As-constructed workflow – a total systems approach

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Overview

• Asset lifecycle:
  – Plan, Design, Build, Manage, Dispose

• As Constructed component fundamental part

Actual “As-Built” drawing as required by Fairfax County during Media General cable TV build-out
As Constructed Requirements

- Location - where
- US Annual combined billion dollar industries in pipe and cable locators, contract locators, One-Call (DBYD), subsurface utility engineering and so forth. (ASCE)
- These industries do their best to detect, trace, mark, map, and protect this infrastructure that is hidden from sight.
- SUI Standard AS 5488-2013
As Constructed Requirements

• Attribution What is where
• Survey existing underground assets
  – Location
  – Attribution
    • Between 2 – 6 x more expensive than location only
    • Limited availability of attributes
• When it is built it is your one opportunity to get the correct information.
• Why is it important?
However, I am concerned that some local authorities might not have the capacity for the increasing sophistication of information needed to keep delivering essential everyday services to communities affordably.
Asset Lifecycle

• Auditor
• How to prove the asset history
• Acquisition (how do you know)
• Starting point of the asset history?
  – As Constructed Paper
  – Organisation that built it
Real Benefits

• Need to know what you don’t know

• “The real benefit lies within the next generation of sophisticated asset analytics that we are able to achieve – the benefits are substantial.”

  - Haydn Read
  Manager, Strategic Asset Planning
  Wellington City Council (NZ)
Current Costs

• Development community
  – $1500

• Council / Utility
  – Recapture $ 900 - $1100

• Region 20 submissions / week

• Cost to industry: $1.5 Million p.a.

• Cost to taxpayers $1 Million / Utility p.a.

• Total Cost 3.6 Million p.a.
As Constructed Process

• What do you need to achieve?
• Develop your own. ACT Ref 11, FNQ Roc
• Analyse
• Improve GIS / Asset management data model
• 2- 4 years
• Choose existing Standard (A-Spec / ADAC)
• Wellington Chose A-Spec
How to implement Standard

- We then needed a tool to help us implement that Standard and QA the data coming into Council.
- We believe that ACDC is the ‘missing piece in the puzzle’ enabling us to connect directly with industry and with the minimum of disruption to our current workflows.”
Involvement

- Asset Management Team
- GIS Team
- Council Engineering team
- Developer
- Surveyors
- Design
How to implement a standard

• Built a standards compliant template for industry
  – CAD Standards
  – Location Standards
  – Asset standards (A-Spec for Wellington)
• Configure rules - Attribute and spatial
• Map to Internal System – Different Asset Management Systems
• Provide mechanism for abandoned and removed assets
How to implement a standard

- Industry engagement
  - Explain
  - Template
  - Menu system
  - Training material
  - Validation portal (www.asconstructed.com)
SUBMITTING DIGITAL AS-BUILT DRAWINGS

START MODULE

INTRODUCTION – WHY THE CHANGE?

You are required to adopt the as-built drawing submission process described in this module. Understanding its background will show you why the change is well worth your effort.
Improved Costs

• Must have an industry impact of < 10%
• Reduce capture and integration costs from 2 days to < 2 hours.
  2 utility groups.
• Total Cost Utility + Council
• <2 Million
• Overall 45% improvement
Benefit

- Required information to deliver to ever increasing asset management requirements
- Validated information into GIS / Asset management.
Conclusion

• Wellington saving significant resources in capture.
• Buy in from Developer community
• Better information into GIS / asset management
• Savings of 75 Million over 7 years based on improved asset management practices.