



# Esri Best Practices: Implementing ArcGIS Hub

Nick Giordano  
Eric Apple

An abstract 3D architectural graphic on the right side of the slide. It features various geometric shapes and planes in shades of blue, orange, and green. Some surfaces are covered with white topographic contour lines. The overall composition is dynamic and layered, suggesting a complex digital or spatial environment.

**GIS  
INSPIRING  
WHAT'S  
NEXT**

# Esri Best Practices: Implementing ArcGIS Hub

## Agenda at a Glance

- **Why the Hub?**
- **ArcGIS Hub Overview**
- **Hub Best Practices**
  - Hub Implementation – People, Process and Tech
  - Best Practices:
    - *Leadership & Governance*
    - *Strategy & Workflows*
    - *Technology & Data*
    - *Culture & Training*
    - *Engagement*
- **The Esri Method**



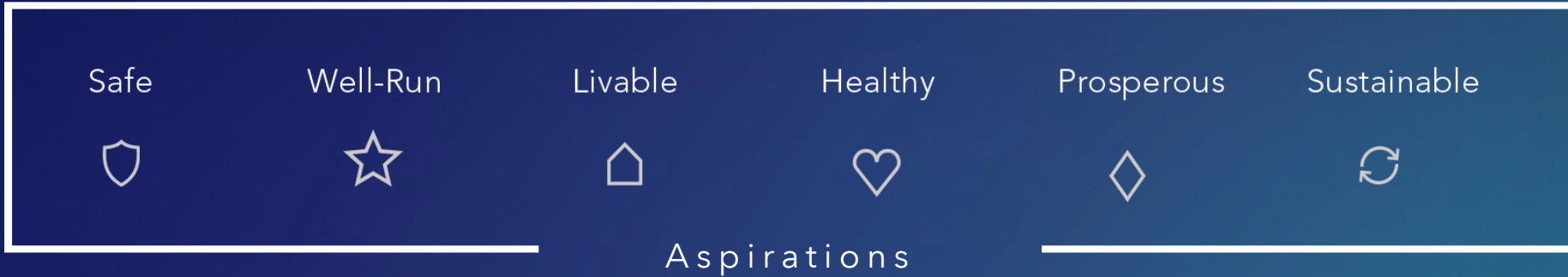
# Esri Best Practices: Implementing ArcGIS Hub

## Why the Hub?





# Governments have Aspirations



# Aspirations are Achieved Using Initiatives





Government

COMMUNITY LEADERS

GOVERNMENT LEADERS

RESIDENTS

NGOs

UNIVERSITIES

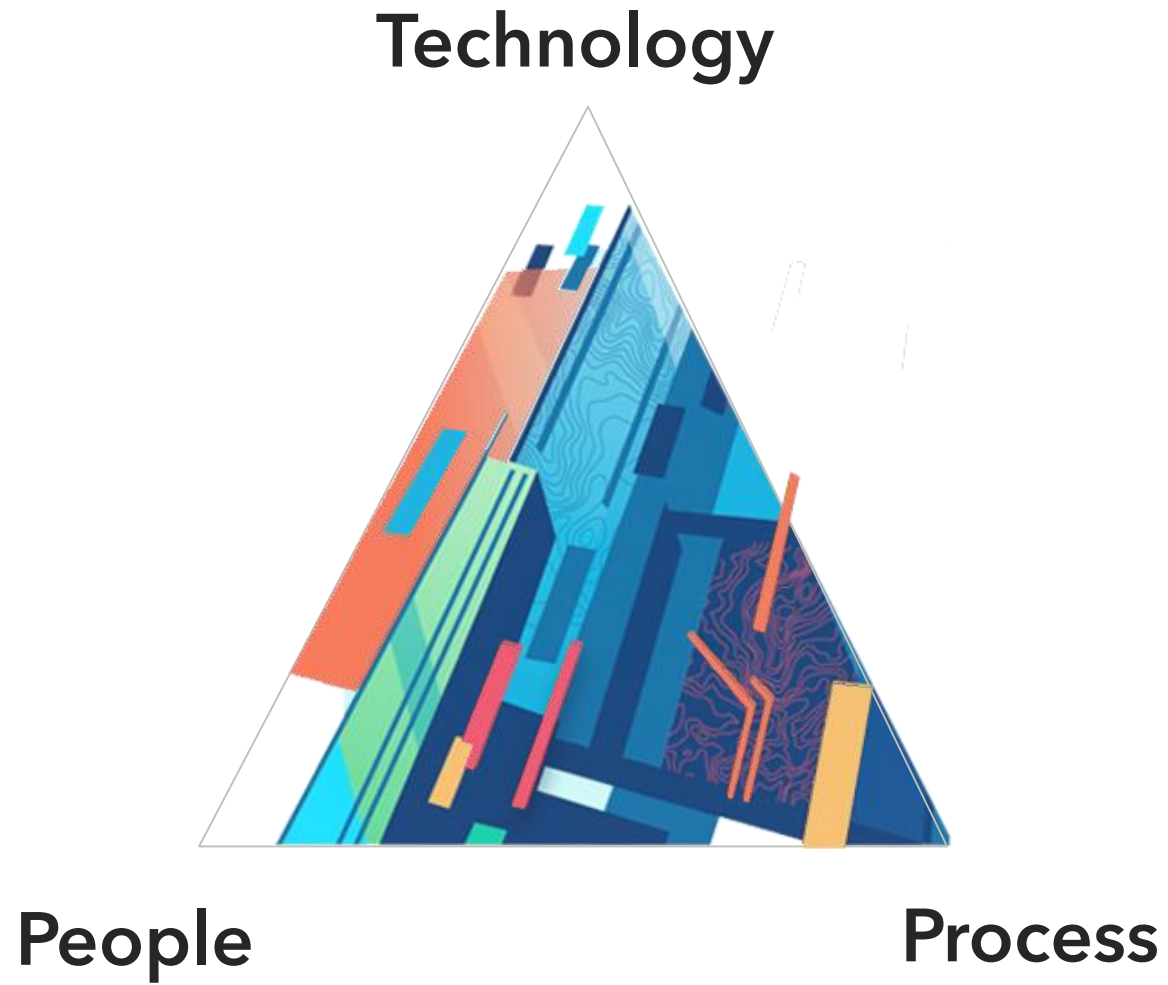
START-UPS

Leverage the  
Broader Community

To achieve those goals, Government needs the Community to...

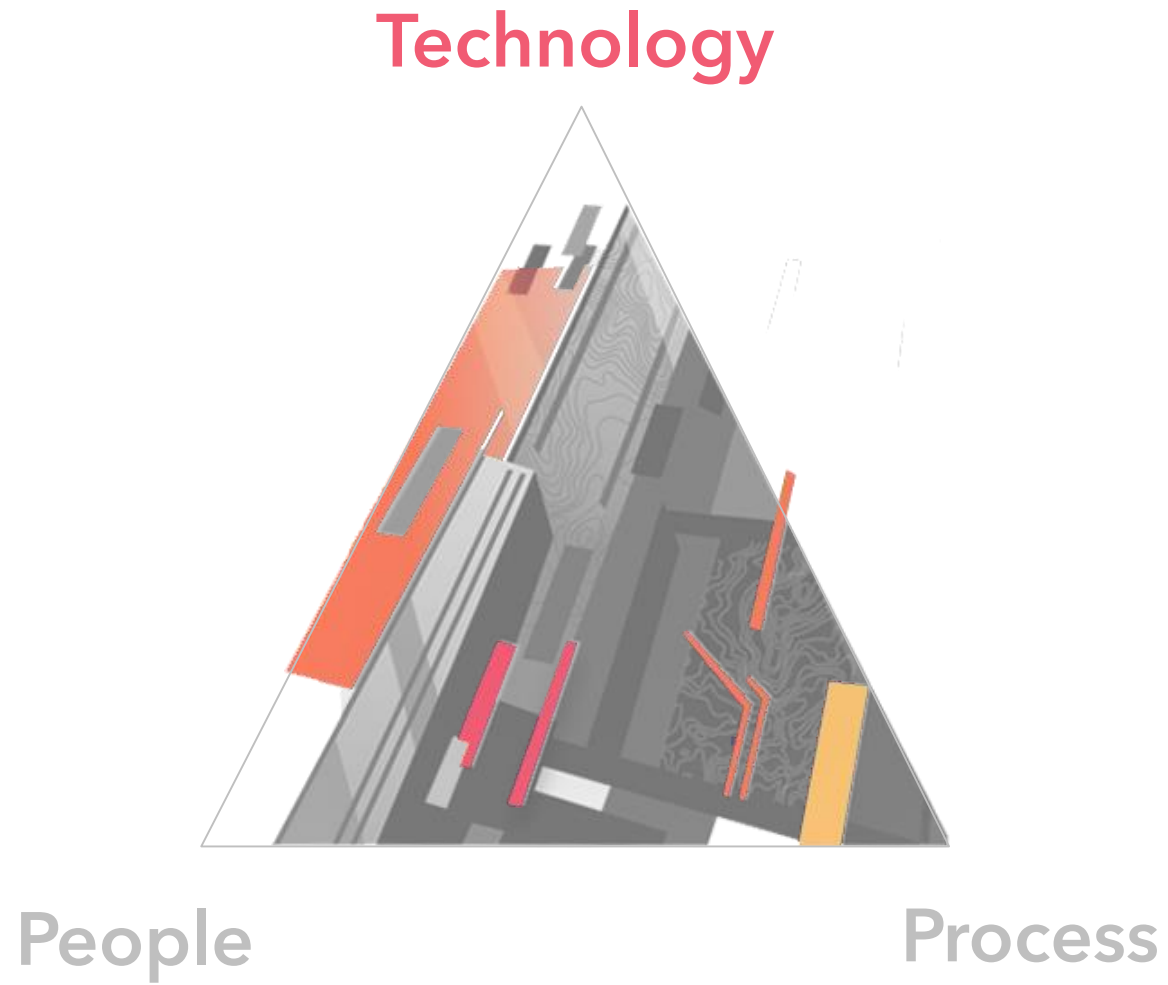


# People, Process, Technology





Esri Best Practices: Implementing ArcGIS Hub  
**People, Process, Technology**



# ArcGIS Hub | Is Transforming Community Engagement and Collaboration

## Organizing and Leveraging Stakeholder Interactions



## Initiatives

Community Portal

Performance Reporting

Urban Planning

Demographic Reporting

Open Data

## Stakeholders

- Government Leaders
- Community Leaders
- Universities
- NGOs
- Citizens

*Enabling Civic Participation*

# ArcGIS Hub | Organizing and Leveraging Community Partners

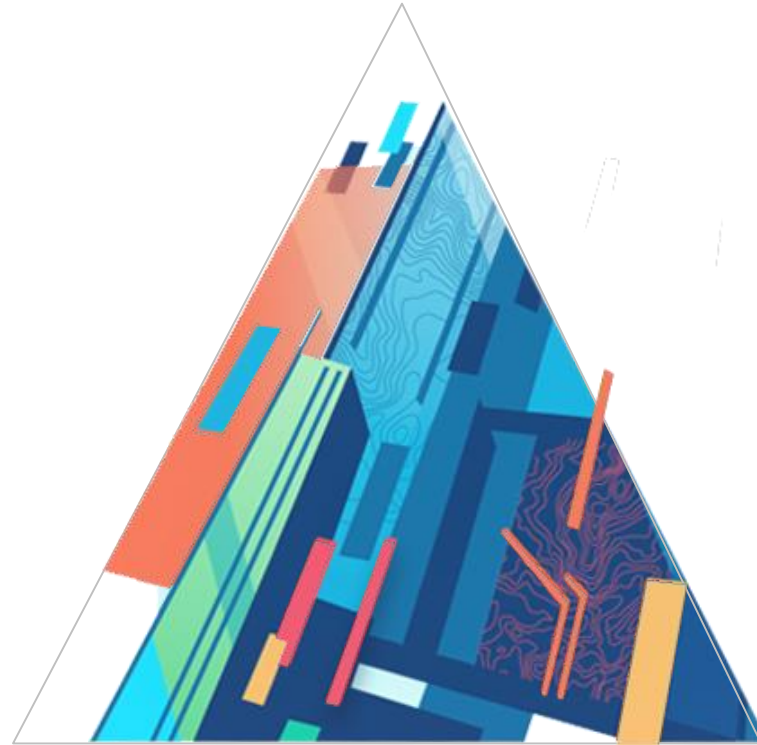


*Partnering builds stronger initiatives*





Technology



People

Process



# Hub Themes

Leadership & Governance	Strategy & Workflows	Technology & Data	Culture & Training	Engagement
Executive Leadership	Strategic Alignment	GIS Infrastructure	Thinking Spatially	Citizen & Press Engagement
Management Team	Location Value Assessment	Data	Culture of Innovation	Tech Sector & Business Community Collaboration
Internal Champions	Initiatives	Initiative Applications	Enterprise Collaboration	NGO Collaboration
GIS Professionals	Performance Tracking	Destination Website	Training and Education	Academia Partnerships



# Leadership & Governance

Leadership & Governance	Strategy & Workflows	Technology & Data	Training & Culture	Engagement
Executive Leadership	Strategic Alignment	GIS Infrastructure	Thinking Spatially	Citizen & Press Engagement
Management Team	Location Value Assessment	Data	Culture of Innovation	Tech Sector & Business Community Collaboration
Internal Champions	Initiatives	Initiative Applications	Enterprise Collaboration	NGO Collaboration
GIS Professionals	Performance Tracking	Destination Website	Training and Education	Academia Partnerships





# Executive Leadership



## Executive sponsorship is key

- Who is your executive sponsor or change agent?
- How knowledgeable is senior management of GIS capabilities? How do you think they see it's current value?
- Who owns and is leading the hub initiative?



## Focus on quick wins

- Elected officials work at a different cadence than city employees
- Focus on quick wins and the top priority initiatives to match that cadence



# The Hub Team



## Map out the Team







# Leadership & Governance

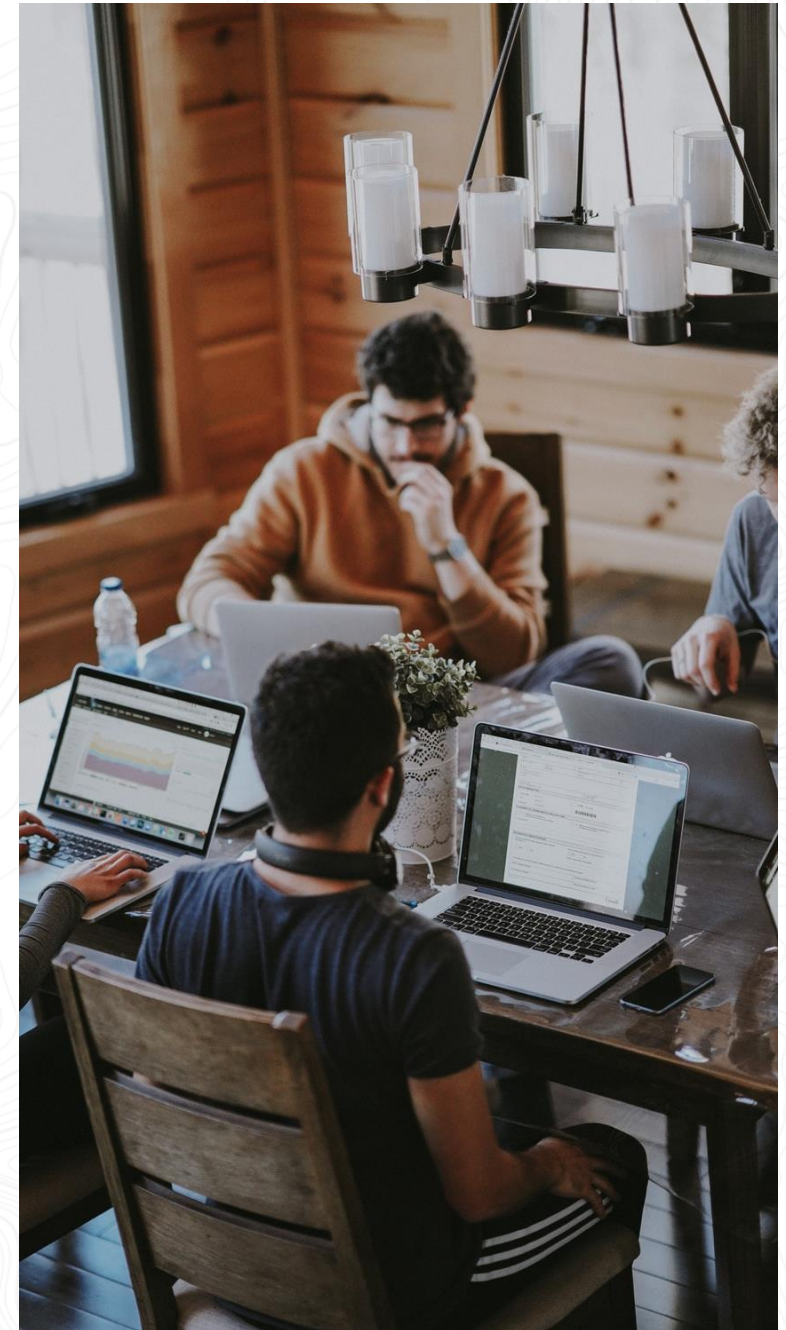
## Internal Champions



### Champion Checklist



- People that are excited about the Hub and can get others excited about it, too
- Passionate about their Initiatives and the organizational direction
- Wants to take action to make change
- Familiar with or willing to learn GIS & data science concepts and technology
- Optimistic, tenacious, has the grit to see it through







## Give GIS Professionals a seat at the planning table

- Get GIS professionals on board with the process and the big picture strategy, not just the infrastructure and project-based mentality
- Make sure GIS professionals have a seat at the table for initiatives and are kept in the loop



## Enable the Organization, don't be a Gatekeeper

- “Not doing everything” mindset should be in place for GIS professionals
- This will be a large effort: it will require educating and new GIS users and enabling current users to do more on their own



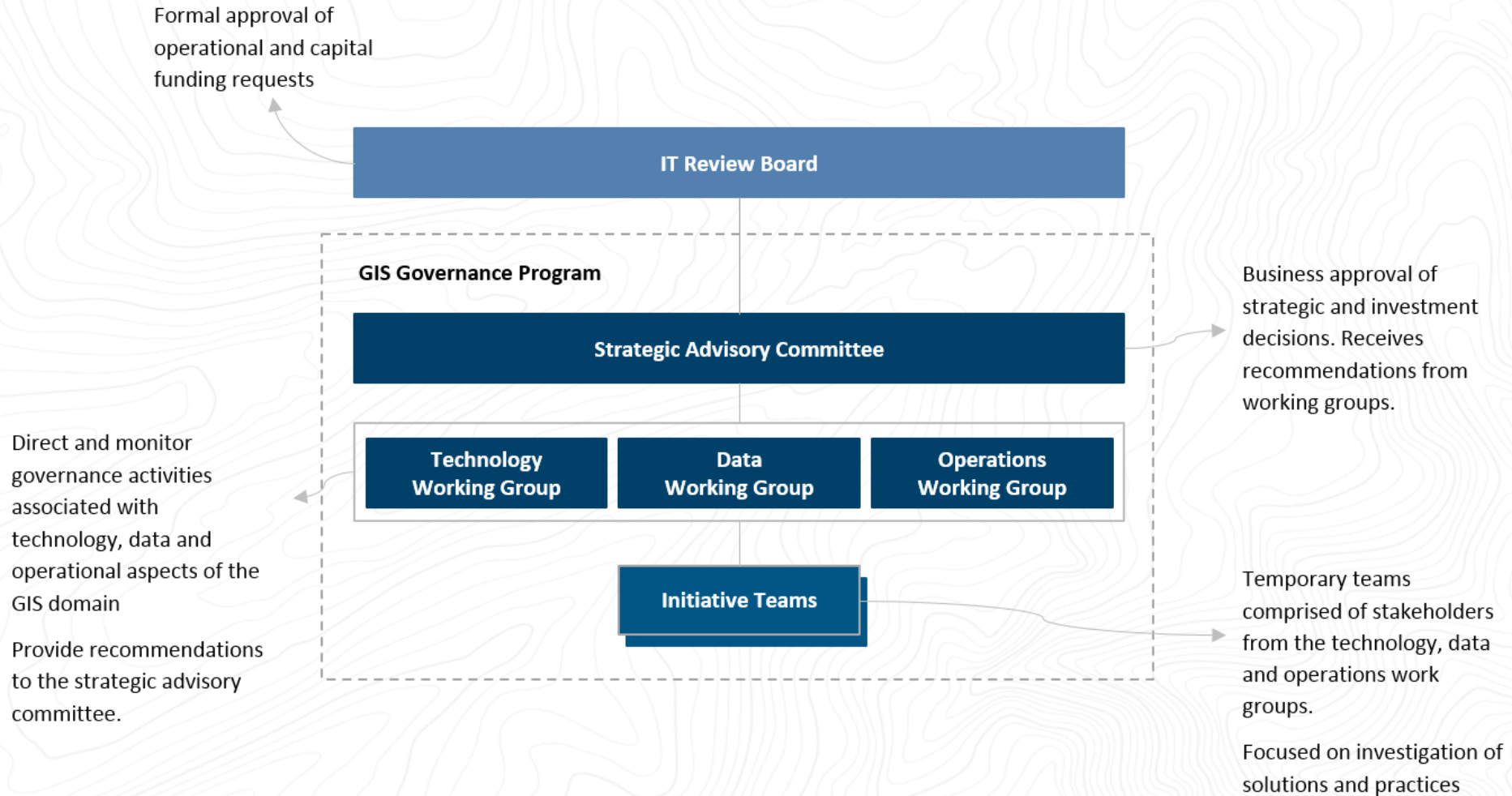
# Leadership & Governance

## GIS Governance

### Upcoming Session:

**Governance for GIS**  
Matt Lewin, Esri Canada

**Thurs, 1:00–2:00 pm**  
SDCC – Ballroom 20 A





Hub Themes

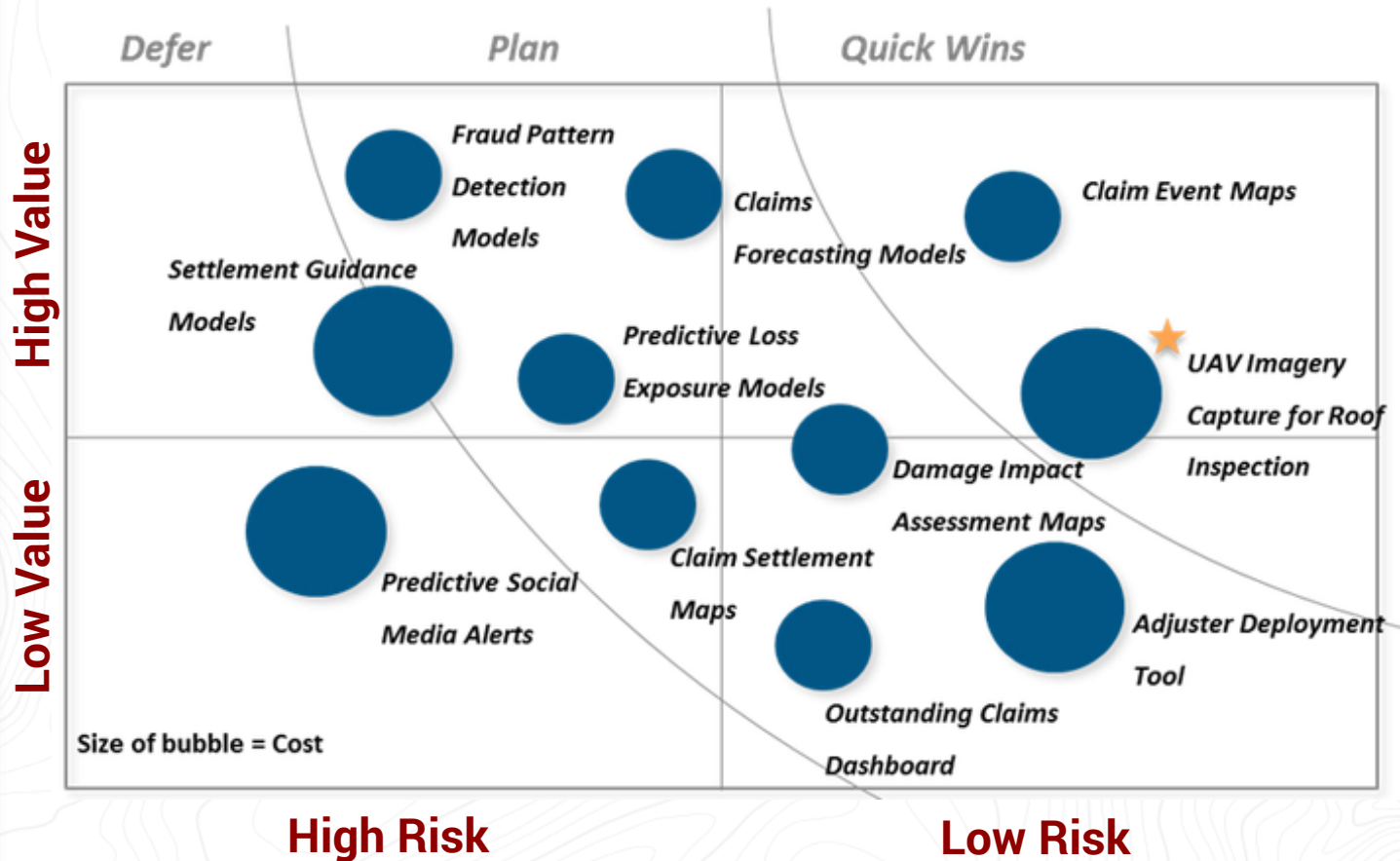
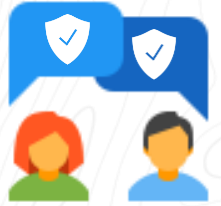
# Strategy & Workflows

Leadership & Governance	<b>Strategy &amp; Workflows</b>	Technology & Data	Culture & Training	Engagement
Executive Leadership	Strategic Alignment	GIS Infrastructure	Thinking Spatially	Citizen & Press Engagement
Management Team	Location Value Assessment	Data	Culture of Innovation	Tech Sector & Business Community Collaboration
Internal Champions	Initiatives	Initiative Applications	Enterprise Collaboration	NGO Collaboration
GIS Professionals	Performance Tracking	Destination Website	Training and Education	Academia Partnerships





# Strategic Alignment



## Top 3 Local Problems 2018 American Mayor's Survey

Among mayors' top responses, by category:

Traffic and parking	41%
Public safety	26%
Jobs and economic growth	25%
Roads	24%
Affordable housing	20%

Bloomberg American Cities Initiative



# Location Value Assessment



## Initiative Characteristics

- Workflows & Procedures
- Value to Organization/Community
- Priority Level
- Target Audience
- Business Areas Involved
- Key Indicators/Metrics
- Information product ideas
- App/Map Needs
- Data Needs & Sources
- Content to Generate



## GIS Patterns of Use





# Initiatives



## Initiative Components

### Team

- Staff
- Community
- NGOs
- Universities

### Engagement

- Events
- Discussions & Comments
- Crowdsourcing
- Surveys

### Content

- Main Site
- Template
- Configurable Apps
- Maps
- Story maps
- Solution apps
- Open Data
- Private Data

### Dashboards



## Initiative Framework

Initiative Qualification & Selection

Initiative Planning

Initiative Creation

Initiative Approval & Launch

Post-Launch Processes





# Initiatives



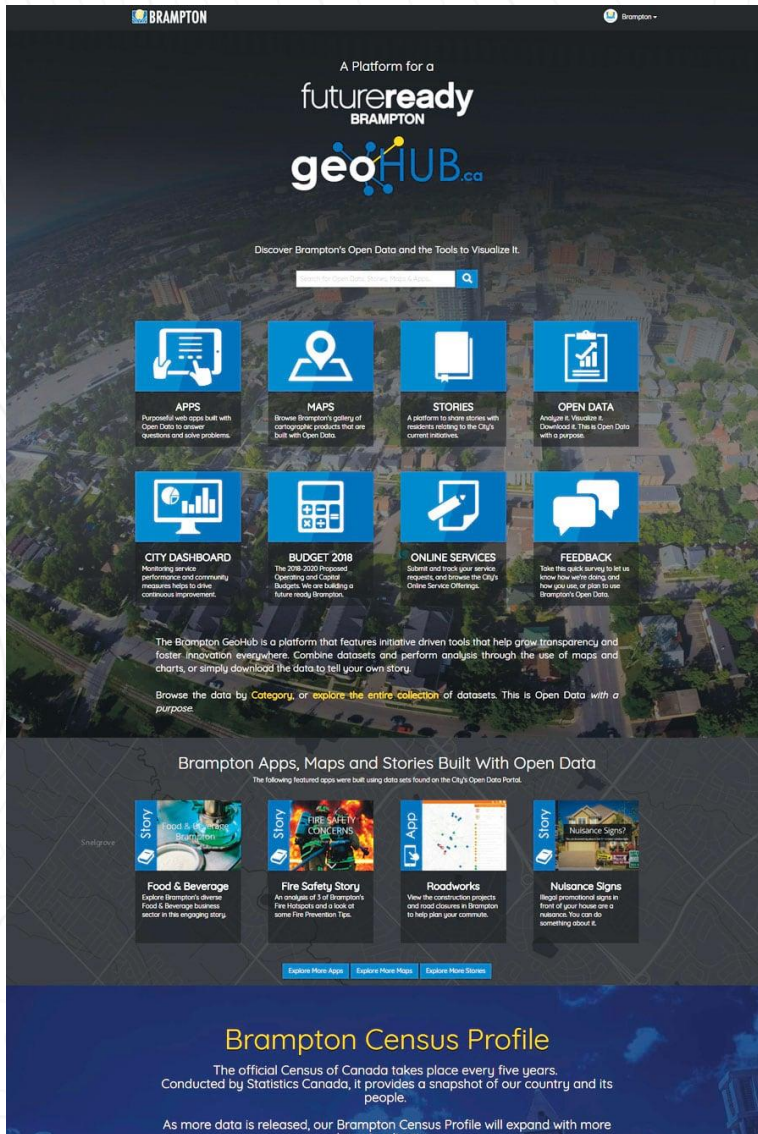
## Initiative Framework

Initiative Qualification & Selection	<ul style="list-style-type: none"><li>• Set Standards on what Initiative ideas need to move forward</li></ul>	<ul style="list-style-type: none"><li>• Add initiatives to a backlog if they aren't selected right now</li></ul>
Initiative Planning	<ul style="list-style-type: none"><li>• Define Initiative Team members</li><li>• Set expectations, communication preferences and meeting cadence</li></ul>	<ul style="list-style-type: none"><li>• Inventory existing material and data</li><li>• Host kick-off meetings</li></ul>
Initiative Creation	<ul style="list-style-type: none"><li>• Content Creation (images, videos, text)</li><li>• Migrate/Add initiative data</li></ul>	<ul style="list-style-type: none"><li>• Create applications</li><li>• Wireframe a Draft Hub initiative page</li></ul>
Initiative Approval & Launch	<ul style="list-style-type: none"><li>• Stakeholder approval milestone</li><li>• Final site/app review and tweaks</li></ul>	<ul style="list-style-type: none"><li>• Launch PR campaign or social media posts</li></ul>
Post-Launch Processes	<ul style="list-style-type: none"><li>• Post-Launch process review: improve this framework for next time!</li></ul>	<ul style="list-style-type: none"><li>• Change management: how will you handle change requests? Large additions?</li></ul>



# Strategy & Workflows

## Performance Tracking



## Metrics for the Initiatives

- What are the goals (metrics) of the initiatives? (e.g. reduce pedestrian deaths by X percent)
- These will show you are working to make progress and have the numbers to back it up

## Metrics for the Hub itself

- Set up early on – even before you implement Hub
- Qualitative and Quantitative Metrics for Hub platform success



Hub Themes

# Technology & Data

Leadership & Governance	Strategy & Workflows	<b>Technology &amp; Data</b>	Culture & Training	Engagement
Executive Leadership	Strategic Alignment	GIS Infrastructure	Thinking Spatially	Citizen & Press Engagement
Management Team	Location Value Assessment	Data	Culture of Innovation	Tech Sector & Business Community Collaboration
Internal Champions	Initiatives	Initiative Applications	Enterprise Collaboration	NGO Collaboration
GIS Professionals	Performance Tracking	Destination Website	Training and Education	Academia Partnerships





# GIS Infrastructure



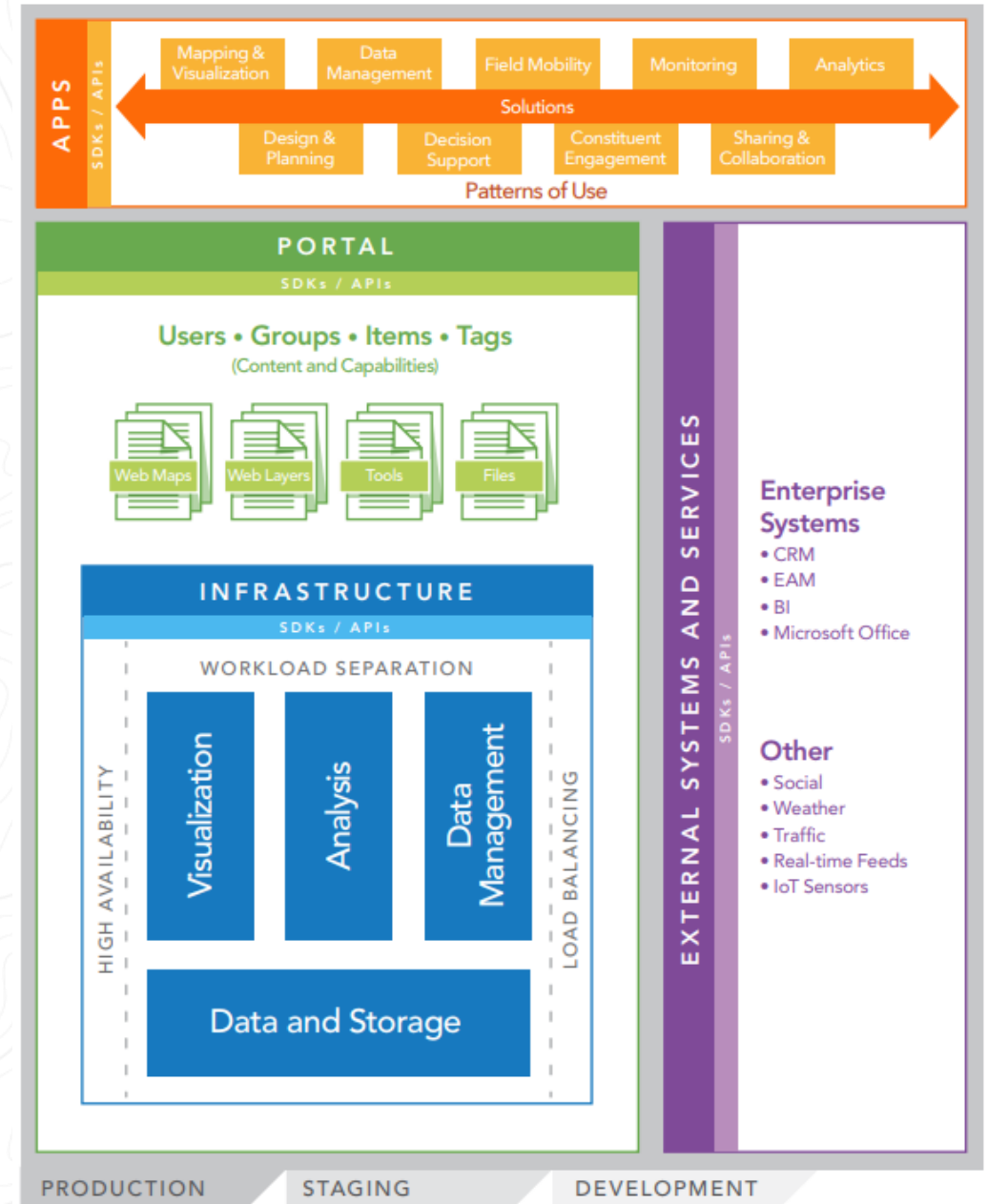
## Understand your current GIS infrastructure

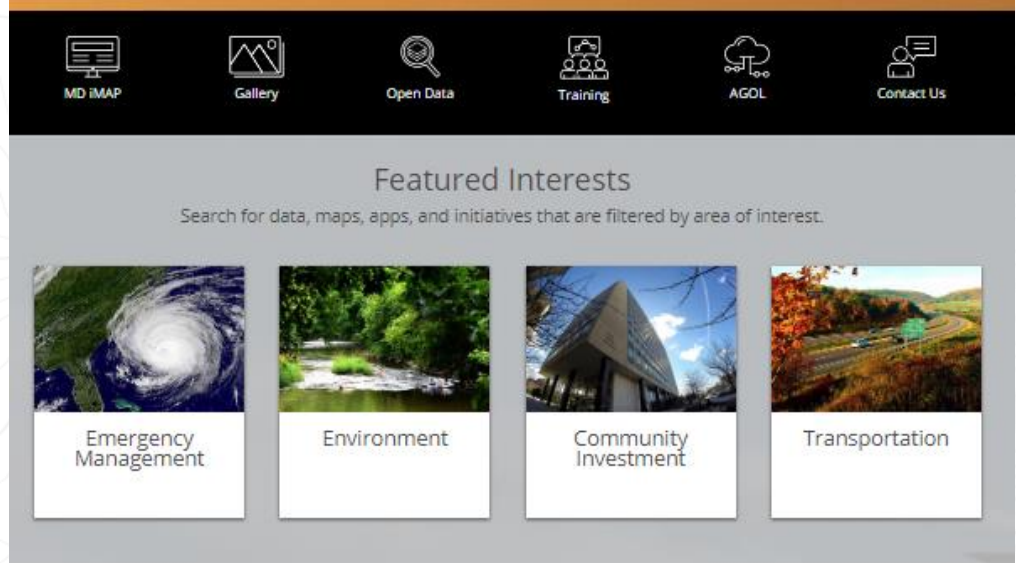
- What other systems are connected? (e.g. a BPs 311 system, CAMA, etc.)



## Modernize and centralize when possible

- Big trend after first round of initiatives – focus on getting more departments on board





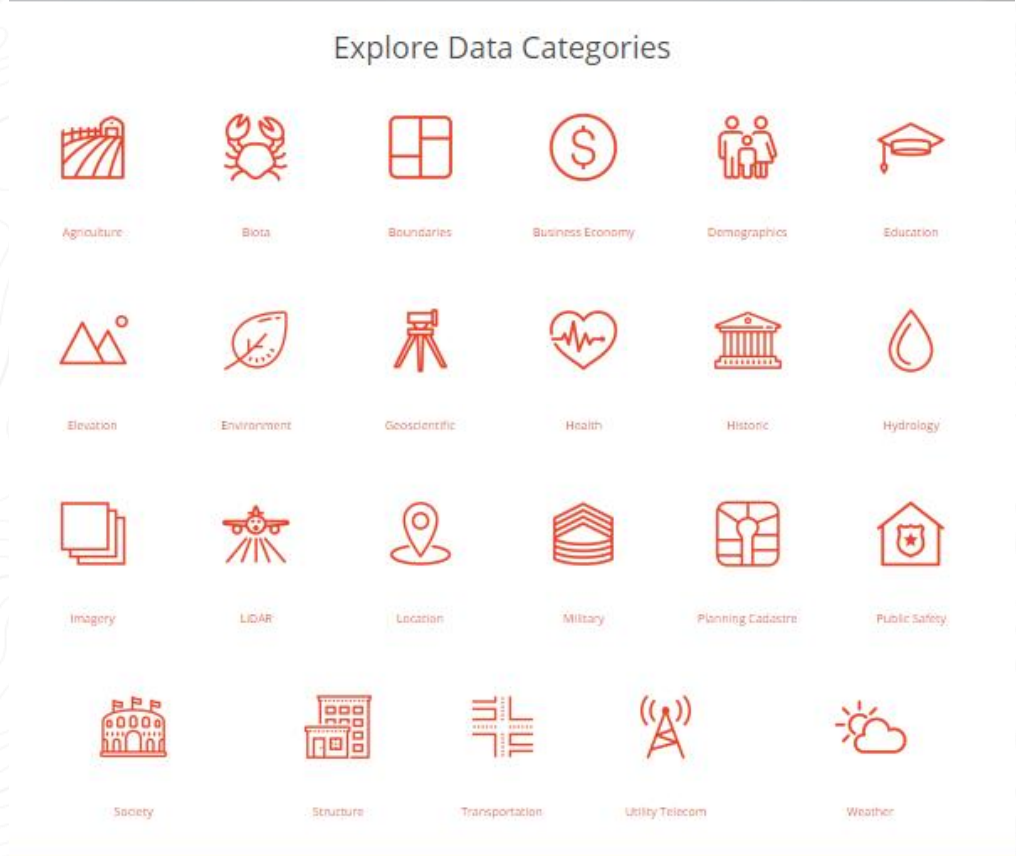
## Inventory and Curate

- Knowing what resources you have available and standardizing the format is a key to successful initiatives



## Location-enable priority systems of record

- Will be valuable resource for working with initiative teams





# Initiative Applications



Loudoun County: Smart Planning Apps  
(Story Maps & WebAppBuilder Apps)

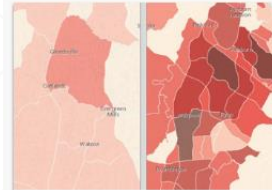


**Modernize and incorporate existing apps into the Hub**



**Stay up to date with Esri's latest applications and solutions**

## Smart Planning Apps



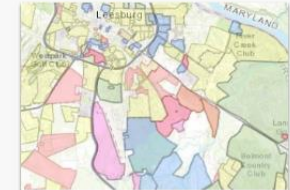
**Demographic Trends**  
Visualize population changes between 2000 and 2015



**Zoning**  
Revised 1993 Zoning Ordinance



**Residential Communities**  
Explore development status, acreage, and more



**Existing and Potential Development**  
EPD Tool

*South Bend, IN  
Vacant Lots Initiative  
(Survey123)*

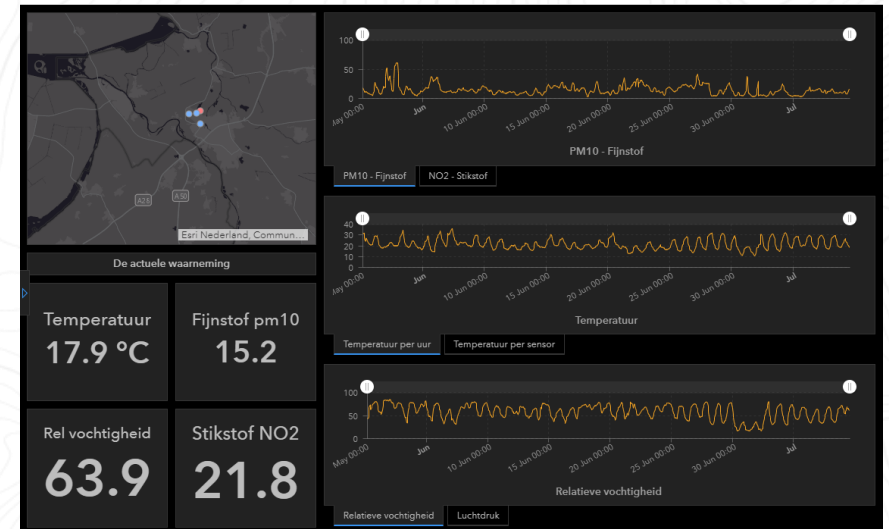
**Update Vacant Lot Data**

Please use this survey to help us keep our vacant lot data current.

**What is the address of the lot in question?**  
If you know the actual street address of the lot, enter it here.

**What is a nearby street address?**  
If you don't know the street address of the lot, enter an address near it.

**Where is the lot? \***  
Please indicate the lot in question with the map marker



*City of Zwolle SensHagen – Crowdsource Air Quality & Climate Data (Operations Dashboard)*





# Destination Website



## Streamline Design Process

- Identify existing style & branding elements
- Connect with organization's branding/design experts and keep them in the loop
- Have standard site frameworks & materials for easier planning with initiative teams



## Monitor and Expand after Release

- Make sure people are accountable for updates of sections that need to stay up-to-date (events, news)
- Configure web analytics to monitor user interaction and behavior on the Hub pages

Banner  
Mission

Apps  
Analysis

Performance

Related Initiatives  
Subpages

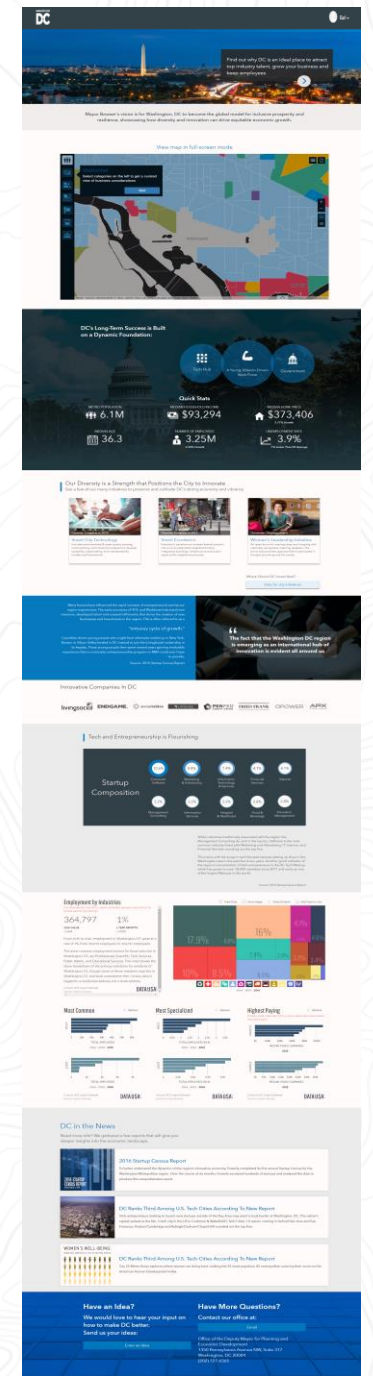
Success Stories

Maps & Data  
Infographics

Surveys

Ways to Engage

Participating Agencies



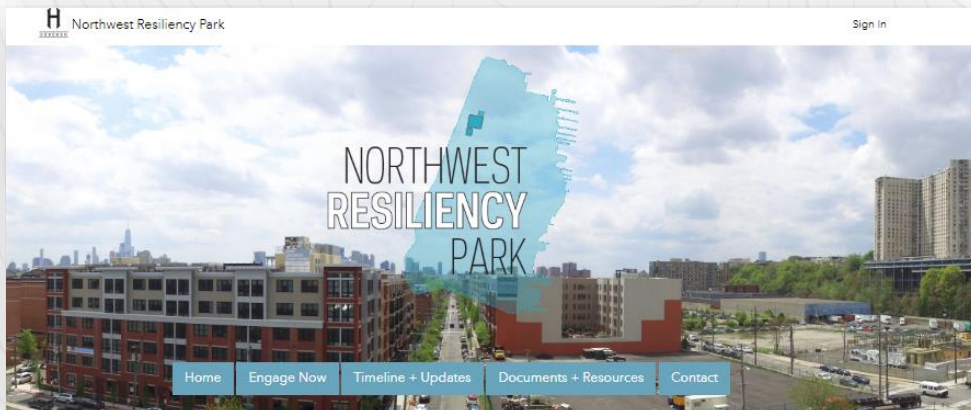




# Technology & Data Destination Website

Brampton, Canada  
geoHUB

## Northwest Resiliency Park Initiative Hoboken, NJ



### Common Ground for People and Water

Hoboken's largest park will provide recreation and public space for our community. It will also be a fundamental part of Hoboken's resiliency strategy by integrating green infrastructure and innovative stormwater management measures to mitigate flooding from rainfall events. The park will foster a healthier environment for all to enjoy.

### Concept Design Community Meeting #2

Thank you to the members of the community who came out to the meeting last Wednesday, July 27th and provided input!

The City of Hoboken and the design team presented further development of the the Northwest Resiliency Park concept design, while collecting feedback on certain design features such as the terrace, pavilion, play areas, athletic field, lighting, and materials. Check back here soon for presentation materials from the meeting.

The project will now move into the preliminary design phase to further develop the park design prior to permitting.



### Hoboken's Next Resiliency Park

In 2016, the City of Hoboken acquired 6 acres in Northwest Hoboken



### Brampton Apps, Maps and Stories Built With Open Data

The following featured apps were built using data sets found on the City's Open Data Portal.



[Explore More Apps](#) [Explore More Maps](#) [Explore More Stories](#)

### Brampton Census Profile

The official Census of Canada takes place every five years. Conducted by Statistics Canada, it provides a snapshot of our country and its people.



Hub Themes

# Culture & Training

Leadership & Governance	Strategy & Workflows	Technology & Data	<b>Culture &amp; Training</b>	Engagement
Executive Leadership	Strategic Alignment	GIS Infrastructure	Thinking Spatially	Citizen & Press Engagement
Management Team	Location Value Assessment	Data	Culture of Innovation	Tech Sector & Business Community Collaboration
Internal Champions	Initiatives	Initiative Applications	Enterprise Collaboration	NGO Collaboration
GIS Professionals	Performance Tracking	Destination Website	Training and Education	Academia Partnerships





# Thinking Spatially



## Introduce GIS and Spatial Thinking to a Wider Audience

- Videos, short workshops, or teaching about how GIS is more impactful than just another program like Word or Excel
- Lunch-and-learn activities can provide great forums for collaboration and sharing knowledge for GIS User groups
- Executive Workshops can communicate the benefits of GIS and help leaders understand the value it brings to the organization



1. Ask and Explore



2. Model & Compute



3. Examine & Interpret

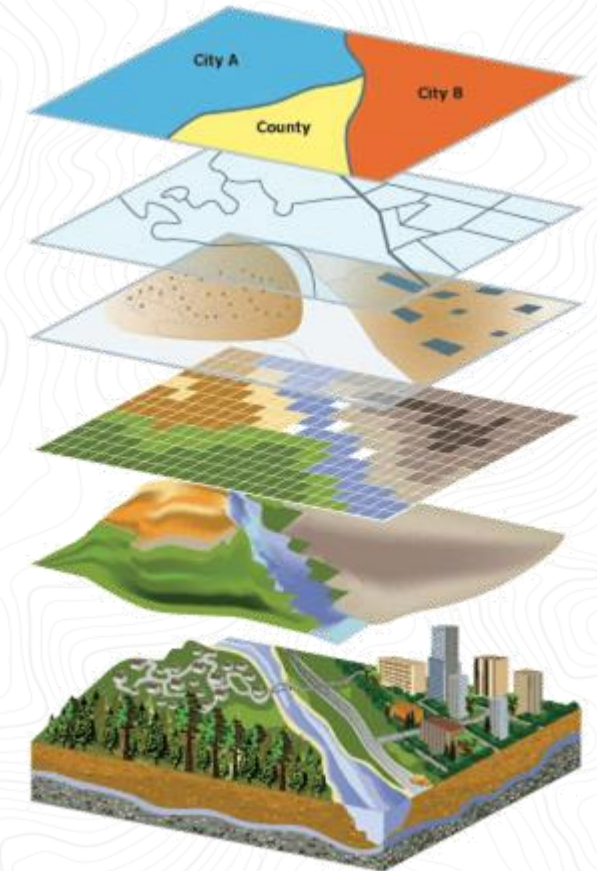


4. Make Decisions



5. Share Results

## Spatial Problem Solving Framework





## 8 Elements of Innovation Management Systems

*Andrew Corbett*

1. Leadership and organizational culture willing to commit & take risks
2. System-wide resources
3. Governance Process
4. Clearly articulated mandate and scope
5. Inclusive & collaborative organization structure
6. Set processes and tools
7. Metrics and rewards
8. Skills and Talent



Culture & Training

# Enterprise Collaboration



**Connect with all relevant parties and departments for your initiative**

**Start with the most enthusiastic and supportive departments – the collaboration will spread from there**







# Training & Education



Leverage a blend of self-paced & Instructor-led training options

Make sure to meet the short term training needs as well as accomplishing the long-term vision.

- Create short term training plans that support initial operating capabilities
- build out the long term Workforce Development Plan to meet the broader organizational goals

## Adoption Process

Awareness

Use

Advocacy

## Training Plan Process

Alignment

Analysis

Action



Hub Themes

# Engagement

Leadership & Governance	Strategy & Workflows	Technology & Data	Training & Culture	<b>Engagement</b>
Executive Leadership	Strategic Alignment	GIS Infrastructure	Thinking Spatially	Community & Press Engagement
Management Team	Location Value Assessment	Data	Culture of Innovation	Tech Sector & Business Community Collaboration
Internal Champions	Initiatives	Initiative Applications	Enterprise Collaboration	NGO Collaboration
GIS Professionals	Performance Tracking	Destination Website	Training and Education	Academia Partnerships



Engagement

# Community and Press Engagement



## Utilize community members as volunteers

- Find places that citizens can help round out the data you need for initiatives
- Look at the community as a new department – aim to break down its silos
- Consider the roles that community members and groups can play in initiatives – are there any efforts you can team up on?



## Integrate Hub into existing engagement patterns & digital strategy

- Understand which apps citizens are using to better integrate into those apps into the hub system and push data to them
- Know how to target your audience – where are they discussing local issues now? Where does the most misinformation occur?



## Work with local press to understand the Hub system & city data

- Promote hub with media, work with journalists and investigative reporters to learn and use data and hub system
- Have a way to counter/defend against negative feedback, communicate value instead of defending cost





Engagement

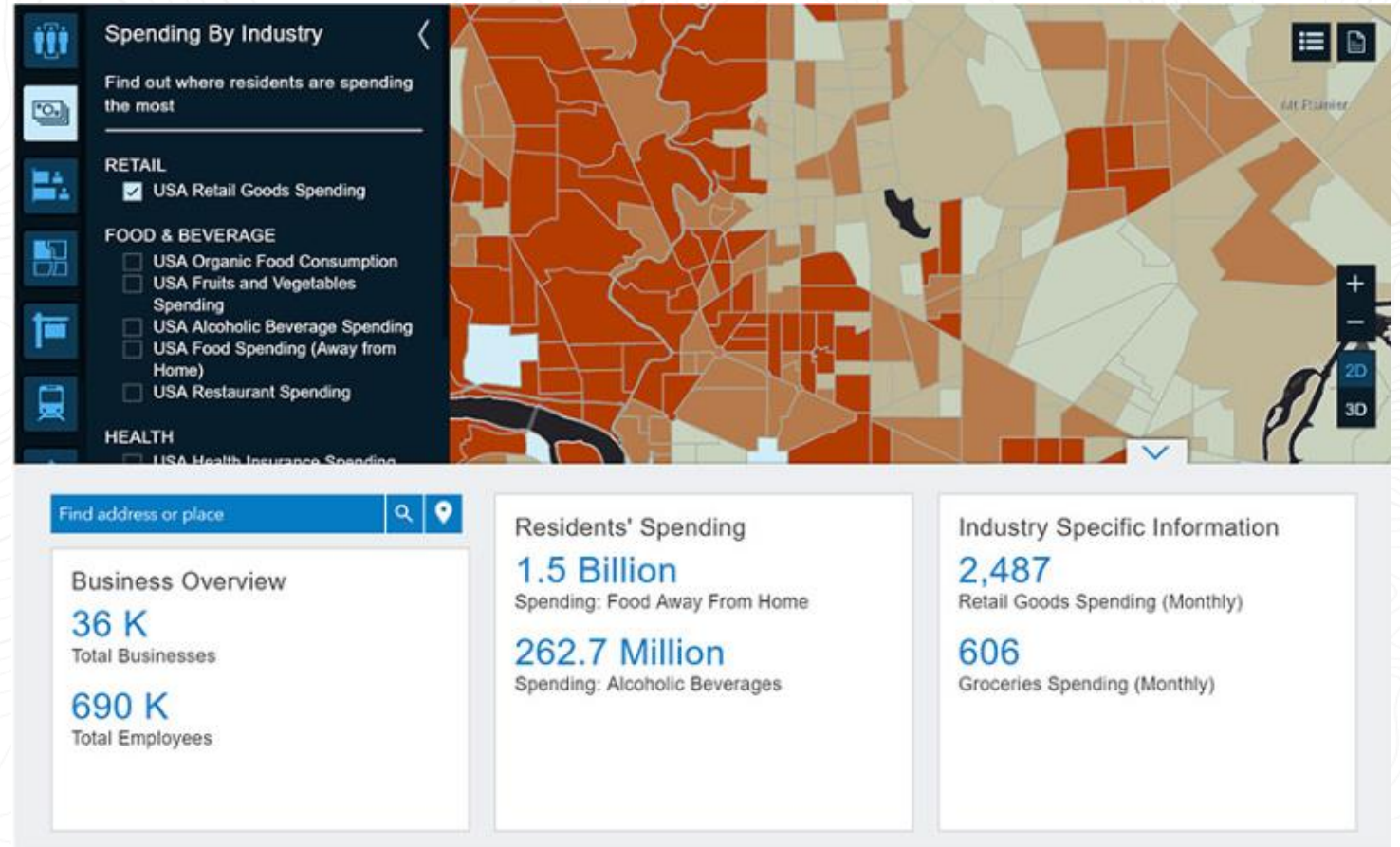
# Business and Tech Community



Connect with the local tech/start-up community



Promote economic development data & initiatives with local businesses





Engagement

## NGO & Non-Profit Collaboration



### Empower Existing & Foster New Non-Profit Partners

- Conduct awareness seminars with NGOs on available open authoritative data and tools.
- Embed technology enablement sessions with useful application training into existing collaborative programs across Govt. and NGOs.
- Author and share easy to use application templates to allow more NGOs to utilize GIS







Engagement

## Academic Partnerships



### Partner with the local Academic Community

- Link initiatives to real problems that students can help solve: get initiatives on the syllabus
- Coordinate with university groups for days of service to work on initiative activities that may require a larger labor force
- Look for opportunities for city leaders to mentor future leaders





# Qualifying Hub Opportunities

## Hub Blueprint Scorecard

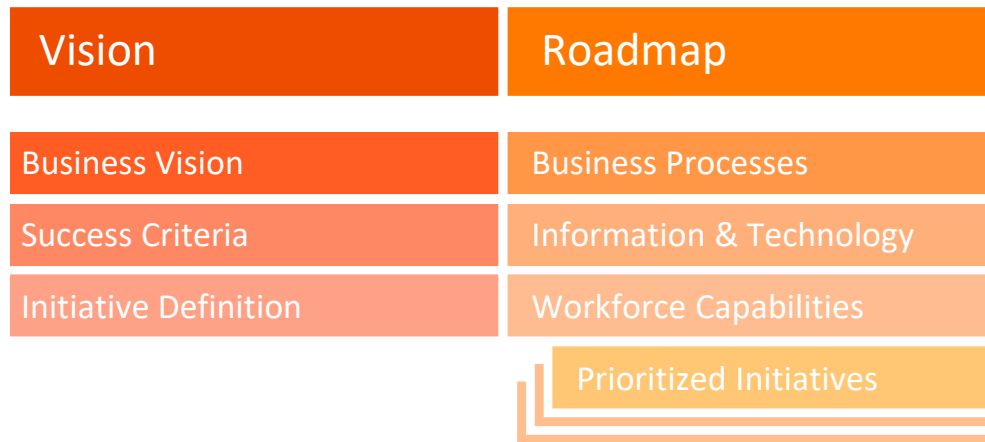
[BACK TO QUALIFYING HUBS](#)

Leadership & Governance		Strategy & Workflows		Technology & Data		Training & Culture		Engagement	
Executive Leadership		Strategic Alignment		GIS Infrastructure		Thinking Spatially		Citizen & Press Engagement	
Management Team		Location Value Assessment		Data		Culture of Innovation		Tech Sector & Business Community Collaboration	
Internal Champions		Initiatives		Initiative Applications		Enterprise Collaboration		NGO Collaboration	
GIS Professionals		Performance Tracking		Destination Website		Training and Education		Academia Partnerships	
Total		Total		Total		Total		Total	
								Overall Score	

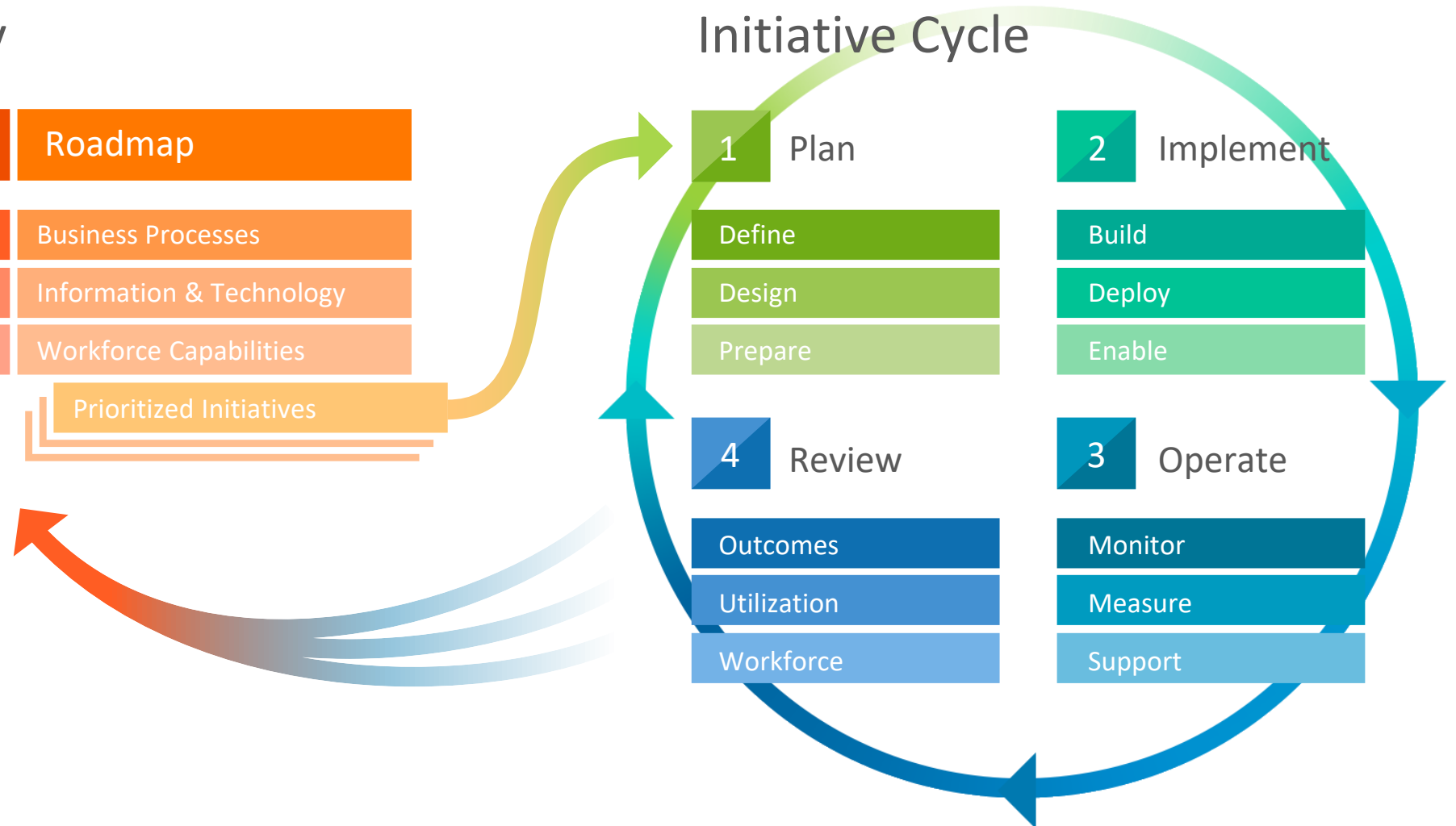
# The Esri Method

Maximize Business Impact with GIS

## Location Strategy



## Initiative Cycle



Esri User Conference 2018

## **Best Practices: Implementing ArcGIS Hub**

# **Q&A Section**





# Esri User Conference 2018

## ArcGIS Hub Schedule

### Upcoming Hub Technical Workshop:

**ArcGIS Hub: Getting Started with Open Data**

SDCC –Ballroom 31 A

**Thursday, July 12**

**1:00–2:00pm**

### ArcGIS Hub/Open Data Expo Area

Wednesday, July 11 9:00 AM–6:00 PM

Thursday, July 12 9:00 AM–1:30 PM

*Ground Level Exhibit Hall B, SDCC*

Visit the ArcGIS Hub/Open Data area to learn how to use a “hub” approach to take your open data further by connecting it directly to community priorities. See how to setup hub websites, initiatives, apps, and events and meet with our team to get your questions answered, and find out how to start building more informed, connected, and engaged communities today.



esri

THE  
SCIENCE  
OF  
WHERE