Software integration and Business Intelligence (BI) in Geospatial Energy Data Management System

Spatial Thinking …..
“Thought process on modelling evolving GIS solutions, in the current era of connected world of things”
Beyond we think ....
Connected GIS

A mesh of information being listened by GIS

The information mesh/data intelligence is what we sense as the approach for the intelligence GIS solution to adopt in the era of IoT, Machine learning & AI / BI.
Aggressive Listening

Predictive decision making

- Infrastructure
- Machine learning
- Data Sources
- Standards
- Planning
- GIS handshake with BI
- Field data
- Field data
- SCADA
- Billing
- OMS
- CRM
- AMS
- SAP
- Data Sources
- Machine learning
- Infrastructure
Data from various sources

Field data
Asset information
Sensor data
Consumer Information
Emergency

What If

Are we listening to all the available data sources?

Extract → Transform → Load

Data-Driven decision making
How

Micro Service Architecture
MultiSpeak Model

MultiSpeak® Web Services Bus

Outage Management & Distribution Operations
- CH Call Handling
- WEA Weather
- OA Outage Analysis
- LT Location Tracking
- SCADA Supervisory Control & Data Acquisition

Demand Response
- DM Demand Management
- DER Distributed Energy Resources
- DR Demand Response
- PAN PAN Communications

Demand Response
- MM Message Management

Distribution Engineering, Planning & Construction
- DGN Field Design
- LOC Underground Facility Locations
- AM Asset Management

Customer Billing and PAN Management
- PPM Prepaid Metering
- CB Customer Billing
- CP Commissioning & Provisioning
- PP Payment Processing
- MDM Meter Data Management
- PG Payment Gateway

Work Order Accounting and Inventory
- ASM Assembly Management
- FA Finance & Accounting
- EDTR End Device Testing & Receiving
- INV Inventory Management

Work Management
- RM Resource Management
- SA Scheduling & Assignment
- WG Work Generator

Work Order Management
- WR Work Requester
- WP Work Performer
- WO Work Owner

MultiSpeak Model

Metering and Service Management
- CD Connect/Disconnect
- MR Meter Reading
- WV Work Viewer
- WR Work Requester
- WP Work Performer
- WO Work Owner

Subscription Management
- PUB Subscription Management

Notification
- NOT Notification

#GWF2017

www.geospatialworldforum.org
Industry Solutions
Services and Software
Use these key industrial services to build, test, and run your innovative Industrial Internet applications.

EDGE SOFTWARE AND SERVICES

**Connectivity**  
Easily apply this plug-and-play, secure, and reliable connectivity service.

**EdgeManager**  
Use the EdgeManager as a single point of entry for deploying and monitoring devices remotely.

**Enterprise Connect**  
Provide manageable and scalable connectivity between the Predix cloud and your enterprise.

**Machine**  
Create solutions that enable machine-to-cloud, machine-to-machine, and machine-to-human connectivity.

DATA MANAGEMENT
Consumer produced data

The performance of every organisation depends on the quality of service it offers to its end users and at the same time the satisfaction of the users. When the same is applied to utility industry, the end services offered by utilities can be measured by customer satisfaction. There can be very valuable information that could be produced by customers. The time where utilities claim to provide omni channel of apps to consumers, the approach & standards to be driven from GIS.

How is the consumer produced data being utilized?
Open Outage Maps
- Transparency, publish a public facing Google/Open Maps based outage details.
- Map enabled dashboard

Aggregate information from various sources
- Manage outages, social media tickets, planning tasks and many more.

Consumer produced data
- Maintenance free on software releases, features etc...assures happy consumers.

Enterprise Integrations
- Extend the technology to publish data to enterprise systems for analysis.

Transactional Information
- Information from field
- Asset maintenance data
On field data

Every organisation has huge amount of data collected off the field in form of paper. These information is used for validation and later discarded. These information's when digitised offer a huge spectrum of data which can be utilised for crucial decision making.

If you take the example of pole inspection data, the inspection conducted on the poles is used for validating the health and status of poles, if this information when stored on a digital platform and offered the intelligence of location, will let the system decide the behavioural patterns of these equipment's distributed across various regions.

A Go Digital Platform for Business to transform data collection process from paper into Web and Mobile.
Many utility companies use GIS to manage assets and operations, including making smart grid systems a reality. Business intelligence is all about extracting high-value information from vast amounts of data, and presenting it to the right people in a highly consumable format.

BI + GIS: Enable location intelligence to BI output allows decision makers to visualize the influence of geography on behaviours, activities, and processes. The result is improved data-driven decision making.
Conclusion

Business intelligence is all about extracting high-value information from vast amounts of data, and presenting it to the right people in a highly consumable format. Adding GIS to enable location intelligence to BI output allows decision makers to visualize the influence of geography on behaviours, activities, and processes. The result is improved data-driven decision making.
Thank You!

Karthik Sagar Panchangam
Product Line Lead
Mail: karthik.Panchangam@magikminds.com
Mob: +91 9704028379
Skype: karthik.sagar
MagikMinds software services PVT LTD.
URL: www.magikminds.com