

# Metrics Manager For Digital Cadastral Database Management

Les Gardner & Marc Strong



Land and Property  
Management Authority

Planning  
&  
Managing  
Upgrades





**Enormity of Task**

*The **BIG** Questions*

What do we have **NOW**?

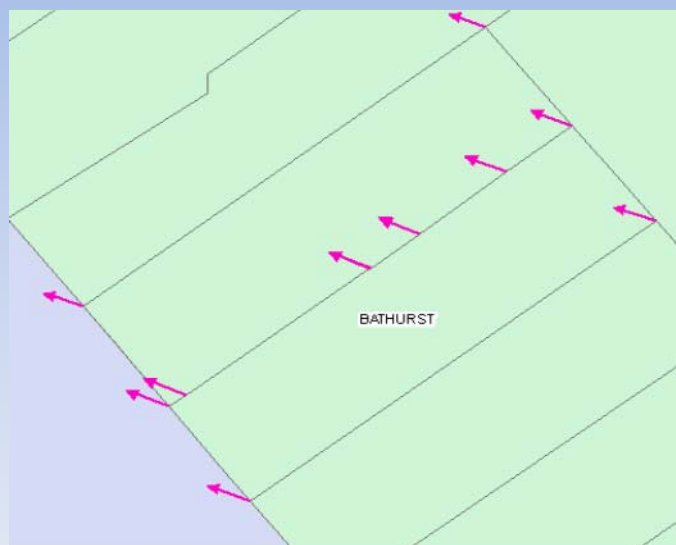
What's **required**?

What's **achievable**?

Where do we **start**?

What do we have now?

## Accuracy Vectors



# Generating Accuracy Statistics

The screenshot shows the ArcMap interface with a map of Bathurst, Australia. The 'Layers' panel on the left is expanded to show 'Metrics' and 'Displacement Vectors'. A table titled 'Selected Attributes of Displacement Vectors' is overlaid on the map, displaying the following data:

OBJECTID	Shape	CadPointOID	VectorLength	VectorBearing	CreateDate	ControlSource
848	Polyline	5986110	2.084139	295.367524	4/06/2009 1:12:09 PM	1
849	Polyline	2356088	2.201498	268.730882	4/06/2009 1:12:09 PM	1
850	Polyline	2355955	3.718644	280.313755	4/06/2009 1:12:09 PM	1
851	Polyline	4171042	1.975467	273.791501	4/06/2009 1:12:09 PM	1
852	Polyline	8533598	2.447398	301.755098	4/06/2009 1:12:09 PM	1
853	Polyline	5986081	2.831403	265.531908	4/06/2009 1:12:09 PM	1
854	Polyline	8533597	2.811322	307.624013	4/06/2009 1:12:09 PM	1
855	Polyline	8533599	2.053425	279.635321	4/06/2009 1:12:09 PM	1

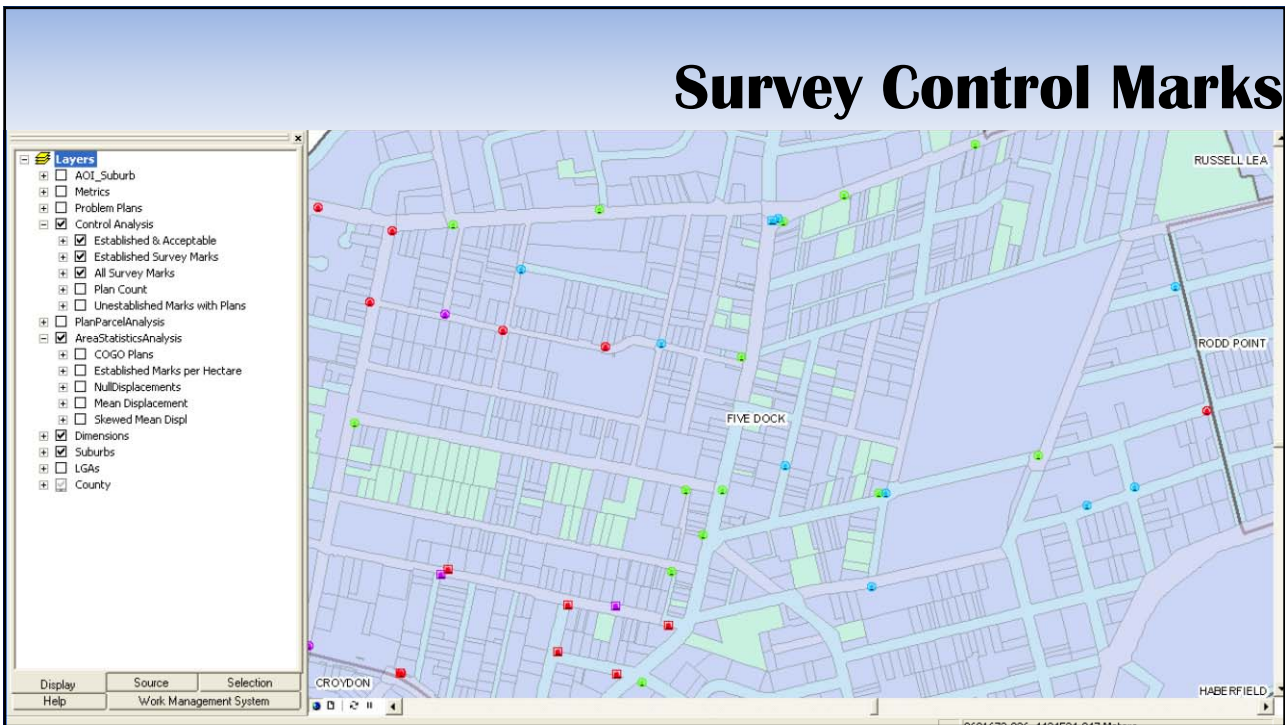
# Suburb Statistics

The screenshot shows the ArcMap interface with the 'Identify' window open over the Bathurst map. The 'Identify' window shows the following fields and values for the selected feature:

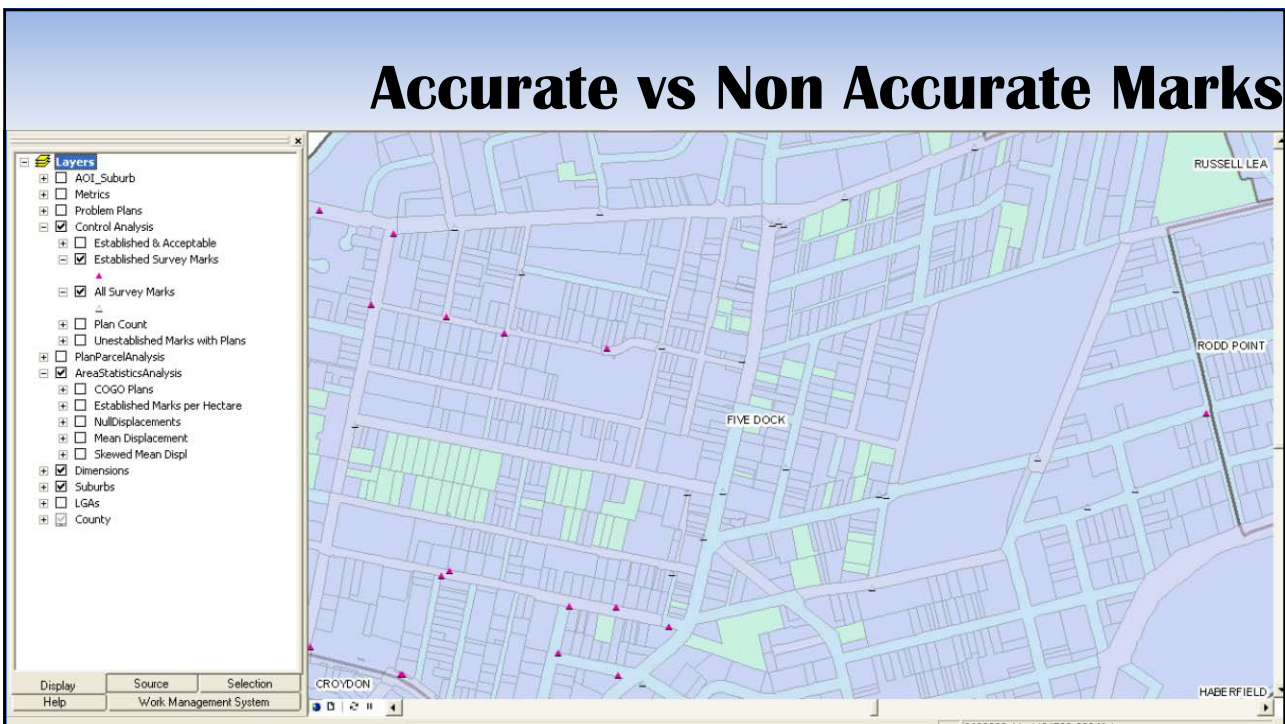
Field	Value
OBJECTID	2858
Shape	Polygon
ClassSubType	2
AOIhectares	507.51666
AOIName	BATHURST
CreateDate	<null>
ModifiedDate	<null>
OBJECTID	4364
aoioid	2858
plancount	2101
cogoplancount	46
controlplancount	45
controlvectorcount	756
meandisplacementvector	2.442551
stddevdisplacementvector	1.726399
controlmarkcount	227
controlmarkdensity	0.285876
establishedmarkdensity	0.258716
createdate_1	30/07/2009 10:32:27 PM
retiredate	<null>

Below the 'Identify' window, the 'Selected Attributes of Displacement Vectors' table is visible, showing the same data as in the first screenshot.

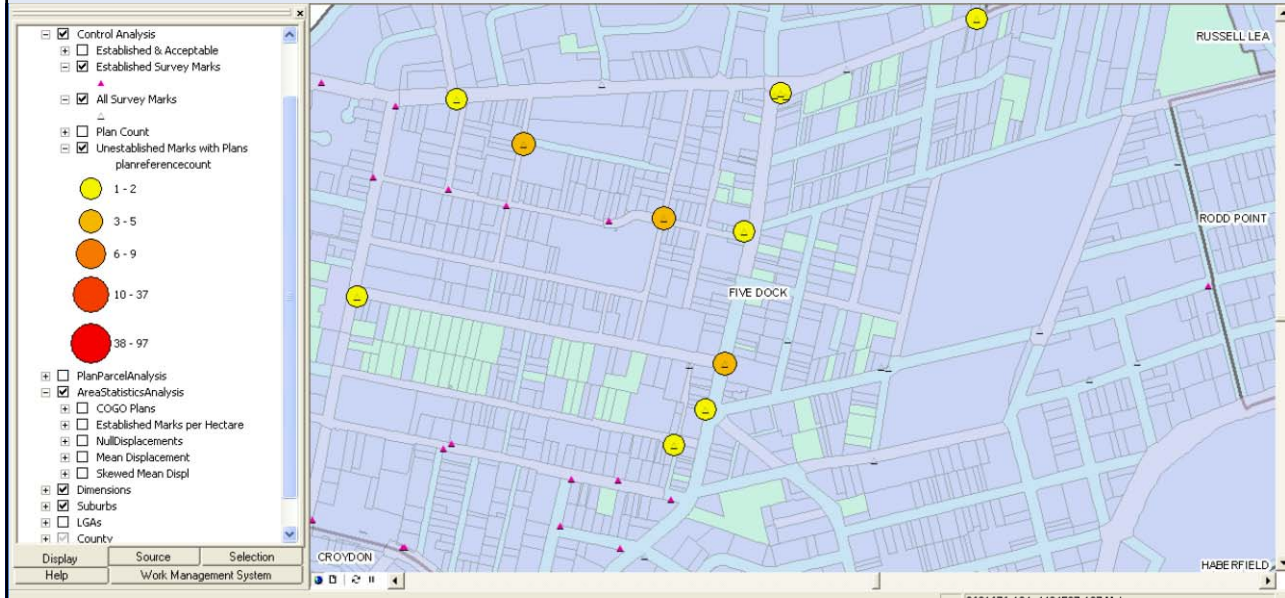
# Survey Control Marks



# Accurate vs Non Accurate Marks

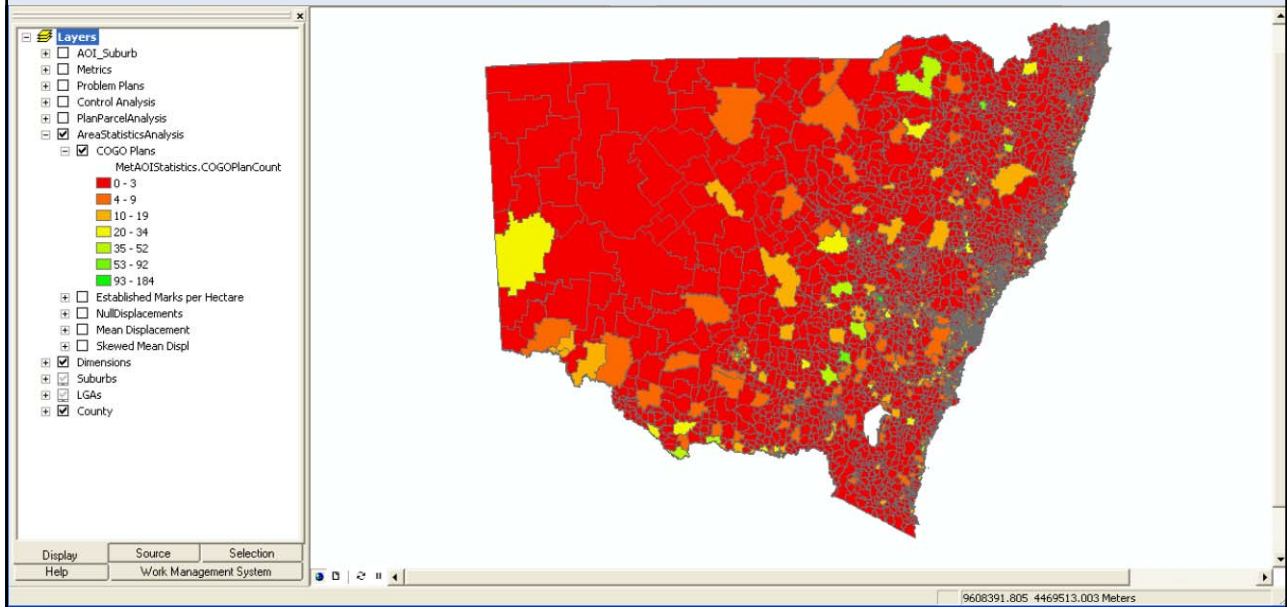


# Highlight non Accurate by Plan Count

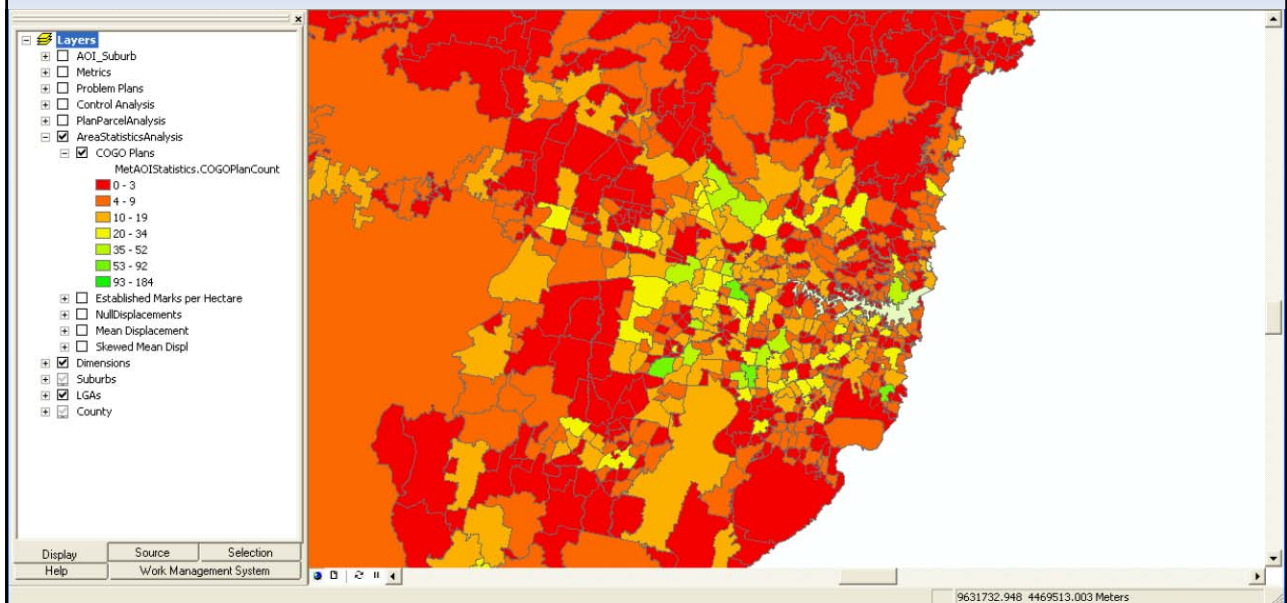


Where do we start?

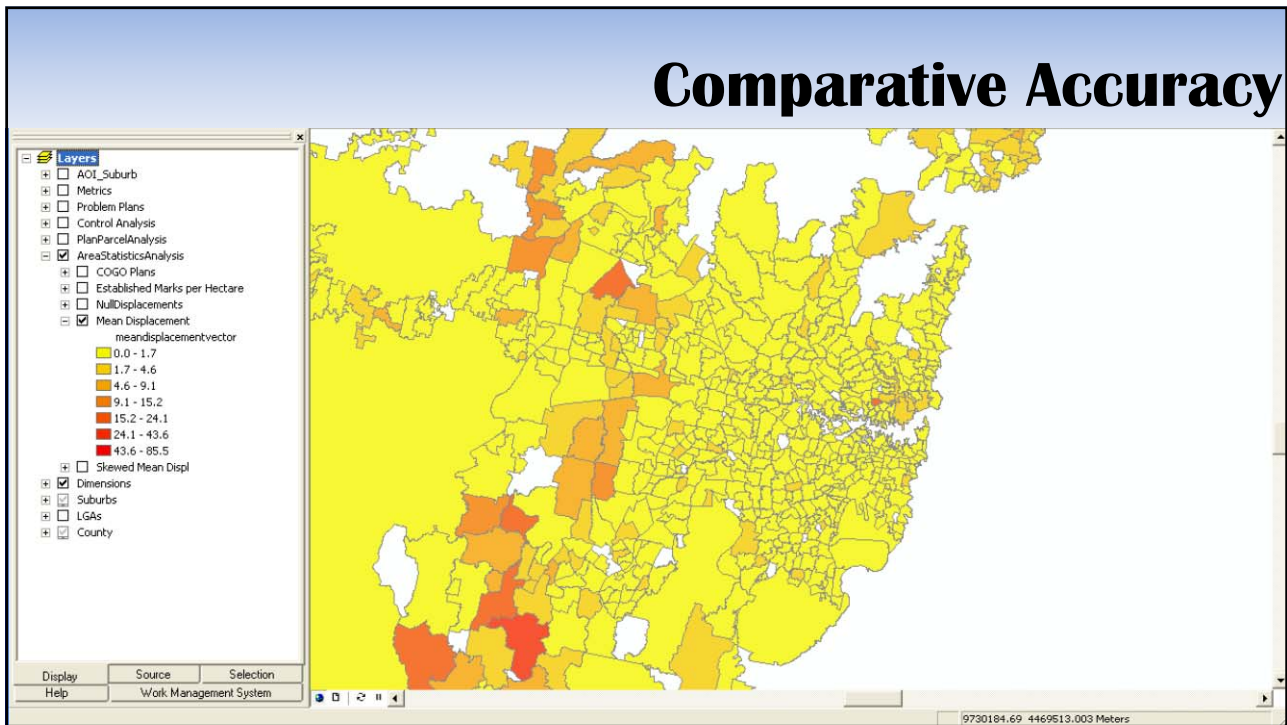
# State Analysis – by Activity



# Regional Subdivision “HotSpots”



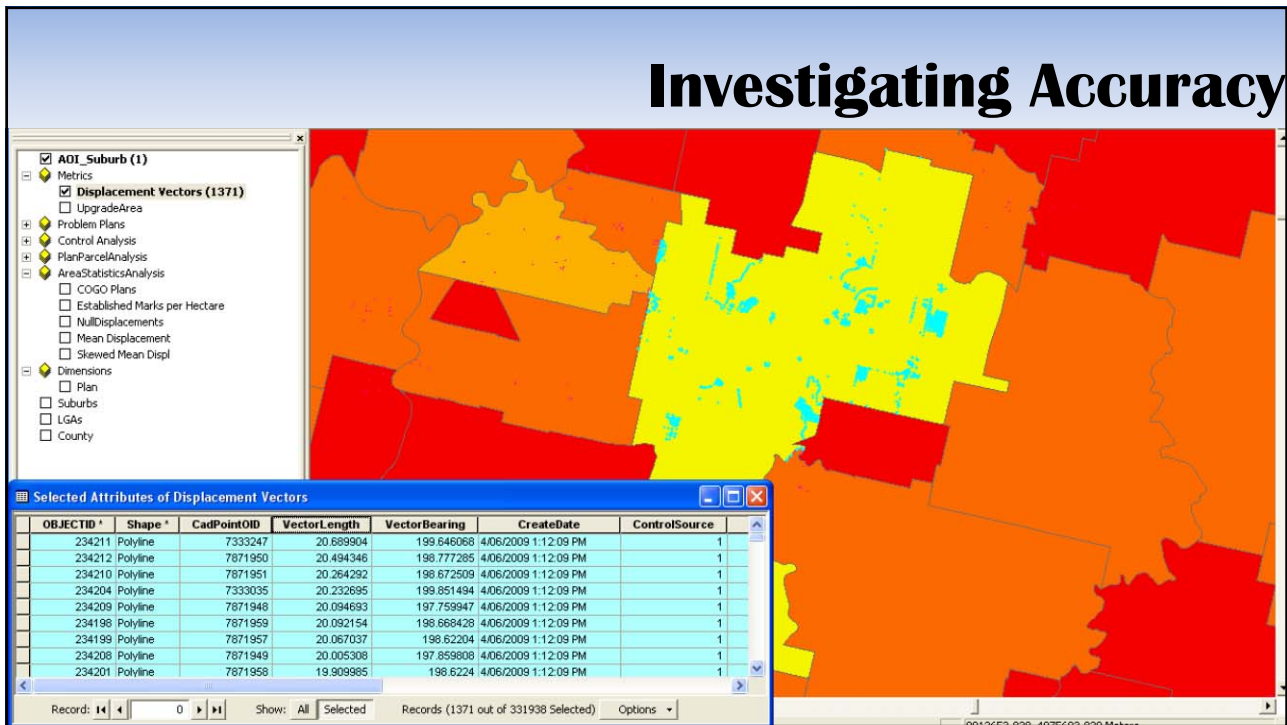
# Comparative Accuracy



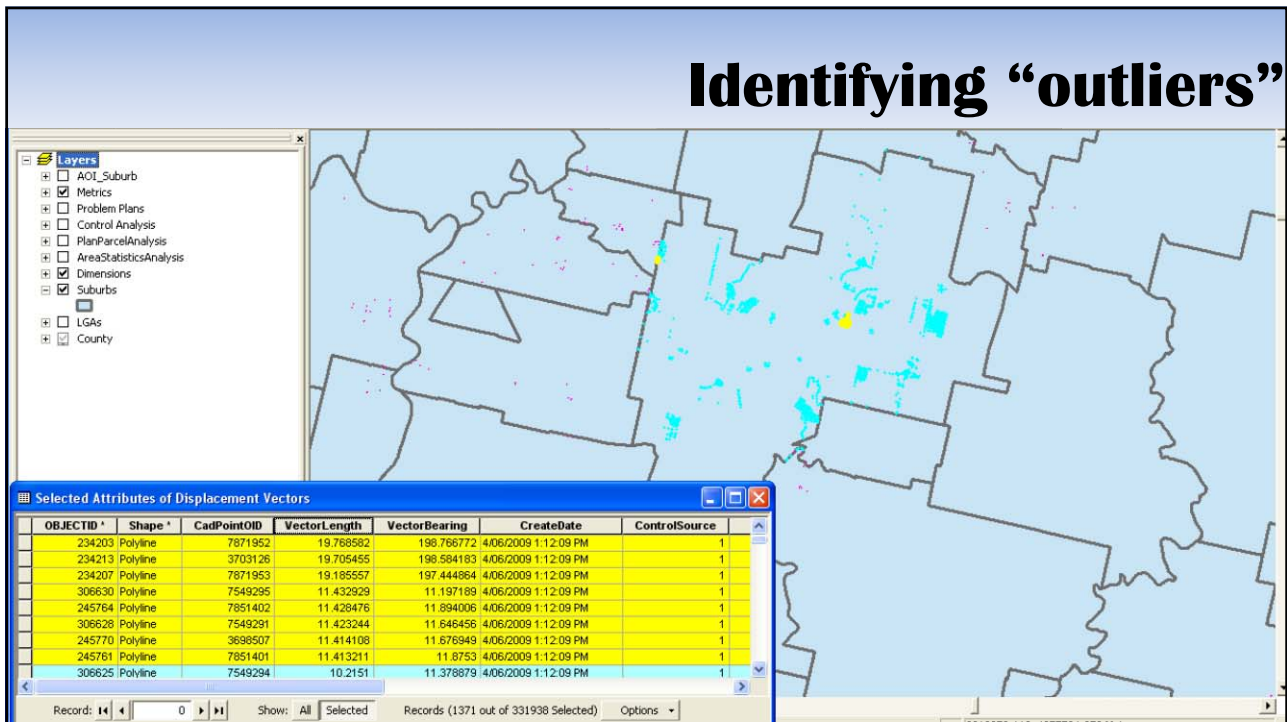
What's achievable?



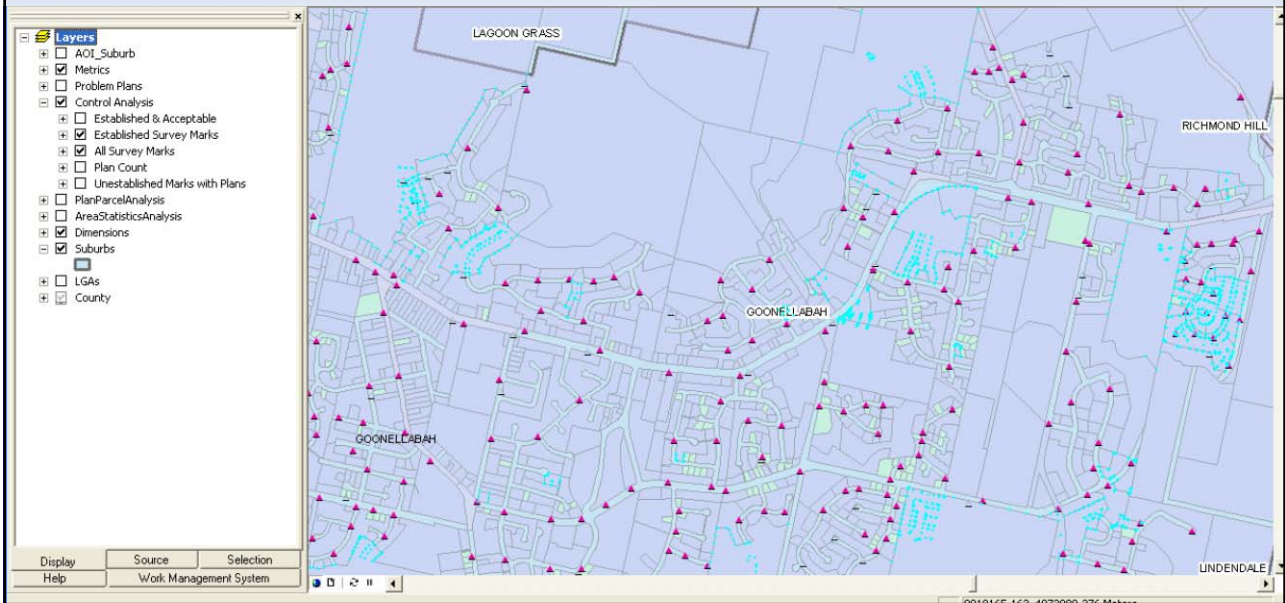
# Investigating Accuracy



# Identifying "outliers"



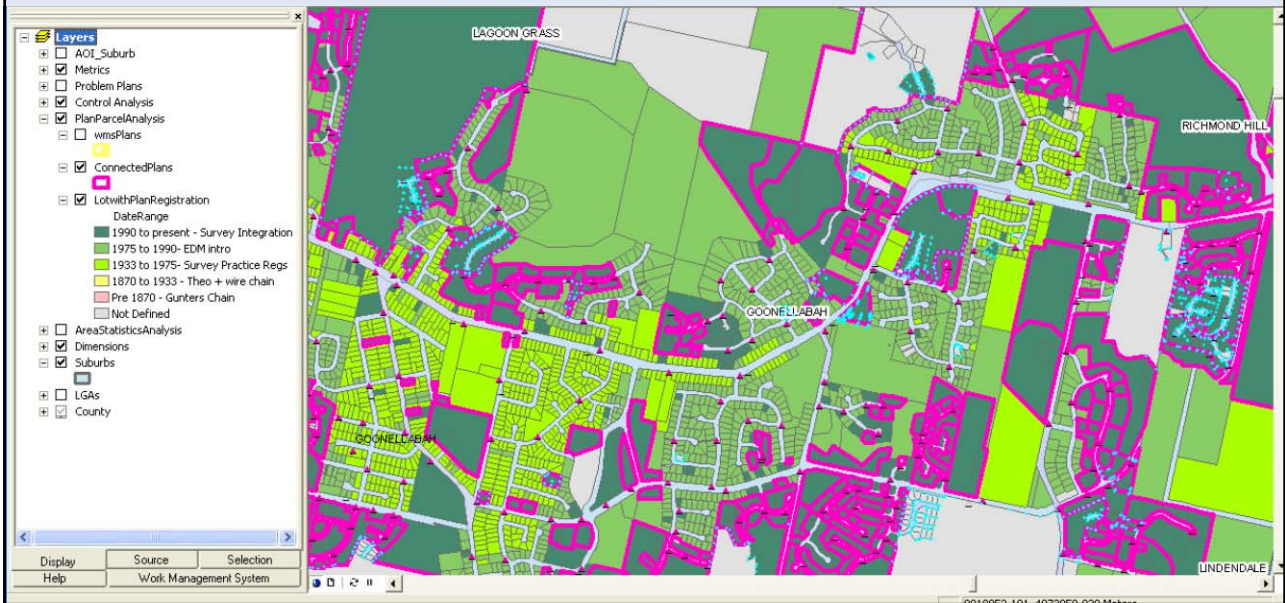
# Evaluating Control Quality



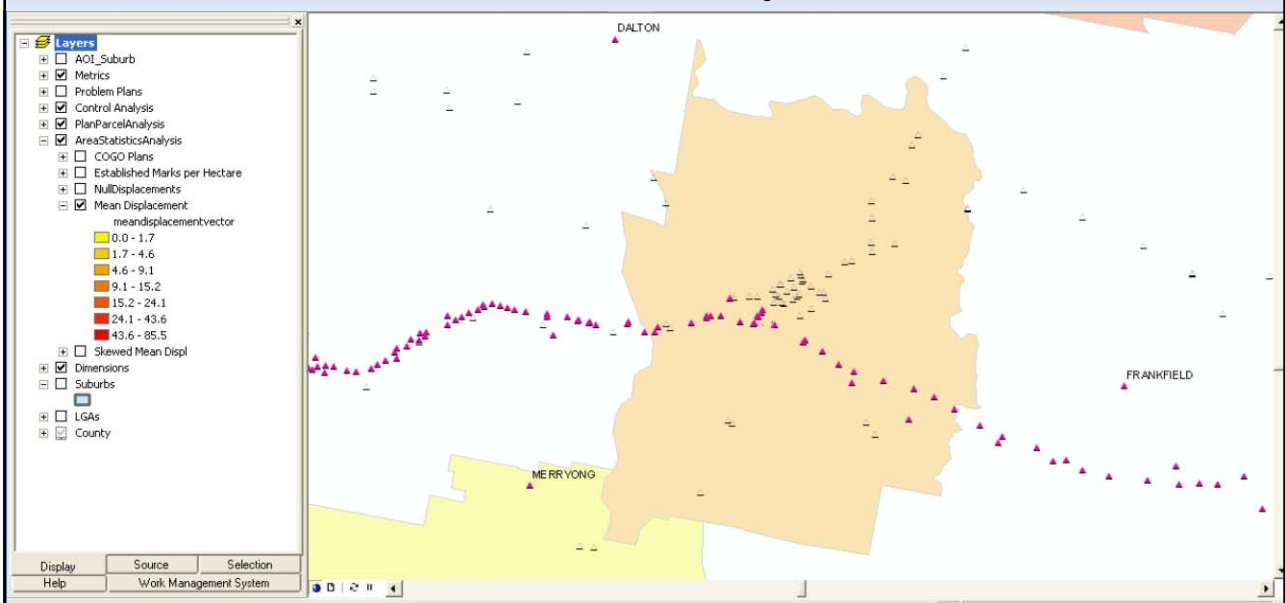
# Evaluating Cadastral Integrity



# Highlighting Accurate Plans



# Different Story in the "Outback"



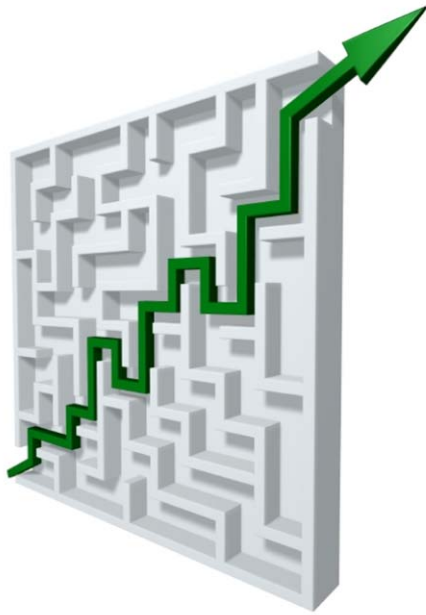
# Evaluating Effort & Potential



# Enabling the Future



# Q & A



## LESSONS LEARNT

### **COMMITMENT**

**Requirements** driven

**Iterative** Upgrade Process

**Coordinated** Approach



# WHY UPGRADE?



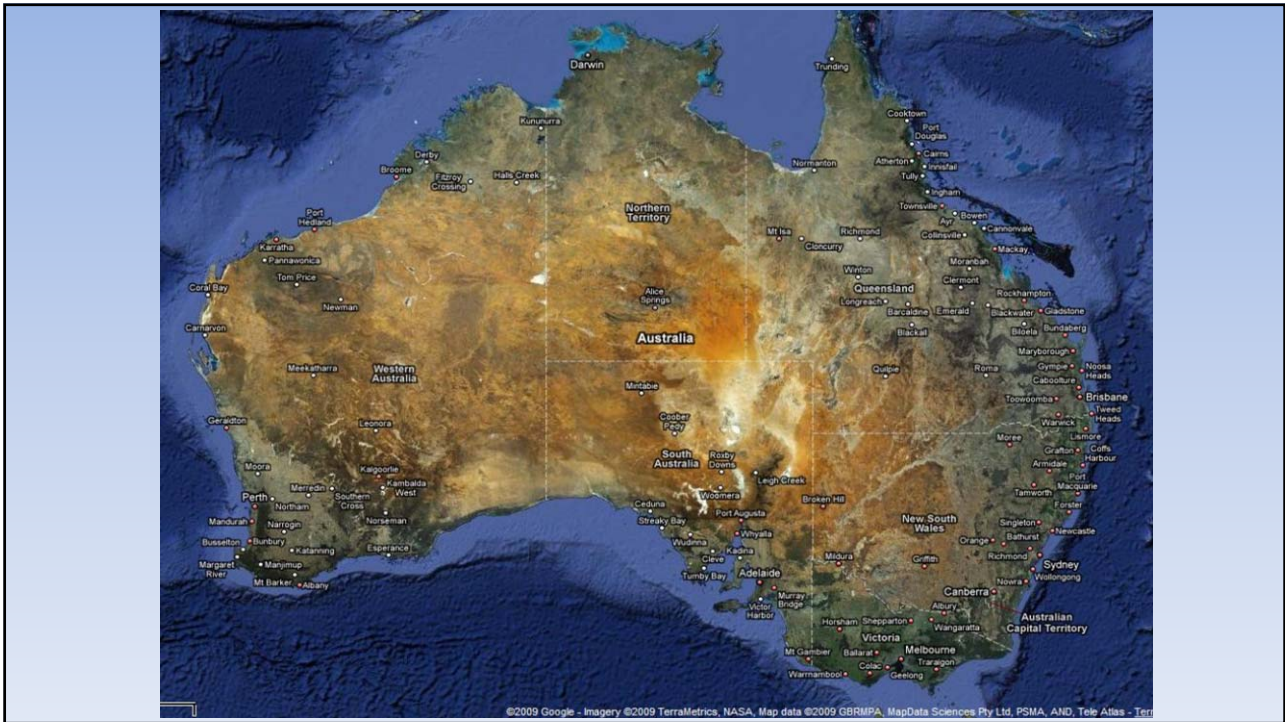
Imagery



Add DCDB







## Additional Information

- Stakeholders
- Interests
- Actions
  - Estimates
  - Performance Metrics
- Time Variance
- Integration within Maintenance System

