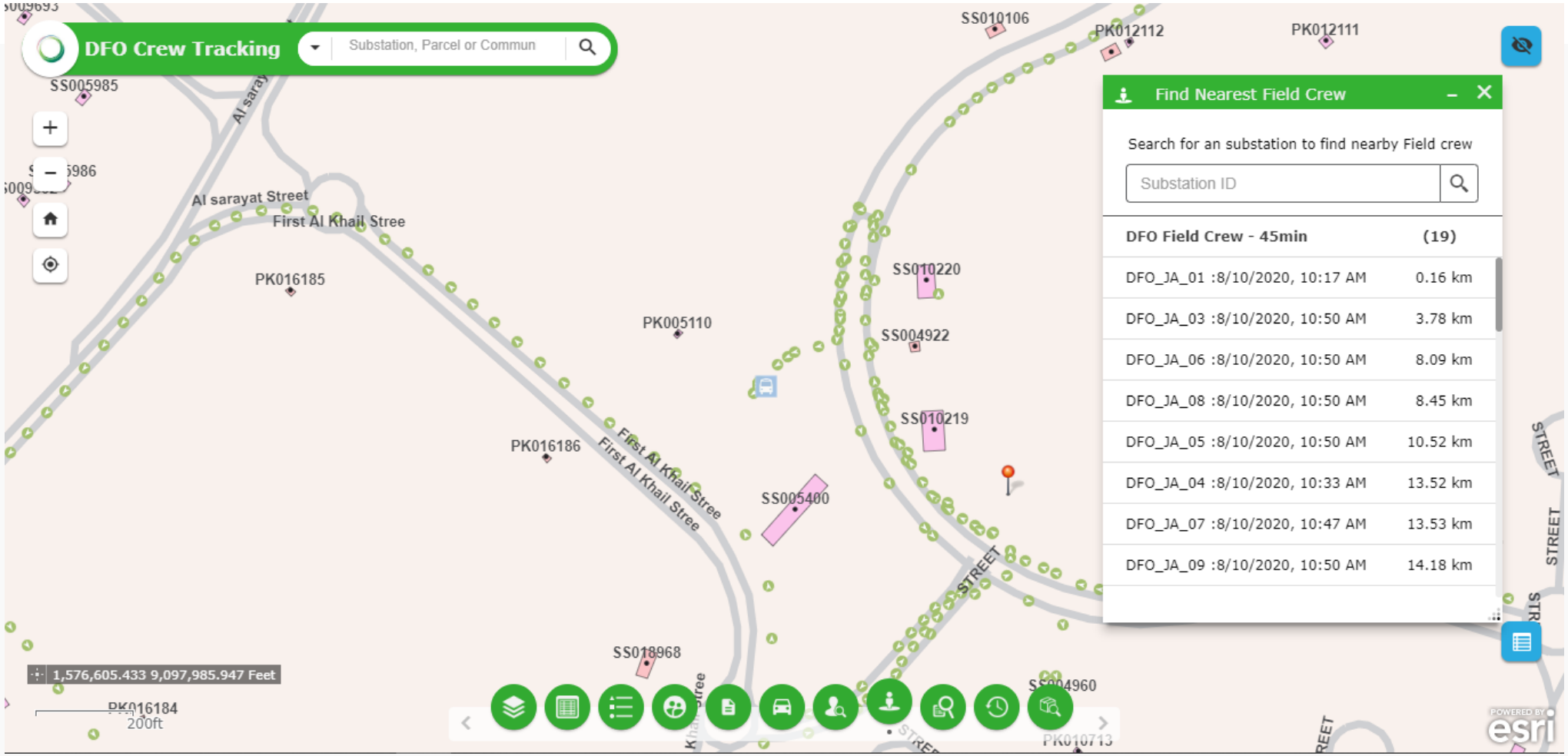
DFO Crew Tracking



GIS & Geo Solutions

Crew Tracking

DFO Crew Tracking



Way Forward

Offline Capability

- Target Q1, 2021

Augmented Reality

- 3rd Data Visualization
- Remote Office Assistance
- Standard Operating Procedure
- Target Q2 2021

Custom Apps

- Location along cables
- Confidence Factor
- Target Q3, 2021

GIS &
Geo
Solutions

Q&A

THANK YOU