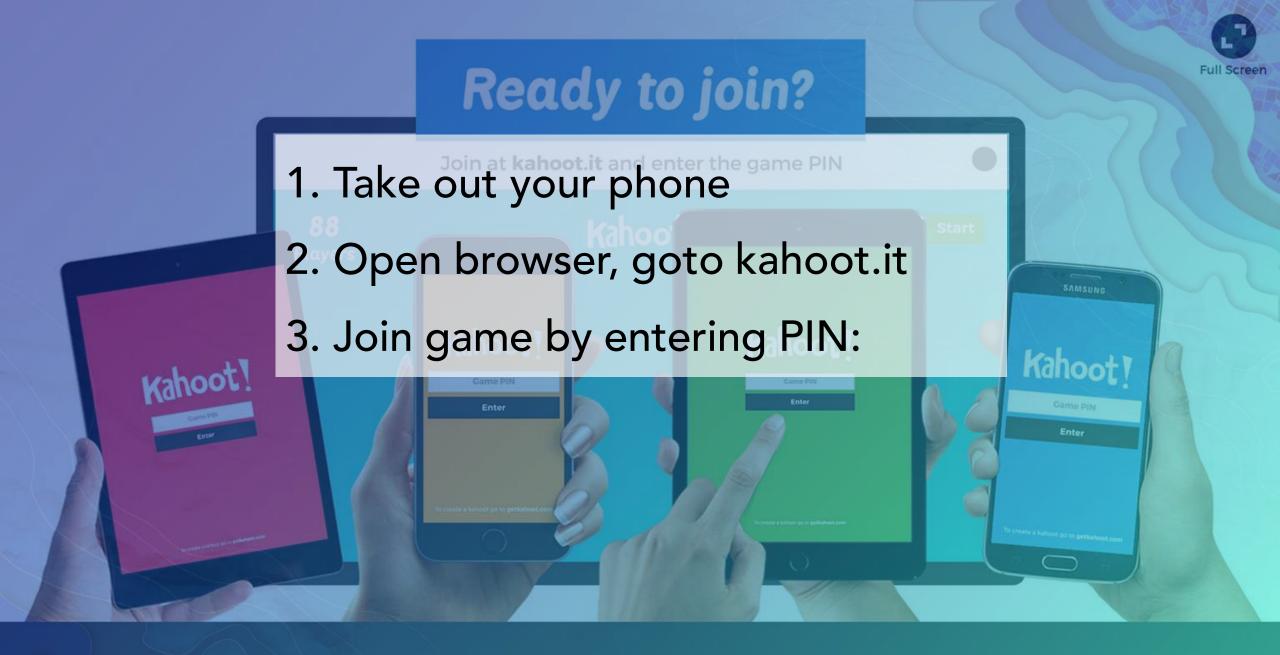


Demystifying Web GIS

and how best to apply it within your organisation

Richard Kaufholz | Solution Architect



Get your phone, tablet or laptop out now!



gis ['gee-eye-es'] the technology pattern that enables users to perform management and analysis of geographic information



gis ['gee-eye-es'] the technology pattern that enables users to perform management and analysis of geographic information

web•gis ['web gee-eye-es'] the technology pattern that enables non-technical users to perform management and analysis of geographic information across a network

scalable can support n-number of users across the web

functional supports large array of capabilities:- discover, use, make and share

mobile-ready can be accessed from any device, anywhere at any time

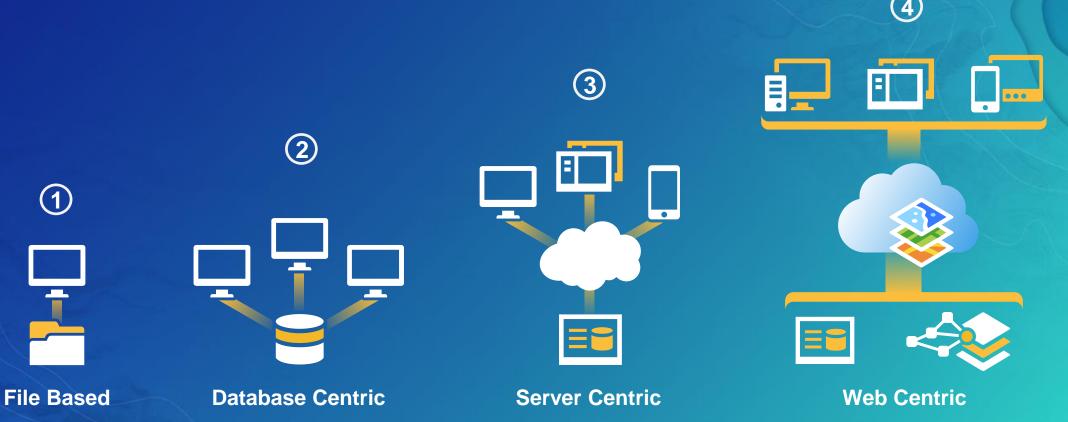
secure protects information from malicious or unintentional harm

interoperable supports consumption in and by other web-enabled and geographical systems

configurable supports re-use through customisation to meet specific needs

Evolution of GIS

From powerful beginnings to the integrated future...

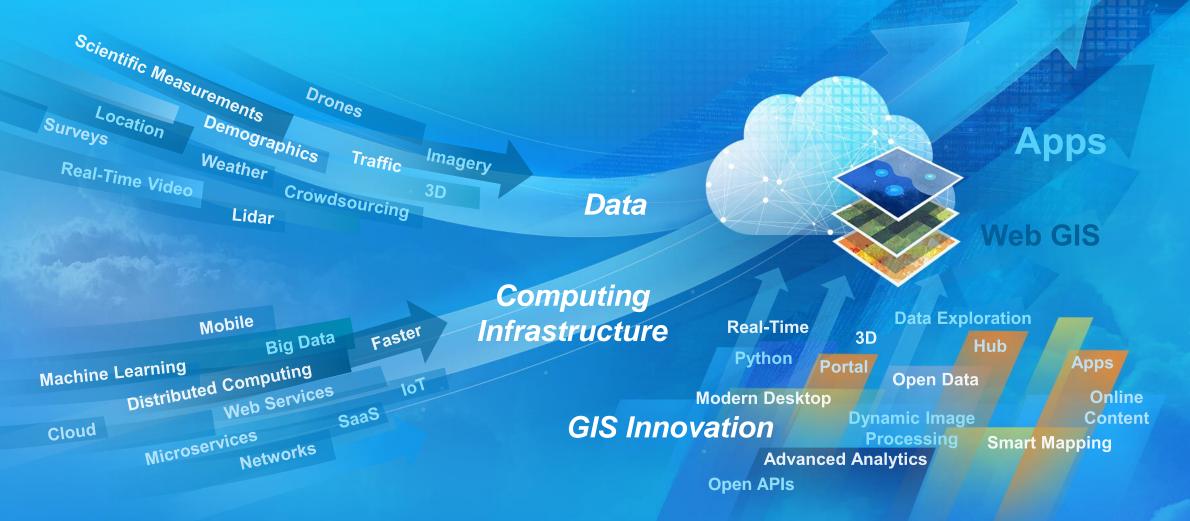


Evolution of GIS

From powerful beginnings to the integrated future...



It wasn't broke, why are we fixing it? Web



It wasn't broke, why are we fixing it?

enables it ► Internet

demands it **Consumerisation**

supports it > Service-oriented architectures

delivers it Mobility

hosts it > Cloud

scales it ► Big data

Business patterns of GIS

Understanding how business and GIS fit together



Traditional GIS: Technology Patterns

Technology used for each pattern



ArcCatalog

ArcMap

ArcScene



ArcGIS Mobile ArcPad





ArcReader Explorer Shapefiles PDF



Layouts Screenshots Paper Maps

Web GIS: Technology Patterns

What comparable technology do we use for Web GIS





Portal / ArcGIS Online

Map Viewer

Scene Viewer

- + ArcGIS Pro
- + GeoAnalytics
- + Insights for ArcGIS



Collector

Survey123

Workforce

Navigator

+ AppStudio



Templates

Web AppBuilder

Solutions

- + Github
- + API/SDKs



ArcGIS Maps for..

Web Services

Web GIS

Understanding how it fits together



Web GIS

Even this is evolving...



Portal as the gateway to Web GIS But its not just a webpage, it's a geo-information model

Geoinformation model

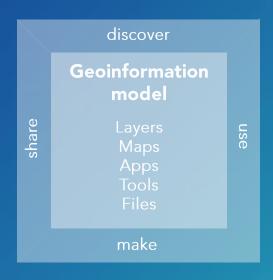
Layers

Maps

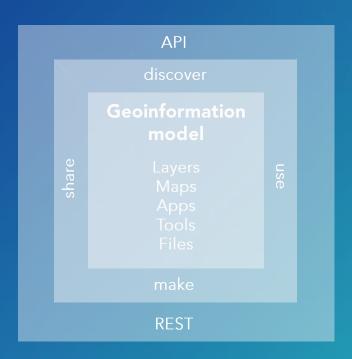
Apps

Files

Portal as the gateway to Web GIS But its not just a webpage, it's a geo-information model

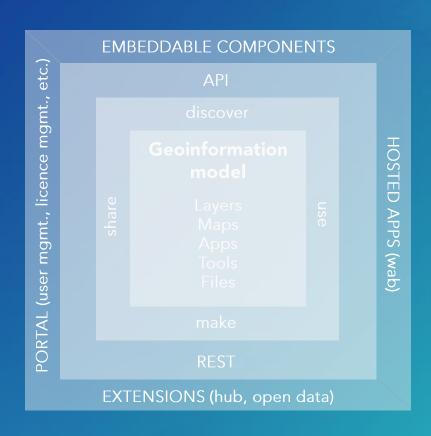


Portal as the gateway to Web GIS But its not just a webpage, it's a geo-information model



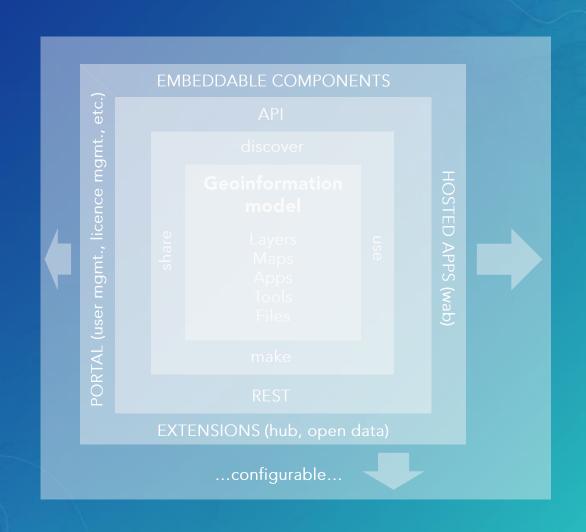
Portal as the gateway to Web GIS

But its not just a webpage, it's a geo-information model

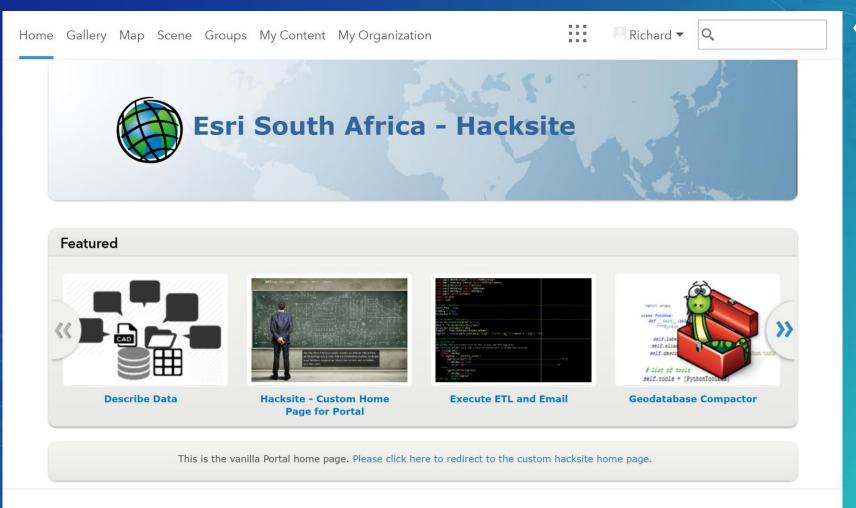


Portal as the gateway to Web GIS

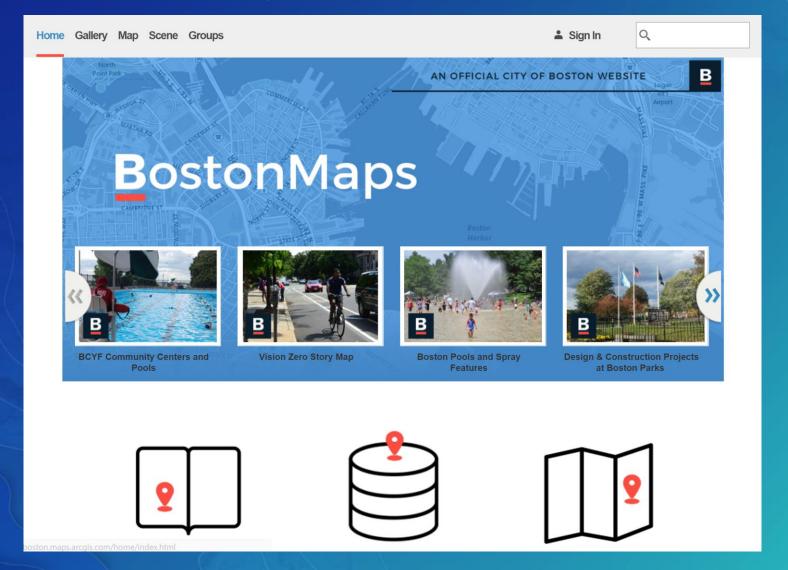
But its not just a webpage, it's a geo-information model



Can we make it look the way we want?

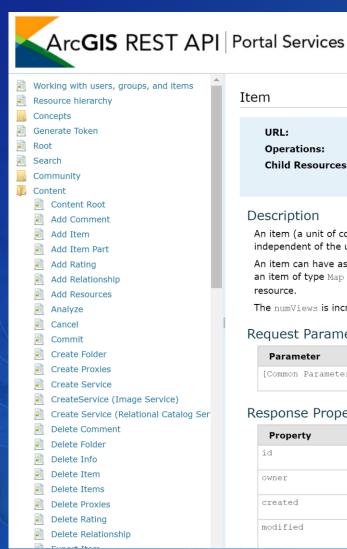


Out of the box



- Out of the box
- Configured design

Can we make it look the way we want?



Item

URL: http:// <content-url>/items/<itemId> Add Comment, Add Rating, Delete Rating, Share Item, Unshare Item Operations: **Child Resources:** Item Comments, Item Rating, Related Items, Groups, Item Data, Package Info File, Item Info File

Description

An item (a unit of content) in the portal. Each item has a unique identifier and a well known URL that is independent of the user owning the item.

An item can have associated binary or textual data that's available via the item data resource. For example, an item of type Map Package returns the actual bits corresponding to the map package via the item data resource.

The numViews is incremented when an item is opened.

Request Parameters

Parameter	Details
[Common Parameters]	For a complete listing, see Common parameters.

Response Properties

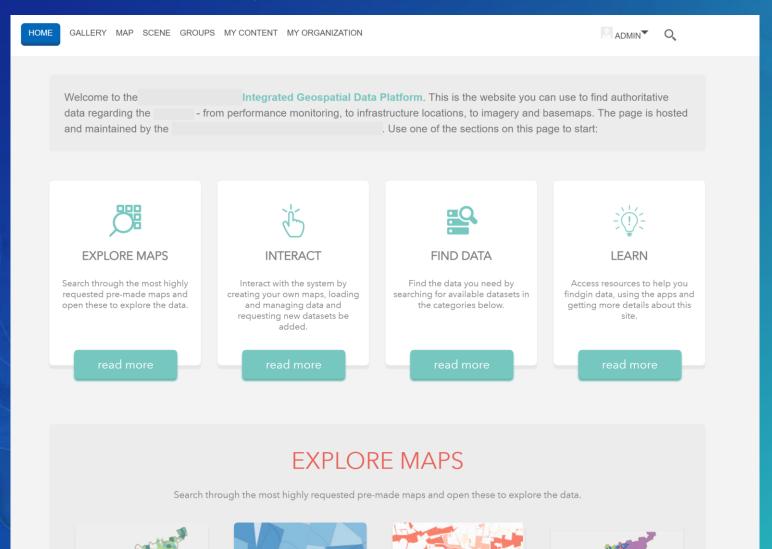
Property	Details
id	The unique ID for this item.
owner	The username of the user who owns this item.
created	The date the item was created. Shown in UNIX time in milliseconds.
modified	The date the item was last modified. Shown in UNIX time in

- Out of the box
- Configured design
- **REST API**

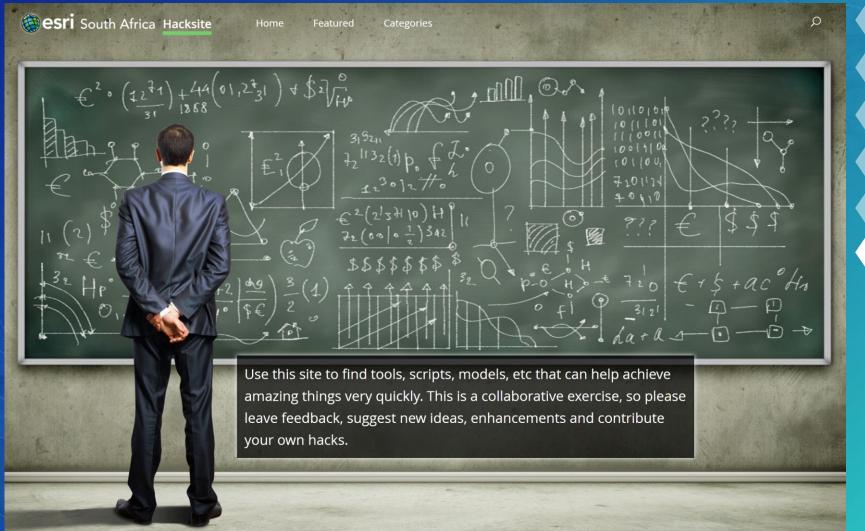
Search



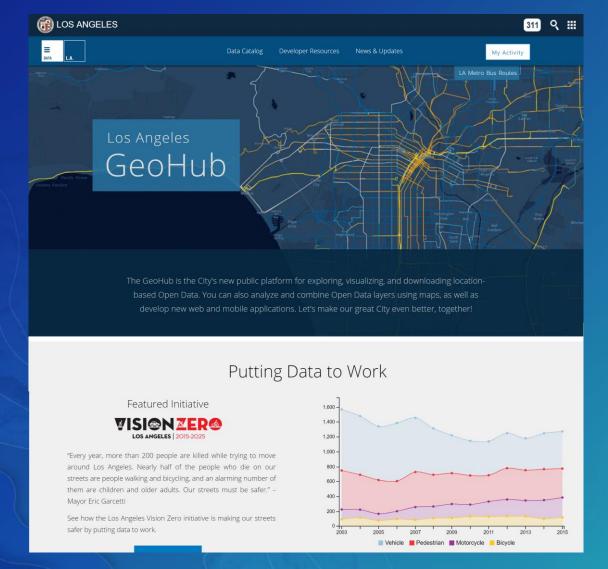
- Out of the box
- Configured design
- REST API
- Embedded in site/blog



- Out of the box
- Configured design
- REST API
- Embedded in site/blog
- Custom configuration



- Out of the box
- Configured design
- REST API
- Embedded in site/blog
- Custom configuration
- Custom website (API)



- Out of the box
- Configured design
- REST API
- Embedded in site/blog
- Custom configuration
- Custom website (API)
- ArcGIS Hub

What is the role of the WAB

How can we easily deploy GIS capabilities our existing and NEW users

Code & Customise

Extensible Apps

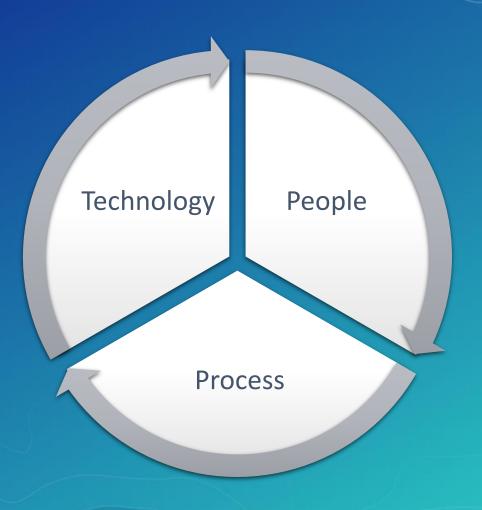
App Builders

Configurable Apps

Out-of-the-box apps



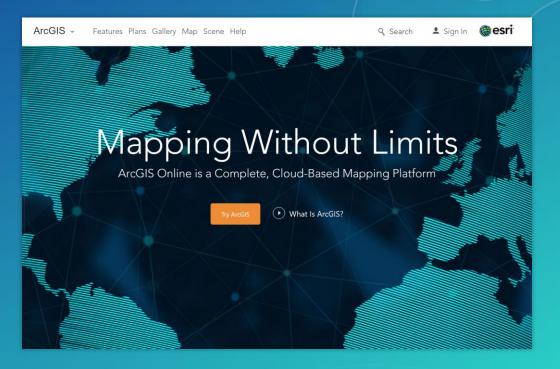
ten steps to success



Step 1: Start Now

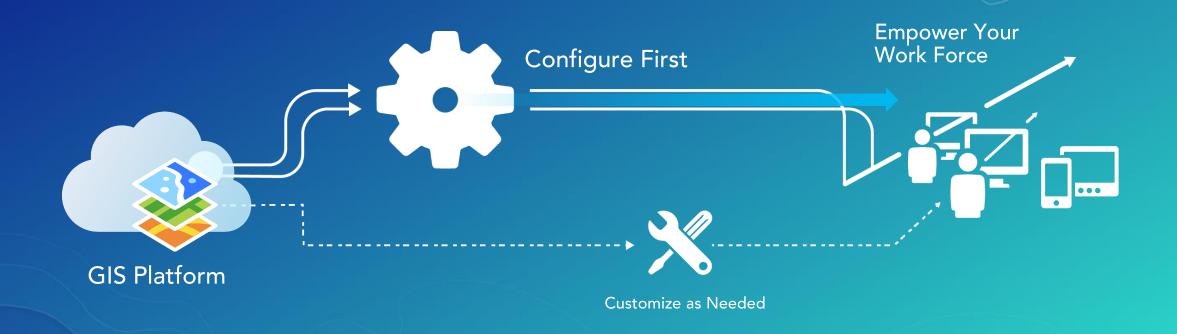
Don't wait for upgrades – get going now and use the new tools





Step 2: Build fast!

Look at the continuum – leverage COTS and the app builders



Step 3: Derive insight

Embrace the science of where to derive new meaning to your data and business







measuring SIZE, SHAPE, AND DISTRIBUTION



detecting & quantifying



determining

HOW PLACES

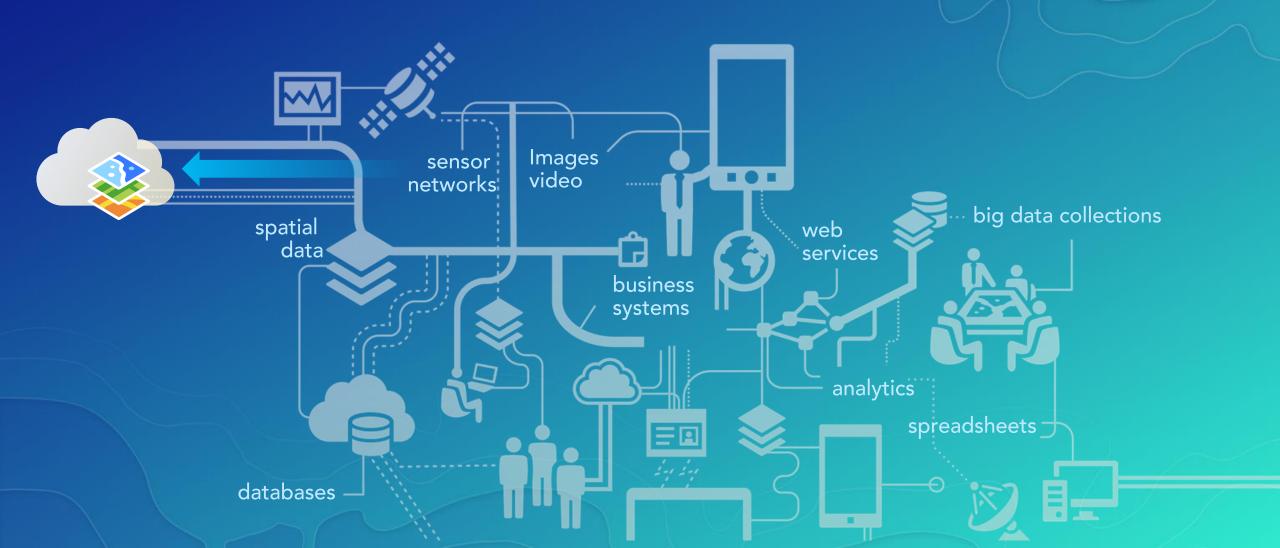
ARE RELATED



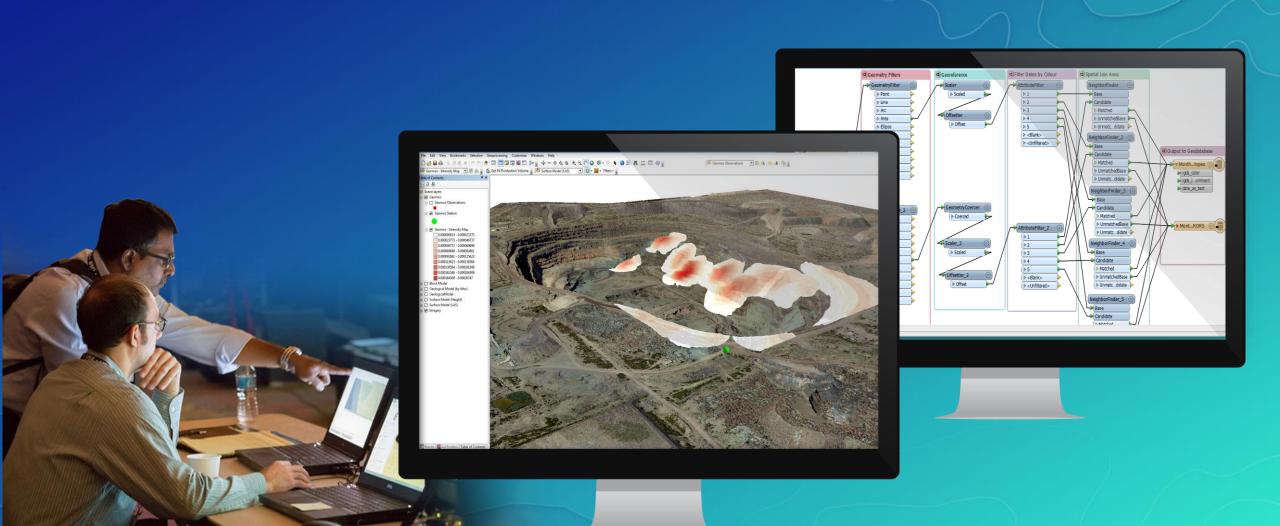
making PREDICTIONS

Step 4: Leverage GIS as an Enterprise Asset

Integrate with other mission systems and involve all users



Step 5: Grow your GIS professionals Learn how to apply the science of where and become more critical to the business



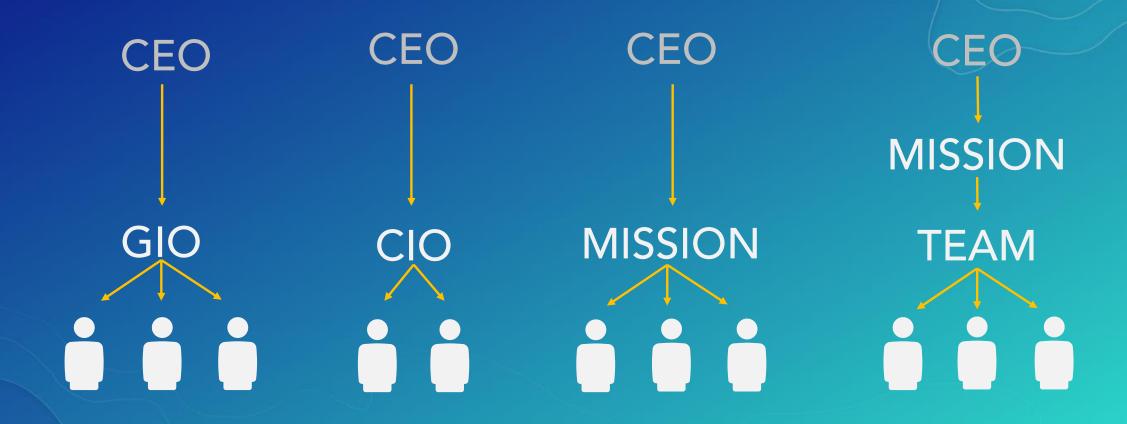
Step 6: Setup the foundation

Ensure solid foundations are laid for information management

- Set the standards for APPS & INFORMATION & TECHNOLOGY
- INFORMATION must include:
 - Ownership
 - Quality
 - Maintenance
 - Security/access
 - Representation
 - Copyright/reuse

Step 7: Organise effectively

Invest in people who will manage, use, grow and get value from geographical insight



Step 8: Get involved personally

Executive sponsorship is crucial – being an active participant and contributor is priceless



Step 9: Establish a culture of sharing

Enable People to Work Together by Securely Sharing Data, Apps, and Knowledge



Andile **GIS Analyst**



Jenny Executive



Johnny



David Engineering



Lebo **Customer Service**

















ACCESS FUNCTIONALITY 0000

0000



Step 10: Keep at it!

Like a flower, a Web GIS needs to be constantly tended to, nurtured and grown



And don't forget...

To keep learning!

MOOC

esri.com/mooc/diy-geo-apps
www.esri.com/landing-pages/training/locationadvantage
www.esri.com/landing-pages/training/spatial-analysis

User Conferences

www.esri.com/events/user-conference
 www.esri.com/events/devsummit

The ArcGIS Book

learn.arcgis.com/en/arcgis-book/

Esri South Africa Training

http://www.esri-southafrica.com/our-training

Free Training

training.esri.com

Certification

www.esri.com/training/main/certification

Esri South Africa Blog

blog.esri-southafrica.com



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