

Federal GIS Conference 2014

February 10–11, 2014 | Washington DC



Implementing ArcGIS for Facilities

Don Hong and Craig Cleveland

Agenda

- **Introduction to ArcGIS For Facilities**
- **Challenges of Implementing ArcGIS For Facilities**
 - Data
 - System
 - Application
- **Demonstrations**
- **Wrap up**



Facility Life Cycle & the Value of GIS

Lots of Applications Supporting Many Stakeholders & Business Needs



... is there a technology that provides a systems-based approach?

... is there a technology or information system that scales all geographies?

... is there a technology that can extend the value of FM System and Bldg Design data?

Industry & User Business Challenges



- Detecting patterns, trends, & relationships
- Prediction, reaction, & course correction
- Decision support at all scales or levels of details



ArcGIS for Facilities – Solution Areas



Portfolio



Planning / Site Selection



Optimization & Allocation



Space Utilization

**Planners/
Analysts**



- Site Selection:
- Demographics
- Market statistics
- Available Resources
- Competition

Design & Engineering



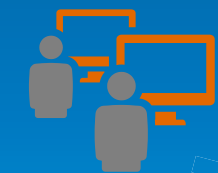
- Design
- Environmental Assessment/ Impact
- Site Engineering
- Design constraints

Portfolio Managers



- Analyze Condition, Utilization, Capacity
- Determine Total Cost of Operation (TCO)
- Decision Support: Maintain or Divest

**Anywhere
Any time**



Professional GIS

- Data Creation, Management, Analysis, Dissemination

Analysis & Visualization



Location Analytics & System Integration



Business Systems

Web GIS

The Work

Operations



Space & Move Management



Maintenance Management



Energy & Sustainability

Operations Manager



- Project status
- Efficiency Improvements
- Compliance
- Cost Reduction
- Continuity of Business

Facilities Maintenance Manager



- Asset Repairs
- Asset Maintenance, Testing & Inspection
- Work Order Management
- Space & Move Management

Facility Owner(s) and Occupants



- Where are people, places, things
- Routing & Path Analysis
- Reporting issues

Professional GIS



- Data Creation, Management, Analysis and Dissemination
- CAD to GIS ETLs
- Webmap development

Analysis & Visualization



Location Analytics & System Integration



Business Systems

Web GIS

The Work

Safety & Security



Physical Security



Safety & Environmental Health



Emergency Management

Facility Owners & Occupants



- Incident Reporting
- Evacuation Route
- Crowd sourced incident information

Health, Safety & Environment Staff



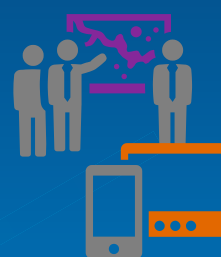
- Health and Environmental Regulation Compliance
- Emergency Plan
- Risk Assessment
- Incident Mgt

Physical Security Staff



- Monitoring
- Response

Emergency Responders



- Planning
- Logistics
- Operations
- Command
- Public Information



Professional GIS

- Data Creation, Management, Analysis, Dissemination

Analysis & Visualization



Location Analytics & System Integration



Business Systems

Web GIS

The Work

Facilities GIS Maps and Apps

- Resources available at www.esri.com/fm



Diversity of Users and Applications

GSA Public Building Service



Architect of the Capitol



National Park Service Facilities



National Institutes of Health FM



NASA Stennis Real Property & Facilities



US Marine Corp Real Property

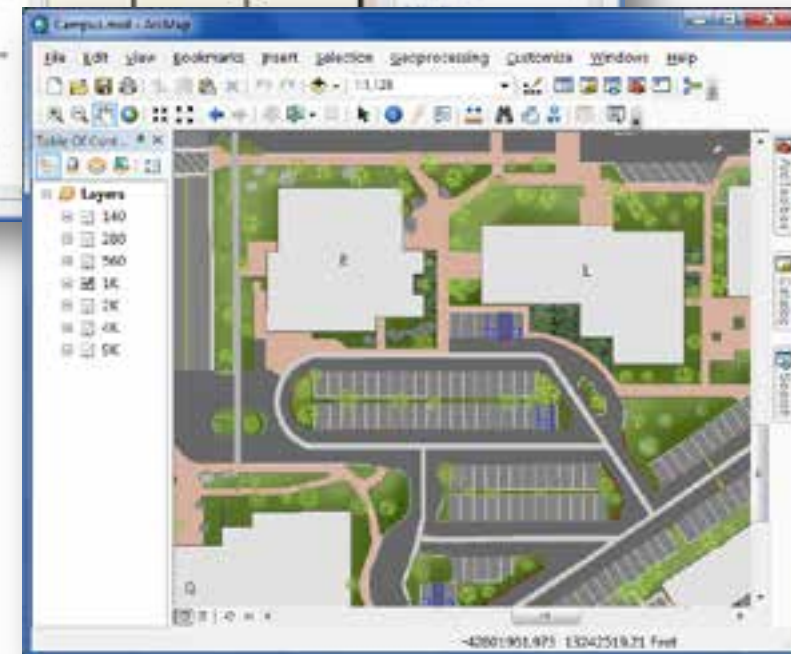
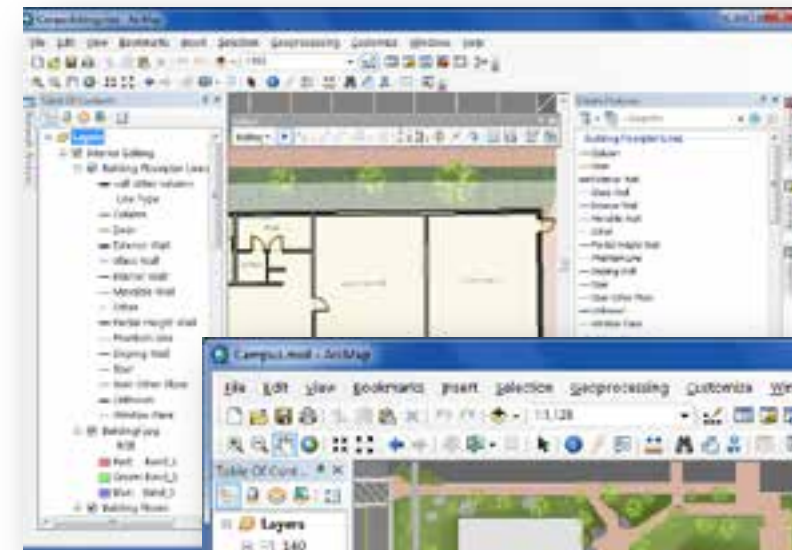
Challenge #1 - Data

- **Availability**
 - What data do I need?
- **Formats**
 - CAD, BIM, CADFM, DBMS
- **Standardization**
 - How do I put them together?
- **Maintenance**
 - What does it take to maintain the data?



Campus Editing & Basemap Templates

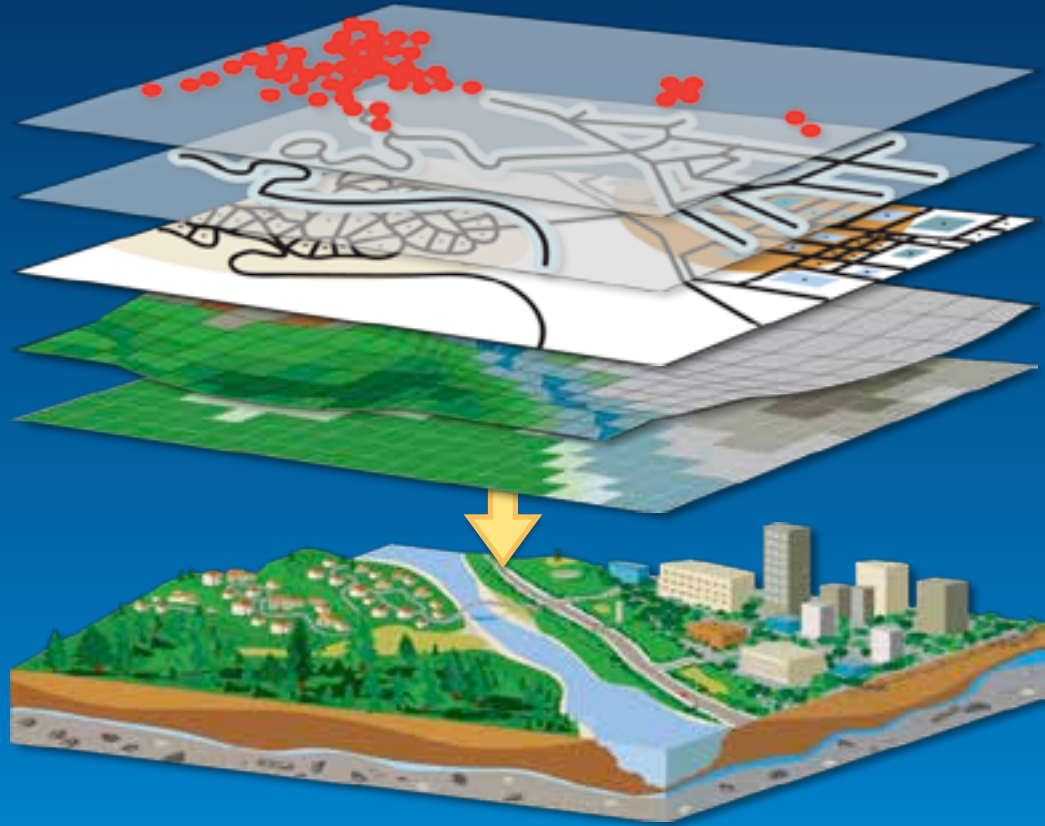
Craig Cleveland



Challenge #2: System

- **System Architecture Design**
 - Right hardware configuration
- **System Integration**
 - What is the best practice to integrate GIS with other systems?





ERP



CRM

BI



EDM

Best Practice

Exploit location info from important business systems – “location analytics”

Challenges #3: Applications

- **Web**
 - What applications do we need?
 - How much does it cost?
 - How about 3D?
- **Mobile**
 - What does it take to build a mobile application?





Consumerization

Experiences with technology at home
drive expectations @work

Campus Place Finder Template

Craig Cleveland



Extending the Templates

Craig Cleveland



Principles for world-class FM GIS @work

Connecting systems and stakeholders from across the enterprise

- **Manage asset and resource information**
- **Facilitate better planning and analysis**
- **Get information into and out of the field**
- **Provide comprehensive view of operations**
- **Geo-enable other business systems**
- **Empower employees, constituents, and customers**



- **Esri COTS technology platform – ArcGIS**
- **Follow an agile project methodology**
 - **Shape human workflows to leverage the capabilities and strengths of the ArcGIS platform**
 - **Configure existing tools first, and use customizations sparingly and as deemed absolutely essential by project leadership**
 - **Interface with other business systems using web services or routine ETL data movements**
- **Provide long-term support resources**
- **Leverage the Esri community for ideas and resources to support innovation and sharing of best-practices**

Our Approach

Follow our best practices to maximize the value of using the ArcGIS platform

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**Don't forget to complete
a session evaluation form!**

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Networking Reception

Smithsonian National Museum of Natural History

Tuesday, 6:30 PM–9:30 PM

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and the 140/150 Room Concourse.

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Understanding our world.