ArcGIS Mobile Implemented to Improve Damage Assessment Field Data Capture

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Aurecon
Market Sector and Footprint

- **Advisory and Management Consulting**
- **Buildings and Property**
- **Community Infrastructure**
- **Defence**
- **Education and Training**
- **Energy**
- **Environment**
- **Health**
- **Integrated Communications Technology**
- **Industrial**
- **International Development Assistance**

- **Local Government**
- **Mining and Metals**
- **Oil and Gas**
- **Telecommunication**
- **Transportation**
- **Water**

Introduction to the Project

Project Scope was to Assess Damage to:

- 5500 Houses

- 200 Schools

- 200 Roads

- 9 Public Buildings

- ……in 12 weeks

Objectives

- Assess and Verify Damage

- Provide Recommendations

Implementation of ArcGIS Mobile
Reasoning for choosing ArcGIS Mobile

- **Very tight deadlines and limited budget**

- **Dispersed and remote sites**

- **Reduce post assessment cleanup**

- **Reduce geo-referencing effort**

- **Integration of data with images**

- **Required daily updates**

- **Progress required spatially to assist planning**

Implementation of ArcGIS Mobile
Timeline

Incident Declared as a Disaster

Nov2011-Feb2012

Develop Methodology and Choose Technology

28 May 2012

System Configuration and Testing

29 May 2012

Assessment & Verification
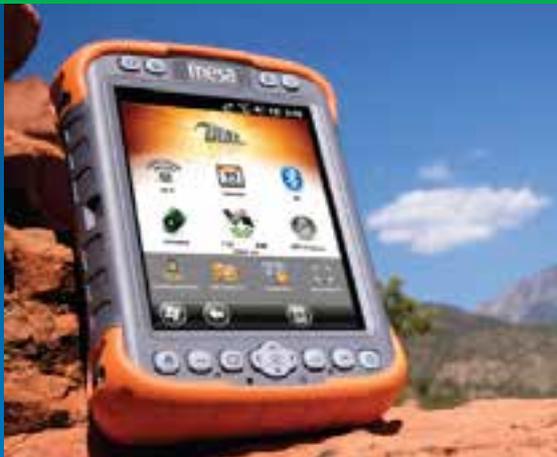
30 May 2012 – 31 July 2012

Prelim Report

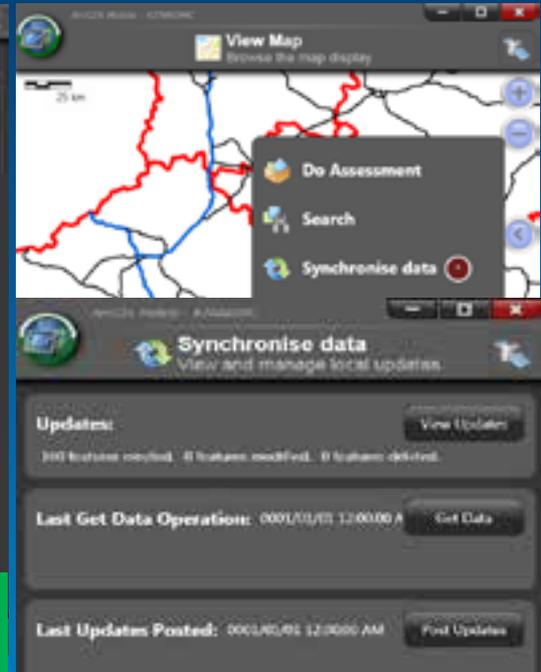3 August 2012

Final Report

16 August

Implementation of ArcGIS Mobile

Methodology Implemented – Field Data Capture Forms and Sync

Trimble & Mesa GPS devices used in the field

Preconfigured capture forms with dropdown list improve data quality and geo-referencing of attributes &images

ESRI ArcGIS Mobile platform used to sync daily with SDE via 3G/GPRS

Implementation of ArcGIS Mobile

Data Flow and Outputs

AURECON VPN

ArcSDE CPT → GBD QA → GBD MASTER → MS ACCESS

Implementation of ArcGIS Mobile

Constraints and Limitations

- Limited Internal Skills

- Limited Devices and Technology

- Not able to easily export images

- Ability to only capture points and not polylines

- Limited cell phone (3G/GPRS) coverage

Results and Findings
Benefits

- Drastic Time and Cost savings

- Massive reduction in post capture effort (10% of previous effort)

- Paperless methodology

- Daily updates from the field

- Improved management information

- Improved data quality

Conclusion

- Start with the end goal in mind
- Required a mind shift to trust technology

- All you need is an open and innovative mind-set to move towards continuous improvement.

End

- Thank you for your time!

- Questions?