



# Integration with Google Glass for Smart Asset Management

By

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# Abstract

- All the assets in the distribution network needs preventive maintenance and better management techniques.
- The world is moving to Mobile first technologies and by using Google Glass along with ArcGIS Server and ArcGIS Online will enable to cater a lot of information to the technician where ever needed with minimal interaction with the system.
- This kind of integration mechanism helps technicians to work more effectively with the information in hand.

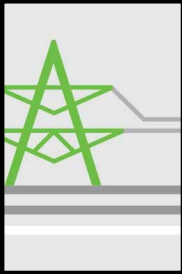
# Goal of Integration



Quality of Field Work



Information



Efficient Asset Network Dataset



Crew Safety



Efficient Asset History

# Improved Quality of Field Work

- Asset Information
- Previous Maintenance History
- Maintenance Steps
- Previous Faults and fixes

Notes



Enables users to see a list of instructions in the form of cards that needs to be followed to ensure proper functioning of equipments

Checklist



Enables field engineers to view instructional/guidance videos and collaborate with SMEs for carrying out maintenance activities

Videos



Displays real time graphs about commercial availability, outages, equipment history etc. of various equipment's/assets

Asset Metrics



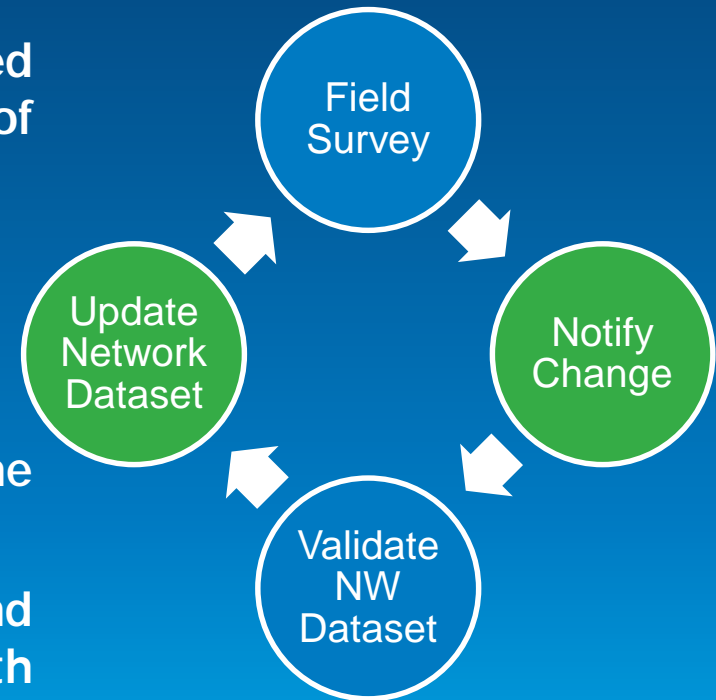
## Improved Information

- Driving directions
- Plot N/W dataset in Camera view to review Asset Dataset
- Other field user notifications
- WO notifications
- Track data like
  - Route time
  - Time spent at site
  - Overtime etc. using Geo Fencing

# Improved Asset Network Dataset

Not only the assets in the distribution network needs maintenance but the GIS datasets needs to be updated based on the maintenance work carried out the technicians. If an asset is replaced from the distribution network with a new upgraded one, the information has to be updated in the GIS dataset for better network tracing capabilities and to provide better data to the technicians in field.

- Tools like Map Change request can be integrated with Glass to provide change in the information of an asset about
  - Asset Misplaced
  - Incorrect Attribute
  - Missing Assetto the GIS team to recheck the asset in the network dataset.
- GIS team validates the network dataset and updates the following changes to the dataset with the real time data provided by technicians during the field survey.



# Improved Crew Security

Crew Security is the major concern to any utility company. Giving real time notifications to crew in the field is highly impossible when there is an emergency situation.



- ArcGIS tools like Hazard Reporting will help technicians to add a hazards to the network with their location and information of the hazard like
  - Type of the Hazard.
  - Risk Involved
  - Suggested Action
- ArcGIS Hazard Notification tool sends the notifications to the operations team and the field crew who are in the proximity near the hazard.
- Field crew or the operations team can reroute the field crew to the nearest safety location where the risk is less.

# Improved Asset Information

- Information about an asset in the network provided by the field technician can be used by the operational management team for predictive measures like
  - When should the next maintenance to take place before Preventive maintenance
  - What will be the impact of running an asset at its maximum will give an analysis of when it should be maintained and when to decommission it or when to replace it to avoid unplanned downtimes



## Notes

- Type of Note
- Severity
- Attachments



## Change Request

- Type of change
- Severity
- Suggestions
- Attachments

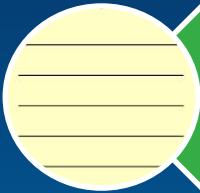


## Videos

- Captured video about steps taken while maintaining it, can be used for quality checks or for training purposes



## Advantages to Crew



Asset Historic Notes



Asset Maintenance Videos



Hazard Notification



Driving Directions

# Advantages to Operational Management



Efficient Network Dataset



Data Required for Predictive Maintenance



Improved Quality of Field Work



Efficient Crew Training



