Enterprise GIS
Strategic Planning for Success
Adam Carnow
This presentation is part of the GIS Manager Track

- All sessions are in SDCC Ballroom 20A

- **Wednesday**
  - 8:30-9:30 AM – Enterprise GIS Strategic Planning for Success
  - 10:00-11:00 AM – Architecting the ArcGIS Platform: Best Practices
  - 1:00-2:00 PM – Communicating the Value of GIS
  - 2:30-3:30 PM – Workforce Development Planning: A People Strategy for Organizations

- **Thursday**
  - 8:30-9:30 AM – Increase GIS Adoption by Integrating Change Management
  - 10:00-11:00 AM – Supporting Government Transformation & Innovation
  - 1:00-2:00 PM – Governance for GIS
  - 2:30-3:30 PM – Moving Beyond Anecdotal GIS Success – An ROI Conversation
Abstract

It takes more than technology for an enterprise GIS to be successful. It requires business and IT management skills. This session will review the seven elements of a successful enterprise GIS and provide strategies how GIS Managers can implement them. The seven elements are:

• Vision and Leadership
• Understand how GIS can contribute to your organization’s success
• Develop and maintain a GIS Strategic Plan
• Implement effective governance
• Implement evolutionary approaches (change management)
• Deploy engaging apps
• Recruit, develop and maintain good staff
Generally, people outside of GIS think of GIS just as “maps” or a graphic product, or the younger brother of CAD…

- Promote the System
- Get a “GIS Health Check-Up”
- Use a Best of Breed approach
- Consider Software as a Service (SaaS) i.e., cloud
- Set GIS up as the Central Hub
Mapping the Cause: Using GIS to Determine Potential Causes for Cancer

AUGUST 27, 2015 BY TROY LAMBERT

Much talk lately in the tech world is related to Big Data and how useful it really is. The debate centers not only around making relationships, but how to determine which relationships are significant. How do we make all the demographic data we've gathered meaningful?
GIS is often seen as “maps” or a visual graphics product, and the more advanced capabilities are ignored because they remain unknown to key departments and decision makers.
Graph 14: What is your biggest challenge?

- Lack of awareness among users and policymakers: 38%
- Lack of adequate govt support & stifling regulations: 12%
- Finding trained workforce: 21%
- Transforming/reorienting business: 12%
- Keeping pace with innovation: 7%
- Others: 7%
- Not sure: 3%
ArcGIS Transforms Organizations

Creating Shared Information & Facilitating Collaboration

Hierarchical
- Stovepiped Data
- Management
- Planning
- Operations

Networked
- Shared Geographic Understanding

Opening Access & Engaging Everyone
Consumers and businesses have embraced geographic information systems (GIS) as a huge boon in their lives. The systems are accurate sources of information; they’re time- and fuel-saving modalities; and, taken together, they’re an omniscient, daily valet.
Digital transformation may be the promised land for many forward-looking enterprises, but few are actually ready for it. There are many organizational and cultural issues to address -- getting executive and employee buy-in, determining what processes need to be digitized, and getting people to rethink their roles. If that isn't enough, technical issues also appear to be getting in the way as well. Scalability issues, resource issues, and application backlogs are quickly getting in the way of making progress on the journey.
Why Most Orgs Have a Profound Challenge with Digital Transformation

The CIO’s Legacy IT “Mountain”
- Aging legacy systems (ERP, etc.)
- Bureaucracy + overcentralization
- Years of underinvestment
- Traditional data center
- Technical debt
- Cost center focus
- Legacy skills
- Closed platforms/no APIs

With thanks to Maureen Blandford
Stop Doing Low-Value Work

by Priscilla Claman

JUNE 01, 2016
What makes an enterprise GIS successful?

Published on June 22, 2016

Adam Carnow
Community Evangelist at Esri

5 articles
What makes an enterprise GIS successful?

- More than technology:
  - Motivated people committed to managing change
  - Effectively applying the technology in a sustainable manner
  - Following best practices

“...whether or not our GIS implementation is successful is not a technology problem, it's a people problem...”

- Assistant City Manager
Esri Case Study | Pinellas County, Florida
Elements of a Successful Enterprise GIS

- Vision and Leadership
- Understand how GIS can contribute to your organization’s success
- Develop and maintain a GIS Strategic Plan
- Implement effective governance
- Implement evolutionary approaches (change management)
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Vision and Leadership

• There’s a difference between being a manager and being a leader.
• Let everyone know the capabilities and benefits of GIS.
• They want your help. They need your help. They just don’t know it.
• Document your vision, and create and maintain a plan to realize that vision.
• It’s your job to extract as much value as possible from your GIS investment.
• It’s your job to exceed the expectations of the people funding your operation.
Three Differences Between Managers and Leaders

Leader vs. Manager

- Creating Value vs. Counting Value
- Circles of Influence vs. Circles of Power
- Leading People vs. Managing Work

I didn’t have a ready answer and it’s a complicated issue, so we decided to talk the next day. I thought long and hard, and came up with three tests that will help you decide if you’ve made the shift from managing people to leading them.
Understand how GIS can contribute to your organization’s success

• How does your organization define success?
  - Strategic Plan
  - Initiatives
  - Goals, Objectives, Policies
  - Performance Management (Key Performance Indicators)
  - Smart Community

• Talk to leaders
  - Vision
  - Pain
  - Learn their business and deploy solutions that further vision and reduce pain

• Make executives GIS users (think dashboards…)
Develop and Maintain a GIS Strategic Plan

- Needs to align with organization’s strategic plan
- Needs to align with organization’s IT strategic plan
- Develop a GIS maturity assessment
  - URISA Capability Maturity Model
  - SlimGIM (www.slimgim.info)
  - GeoVision Assessment (www.g2gmarket.com)
- Identify where there is room for expansion of services
- Prioritize and execute in phases in a sustainable fashion
Do we need to rebrand ourselves?
Build a Location Strategy
ArcGIS supports all nine common business patterns

**Mapping & Visualization**
Understand locations and relationships with maps and visual representations

**Data Management**
Collect, organize, and maintain accurate locations and details about assets and resources

**Field Mobility**
Manage and enable a mobile workforce to collect and access information in the field

**Monitoring**
Track, manage, and monitor assets and resources in real-time

**Analytics**
Discover, quantify, and predict trends and patterns to improve outcomes

**Design & Planning**
Evaluate alternative solutions and create optimal designs

**Decision Support**
Gain situational awareness, and enable information-driven decision making

**Constituent Engagement**
Communicate and collaborate with citizens and external communities of interest

**Sharing & Collaboration**
Empower everyone to easily discover, use, make, and share geographic information
## Build a Location Strategy
Find Opportunities Where Location Can Add Value

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### Build a Location Strategy
#### Define and Measure Success

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**Green** = Meeting Need, **Yellow** = Partially Meeting Need, **Red** = Not Meeting Need
Build a Location Strategy

Project Prioritization

- High or Unmanageable
  - Cautiously Embrace
- Low and Manageable
  - Aggressively Embrace
- Low or Uncertain
  - Avoid
- High and Clear
  - Experiment

Challenges vs. Benefit Matrix
Deliver Real Solutions
In a sustainable manner, enable others to use GIS...

http://www.esri.com/software/apps

See what ArcGIS Apps are available

Apps for the Field  Apps for the Office  Apps for the Community  App Builders
Deliver Real Solutions
Supported, Configurable, Included

http://solutions.arcgis.com

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ArcGIS
Open Data

Connecting Citizens and Businesses to Your Authoritative Data

Set up a public-facing website within minutes to share your open data. ArcGIS Open Data is an Esri hosted and managed solution that is included with ArcGIS Online.
Open Data Hub (Beta)

This is the community's public platform for exploring and downloading open data, discovering and building apps, and engaging to solve important local issues. You can analyze and combine Open Datasets using maps, as well as develop new web and mobile applications. Let’s make our great community even better, together!

Explore Data Categories

Browse through the different types of information contained in the categories below. Data is continually updated from the systems that the City uses. Anyone can use open data from the City of Lewisville Open Data at no cost. Download raw data and share your insights with your community or build new applications that serve specific users.
# Performance Dashboard

| Average Response Time to Work Orders at End of Day | 5.2 | Days of General Fund Reserves | 130.3 | Percent of Public Services | 99.9% | Average Days to Complete New | 23 |

| IT Help Desk Open Work Orders at End of Day | < 40 Work Orders | 106 | 99.1 | 89.7 |
| Avg Daily Health Inspection Score | > 90 Points | 93 | 95 | 96.8 |
| Avg Days to Close Grass and Weeds | < 10 days | 6 | 6.9 | 7.5 |
| Avg hrs spent mowing medians in last 30 days | 2 | 1.1 | 1.2 | 1.3 |
| Avg hrs spent mowing parks in last 30 days | 4 | 4.1 | 4.1 | 4.1 |
| Avg hrs spent mowing sports facilities in last 30 days | 8 | 9.5 | 9.2 | 9 |
The "DataHub" is the City of Johns Creek's central location for open data, dashboards, and interactive mapping applications.

Through this Hub, you can visualize city data in maps, charts, and dashboards. Developers can even tie their own data services and applications into City data.

Visualize Data in Dashboards
Dashboards provide an interactive way of visualizing information in the Johns Creek DataHub.

- **Most Common Data**
  Explore the most commonly-accessed data in the DataHub.

- **CreekView**
  Interact with property information through a map.

- **Business Locations**
  Find businesses and associated information.

- **Building**
  Browse building permits and construction projects.
ArcGIS Hub provides a two-way engagement platform to connect government and citizens.

Encourage people to take action and bring positive change in their own neighborhoods.

ArcGIS Hub provides a two-way engagement platform to connect government and citizens.

You get an interactive platform to organize people, processes, and technology. ArcGIS Hub comes with built-in event creation and sharing directly to Hub websites and your Hub mobile app. It also allows you to gather feedback from inside and outside your organization to find or create new solutions to existing problems.

https://hub.arcgis.com/
If you’re going to raise your game, you need to upgrade your infrastructure…
Implement effective governance

- Do not want process to get in the way of progress
- Must obtain and cultivate executive sponsorship
- GIS Steering Committee
- Management review of COTS vs. Custom decisions
- Project prioritization
Implement evolutionary approaches (change management)

• Embrace change, make it part of your routine
• Participate in ArcGIS Early Adopter Community
• Participate in ArcGIS Developer Program
• Make Research and Development part of everyone’s work
• Investigate the latest improvements and make plans to use them
Deploy engaging apps

- People want to use apps like those on their smart phones and tablets
- Apps need to be focused and intuitive
- Apps need to work on any device, anywhere, anytime
- Focus on business drivers, not technology
- The goal is:
  - to give everyone alternatives (responsive)
  - but keep them in a known, controlled and secure environment (identity)
  - while using the latest and most authoritative data and processes (web services)
Understand the Need for a Mobile Workforce

Operations Dashboard

ArcGIS Pro

Explorer for ArcGIS
Drone2Map for ArcGIS
Survey123 for ArcGIS
Collector for ArcGIS

Navigator for ArcGIS

Workforce for ArcGIS
Recruit, develop and maintain good staff

- Create and Maintain a Workforce Development Plan (Esri can help…)
- GIS Managers need IT management and business skills
  - Business Skills
    - Market and sell your team's capabilities to the leaders
    - Develop and maintain a business plan and change management plan
  - IT Management Skills
    - System Architecture Design
    - Service Level Agreements
    - Enterprise System Integration
    - Security
    - Project Management, etc.
- Get help (Esri and our Partners)
Develop Strong Partnerships
Esri Team and Esri Partners

• Esri Team
  - Account Team (Manager and Solution Engineer)
  - Subject Matter Experts
  - Training Consultant
    - Workforce Development Plan
  - Technical Support
    - Premium Support
  - Professional Services
    - Packages, Rent-a-Tech, Projects
  - Esri Enterprise Advantage Program (EEAP)

• Esri Partners
  - Specialties (ArcGIS Online, ArcGIS for Local Government)
  - ArcGIS Marketplace
Develop Strong Partnerships

Develop and Grow Your Internal Team

- Executive Champion(s)
- IT Leadership
- Enable collaboration and empower others
- Mindset of a GIS Consulting Firm
- Market Spatial Analysis
- Measure, document, and publicize the impact (ROI)
Esri Resources

• Architecting the ArcGIS Platform: Best Practices
• Implementing ArcGIS on GeoNet
• Managers in GIS LinkedIn group
• Events
  - GIS Managers’ Open Summit at Esri International User Conference
  - Meetups
  - GIS Manager Workshops
• Esri Account Team
Please Take Our Survey on the App

Download the Esri Events app and find your event.

Select the session you attended.

Scroll down to find the feedback section.

Complete answers and select “Submit.”