

Area Report

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Organisation: Dubai Electricity and Water Authority (DEWA)

Country: United Arab Emirates

Level of government: Local government

Sector: General public services

Type: Data, Financial Resources, Human Resources, Public Service

Launched in: 2010

Overall development time: 6 year(s)

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Description

Area Report is an automated powerful reporting system tool prepared in-house using available information technology tools within the authority. These tools include Geographic Information System (GIS), internally developed database. Area Report serves as a Proactive Planning Tool supporting the core business of the authority resembled by the delivery of sustainable electricity services at a world-class level of reliability, efficiency and safety. Area report enhances all electrical network expansion activities by providing more reliable information about area under study with ONE CLICK. This is done by:collecting and analyzing all information from site in addition to information received from customer; monitoring the progress of construction activities; and determining the availability of electrical network infrastructure within the area under study.

Why the innovation was developed

- With the beginning of the recovery from the global economic crisis, when the main developers of the major projects in Dubai were unable to update their Master Plans due to the associated uncertainties.
 - Periodic submission of developers Master Plans to Dubai Electricity & Water Authority (DEWA) is essential to plan future expansions for electrical network infrastructure. Accordingly, DEWA was not in a position to decide exactly the investment plan for the upcoming years.
 - At this stage DEWA decided to take the initiative and prepare quarterly report of each area in Dubai (currently semiannual). This report depended mainly on site surveying to monitor the development on site for each project/ area to decide the required investment.
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Objectives

Enhance public trust, Improve efficiency, Improve service quality, Support economic growth

Main beneficiaries

General population, Government bodies

Results

Efficiency

- Reduce the time needed to create area report manually by 60% (from 5 working days to two working days).
 - Reduce the number of pages required to create a report for each area by 12.5%.
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Service quality

Responsiveness:

- Efficient and reliable planning which contributed to the recent achievement of DEWA of reducing Customer Minutes Loss (CML) to 4.9 minutes compared to global standard of 16.4 minutes.

Reliability:

- Timely plan for investment in the infrastructure for DEWA electricity system. This has contributed to the recent achievement of UAE during 2013, 2014 and 2015 where UAE represented by DEWA ranked the 4th internationally and the 1st in MENA for ease of access to electricity.
 - Efficient and reliable planning which contributed to the recent achievement of DEWA of reducing Customer Minutes Loss (CML) to 4.9 minutes compared to global standard of 16.4 minutes.
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User satisfaction

- Timely plan for investment in the infrastructure for DEWA electricity system. This has contributed to the recent achievement of UAE during 2013, 2014 and 2015 where UAE represented by DEWA ranked the 4th internationally and the 1st in MENA for ease of access to electricity

Development

Design

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Design time: 1 year(s)

Testing

- Collecting and analyzing all information from site in addition to information received from customer and monitoring the progress of construction activities
- Determining the availability of electrical network infrastructure within the area under study.
- Each report covers certain area/project (divided to 63 subzones) to maintain accuracy & the special requirements for each area/project

Testing time: 2 year(s)

Implementation

Tools used:

- Link site information with the electrical information (by creating a new database called "Muheet" which was developed internally for more than 195,000 plots & more than 27,000 distribution substations and to create efficient reporting system on a one finger click).
- Using the available data extracted from company's intelligent systems (GIS, databases, SAP and SCADA).
- Prepare color coded area maps including all electrical information & the status of under progress projects in single sheet.
- Using drone for site check.
- Establish link with Dubai Land Department to ease access plot/developer information & projects status.

Resources used:

- Existing manpower.
- Existing office resources.
- No dedicated budget for this project.

Implementation time: 3 year(s)

Challenges and solutions

- The high diversity in constructional development of different areas in Dubai and the associated difficulty in determining the requirements of each area.
- To overcome this difficulty, Dubai was divided into 3 zones (Deira, Bur Dubai and Jabal Ali). Additionally, each zone is divided into 21 sub-zones based on source of supply/project type/load type, etc.
- Data collection: Getting the status of over 195,000 plots in a short period is not an easy job. This was achieved by the dedication and commitment of all concerned staff.
- Provision of a centralized and easy access warehouse for information brought from site: Using staff knowledge in IT, a new database was developed internally named "Muheet Database" to store all information from site in addition to information received from customer of certain plot(s).
- Simple Report Display Format: A color coding area map were created and linked with GIS to display the status of each plot including bi chart showing the percentage of each status.

Lessons Learned

Conditions for success

- Support of management
 - Staff motivation
 - Appropriate environment
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Other information

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Area Report serves as a Proactive Planning Tool supporting the core business of the authority resembled by the delivery of sustainable electricity services at a world-class level of reliability, efficiency and safety.

Area report enhances all electrical network expansion activities by providing more reliable information about area under study with ONE CLICK. This is done by i) collecting and analyzing all information from site in addition to information received from customer ii) monitoring the progress of construction activities

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