Making Infrastructure Development Location Intelligent

Jason Clark – Thiess
Ben Somerville – ESRI Australia

Concepts
// Spatial literacy is growing
// Data is growing from expanding sources.
Why is GIS important?

// Improve Risk Management
/ Better understanding of factors in planning and design
/ Share common project management tools

// Increase Collaboration
/ Single source for all project information
/ Share knowledge through geography – intuitive maps

// Allow for Complete Transparency
/ Access to same information from executive level down
/ Continuous Visibility and Monitoring throughout Project

// Offers a Comprehensive Approach
/ All information and data formats integrated
/ Easily integrate multi-disciplinary information

---

GIS and the Geographic Approach Is Expanding . . .

Why?

- Clear Business Value
- Expanding Needs for Integrated Approach
- More Awareness Of Benefits
- New Applications & Solutions
- Increased Interest In Enterprise GIS & SDI
- Organizations Are Working Together

---

FIG Congress 2010
Facing the Challenges – Building the Capacity
Sydney, Australia, 11-16 April 2010
Example

// Brisbane to Gladstone Yacht Race
- High volume site
- 14.5 million hits in two and a half days
- Live data delivered to the public

Computing platforms change

// Mainframe computing
// Departmental and scientific computing
// Workstations and networks
// Personal computers
// Database and enterprise servers
// The web connecting the systems
// Devices and networks
// The web IS the system
// …
Our fundamental work remains constant
// Resource and landscape inventory
// Facility management
// Planning
// Government operations
// Science
// Land information and management
// Public / Private access to information
// …

But technology change allow for new approaches…

Data… data… data
// Key to any information or decision initiative
// Good data practices lead to good decisions
// Seamless storage and access improves the process
Crowd Sourcing (VGI)

// Next frontier of data capture
// Not accurate
// Helps define the areas we need to focus on
// Political implications could skew efforts

Examples

// Koala Diaries
- Volunteered information
- Demonstrates the public’s commitment to the cause
- Will help infrastructure companies such as Thiess with CSR
- Every aspect of Thiess’ work is related to geography and is therefore spatial.
- Construction & infrastructure projects contain large amounts of spatial data in the form of:
  - Project schedules
  - CAD drawings
  - Aerial photography
  - Project documents
- GIS integrates and interprets this information.
- Allows for a deeper understanding of construction project.
PROJECT LIFECYCLE INVOLVES MANY ASPECTS OF PROBLEM SOLVING
- GEO-INTELLIGENCE IS A PROBLEM SOLVING TOOL
- GIS CAN SUPPORT ALL PHASES OF A PROJECT LIFECYCLE
- CAN HOST MYRIAD OF LOCATION-BASED AND TEXTUAL DATA PRODUCED BY LARGE PROJECTS
- MAXIMISE ROI TO PROJECT BY USING GIS AT EVERY STAGE

VIEWING PLATFORMS
- ARCGIS SERVER
- FLEX API

SYSTEM INTEGRATION
- ASSET MANAGEMENT & PLANNING
- PROPERTY & STAKEHOLDER
- ENVIRONMENT
- DOCUMENT MANAGEMENT & QUALITY

DATA TRANSFER TOOLS
- CAD & SURVEY

FIELD DATA COLLECTION
- MOBILE, TABLET & PEN DEVICES
AS A MINIMUM:

- STREAMLINES WIDE RANGE OF PROJECT ACTIVITIES:
  - FIELD DATA COLLECTION
  - ANALYSIS
  - DESIGN
  - PROJECT MANAGEMENT

- SIGNIFICANTLY INCREASES DATA ACCURACY

- PROJECT STAFF CAN EASILY SHARE AND ANALYSE DATA