



Governance for GIS

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What is Governance?

Governance refers to an organization's system of control

Governance refers to...

- Leadership and direction
- Authority and accountability
- Decisions and decision-rights
- Collaboration enablement
- Business alignment

What is Governance for GIS?

GIS governance is a subset of IT governance

IT Governance (from Gartner)

The processes that ensure effective and efficient use of information technology in enabling an organization to achieve its business goals

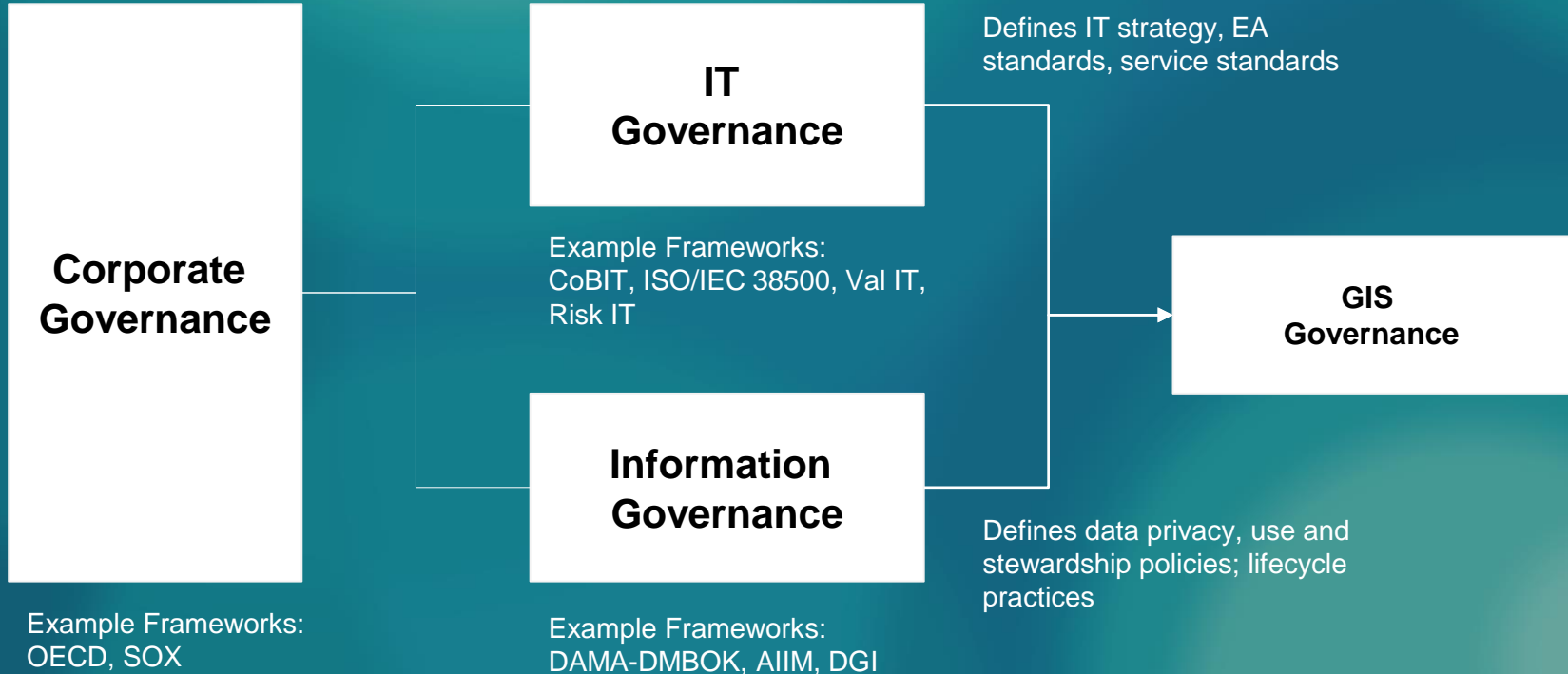


GIS Governance

Augments IT Governance by defining processes and decision structures that optimize the alignment between the organization's GIS investment and its business objectives

Levels of Governance

GIS governance is influenced by several levels of governance



Governance...why bother?

Governance enables performance with conformance

Common enterprise GIS challenges...

- Redundant technologies and datasets
- Limited data sharing across departments
- Lack of collaborative decision-making
- Duplicate software/data purchases
- Growing skills gap across the workforce
- Under-utilized technology investments
- Slow and complex procurement process
- Poorly aligned service delivery model
- Lack of executive awareness

If you are struggling with these issues – you probably need governance!

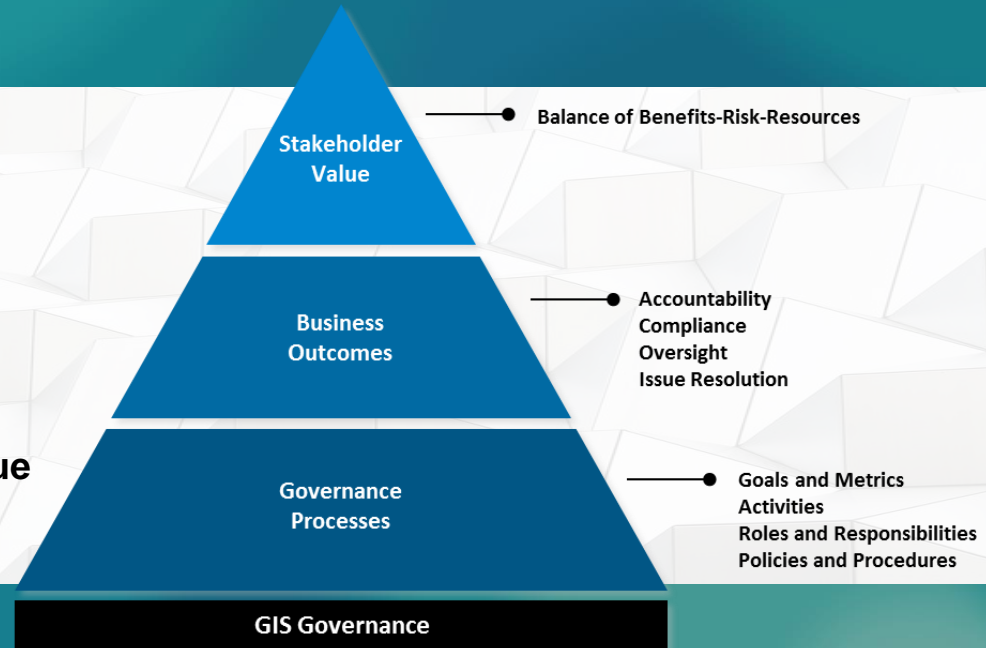
Purpose of Governance

Effective governance balances benefits, risk and resources

At its root, governance is a set of processes...

Processes drive improved business outcomes...

Business outcomes create stakeholder value by optimizing benefits, risk and resources



Governance is not Management

Governance is about providing direction and leadership

Governance

Set direction, establish strategy

Effect change

Define goals, KPIs, key decisions, decision-making processes, accountabilities and priorities

Focus on doing the right things

Management

Execute according to strategy

Manage complexity

Plan, build, run and monitor GIS activities in alignment with the direction set by governance

Focus on doing things right

The Challenges with Governance

There is a lack of focus on governance in GIS circles

**Where do organizations
go wrong?**

- The purpose of governance is often poorly understood
- Lack of attention to ongoing job of governing
- GIS governance lumped in with IT governance
- Perception of bureaucracy and red-tape
- Confusion over governance vs. management

The Benefits of Governance

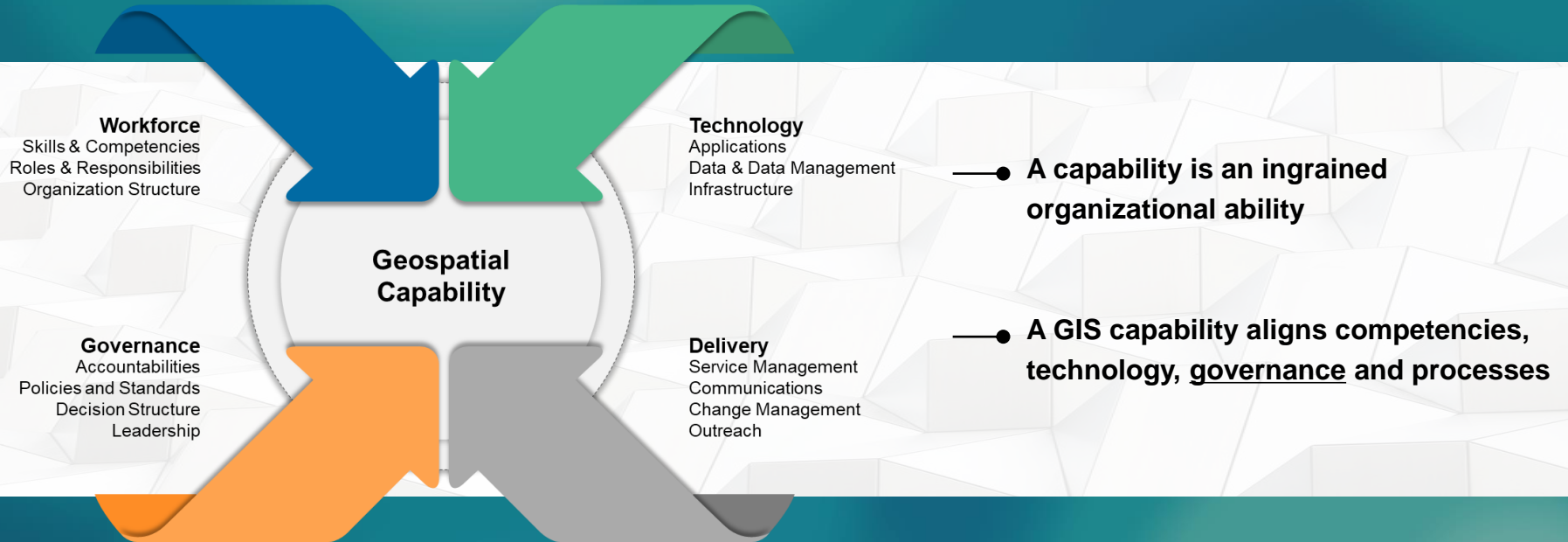
Effective governance can make a good GIS program – great

Top reasons to implement Governance for GIS:

- Better business-technology alignment
- Increased profile of GIS within the organization
- Improved clarity and collaboration over key decisions
- Improved compliance
- Reduced technical and operational risk
- Improved performance management
- Promotion of a “geospatial” culture
- Optimized GIS operations
- Fit-for-purpose workforce capable of meeting emerging demand

The Big Picture

Governance is a key component of a robust geospatial capability





Implementing Governance

Governance Framework

There are generally six major decision areas (domains) to consider



1. **Strategy** – includes vision, strategic plan, stakeholder management, organization structure and innovation
2. **Platform** – includes technology architecture, solution portfolio, access and performance
3. **Data** – includes data architecture, usage, stewardship and quality
4. **Workforce** – includes training and development, talent management and partnerships
5. **Delivery** – includes service management, communication, change and outreach
6. **Investment** – includes budget, prioritization and procurement

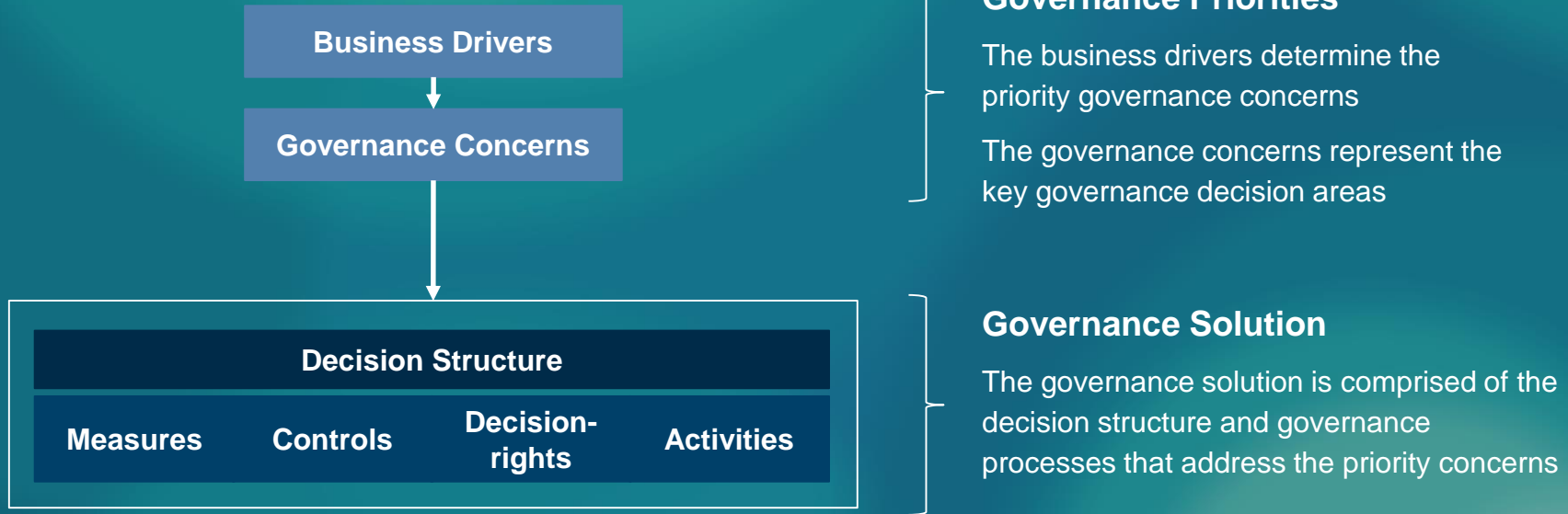
From Framework to Model

A governance model translates the framework into a working program

- A governance model consists of 2 components: **decision structure** and the **governance processes**
- The decision structure defines the membership, reporting lines and relationships and accountabilities of governance stakeholders
- The governance processes define the activities, key decisions, decision-rights, policies and performance measures for areas under active governance

Design Approach

Defining a governance model is a two-step process



Derived from: Operational IT Governance, Cantor and Sanders. IBM DeveloperWorks 2007.

Example Scenario

Let's look at an example to illustrate building a governance model

Situation

- Mid-size North American city transforming public service delivery through digital technology
- Long standing user of GIS for asset management, city planning and public works; mostly mapping and data management
- Emerging demand for new capabilities such as automated feature extraction, mobile data collection, open data sharing and advanced location analytics

Key Question

- How do we establish the governance required to support the growing demand for GIS and enable our transformation strategy?

Challenges

- Lack of an articulated GIS strategy
- Limited understanding of business needs
- Ineffective GIS organization structure
- Overburden of legacy applications
- Lack of clarity over data ownership
- Out-of-date skillsets within the GIS team
- Lack of outreach to partners and community
- Slow and difficult technology acquisition

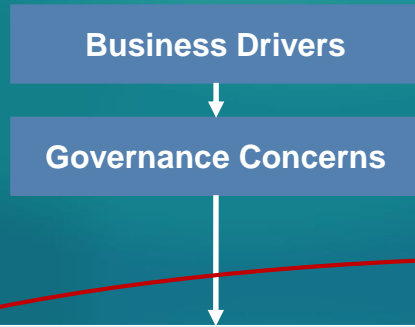
Identifying the Priorities

The City identified eight priority governance concerns

GOVERNANCE					
Strategy	Platform	Data	Workforce	Delivery	Investment
Vision	Technology Architecture	Data Architecture	★ Training and Development	Service Management	Budget
★ Strategic Plan	★ Solution Portfolio	Data Usage	Talent Management	Communications	Prioritization
★ Stakeholder Management	Access	★ Data Stewardship	Partnerships	Change	★ Procurement
★ Organizational Structure	Performance	Data Quality		★ Outreach	
Innovation					

Priorities to Solution

The governance priorities define the scope of your governance solution



Governance Priorities

The business drivers determine the priority governance concerns

The governance concerns represent the key governance decision areas

Governance Solution

The governance solution is comprised of the decision structure and governance processes that address the priority concerns

Derived from: Operational IT Governance, Cantor and Sanders. IBM DeveloperWorks 2007.

Establishing the Structure

The City chose a collaborative structure, organized around gov domains

Formal approval of operational and capital funding requests

IT Review Board

Comprised of Managers from GIS, IT and Business Units

GIS Governance Program

Provide business approval of strategic decisions

Strategic Advisory Committee

Responsible for Strategy and Investment governance domains

Comprised of senior technical staff, business power users and GIS/IT operations leads

Provide recommendations to the strategic advisory committee

Technology Working Group

Data Working Group

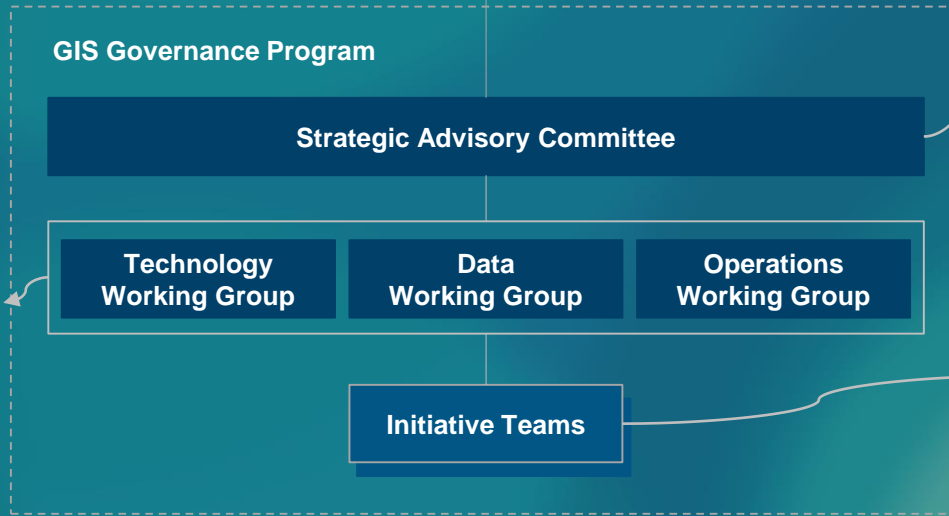
Operations Working Group

Temporary teams comprised of stakeholders from the technology, data and operations work groups.

Responsible for the Platform, Data, Workforce and Delivery governance domains

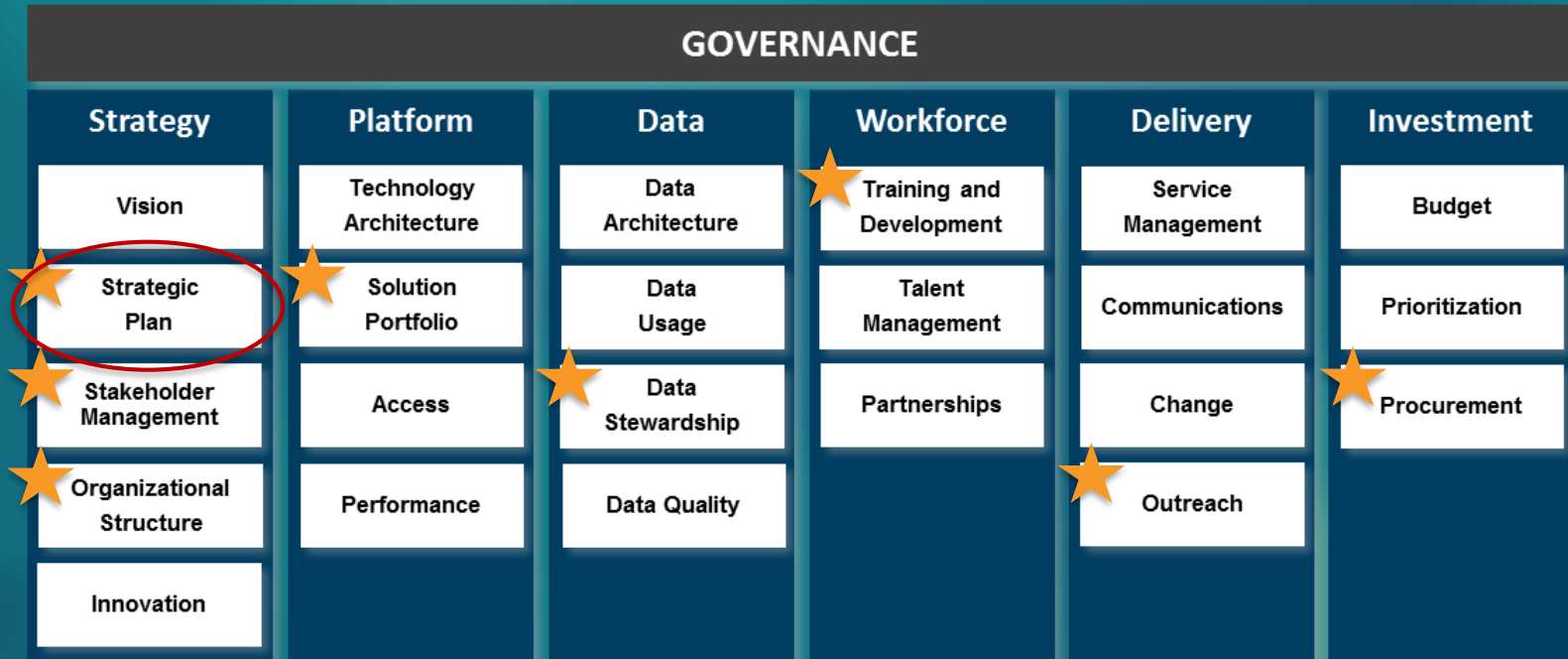
Initiative Teams

Focused on investigation of solutions and practices



Defining the Processes

Next the City defined the gov. processes, let's look at Strategic Plan gov.



Elements of a Process

A governance process is comprised a few key elements

Process Element	Description
Objective	A description of the intention and goal of the governance process.
Controls	The policies, documents and artifacts to be produced by the process.
Decision-rights	The RACI matrix for key activities or decisions defined in the process. The groups and individuals identified in the RACI are the stakeholders identified in the decision structure.
Decisions	Key decisions required during the planning, implementation or monitoring phase of the process.
Inputs	Resources needed for decision-making. This includes compliance specifications, corporate strategies and legal and regulatory frameworks.
Activities	Key tasks or actions to be taken during planning, implementation and monitoring of the process.
Measures	The performance metrics used to monitor progress and effectiveness of the process.

Example: Strategic Plan Governance Process

The process links back to the decision-structure, defines work to be done

Objectives

To establish and maintain a GIS strategy that defines the short-term and long-term vision, mission, strategic goals and roadmap

Controls

- GIS Target Capability Model
- GIS Strategic Implementation Plan

Decision-rights (R = Responsible, A = Accountable, C = Consulted, I = Informed)

Key Activities or Decisions

Develop plan

Monitor status

Approve changes

IT Review Board	Strategic Advisory Committee	Working Groups
A	R	C
A	R	C
A	R	C

Planning & Implementation

Key Decisions

- GIS vision, mission and strategic goals
- Capabilities required to implement the vision?
- Implementation priorities

Key Inputs

- Enterprise Architecture Principles
- Corporate, IT and previous GIS strategic plans
- Corporate, IT and GIS policies and standards
- Industry best-practices

Key Activities

- Review existing corporate, IT and GIS strategic objectives, priorities, goals, and constraints
- Define GIS vision, capability model and implementation plan strategic plan
- Develop an evaluation framework to monitor and evaluate effectiveness of the GIS strategy
- Collect metrics and asses evaluation criteria to determine effectiveness of the current strategy
- Determine if changes required, make updates

Monitoring

Measures (KPIs)

- GIS strategic plan exists
(Approved plan)
- GIS is aligned with corporate and IT strategic plans
(% of corporate/IT objectives met)
- GIS strategic plan is achieving milestones and objectives
(% of projects on schedule, plan ROI is meeting objectives)

Key Considerations

When implementing governance keep these things in mind

- **Leadership Involvement.** A governance program without sufficient commitment or engagement from senior decision-makers will struggle
- **Committee Fatigue.** Often stakeholders sit on other committees or have been involved with governance programs in the past and have grown tired or disillusioned. Must find the individuals or groups to “energize” the program.
- **Redundant Governance.** Be mindful of governance decisions being covered through other programs, committees or boards. Avoid collisions.
- **Overreach.** Be sure your governance program actually has the authority to make decisions and implement programs.

Summary

- Governance is about decisions and decision-making
- Design a decision structure that reflects level of accountability, promotes collaboration
- Governance is an ongoing concern, not a one time thing
- Establish processes that drive ongoing governance and commit to executing them
- Be sure to align to other governance programs (e.g. IT, corporate data)
- Don't do it all at once – prioritize areas of need and tackle those first
- Get started or if you've started – keep going and keep improving!

Thank You!

To learn more please reach out or check out some of our resources

Contact Info:

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Articles



[Governance for GIS:
Decisions and decision-
making](#)



[Implementing Governance
for GIS \(Part 1\): Design
approach](#)



[Implementing Governance
for GIS \(Part 2\): Structure
and processes](#)

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