



# Leveraging the ArcGIS Application Framework



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# Effective ways to leverage the ArcGIS platform

- 1. Author effective maps and globes for use in ArcGIS and externally in applications such as Google Earth**
- 2. Use geoprocessing to create tasks that can be used in ArcGIS Engine and served as web services to ArcGIS web clients**
- 3. Leverage the geodatabase for data management**
- 4. Open editing using simple features interchange**

# What is ArcGIS?



## ESRI Developer Network (EDN)

- **ArcGIS Desktop** - A suite of desktop applications (Explorer, ArcGIS Engine, ArcView, ArcEditor, ArcInfo, and extensions)
- **ArcGIS Server** - An enterprise GIS data management and application server
- **ArcGIS Mobile** – Out-of-the-box applications and developer tools for mobile GIS
- **ArcGIS Online** - Online services that support the desktop and enterprise server applications with data and functionality

# The ArcGIS Framework

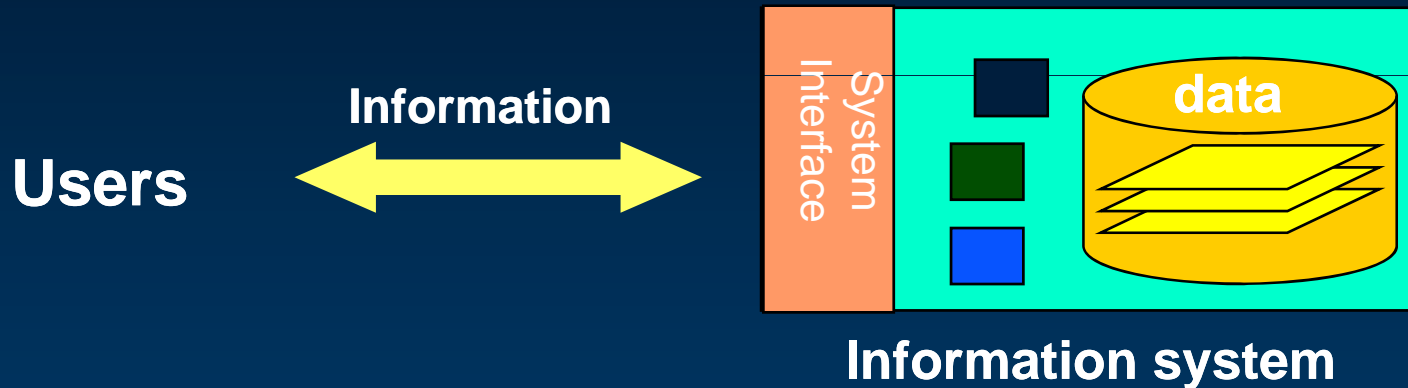
## Key Patterns for GIS

- **Geodata management**
- **Mapping and visualization**
- **Geoprocessing**
  - Spatial analysis
  - Automation
- **Applications**
  - ArcGIS Desktop
  - Custom Engine applications
  - Explorer applications
  - Web applications
  - Web services
  - Mobile applications

# A GIS is an Information System

Determine which information products and applications

- An information system is a tool for providing useful **information** through management and analysis of **data**.



- The purpose of an information system is to support real “line of business” activities.

Determine

Audience – Application – Information – Tools

# GIS Maps

- Interactive
- Scale dependencies
- Tools / Tasks/ Functions
- Visualization, understanding, context

Professional GIS maps



Custom maps



Web maps



Mobile



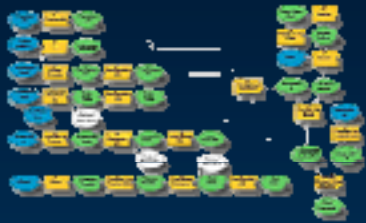
3D Explorer maps



*Choosing the appropriate application*

# Leverage the ArcGIS application framework

A platform for building and deploying GIS solutions



Automate tasks  
and perform  
analysis using  
geoprocessing



Access ArcWeb Services &  
others via SOA

Add in operational  
layers

Layer in your key  
basemap information

ArcGIS Online  
Framework

Start with a 2D or 3D basemap

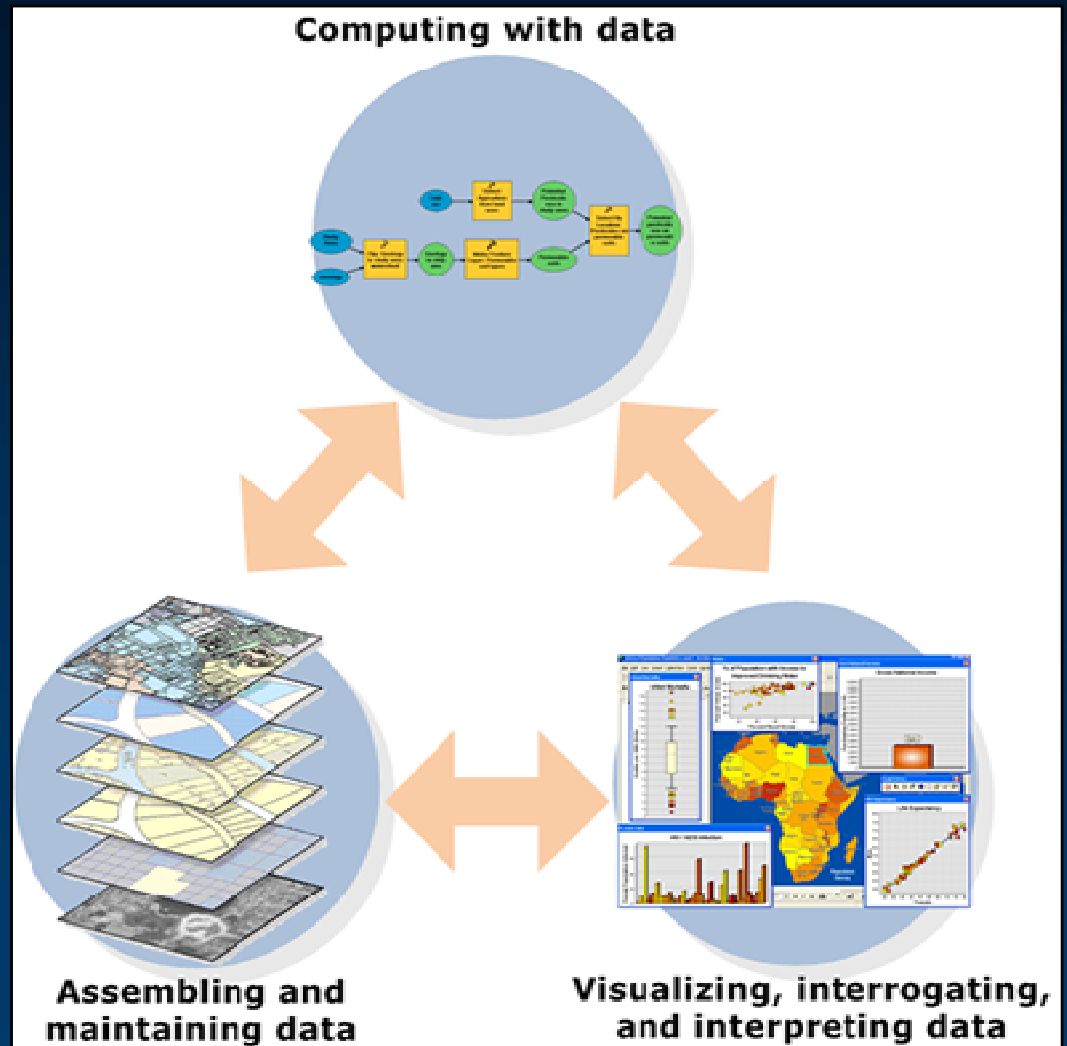
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# Geoprocessing

## Programming with a series of GIS operators

- **Workflow automation**
  - ETL
  - Cartography
  - Data management
  - Modeling and analysis
- **Geoprocessing services**



# Leveraging the geodatabase

- **Manage geographic information**
- **Work with rich data models that go beyond simple features, rasters, and attributes**
- **Openly manage transactions, archives, and replicas across organizations**
- **Openly edit in any application using simple features interchange**

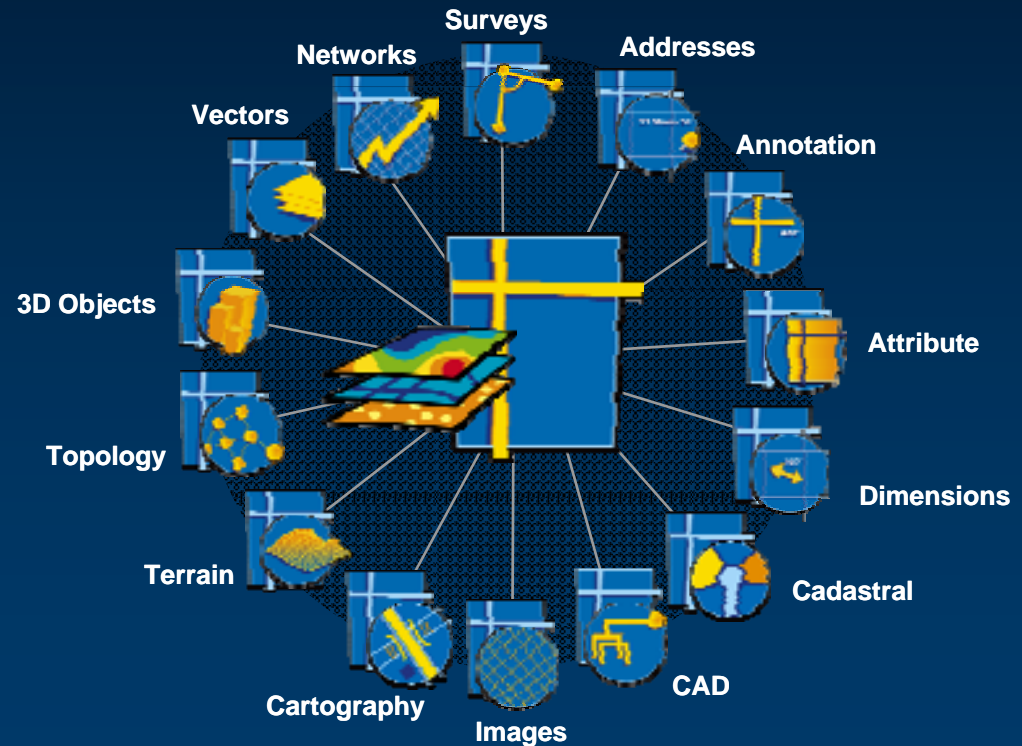
# The Geodatabase

*ArcGIS framework for geospatial information modeling, storage, management and use*

- An rich information model for geographic information
- A transaction framework for managing, editing, update, and replication
- Stores geographic information in files on disk, in relational databases, and in XML schemas.



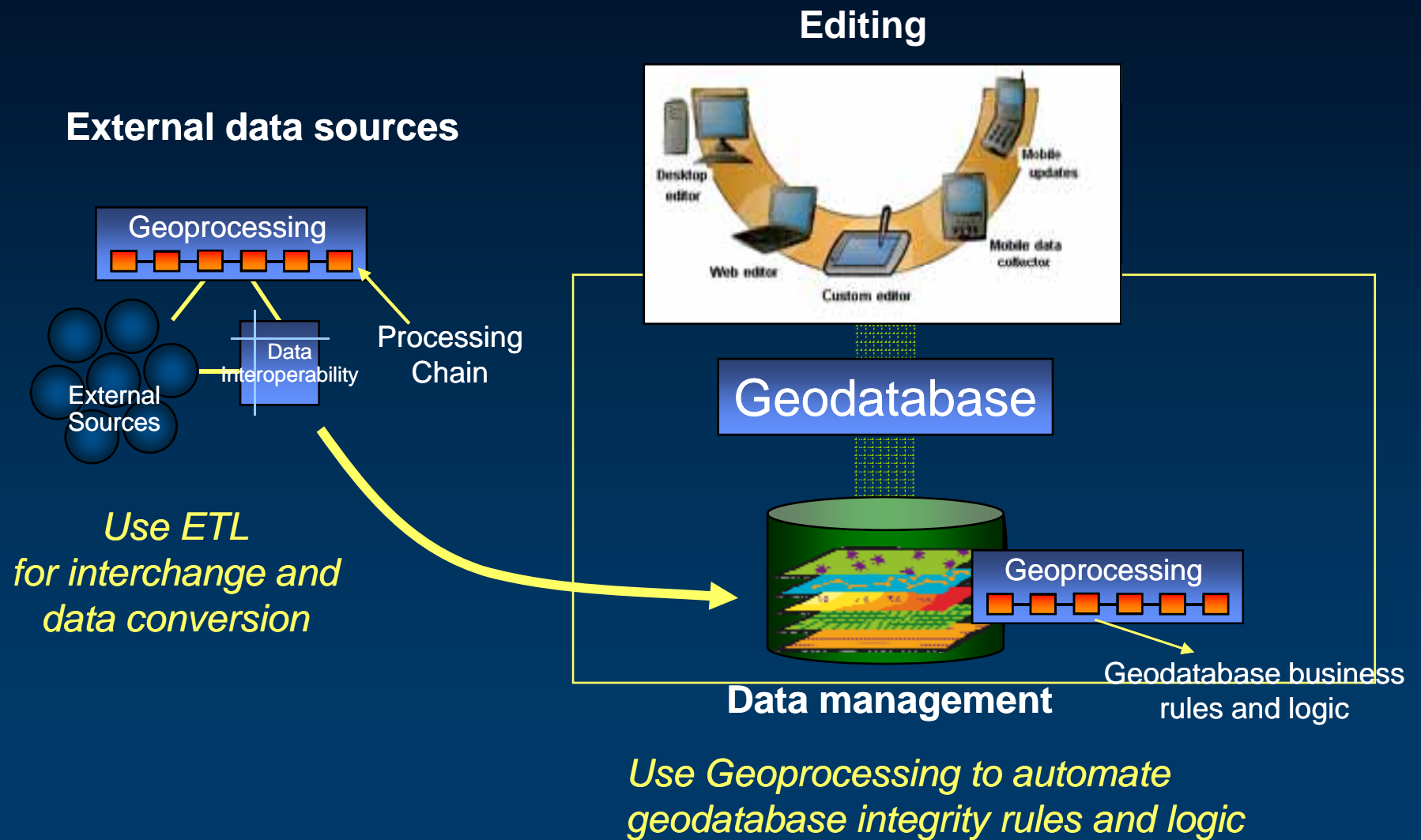
Geodatabase



*Modeling and managing all types of geospatial data*

# Open spatial data management

Integrate external information into the geodatabase



# Demonstration 1: Anne Reuland and Corey Tucker

- Using maps and geoprocessing tools in ArcGIS Server
- Building a browser-based editor for ArcGIS
- Non-versioned editing
- To deploy maps broadly
  - Think about the anatomy of your GIS map
    - Choose your application
    - Choose your basemap layers and properties
    - Identify your operational layers
    - Identify the operations, tools, and tasks

## Demonstration 2: Doug Morgenthaler and Phil Sanchez

- A custom editing application to edit the geodatabase
- Geodatabase editing using AutoCAD
- To use any editing client
  - Use ETL replication
  - Use geoprocessing for geodatabase validation and business rules

# Demonstration 3: Jeff Shaner

- **Deploying ArcGIS Mobile**
- **Building a custom application for ArcGIS Mobile**
- **Understand the ArcGIS Mobile Deployment workflow**
  - **Design for purpose -- Author maps for the device**
  - **Build your custom app**
  - **Build your mobile map cache**
  - **Deploy to the field**
  - **Synchronize updates**

# The ArcGIS 9.2 Platform

*A framework for developers*

## ArcGIS Desktop

A suite of desktop applications (Explorer, Engine, Desktop and extensions)

## ArcGIS Mobile

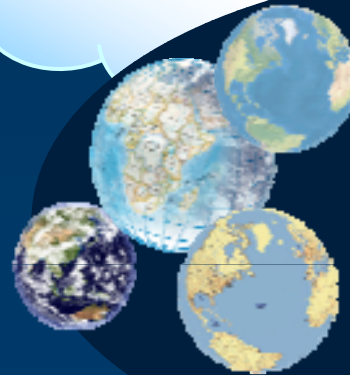
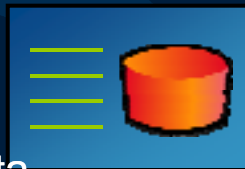
Out-of-the-box applications and developer tools for mobile GIS

## ArcGIS Server

An enterprise GIS data management and application server

## ArcGIS Online

Online services that support the desktop and enterprise server applications with data and functionality





**Thanks**

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