# Workforce Development Planning: A People Strategy for Organizations

Michael Green, Training Sales Manager

Tamara Adamson, Training Consultant

# Agenda

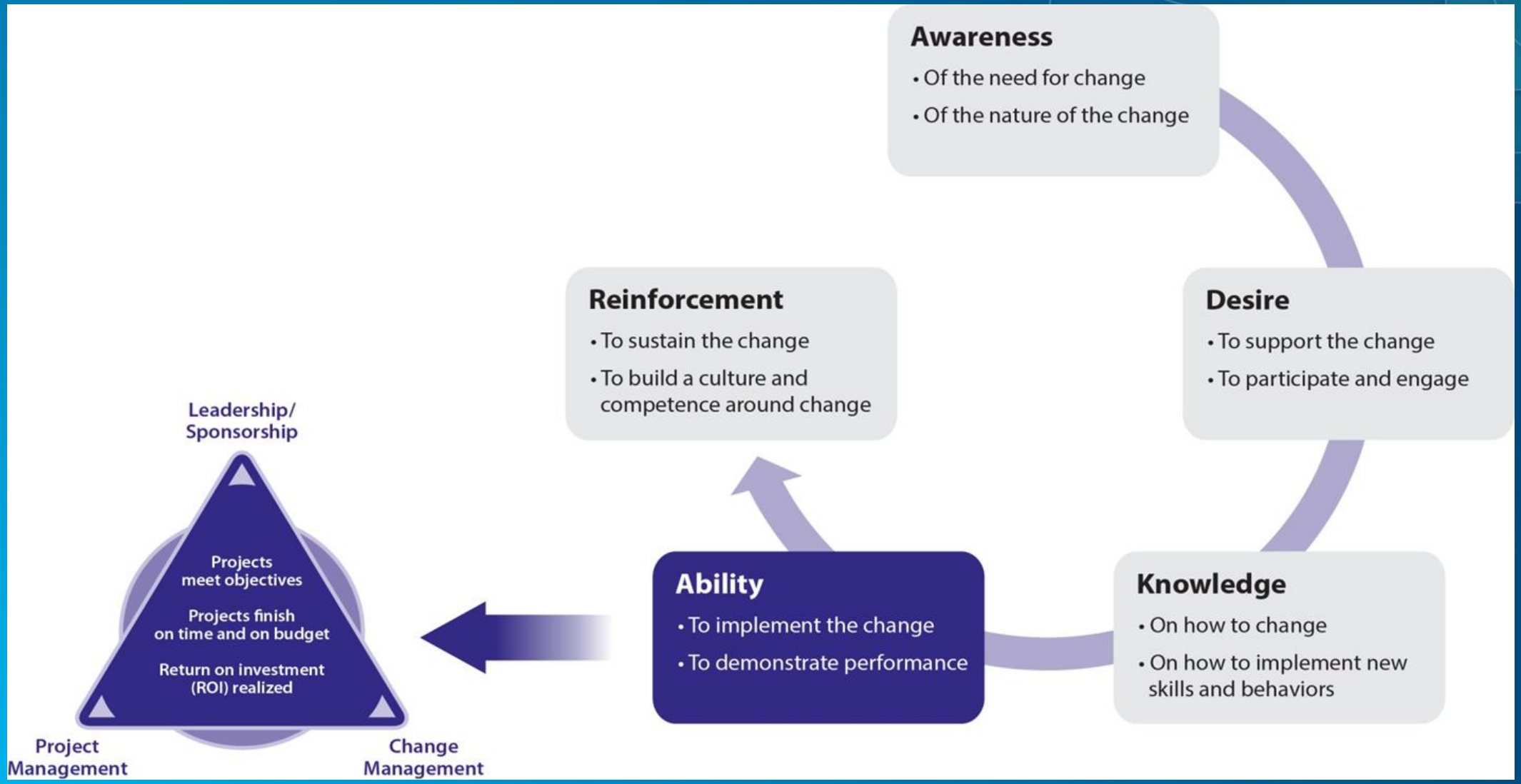
- Change
- Workforce Development Plan
- Breakout Session
- Case Study Discussions
- Next Steps

# Goals for this session

**When you leave this session you will be able to:**

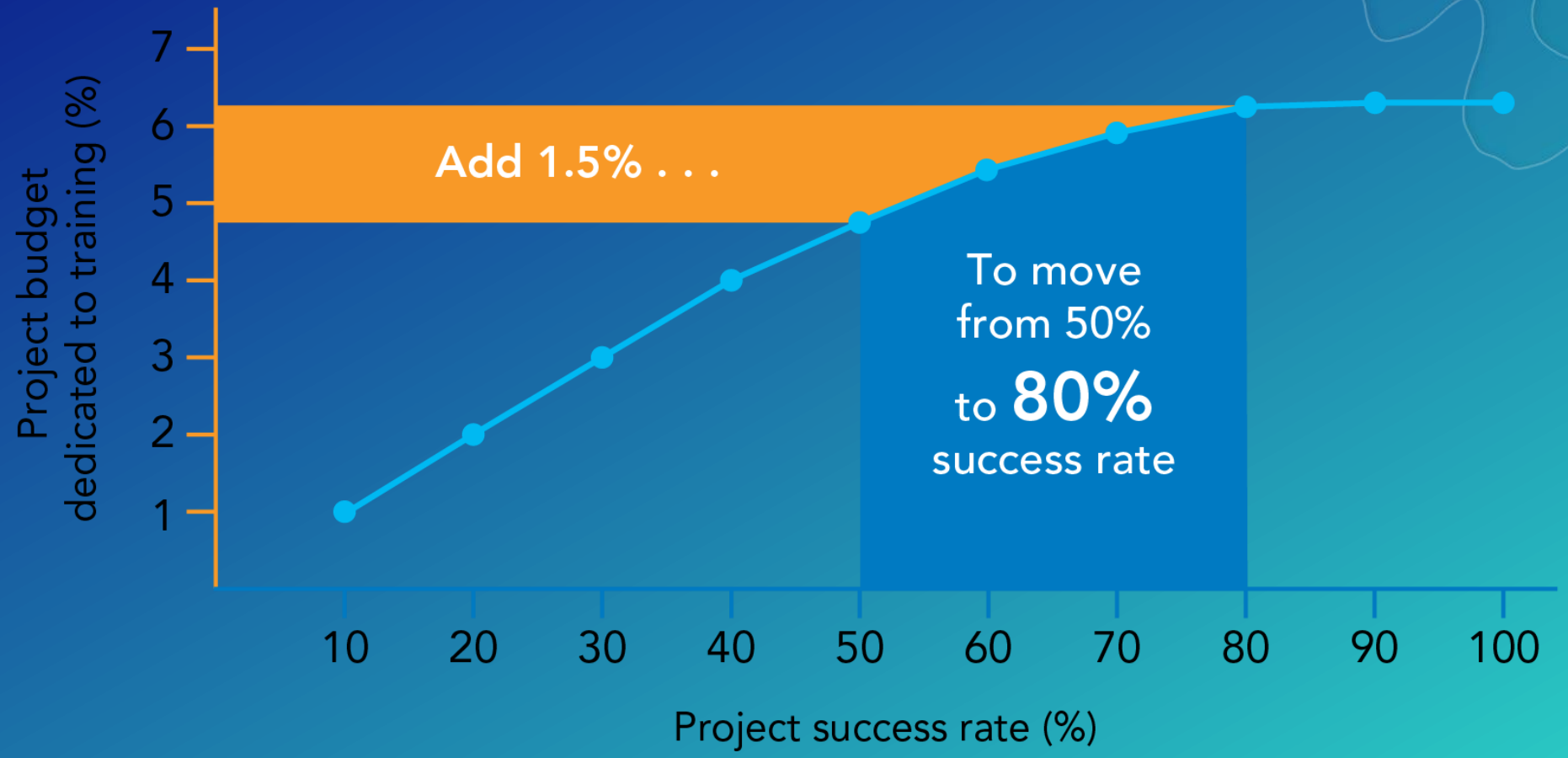
- **Justify the effort to create a Workforce Development Plan as well as the eventual Training**
- **Use the three step process of a Workforce Development Plan to support change**
- **Drive results through effective training**

# Organizational Change and Individual Change




Credit: Prosci ADKAR Change Management Model

# Training spending and project success




Source: IDC, Training's Impact on Projects Survey

# Our Platform and its Capabilities are Advancing

Incremental Software Release

10.5
Pro 1.4
2017

10.5.1
Pro 2.0
May

10.6
Pro 2.1
November

Continuous Online Improvements

Smart Mapping
Machine Learning
Big Data
Scientific Modeling
GeoAnalytics
Ortho Mapping
Crowdsourcing
Spatiotemporal
Utility Networks
Massive Point Clouds
Spatial Statistics
Real-Time
Volumetric Data
3D Cities
Distributed GIS
Web Raster Analysis
Augmented Reality
Imagery

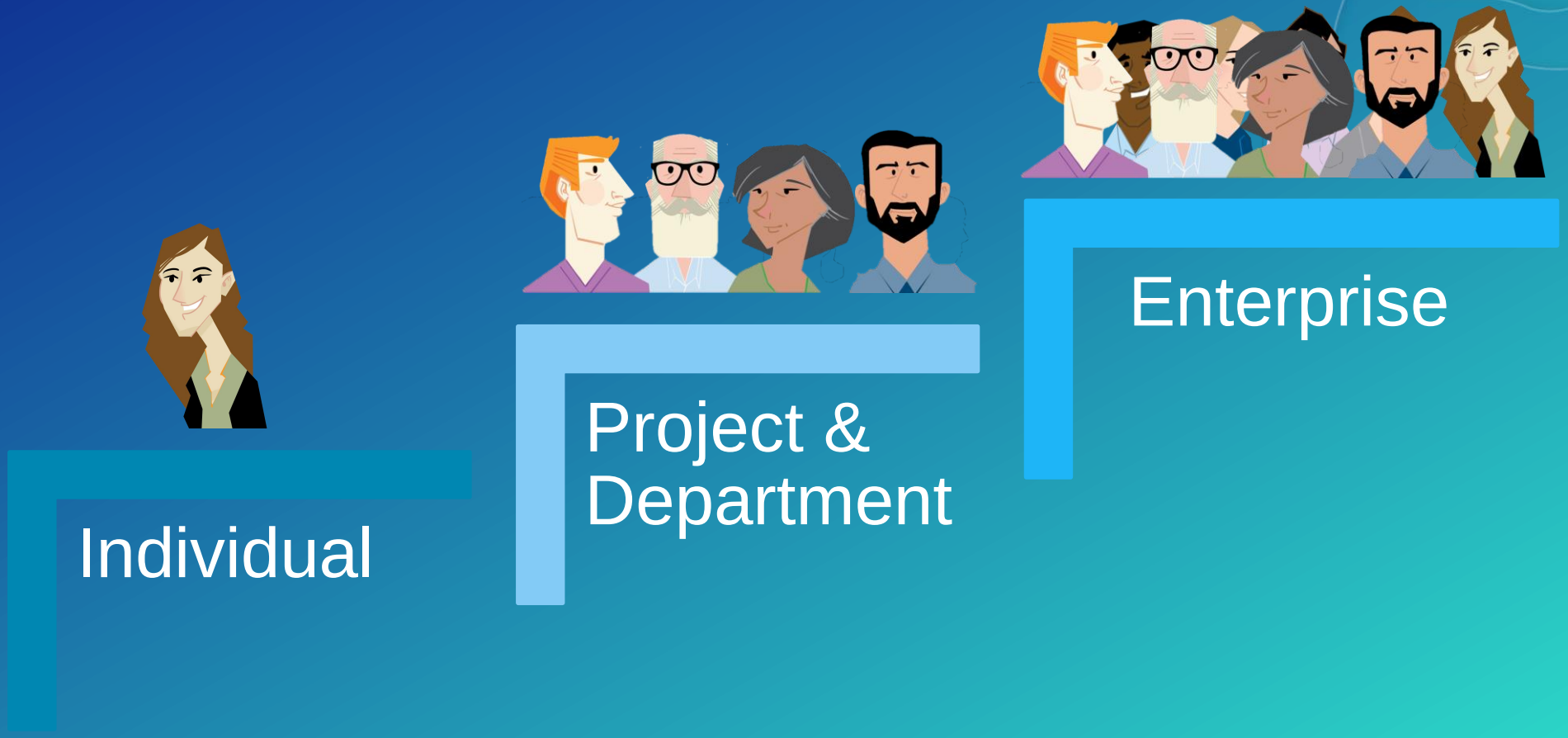
*. . . Focused on Quality, User Needs and Innovation*

# What is a workforce development plan?

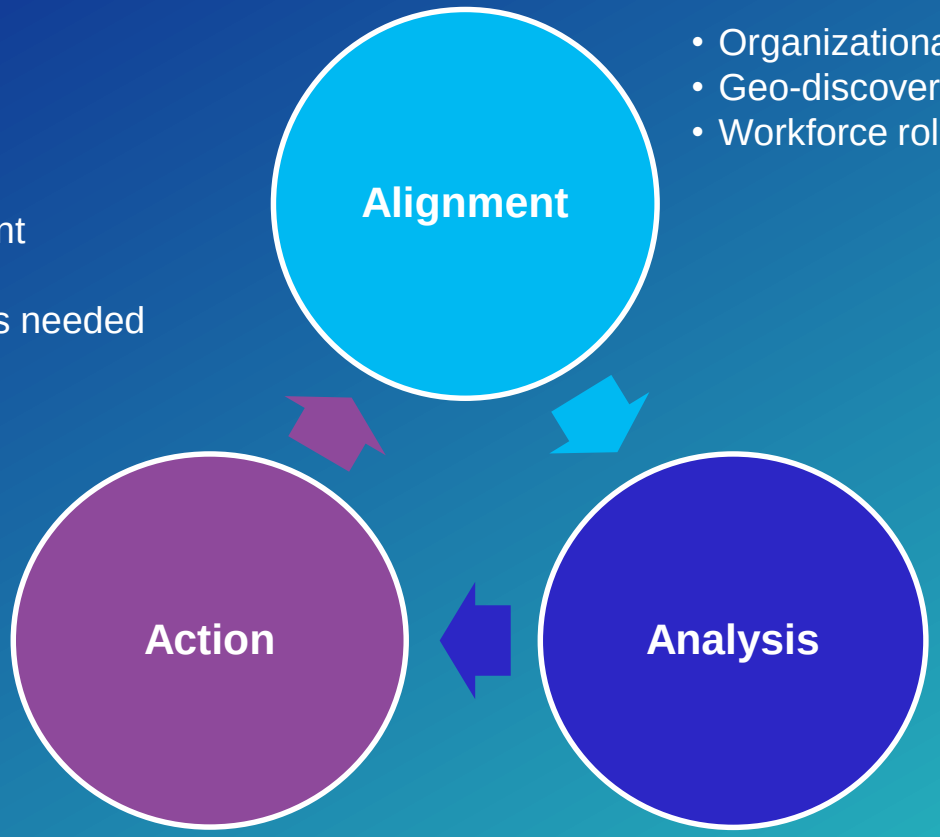
**A strategy-driven learning plan that aligns training resources to your organization’s vision and goals to ensure the roles in your workforce have the skills to execute on leveraging the ArcGIS Platform.**

# Workforce development planning is a process

## Three levels of workforce development planning



# Workforce Development Planning




- Organizational objectives
- Geo-discovery
- Workforce roles

- Skills requirements
- Timelines, priorities and budgets
- Delivery methods (training plan)

- Implement
- Strategy
- Modify as needed

# Workforce Development Process

**Alignment**

- Mission and Goals
- Applications of GIS
- Roles Discovery

# Essential Patterns of a Location Strategy

### Location Enablement

Empower all users to discover, use, make and share maps

### Constituent Engagement

Get feedback and communicate with external constituents

### Decision Support

Support organization decision making activities

### Field Mobility

Get information into and out of the field

### Analytics

Describe, predict, and improve business performance

### Location Data Management

Collect, organize and exchange data about all assets and resources

# Workforce Development Process

Analysis

- Training Resources
- Identify Delivery Method
- Budget Planning

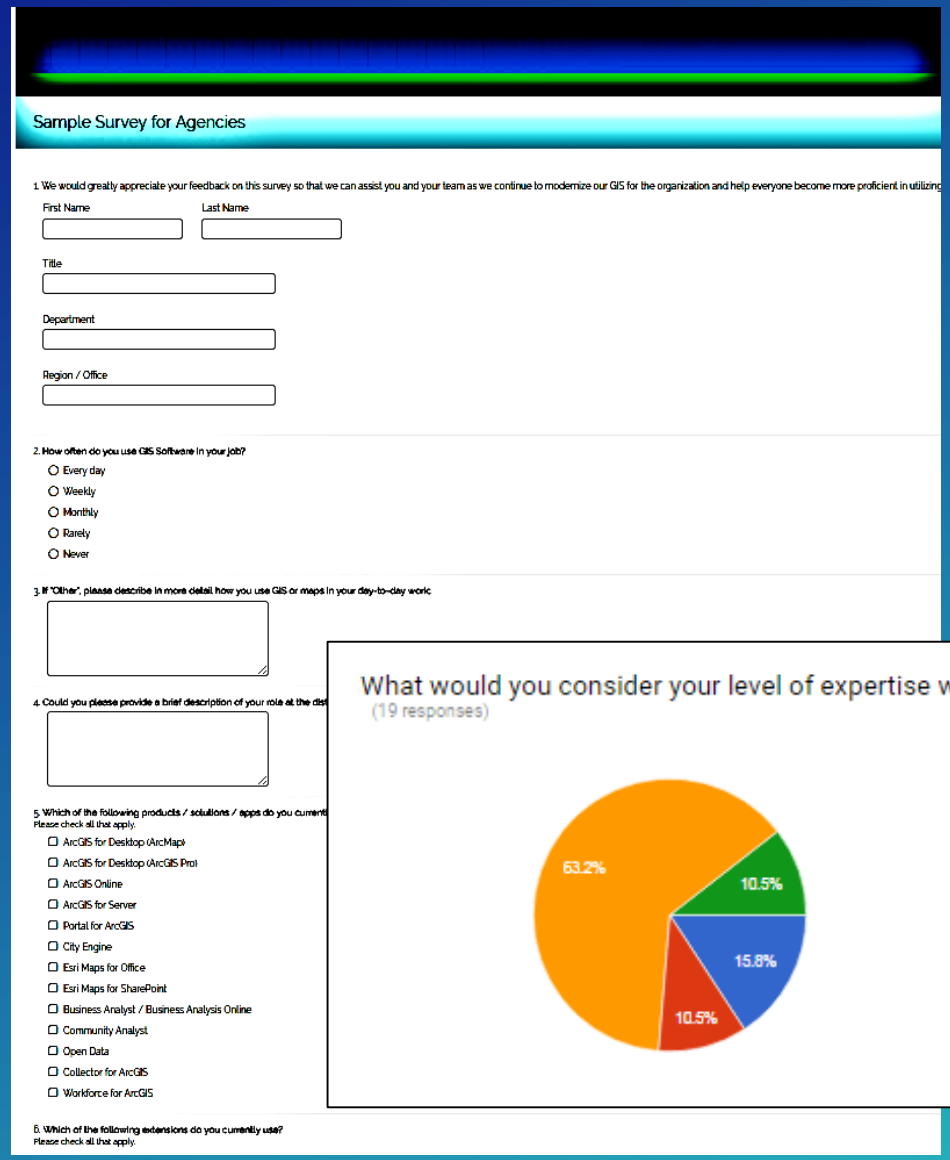
# Workforce Development Process

Action

Execute Plan

Review Plan

# Alignment



Sample Survey for Agencies

1. We would greatly appreciate your feedback on this survey so that we can assist you and your team as we continue to modernize our GIS for the organization and help everyone become more proficient in utilizing

First Name

Last Name

Title

Department

Region / Office

2. How often do you use GIS Software in your job?

- Every day
- Weekly
- Monthly
- Rarely
- Never

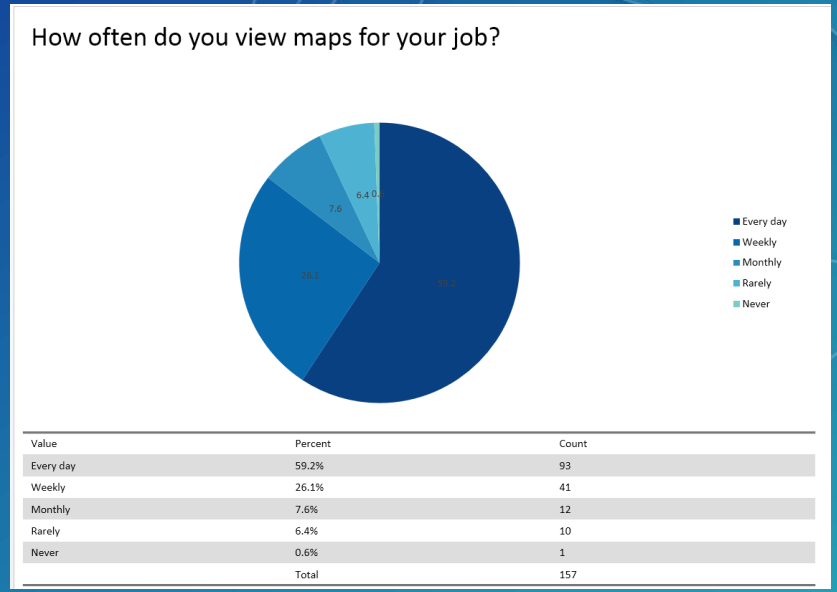
3. If "Other", please describe in more detail how you use GIS or maps in your day-to-day work

4. Could you please provide a brief description of your role at the dist

5. Which of the following products / solutions / apps do you current
Please check all that apply.

- ArcGIS for Desktop (ArcMap)
- ArcGIS for Desktop (ArcGIS Pro)
- ArcGIS Online
- ArcGIS for Server
- Portal for ArcGIS
- City Engine
- Esri Maps for Office
- Esri Maps for SharePoint
- Business Analyst / Business Analysis Online
- Community Analyst
- Open Data
- Collector for ArcGIS
- Workforce for ArcGIS

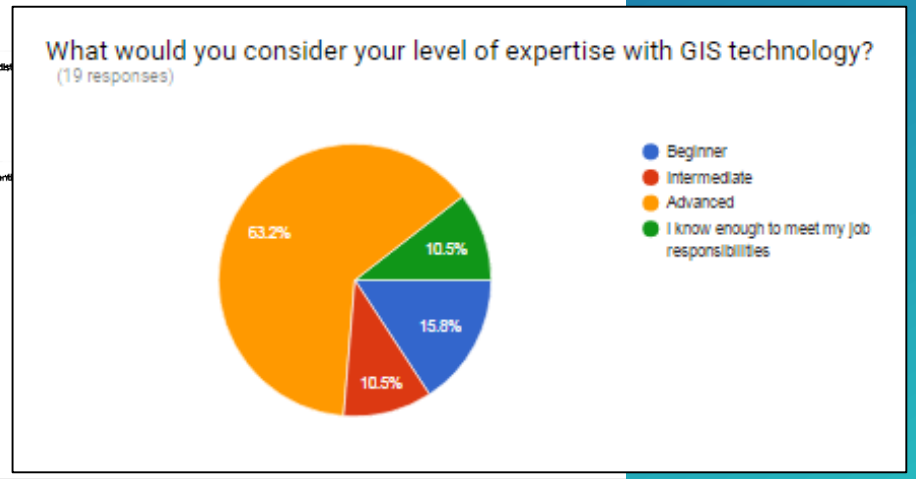
6. Which of the following extensions do you currently use?
Please check all that apply.



How often do you view maps for your job?

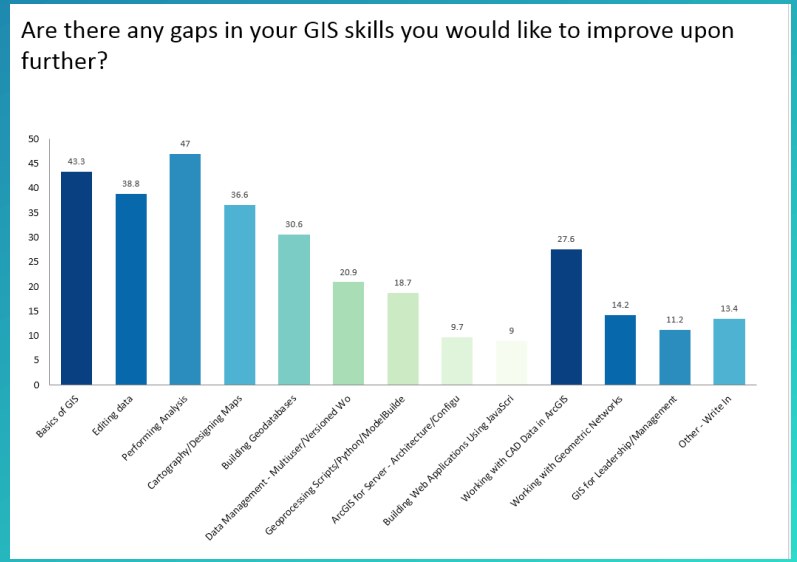


| Value | Percent | Count |
|---|---|---|
| Every day | 59.2% | 93 |
| Weekly | 26.1% | 41 |
| Monthly | 7.6% | 12 |
| Rarely | 6.4% | 10 |
| Never | 0.6% | 1 |
| | Total | 157 |



What would you consider your level of expertise with GIS technology?
(19 responses)





Are there any gaps in your GIS skills you would like to improve upon further?

# Analysis: Connecting Patterns to Strategic Goals

## 3.0 Geospatial Goals and Objectives

To ensure alignment with goals identified in Iowa DOT's Geospatial Policy, geospatial specific objectives have been defined and linked to each policy goal. The geospatial objectives are mapped to GIS patterns (introduced on the previous page) that will support their execution and achievement.

**Performance Management: Using information every day to improve the goods and services we provide to our customers.**

| GIS Goals | |
|---|---|
| 1. Geospatial efforts align with the Department's strategic initiatives. | • Locat<br>• Const<br>• Decis<br>• Field<br>• Analy<br>• Locat |
| 2. Geospatial technology and concepts are used to support Department performance measures | • Locat<br>• Const<br>• Decis<br>• Field<br>• Analy<br>• Locat |

**Data Integration: Better understand the data and information s within the department and determine how we can best leverage**

| GIS Goals | |
|---|---|
| 1. Expand access to geospatial information | • Locat<br>• Const<br>• Decis<br>• Field<br>• Analy<br>• Locat |
| 2. Data custodians have full control over their spatial data | • Locat<br>• Field<br>• Locat |
| 3. Spatial objects are imbedded into enterprise databases | • Locat |

## Geospatial Roles Identified

## 4.0 Roles, Competencies and Training

The work of geospatial users will play an important role in Iowa DOT's evolution. Tools and applications that tackle new kinds of problems are being developed daily. The goal of this document is to enable and empower map users to fully leverage resources so they can maximize their effectiveness by staying current with the technology.

Iowa DOT has a diverse need for GIS technologies to support its strategic plan. As mapping, or location enablement solutions, continues to expand throughout the department, it will make it easier for everyone in the organization to discover, use, make and share maps. This requires a strong base understanding of geospatial solutions, awareness of available resources, and knowledge of training capabilities to ensure worker productivity and promote continued employee skill development.

It is possible a person reading this document may not fit neatly into one of the GIS roles identified on the following pages. Often a person will wear many hats due to his or her personal interest or because of a lack of organizational resources. If this is the case for you, find the GIS roles that apply to your workflows and see the corresponding training associated with each role.

The curriculum developed for each role assumes the employee has no prior experience with the department's GIS software. It is the responsibility of the employee, in collaboration with management, to review course descriptions, requirements and prerequisite technical competencies prior to registering for a course to ensure the training will support his or her role and career aspirations.

**Iowa DOT Geospatial Core Roles**

| Users | Administrators | Managers |
|---|---|---|
| Map Consumer - Field | Geospatial Web Developer | Geospatial Project Manager |
| Map Consumer - Office | Geospatial Data Manager | |
| Map Consumer - Management | Geospatial Server Administrator | |
| Geospatial Knowledge Worker | | |
| Geospatial Data Editor | | |
| Geospatial Analyst | | |

## Training Recommendations by Role

**Map Consumer - Office**

**Staff:** Rail, Transit, Aviation, Grants, Bridge, etc.

**Description:** Office users consume and create content to exchange information with others in the department. Often this work is published with others via various solutions such as story maps, web apps and dashboard. Office users may also need to map information from excel and various databases. These individuals may or may not have any prior geospatial education or workplace experience with geospatial tools.

**Technical Competency:** Basic knowledge of geospatial solutions for creating and publishing information, including web mapping and select mobile solutions.

**Technology & Training Overview**

**Technology:** ArcGIS Online account

**Training:** Geospatial Infrastructure 101 (rest policies, policies, philosophy, imagery and data available), ArcGIS Online training for publishers, portal training, Esri for Office; Story Maps; Esri Web Apps

**Non-Esri Training**

- Iowa DOT Geospatial Infrastructure 101 (REST, Policies, philosophy)
- GeoCortex 101

**Esri Instructor-Led Training**

- ArcGIS 1: Introduction to GIS
- ArcGIS Online Subscriptions for Organizations: Publisher Workflows
- Designing Maps with ArcGIS - OPTIONAL

**Esri E-Learning Training**

- Getting Started with GIS
- Finding Geographic Data in ArcGIS
- Maps and More: Discover the Living Atlas of the World
- Telling Your Story with Esri Story Maps
- Creating Dynamic Maps Using Esri Maps for Office

# Action

Training Plan

Priority of training will be based upon GIS Title, IT Title, full-time GIS user, project requirement, pre-reqs, available software/extensions, and previous coursework.

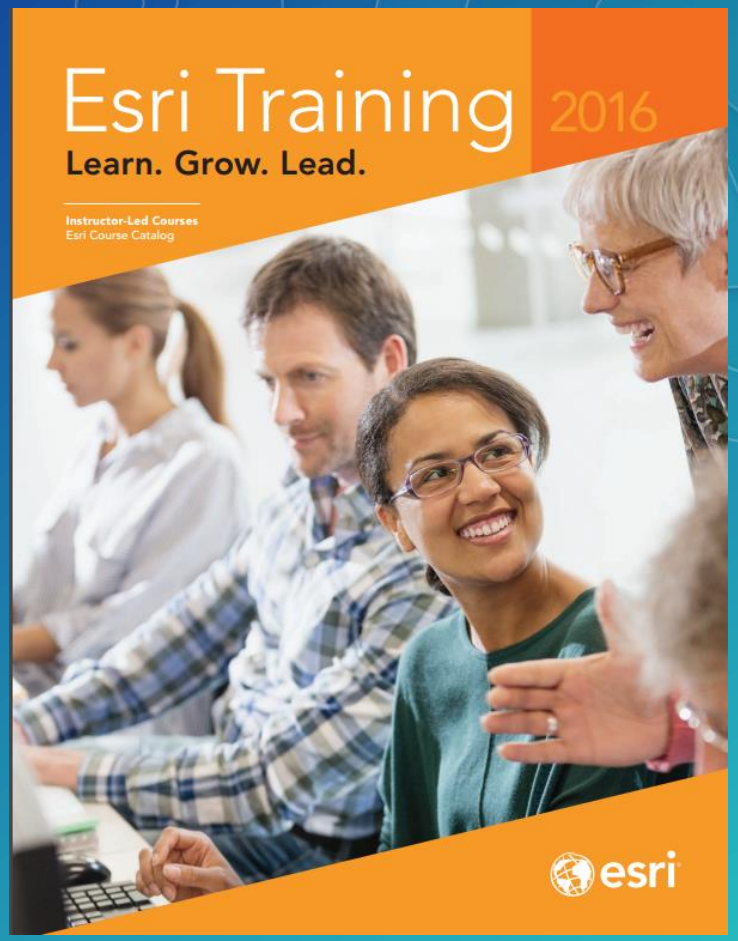
| | | | GIS Foundation | | | | | Geodata | | | Spatial Analysis | | Designing and Sharing | | | | Data Management | | | | | | Server Management | | | Courses for Developers | | | | | | Specialty Classes & Solutions | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ArcGIS 1: Introduction to GIS | ArcGIS 2: Essential Workflows | ArcGIS Online Subscriptions for Organizations: User Workflows (ILO only) | Exploring Enterprise GIS: A Workshop for Leaders | | Building Geodatabases | Editing Data with ArcGIS for Desktop | | ArcGIS 3: Performing Analysis | | Designing Maps with ArcGIS | ArcGIS 4: Sharing Content on the Web | ArcGIS Online Subscriptions for Organizations: Publisher Workflows | | Configuring and Managing the Multiuser Geodatabase | Implementing Versioned Workflows in a Multiuser Geodatabase | Distributing Data Using Geodatabase Replication | Deploying and Maintaining a Multiuser Geodatabase | | Practicing Geodesign Using ArcGIS | ArcGIS for Server: Site Configuration and Administration | System Architecture Design Strategies | Introduction to Geoprocessing Scripts Using Python | Developing Web Apps with ArcGIS API for Javascript | ArcGIS Runtime SDK for Android Bootcamp | ArcGIS Runtime SDK for iOS Bootcamp | Programming ArcGIS for Desktop Using Add-ins | | Introduction to ArcGIS Pro for GIS Professionals (ArcGIS Pro) | Working with CAD Data in ArcGIS | Market Analysis Using Esri Business Analyst (Business Professionals) | Hydrologic and Hydraulic Analysis Using ArcGIS | Arc Hydro: GIS for Water Resources | Implementing Esri Geoportal | | Editing and Maintaining Feature Data |
| R | Recommended Course | Course Type | ILT | ILT | ILO | | | ILT | ILT | | ILT | | ILT | ILT | | | ILT | ILT | ILT | ITL | ITL | | ILT | ILT | | ILT | ILT | ITL | ITL | ILT | ILT | ILT | ILT | ILT | | ILT | ILT | ITL | | | |
| O | Optional Course | Course Duration [days] | 2 | 3 | 0.5 | 0.5 | | 3 | 2 | | 2 | | 2 | 2 | 0.5 | | 3 | 3 | 2 | 2 | 2 | | 3 | 3 | | 3 | 3 | 3 | 3 | 2 | | 2 | 1 | 2 | | 2 | 3 | 2 | | 2 | 1 |
| C | Completed Course | Organizational Roles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Agency | Job Title | GIS Team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OIR | GIS Director | *Pedersen, Dennis* | | | O | O | | | | | | | | | | | | | | | | | | | | | | | | | R | | | | | | | | | |
| OIR | GIS Analyst 3 | *Meeks, Chris* | O | R | | | | | | | O | | | | | | | | | | O | | | | | R | | | | | R | | | | R | | | | | |
| OIR | GIS Analyst 3 | *Herrington, Brandon* | | | | | | | | | | | | | | | | O | | O | | | O | R | | | | R | R | O | O | | | | | | R | | | |
| OIR | GIS Analyst 3 | *White, Suzanne* | | | R | O | | | | | | | O | R | R | | | | | | R | | R | R | | O | O | O | | | R | R | | | R | R | R | | | |
| OIR | Info Systems Tech Cons | *Griswold, Andrew* | | | | | | | | | R | | O | O | | | | R | O | O | O | | | O | | R | | | | | O | | | | | | | | | O |
| OIR | GIS Analyst 3 | *Lane, Matt* | | | | | | | | | | | | | | | | R | | O | | | O | R | | | | R | R | O | O | | | | | | R | | | |
| OIR | GIS Tech 2 | *Thompson, Nancy* | O | R | | | | | | | O | | | | | | | | | | O | | | | | R | | | | | R | | | | R | | | | | |
| OIR | GIS Analyst 2 | *Pittenger, Ryan* | | | | | | | | | R | | O | O | | | | | O | O | O | | | | | R | | | | | O | | | | | | | | | O |
| OIR | GIS Analyst 2 | *Gilliam, Patrick* | | R | | | | | | | | | R | R | | | | | | | | | | | | R | R | | | | O | O | | | | | | | | |
| OIR | GIS Analyst 2 (new position) | *Williams, Kevin* | | | | | | | | | R | | O | O | | | R | O | O | O | O | | | | | R | | | | | O | | | | | | | | | O |
| OIR | GIS Analyst 2 (new position) | *Riter, Michael* | | | | | | | | | R | | O | O | | | R | O | O | O | O | | | | | R | | | | | O | | | | | | | | | O |
| Military | GIS Analyst 2 | *Yu, HeeChong* | | | | | | | | | | | | O | O | | R | R | | R | | | R | O | | R | R | O | R | | O | | | | R | R | R | | | |
| Safety | GIS Analyst 2 | *Tucker, Ray* | | | | | | | | | | | | R | R | | | | | | | | R | | | | R | | | | R | | | | | | | | | |
| TDEC | GIS Analyst 3 | *Buchanan, Tim* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TDOT | IT Manager Senior | *McDonough, Kim* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TDOT | GIS Analyst 2 | *Anderson, Peggy* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TDOT | Data Architect | *Letillier, April* | | | | | | | | | | | | | R | | R | | | | | | R | R | | | R | | | R | | | | | | | R | | | |
| TWRA | GIS Tech Mgr 1 | *Jones, Jeanette* | | | R | R | | R | | | R | | O | R | R | | | | | O | O | | | O | | | | | | | R | | | | O | O | | | | |
| TWRA | Info Resource Spec 3 | *Porter, Tracy* | | | O | | | | | | O | | | R | O | | | | | | O | | O | O | | | O | | | | R | O | | | | | | | | |
| TWRA | Info Resource Spec 3 | *Barrett, Lynn* | | | R | R | | R | | | R | | R | R | R | | | | | | R | | | | | R | R | | | R | R | | | | R | R | | | | |

# Action - Delivery

Instructor-led
E-Learning
MOOCs
Certifications

# Action - Delivery

## Training | Instructor-led




**Benefits:**

- Interactive
- Peer-to-peer learning
- Hands on exercises

**Delivery:**

- In a Esri Training Facility (14 in the U.S.)
- Online (virtual classroom)
- Your facility (on your infrastructure or mobile lab)

# Action - Delivery

## Training | Coaching/Custom

**Coaching**

- Best practices
- Agency tasks & specific workflows
- Student application using a copy of client data

**Full Custom Class**

- Unique and specific to organizational needs
- Can include pieces from existing courses
- Change in delivery method (remove exercises)

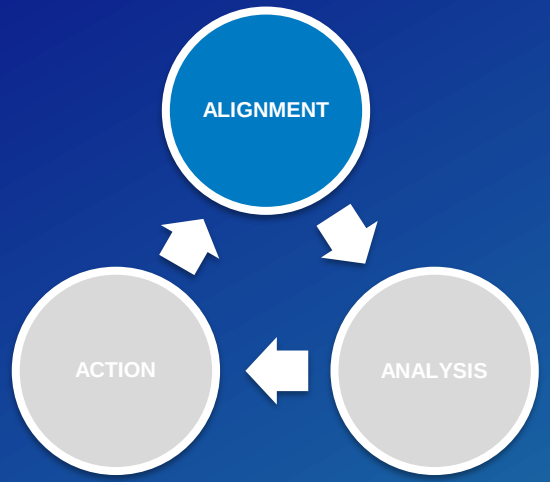
**Let’s look at a more detailed example**

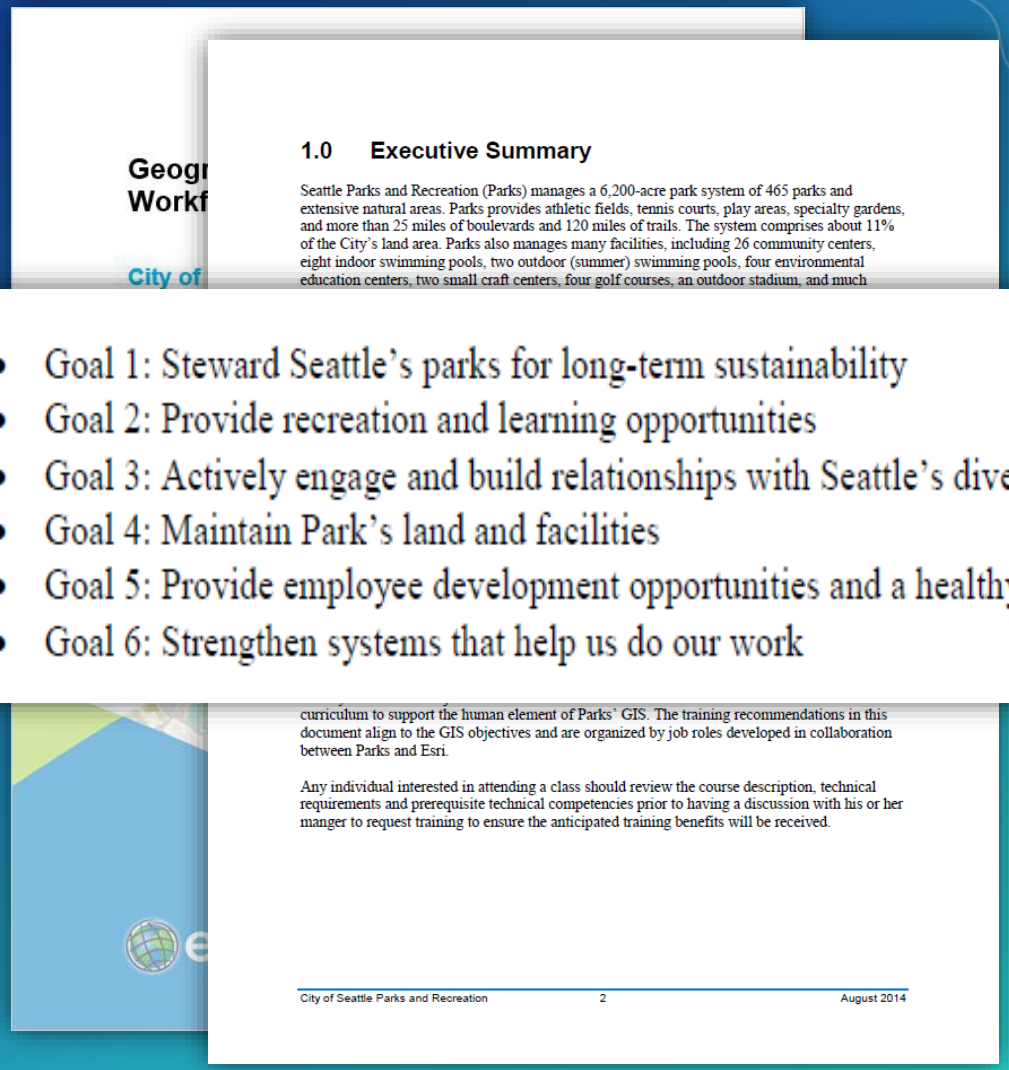
**Seattle Parks and Recreation**

# Identity Organizational Goals

## Process to plan

**The three-step workforce development process results in a workforce development plan**



1.0 Executive Summary

Seattle Parks and Recreation (Parks) manages a 6,200-acre park system of 465 parks and extensive natural areas. Parks provides athletic fields, tennis courts, play areas, specialty gardens, and more than 25 miles of boulevards and 120 miles of trails. The system comprises about 11% of the City's land area. Parks also manages many facilities, including 26 community centers, eight indoor swimming pools, two outdoor (summer) swimming pools, four environmental education centers, two small craft centers, four golf courses, an outdoor stadium, and much

curriculum to support the human element of Parks' GIS. The training recommendations in this document align to the GIS objectives and are organized by job roles developed in collaboration between Parks and Esri.

Any individual interested in attending a class should review the course description, technical requirements and prerequisite technical competencies prior to having a discussion with his or her manger to request training to ensure the anticipated training benefits will be received.

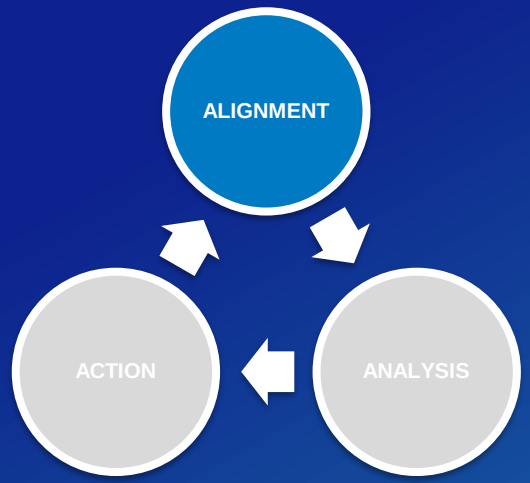
City of Seattle Parks and Recreation 2 August 2014

- Goal 1: Steward Seattle's parks for long-term sustainability
- Goal 2: Provide recreation and learning opportunities
- Goal 3: Actively engage and build relationships with Seattle's diverse population
- Goal 4: Maintain Park's land and facilities
- Goal 5: Provide employee development opportunities and a healthy work culture
- Goal 6: Strengthen systems that help us do our work

# Align GIS Patterns to organization’s strategic goal

| Location Enablement | Location Data Management | Analytics | Field Mobility | Decision Support | Constituent Engagement |
|---|---|---|---|---|---|
| Empower all users to discover, use, make and share maps | Collect, organize and exchange data about all assets and resources | Describe, predict, and improve business performance | Get information into and out of the field | Support organization decision making activities | Get feedback and make informed decisions |

# Develop GIS Goals




| Organization Goal | Steward Seattle's parks for long-term sustainability | |
|---|---|---|
| **GIS Pattern** | **GIS Goal** | **GIS Capability** |
| Constituent engagement<br>Decision Support | Support Park Legacy Plan with maps for status reports and web maps for interactive web reporting | ? |
| Location Data Management<br>Analytics<br>Decision Support | Support Park Planning using GIS to identify neighborhoods that are under served by useable park open space using a Gap Analysis model | ? |

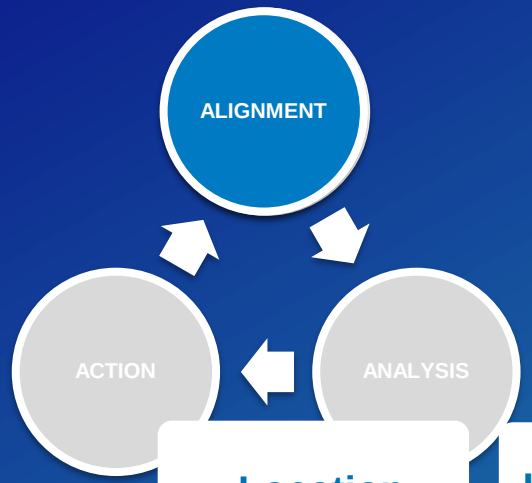
# Align GIS Capabilities to GIS goals

- Foundation
- Collaboration and Sharing
- Data Collection and Management
- Developer
- Imagery and Remote Sensing

- Mapping and Visualization
- Real-Time GIS
- Spatial Analytics
- 3D GIS
- Certification

# Process to plan

| Organization Goal | Steward Seattle's parks for long-term sustainability | |
|---|---|---|
| **GIS Pattern** | **GIS Goal** | **GIS Capability** |
| • Decision Support<br>• Constituent Engagement | Support Park Legacy Plan with maps for status reports and web maps for interactive web reporting | • Real-Time GIS<br>• Collaboration & Sharing |
| • Location Data Management<br>• Analytics<br>• Decision Support | Support Park Planning using GIS to identify neighborhoods that are under served by useable park open space using a Gap Analysis model | • Spatial Analytics<br>• Real-Time GIS |




**Location Enablement**

Empower all users to discover, use, make and share maps

**Location Data Management**

Collect, organize and exchange data about all assets and resources

**Analytics**

Describe, predict, and improve business performance

**Field Mobility**

Get information into and out of the field

**Decision Support**

Support organization decision making activities

**Constituent Engagement**

Get feedback and make informed decisions

# Activity: Identify Capabilities aligned to Goals

- Review the Organizational Goals, Patterns of Use, and the GIS Goals
- Identify the Capabilities that could be applied to these goals
- Optional:
  - Work through a goal you have at your organization

# Align GIS Capabilities to GIS goals

- Foundation
- Collaboration and Sharing
- Data Collection and Management
- Developer
- Imagery and Remote Sensing

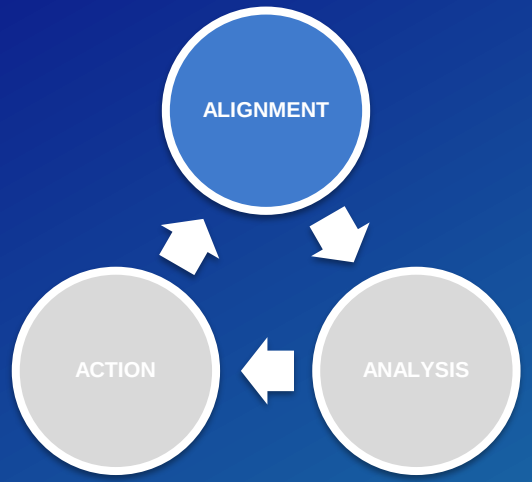
- Mapping and Visualization
- Real-Time GIS
- Spatial Analytics
- 3D GIS
- Certification

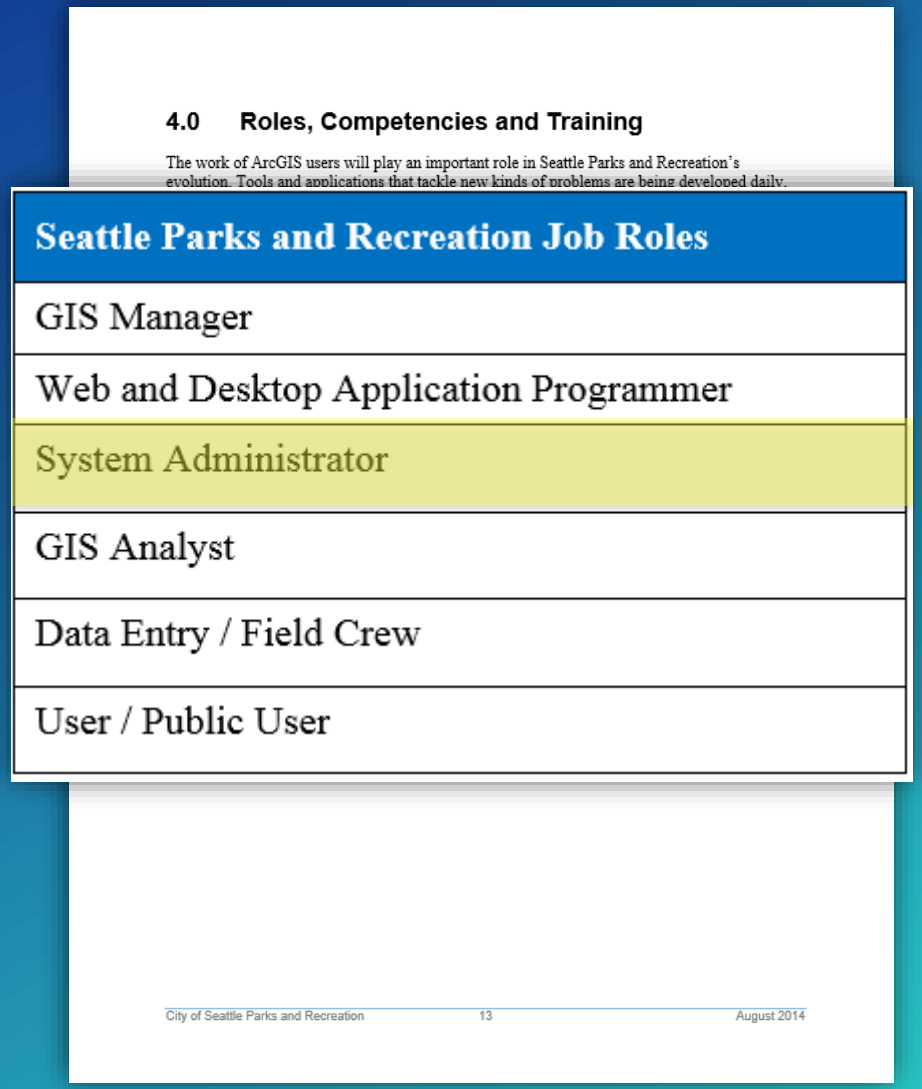
# What are your group results from the exercise?

# Identify Roles

## Process to plan

**The three-step workforce development process results in a workforce development plan**



**4.0 Roles, Competencies and Training**

The work of ArcGIS users will play an important role in Seattle Parks and Recreation's evolution. Tools and applications that tackle new kinds of problems are being developed daily.

| Seattle Parks and Recreation Job Roles |
| --- |
| GIS Manager |
| Web and Desktop Application Programmer |
| System Administrator |
| GIS Analyst |
| Data Entry / Field Crew |
| User / Public User |

City of Seattle Parks and Recreation 13 August 2014

**Sara**

# Align GIS Capabilities to organization's strategic goal

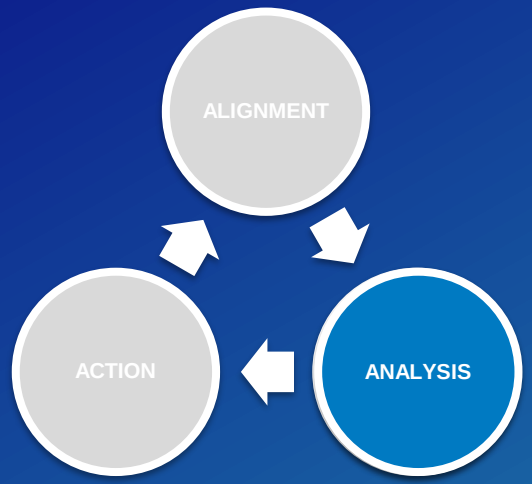
- [x] Foundation
- [ ] Data Collection and Management
- [ ] Mapping and Visualization
- [ ] 3D GIS
- [ ] Developer
- [ ] Spatial Analytics
- [ ] Imagery and Remote Sensing
- [ ] Real-Time GIS
- [ ] Collaboration and Sharing

- [x] Learn GIS Concepts
- [x] ArcGIS Platform Concepts
- [x] ArcGIS Desktop Concepts
- [x] Implement Your GIS

- [x] Learn the Basics
- [x] Build Mobile Apps
- [x] Build Web Apps
- [x] Build Desktop Apps
- [x] Script and Automate

- [x] Learn the Basics
- [x] Collect Data in the Field
- [x] Manage Data Quality
- [x] Manage Enterprise Geodatabases
- [x] Manage GIS Project Workflows
- [x] Convert and Combine Data
- [x] Manage Metadata
- [x] Create and Edit Data
- [x] Maintain Data Integrity

# Process to plan




**System Administrator**

This role's responsibilities include:

- Configures and maintains the GIS infrastructure to conform to set IT policies
- Maintains enterprise spatial databases with governance to include data modeling, geodetic contrc parameters, and metadata documentation
- System performance tuning/troubleshooting
- Related server software (upgrades and service packs)
- Deploys GIS web functionality with appropriate security and server considerations

**System Administrator is not a formal position within Parks. The workflows assigned to this are performed by a combination of Parks IT, the GIS Manager and SPU*

| GIS Pattern | Workflows and Technical Competencies |
|---|---|
| **Location Data Management** | **Data Management Workflows**<br>• Managing Data Quality<br>• Feature Editing for Desktop<br>• Automating Editing Tasks<br>• Feature Editing for Server / Mobile<br>**Data Editing Workflows**<br>• Managing Feature Data<br>• Managing Raster Data<br>• Designing / Managing Geodatabases<br>• Managing Multiuser Geodatabase Environment<br>• Data Documentation |

**Esri Instructor-Led Training**

1. ArcGIS for Server: Site Configuration and Administration (3 Days)
2. System Architecture Design Strategies (3 Days)
3. Building Geodatabases (3 Days)
4. Configuring and Managing the Multiuser Geodatabase (3 Days)
5. Implementing Versioned Workflows in a Multiuser Geodatabase (3 Days)

**Esri e-Learning Training**

1. Archiving Data in a Multiuser Geodatabase (Web Course, 2 Hours, Free)
2. Data QC with ArcGIS: Automating Validation (Web Course, 3Hours, Free)
3. Transforming Data Using Extract, Transform, and Load Processes (Web Course, 3 Hours, Fr
4. Using ArcGIS Data Reviewer to Assess Data Quality (Training Seminar, 1 Hour, Free)
5. Creating and Sharing GIS Content Using ArcGIS Online (Web Course, 3 Hours, Free)

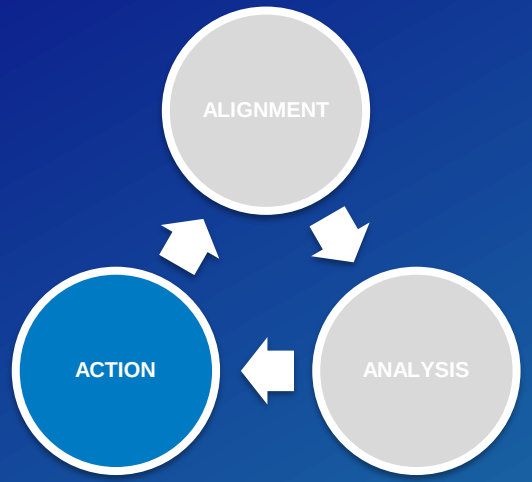
**Applicable Certifications**

- Enterprise Administration Associate
- Enterprise System Design Associate

**Sara**

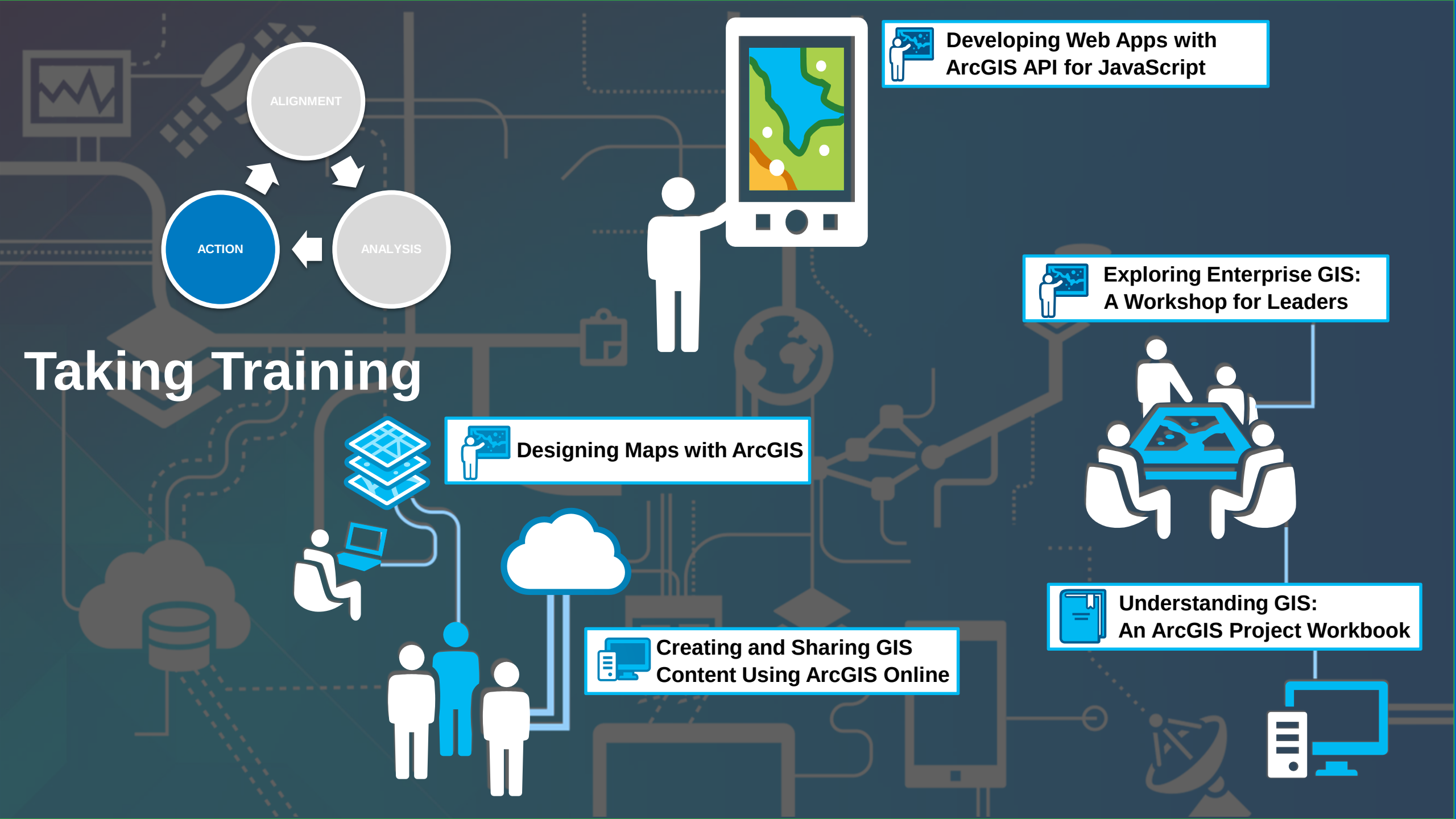
# Process to plan

## The three-step workforce development process results in a workforce development plan




Priority of training will be based upon GIS Title, IT Title, full-time GIS user, project requirement, pre-reqs, available software/extensions, and previous coursework.

| | | | GIS Foundation | ArcGIS 1: Introduction to GIS | ~~ArcGIS 2: Essential Workflows for ArcGIS Online Subscriptions~~ | Organizations: User Workflows (ILO only) | ~~Exploring Enterprise GIS: A Workshop for Leaders~~ | Geodata | Building Geodatabases | Editing Data with ArcGIS for Desktop | Spatial Analysis | ArcGIS 3: Performing Analysis | Designing and Sharing | Designing Maps with ArcGIS | ArcGIS 4: Sharing Content on the Web | ~~Organizations: Publisher~~ | Data Management | Configuring and | Multi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | Recommended Course | Course Type | | ILT | ILT | ILO | | | ILT | ILT | | ILT | | ILT | ILT | | | ILT | ILT |
| O | Optional Course | Course Duration [days] | | 2 | 3 | 0.5 | 0.5 | | 3 | 2 | | 2 | | 2 | 2 | 0.5 | | 3 | 3 |
| C | Completed Course | Organizational Roles | | | | | | | | | | | | | | | | | |
| Agency | Job Title | GIS Team | | | | | | | | | | | | | | | | | |
| OIR | GIS Director | ~~Anderson, Peggy~~ | | | | O | O | | | | | | | | | | | | |
| OIR | GIS Analyst 3 | ~~Meeks, Chris~~ | | O | R | | C | | | | | O | | | | | | | |
| OIR | GIS Analyst 3 | ~~Herrington, Brandon~~ | | | C | | | | O | R | | | | | | | | | C |
| OIR | GIS Analyst 3 | ~~White, Suzanne~~ | | | | R | O | | R | R | | | | O | R | R | | | |
| OIR | Info Systems Tech Cons | ~~Griswold, Andrew~~ | | | O | | | | | O | | R | | O | O | | | | C |
| OIR | GIS Analyst 3 | ~~Lane, Matt~~ | | | | | C | | O | R | | | | | | | | | R |
| OIR | GIS Tech 2 | ~~Thompson, Nancy~~ | | O | R | | | | | | | O | | | | | | | |
| OIR | GIS Analyst 2 | ~~Pittenger, Ryan~~ | | | | | | | C | | | R | | C | O | | | | |
| OIR | GIS Analyst 2 | ~~Gilliam, Patrick~~ | | | R | | | | | | | | | R | R | | | | |
| OIR | GIS Analyst 2 (new position) | ~~Williams, Kevin~~ | | C | | O | | | | | | R | | O | O | | | C | O |
| OIR | GIS Analyst 2 (new position) | ~~Riter, Michael~~ | | C | | | | | | | | C | | O | O | | | R | O |
| Military | GIS Analyst 2 | ~~Yu, HeeChong~~ | | | C | | | | R | O | | | | | O | O | | R | C |
| Safety | GIS Analyst 2 | ~~Tucker, Ray~~ | | | | | | | R | | | | | | R | R | | | |


ALIGNMENT
ANALYSIS
ACTION
Taking Training
Developing Web Apps with ArcGIS API for JavaScript
Exploring Enterprise GIS: A Workshop for Leaders
Designing Maps with ArcGIS
Understanding GIS: An ArcGIS Project Workbook
Creating and Sharing GIS Content Using ArcGIS Online

# Benefits of a Workforce Development Plan

Training aligned with goals and objectives

Defined GIS roles and responsibilities

Deploy training resources effectively

Goals identification

Customized Training Plans

Easy access to training materials and information

Business case for GIS investment

# Seneca Resources Video

# Seneca Resources

Video

Benefits of a Workforce Development Plan

# Case Study: Virginia Department of Transportation

# Case Study: Virginia Department of Transportation

**Mission:** ***Our mission is to plan, deliver, operate and maintain a transportation system that is safe, enables easy movement of people and goods, enhances the economy and improves our quality of life.***

- **Plan**
- **Deliver**
- **Operate**
- **Maintain**
- **Support**

| 2015 VDOT Goals<br>These goals are associated with 43 action items in the 2015 Business Plan | EGIS Goals Directly Contributing to Organizational Goal |
|---|---|
| ***Plan***<br>*Planning includes monitoring existing conditions and forecasting future growth; engagement with stakeholders through MPOs, Planning District Commissions, and local governments; identification of needs; short and long range planning; prioritization, programming, and funding of programs (Transportation Improvement Program, Statewide Transportation Improvement Program and Six-Year Improvement Program [SYIP]).* | *Mapping on Demand*<br>*Application Development*<br>*Tracking*<br>*Workforce Development*<br>*Open Data Exchange*<br>*Data Management*<br>*Building the VDOT EGIS* |
| ***Deliver***<br>*Delivery includes preliminary engineering (project scoping, evaluation of environmental impacts, obtaining comments, developing plans, specifications and estimates), right of way acquisition, and construction project activities (mobilization, maintenance of traffic, construction, and inspection).* | *Mapping on Demand*<br>*Asset Management*<br>*Application Development*<br>*Tracking*<br>*Workforce Development*<br>*Open Data Exchange*<br>*Data Management*<br>*Building the VDOT EGIS* |

**GIS Strategic Workforce Development Plan for Virginia Department of Transportation (VDOT)**

Virginia Department of Transportation

June, 2015

esri

Section Title | Page

Contents





## 2.0 Organizational Overview

**Mission:** *Our mission is to plan, deliver, operate and maintain a transportation system that is safe, enables easy movement of people and goods, enhances the economy and improves our quality of life.*

**Shared Values in Public Service**

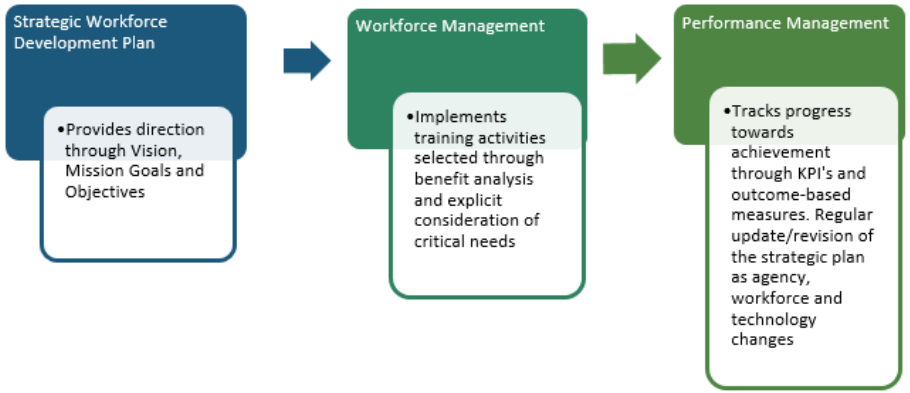
- Be responsive to customer needs, consider what VDOT does in terms of how it benefits our customers, and treat customers with respect, courtesy, and fairness
- Commit to safety and continuous improvement in everything we do, learning from mistakes and successes alike
- Trust, respect, support, and encourage each other
- Respect and protect the public investment
- Make decisions based on facts and sound judgment and accept accountability for our actions
- Strengthen our expertise in using information, tools, and technology to achieve high performance and stay on the cutting edge
- Think ahead, acting and planning creatively for today and tomorrow

The Virginia Department of Transportation (VDOT) is responsible for building, maintaining and operating the state's roads, bridges and tunnels. The organization employees over 7,000 employees across the state in both the main office and the nine districts.

## 3.0 Strategic Goals and Alignment

Strategic workforce development planning is part of an overall effort to manage Virginia DOT in an effort to increase organizational efficiency and effectiveness. This strategic plan reviews agency goals and objectives, relates these to short-term development needs, and sets the long term strategic direction for the agency workforce.

To ensure alignment with State goals, VDOT strategic goals and EGIS strategic goals these relationships are highlighted within this section.




| 2015 VDOT Goals<br>These goals are associated with 43 action items in the 2015 Business Plan | EGIS Goals Directly Contributing to Organizational Goal |
|---|---|
| ***Plan***<br>*Planning includes monitoring existing conditions and forecasting future growth; engagement with stakeholders through MPOs, Planning District Commissions, and local governments; identification of needs; short and long range planning; prioritization, programming, and funding of programs (Transportation Improvement Program, Statewide Transportation Improvement Program and Six-Year Improvement Program [SYIP]).* | *Mapping on Demand*<br>*Application Development*<br>*Tracking*<br>*Workforce Development*<br>*Open Data Exchange*<br>*Data Management*<br>*Building the VDOT EGIS* |

# Case Study: State of Tennessee

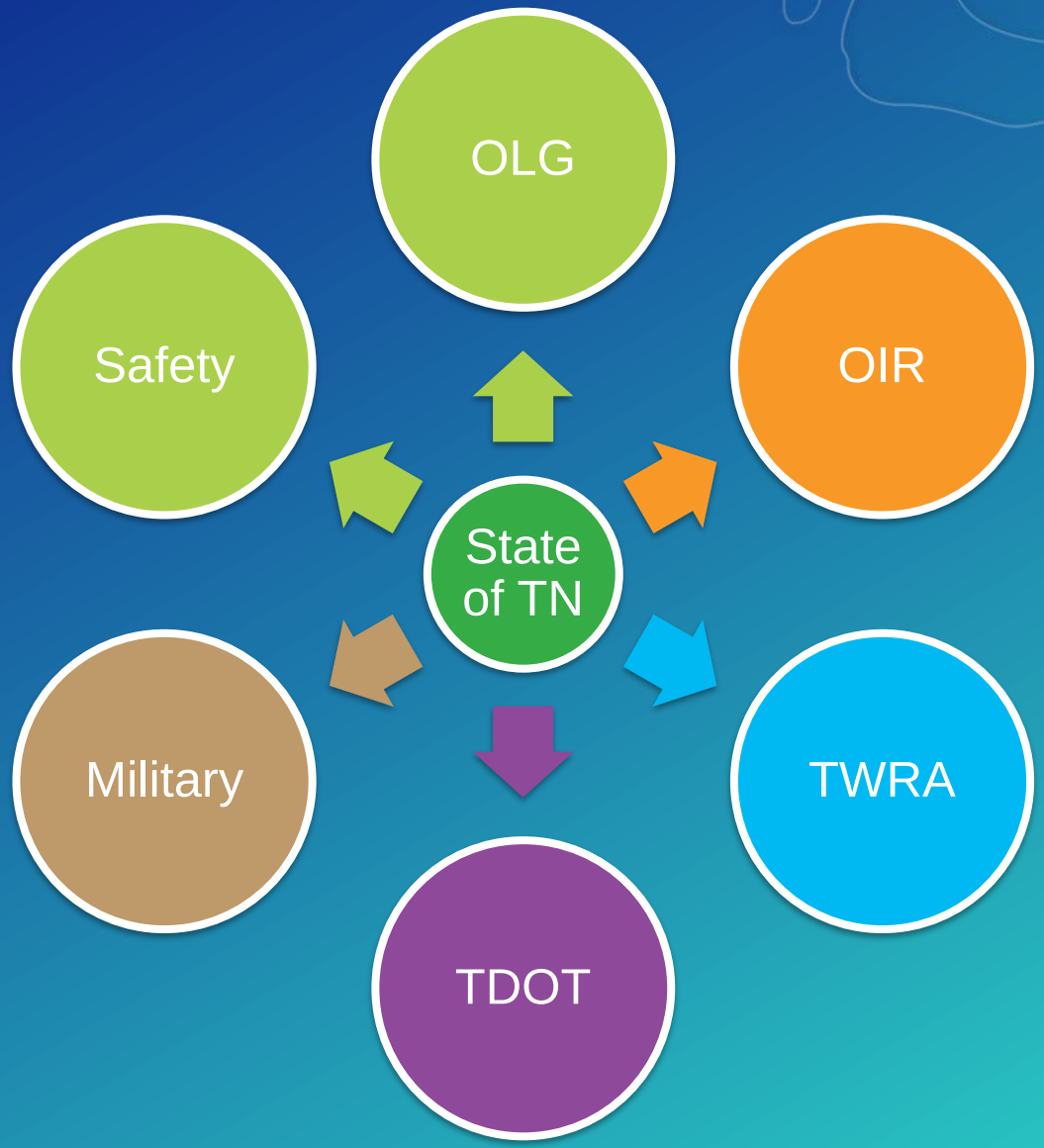
## Case Study: State of TN

TN Tennessee State Government

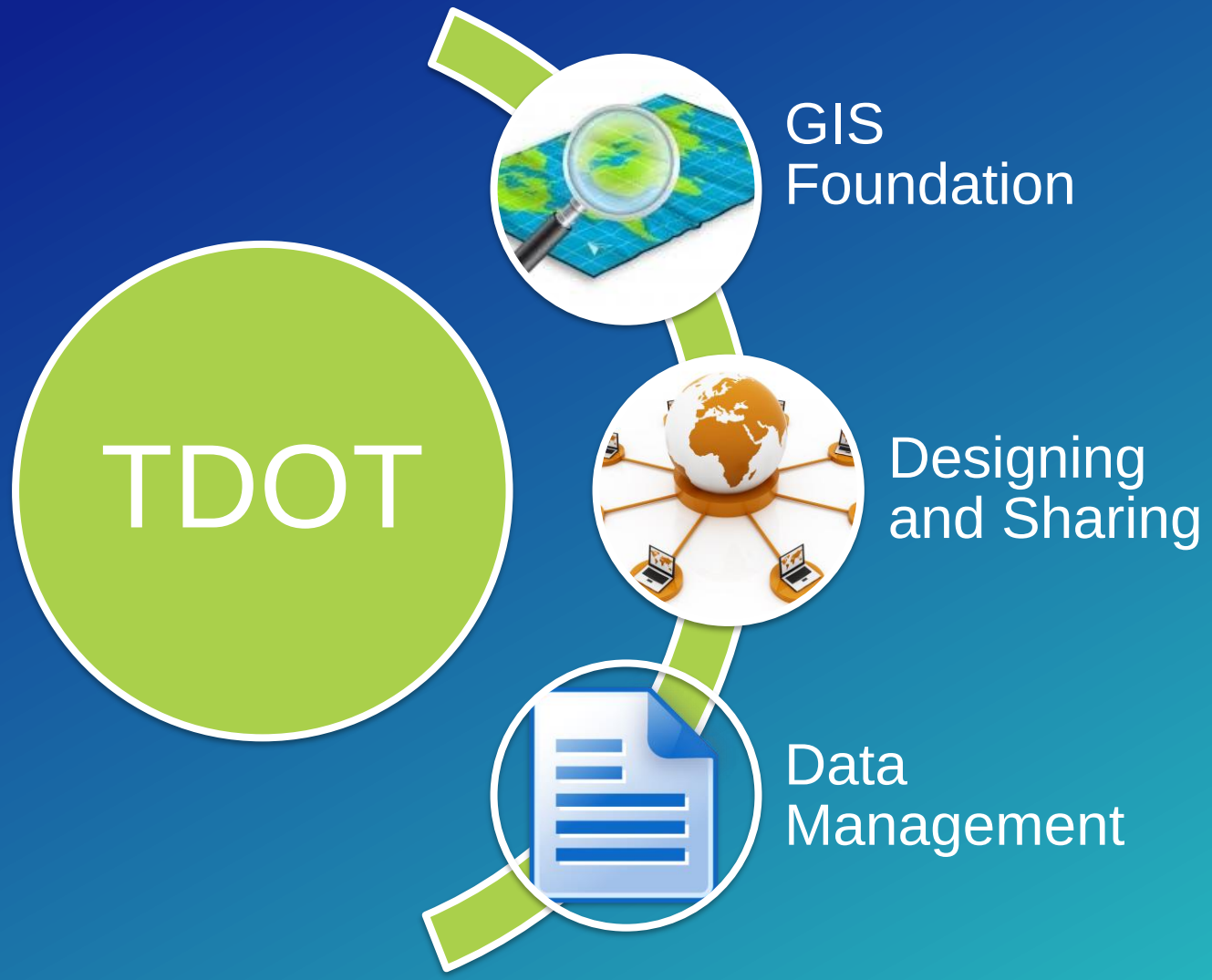
***After years of limited training budgets, many organizations now face the challenge of aligning employee skills with modern technology-driven workflows and customer service expectations.***

***A big focus of the GIS leadership at the State was ensuring that the training went to the right people in the right classes and really showed the impact and the business benefits of the training.***

# Case Study



# Case Study



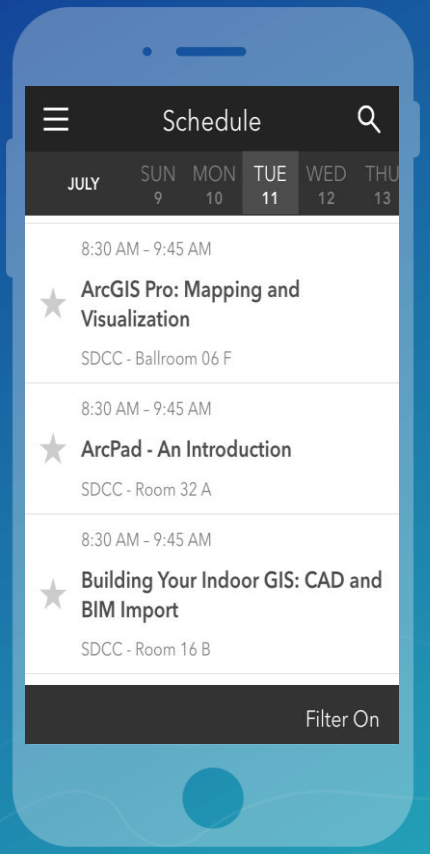

## Recommended Courses

- **ArcGIS 2: Essential Workflows**
- **ArcGIS 4: Sharing Content on the Web**
- **Designing Maps with ArcGIS**
- **Configuring and Managing the Multi-User Geodatabase**
- **Working with CAD Data in ArcGIS**
- **ArcGIS Online Subscriptions for Organizations: Publisher Workflows**

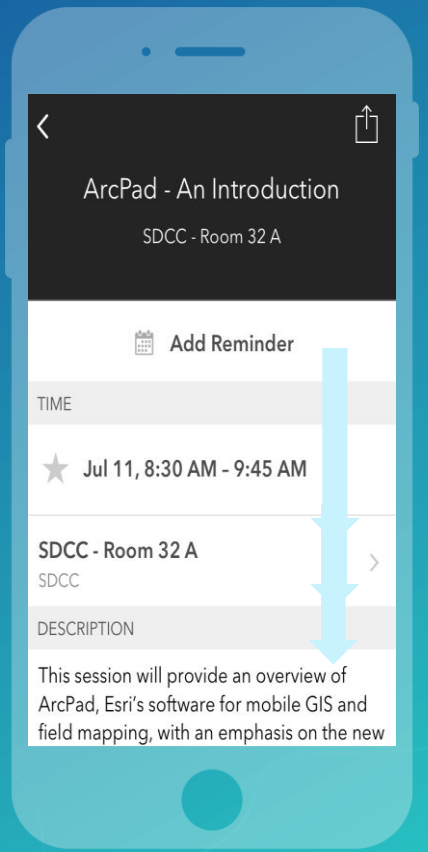
# Please Take Our Survey on the **Esri Events App!**

**Download the Esri Events app and find your event**

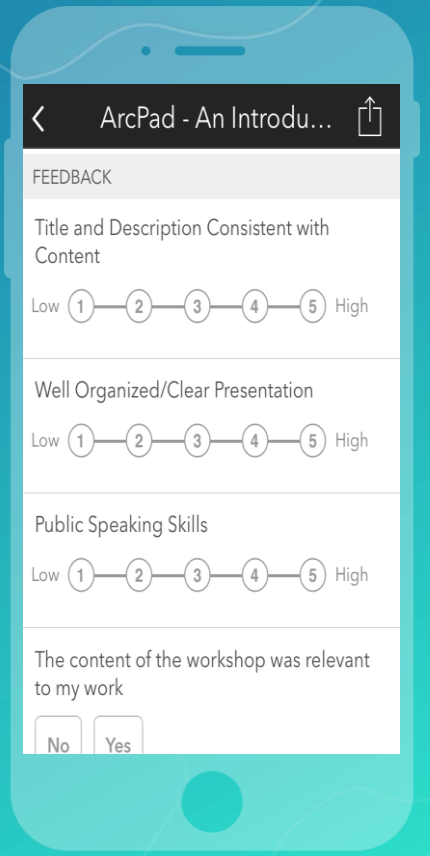

**Select the session you attended**




**Scroll down to find the survey**




**Complete Answers and Select "Submit"**




Questions?