



Geospatial Strategies for State/Local Government

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A world map with a dark blue background and a grid. Numerous glowing points in shades of purple, blue, and yellow are scattered across the map, representing global users. The points are most densely clustered in North America and Europe.

esri

World Leader in Geographic Information Systems (GIS)

Over 10 Million Users

Growing, Strong and Impactful

\$2B Annual Revenue

8,600 Utilities

12,600 NGOs

1,200 National Government Agencies

12,000 States & Regional Agencies

30,800 Cities & Local Governments

4,000+ US Employees

ZERO Debt and Privately Held

> 31% Reinvested in R&D



esri Mission

- Build Leading GIS Technology
 - Software, SaaS & PaaS
- Support Users – Projects & Systems
 - User Community
 - Training & Education
 - Technical Support
 - Professional Services
- Support Partners

... Advance Spatial Literacy,
Science, Education & Conservation

... Creating a More Sustainable World

The Geographic Approach

A Way of Thinking and Problem Solving
That Integrates Geographic Science & Information

An Inclusive and
Multidisciplinary Process

Holistic
Collaborative

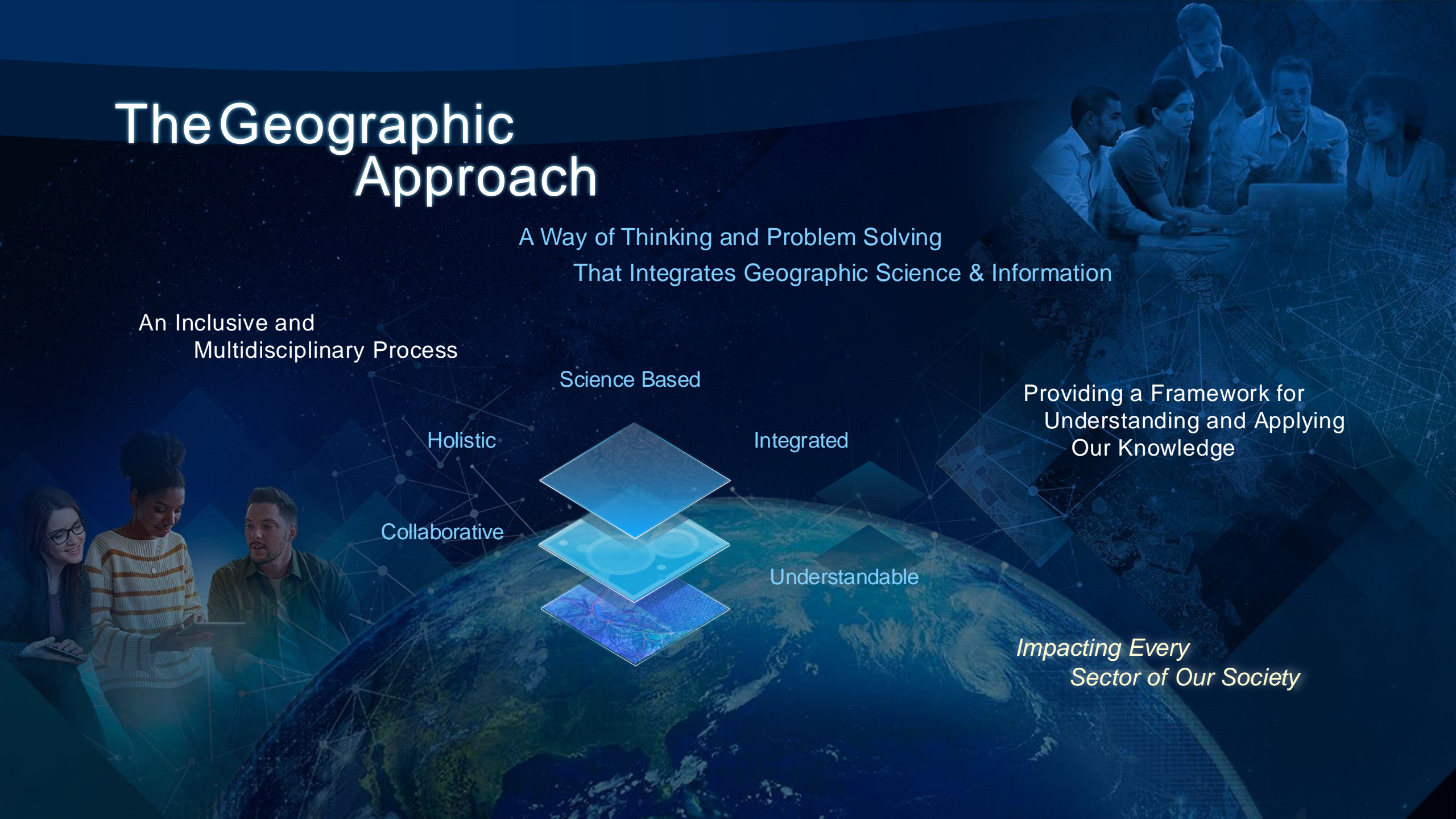
Science Based

Integrated

Understandable

Providing a Framework for
Understanding and Applying
Our Knowledge

*Impacting Every
Sector of Our Society*

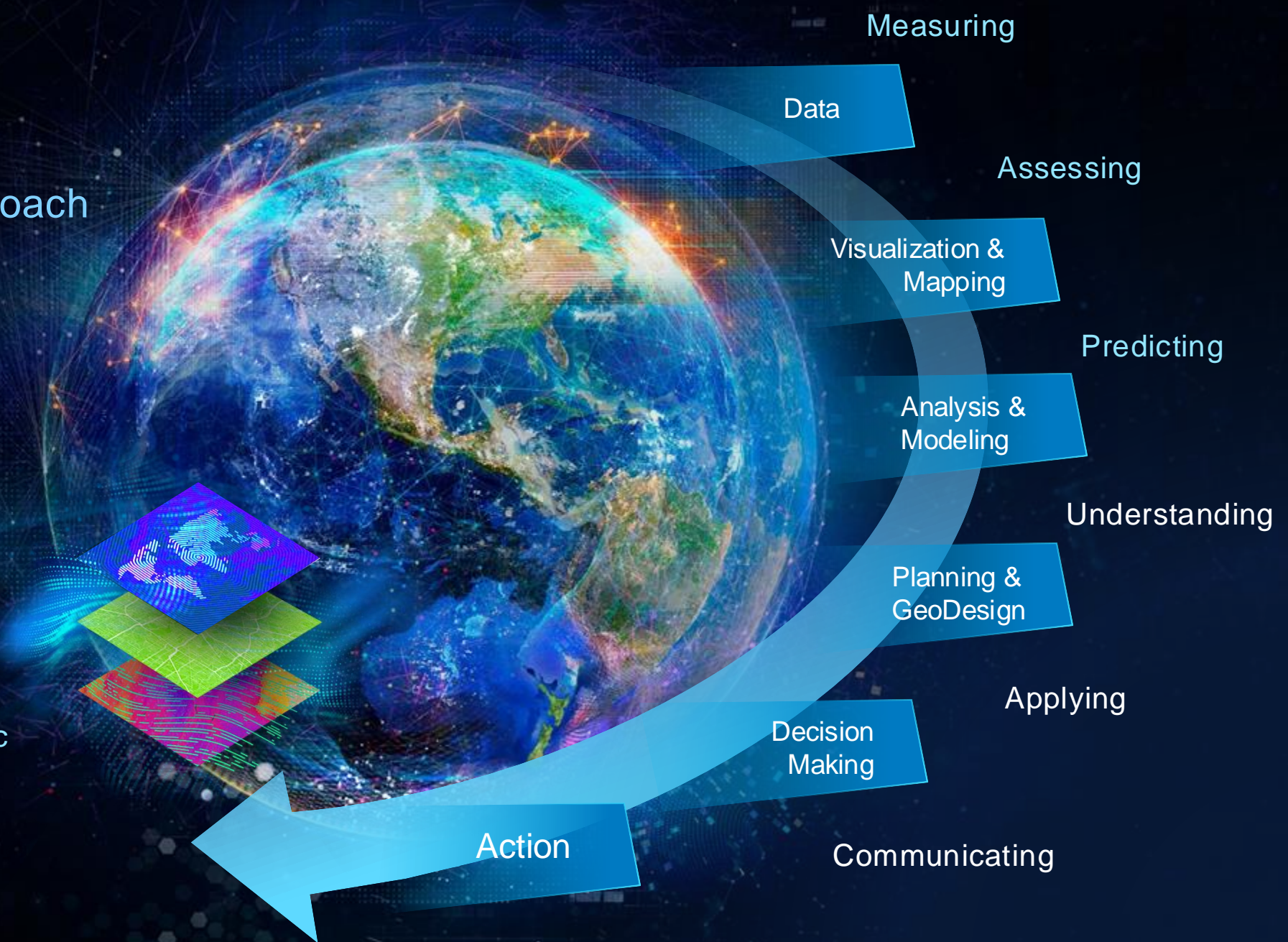


GIS

Enables The Geographic Approach

Providing a Process and Framework . . .

. . . For Applying Geographic Knowledge Widely



What Is a GIS?

A System for Managing, Sharing and Applying Geographic Information



*Delivering Value Across Organizations
Improving Efficiency, Communications, Decision Making and Collaboration*

GIS Continues Advancing

Leveraging and Integrating Many Innovations



Integrating **Mapping**
Web Maps 2D / 3D
Client Side Indoors

3D Visualization
Reality Capture
Immersive (XR)
Digital Twin
Photo-Realistic

Experiences
Apps Builders
Mobile AI APIs

Imagery
Satellite Drones Aerial
Video UAV Lidar
Oriented

Architecture
Distributed Web Services
Portals
Open Cloud Native
Data Management
Standards APIs

Analytics
Real-Time GeoAI
Raster Big Data
Data Science 3D
Web

AI
Experience Search
Data Engineering Assistants
Automation Chatbot

Content
Living Atlas Shared
Services Open Data
Commercial

Improving Geospatial Workflow Productivity

GIS

Applied in Many Fields

Economic Development

Pollution Nature Conservation **Health**

Energy Transparent Government

Natural Resources Climate Change

National Security Science & Technology

Business **Environment** Water Resources

Agriculture Social Conflicts

Urbanization & Development

Natural Disasters

Infrastructure

*Helping Organizations Do Their Work Better
Delivering Business Value Everywhere*

ArcGIS Includes Many Apps

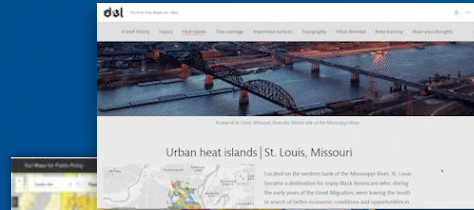
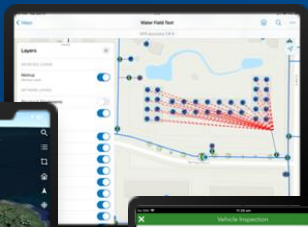
Supporting All Types of Users

StoryMaps

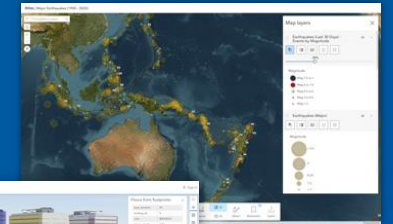
Infographics



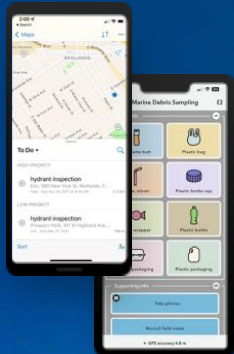
Field Maps



Atlas



Work Management

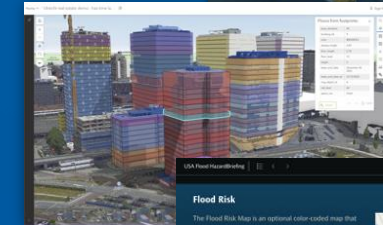


Experience Builder

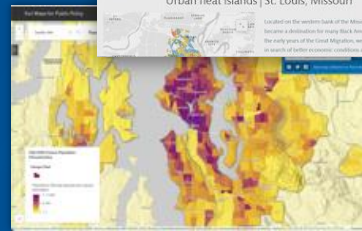
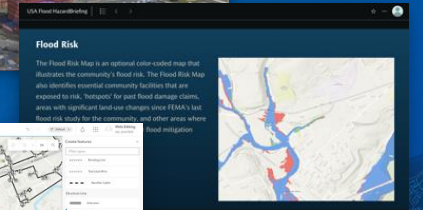
Dashboards



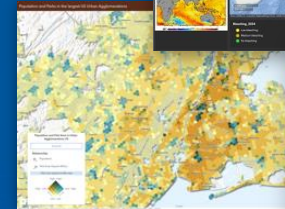
3D Viewer



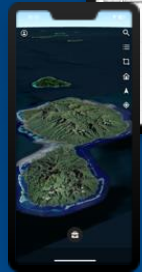
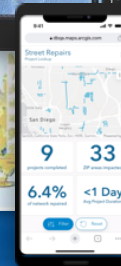
Briefings



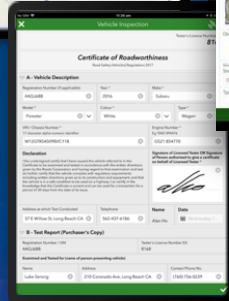
Mapping



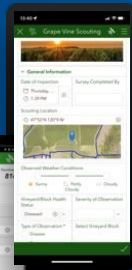
Instant Apps



Earth



Survey123



Data Collection

QuickCapture



Mobile



Web

Web Editor



ArcGIS Includes Content

The Living Atlas
... and User-Shared Content

Global Geospatial Data Portal

New & Improved

World Soils
Ecosystems Hazards
Transportation
Demographics
Habitats Landscape
Basemaps Hydro
Environment Traffic
Weather Elevation
Imagery Biodiversity
Oceans POI Boundaries
Movement Business
Land Cover Infrastructure

- Analysis-Ready Imagery
- **3D Basemaps**
- Places (POIs)
- Ecosystems 2050
- Overture Maps
- OpenStreetMap
- **iNaturalist**
- Land Cover
- Premium Content
 - Imagery
 - Movement
 - Parcels

US Only

- **Parcels**
- Demographics (2024)
- NAIP Imagery
- Census ACS
- Broadband Data
- Hydrology (NHDPlus)
- US NSDI Layers (NGDA)

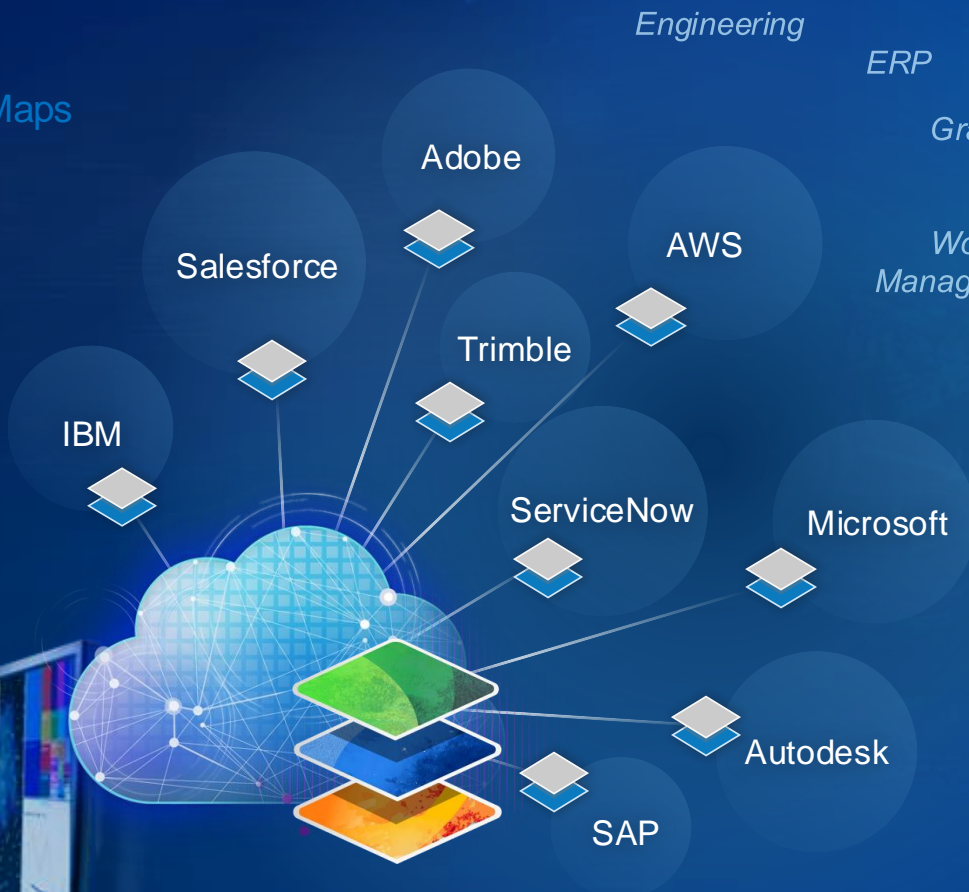
Massive &
Growing Rapidly

Thousands of Curated Layers
Millions of Shared Items . . .

ArcGIS Integrates with Other Systems

Geoenabling Enterprise Business Workflows

Data
Maps
Analytics



Integrating Geographic Thinking Everywhere . . .

ArcGIS Is an Enterprise Platform

Supporting Mission-Critical Systems & Applications

Many Implementation Patterns



- Workflows
- Apps & APIs
- Services
- Data
- Infrastructure



- Scalable
- Secure
- Reliable
- Interoperable

A Well-Architected Platform

ArcGIS today



Many, many more...

User Based ArcGIS in 2024

Viewer

Start viewing your data spatially

- ✓ Securely view maps, apps, and content
- ✓ Monitor KPIs and status updates

Apps:



No ArcGIS Online Credits

Contributor

Everything in Viewer and

- ✓ Review and edit data
- ✓ Mark-up and annotate maps
- ✓ Explore and collaborate on shared projects

Apps:



+250 ArcGIS Online Credits

Mobile Worker

Everything in Contributor and

- ✓ Receive work assignments and directions
- ✓ Share location
- ✓ Collect data and share updates on the go

Apps:



+250 ArcGIS Online Credits

Creator

Start managing, mapping, and analyzing data

- ✓ Create and share maps and apps
- ✓ Manage groups, members, and content
- ✓ Task and manage mobile workers
- ✓ Analyze image, video, and graph data
- ✓ Access ArcGIS Pro Basic

Apps:



+500 ArcGIS Online Credits

Professional

Everything in Creator and

- ✓ Perform advanced data editing
- ✓ Manage databases
- ✓ Create and configure utility networks and parcel fabrics
- ✓ Access ArcGIS Pro Standard

Apps:



+500 ArcGIS Online Credits

Professional Plus

Everything in Professional and

- ✓ Create production-ready cartography
- ✓ Comprehensive analysis that scales to big data
- ✓ Leverage machine learning and deep-learning models
- ✓ Access ArcGIS Pro Advanced and extensions

Apps:



+500 ArcGIS Online Credits

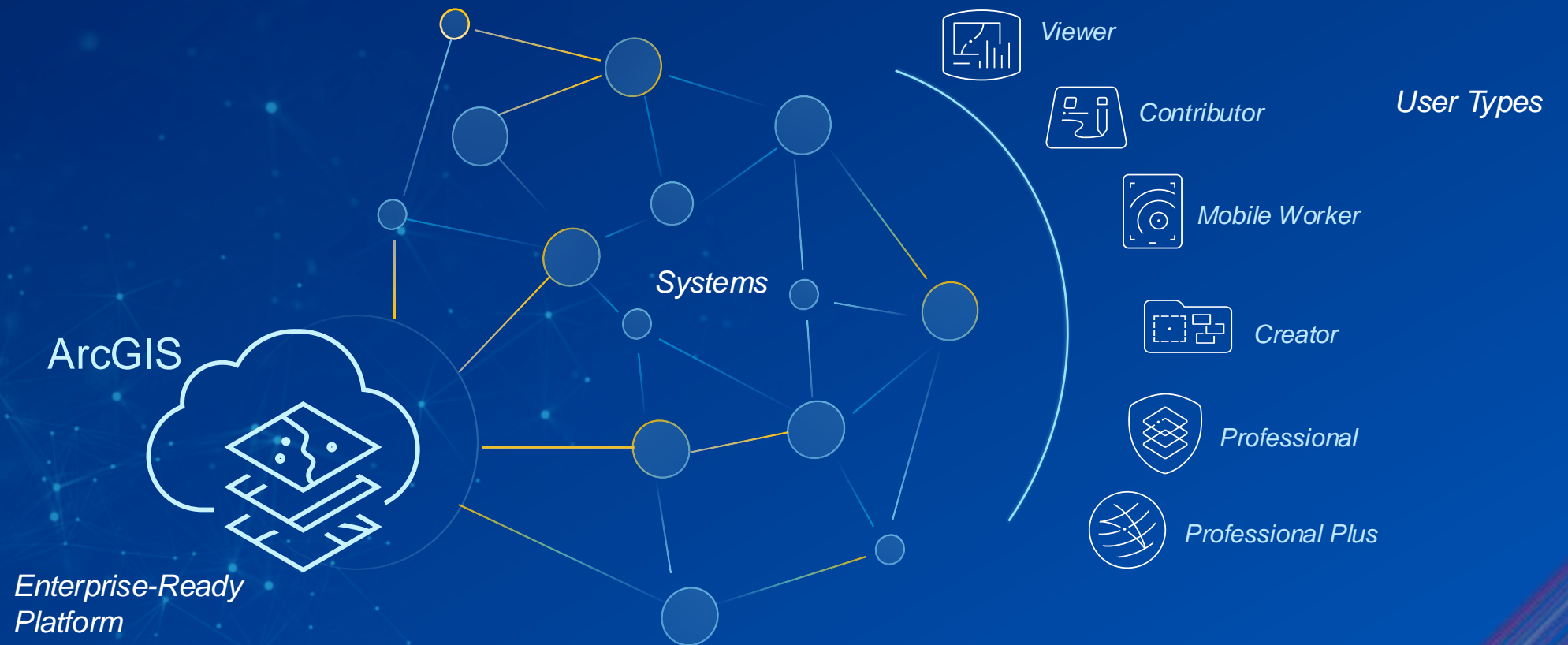
Where GIS and IT Intersect

ArcGIS Well-Architected Framework



ArcGIS

The World's Most Comprehensive Geospatial Platform



TRENDS

Mission/Business Critical

Enterprise-ready

Secure & Reliable

Scalable & High Performing

Integrates with other IT Systems

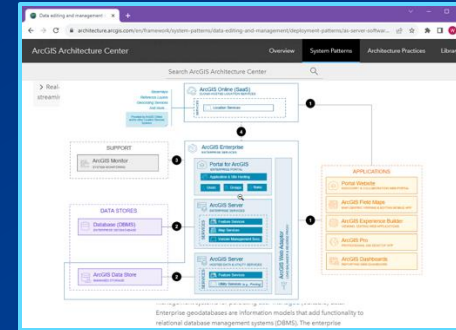
... historic implementations are moving into enterprise IT.

ArcGIS Well-Architected Framework & Website

ArcGIS Architecture Center

- Publicly available at <https://architecture.arcgis.com>
- Targets IT professionals and technologists
- Four main components
 - ArcGIS Overview
 - System Patterns
 - Architecture Practices
 - Architecture Library
- Range from concepts to technical specifics

Performance & Scalability



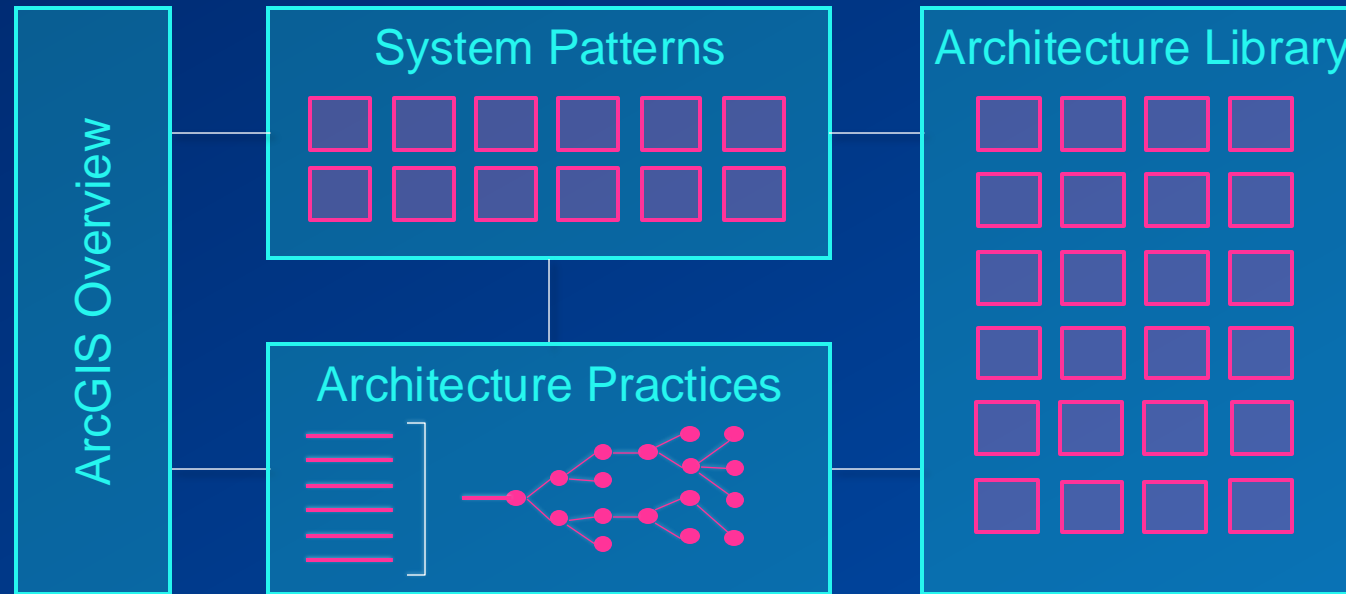
Integration
Observability
Automation

Deployment

Reliability
Security

ArcGIS Well-Architected Framework & Website

Scope & Structure



General
High-Level

Specific
Detailed

ArcGIS Well-Architected Framework & Website

ArcGIS Overview

ArcGIS Overview

ArcGIS as an Information System
Characteristics & Architecture
Capabilities & Deployment Options

General
High-Level

ArcGIS Architecture Center

Overview System Patterns Architecture Practices Library

Search ArcGIS Architecture Center

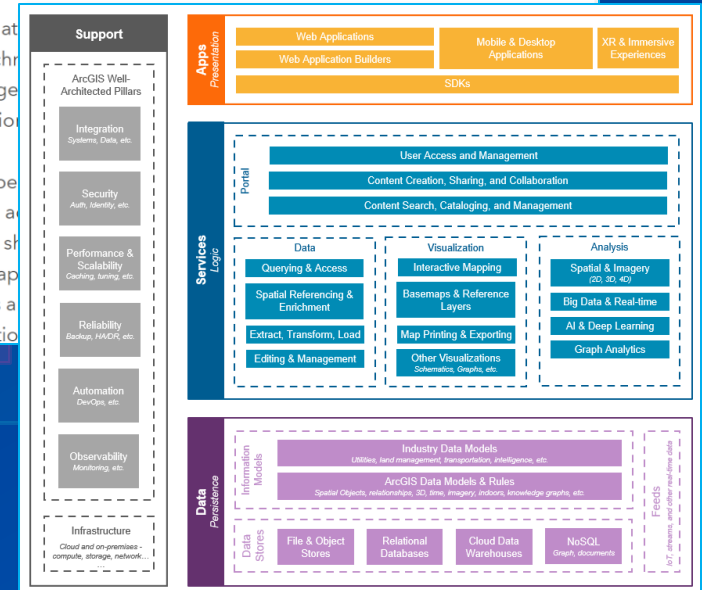
Overview / ArcGIS overview / Introduction to ArcGIS

- ▼ ArcGIS overview
 - Introduction to ArcGIS
 - ArcGIS capabilities
 - > ArcGIS architecture
 - ArcGIS products and deployment options
 - Industry systems and solutions
 - Support, services, and

Introduction to ArcGIS

ArcGIS is a comprehensive geospatial platform that integrates geographic information system (GIS) technology with modern web and mobile applications. It helps organizations understand patterns, relationships, and geographic trends to make data-driven decisions more efficiently. ArcGIS is designed to be flexible, offering these capabilities across a wide range of GIS across your entire organization.

ArcGIS connects maps, apps, data, and people to help organizations discover, use, make, and share data-driven decisions more efficiently. ArcGIS is designed to be flexible, offering these capabilities across a wide range of GIS across your entire organization.



Specific
Detailed

ArcGIS Well-Architected Framework & Website

System Patterns

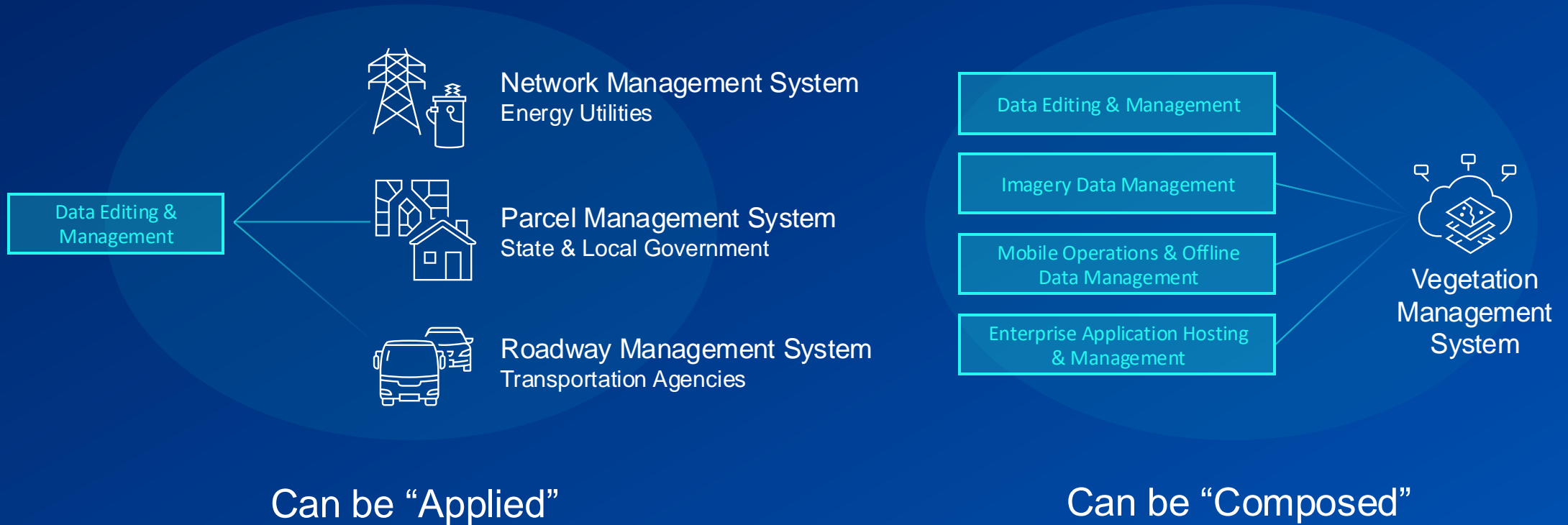
INSIGHT
ENGAGEMENT
RECORD

1. Data Editing & Management System
2. Imagery Data Management System
3. Mobile Operations & Offline Data Management System
4. Location Services System
5. Self-Service Mapping & Sharing System
6. Enterprise Application Hosting & Management System
7. Big Data Analytics System
8. Real-time Data Streaming & Analytics System

Represent the most common (not all) system types ... and will evolve over time

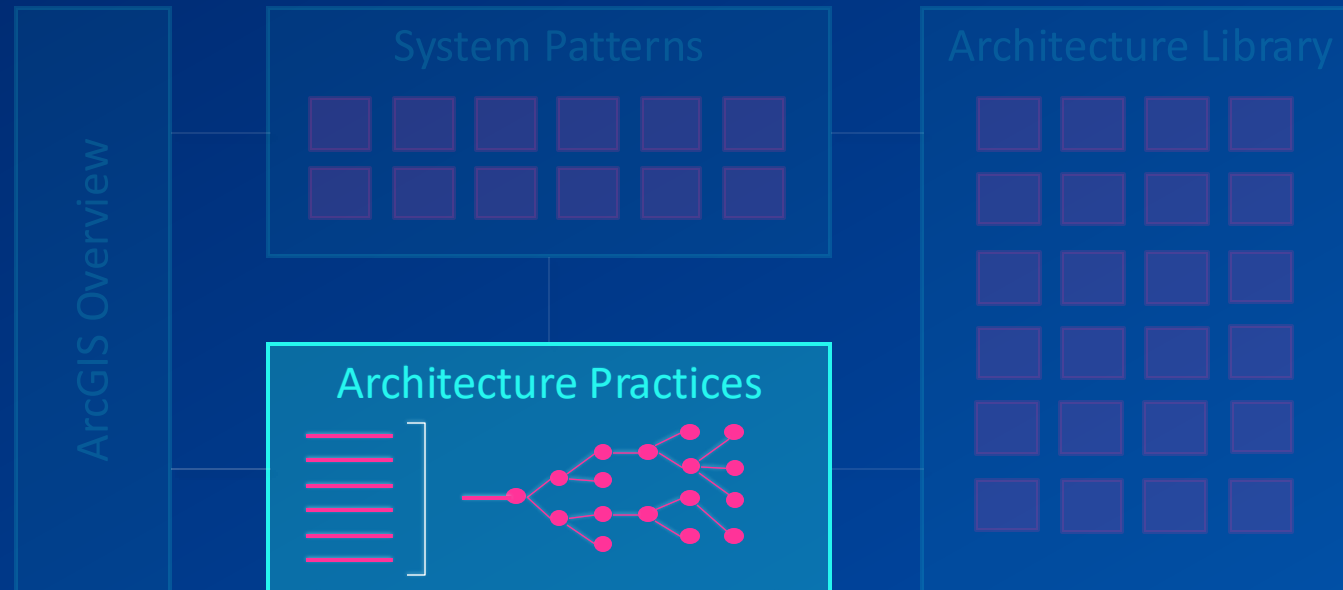
ArcGIS Well-Architected Framework & Website

System Patterns



ArcGIS Well-Architected Framework & Website

Architecture Practices



Architectural Foundations
Design Principles
Deployment Concepts
Architecting for Success

Security Integration
Reliability Automation
Performance & Scalability
Observability

General
High-Level

Specific
Detailed

ArcGIS Well-Architected Framework & Website

Architecture Practices

➤ Approaches & Guidance

- Design Principles
- Deployment Concepts & Approaches
- Architecting for Success

➤ Technology Pillars

- Reliability
- Performance & Scalability
- Automation
- Security
- Integration
- Observability



Backups and disaster recovery

Optimize performance of ArcGIS

Infrastructure as code and DevOps

Data lakes and data warehouses

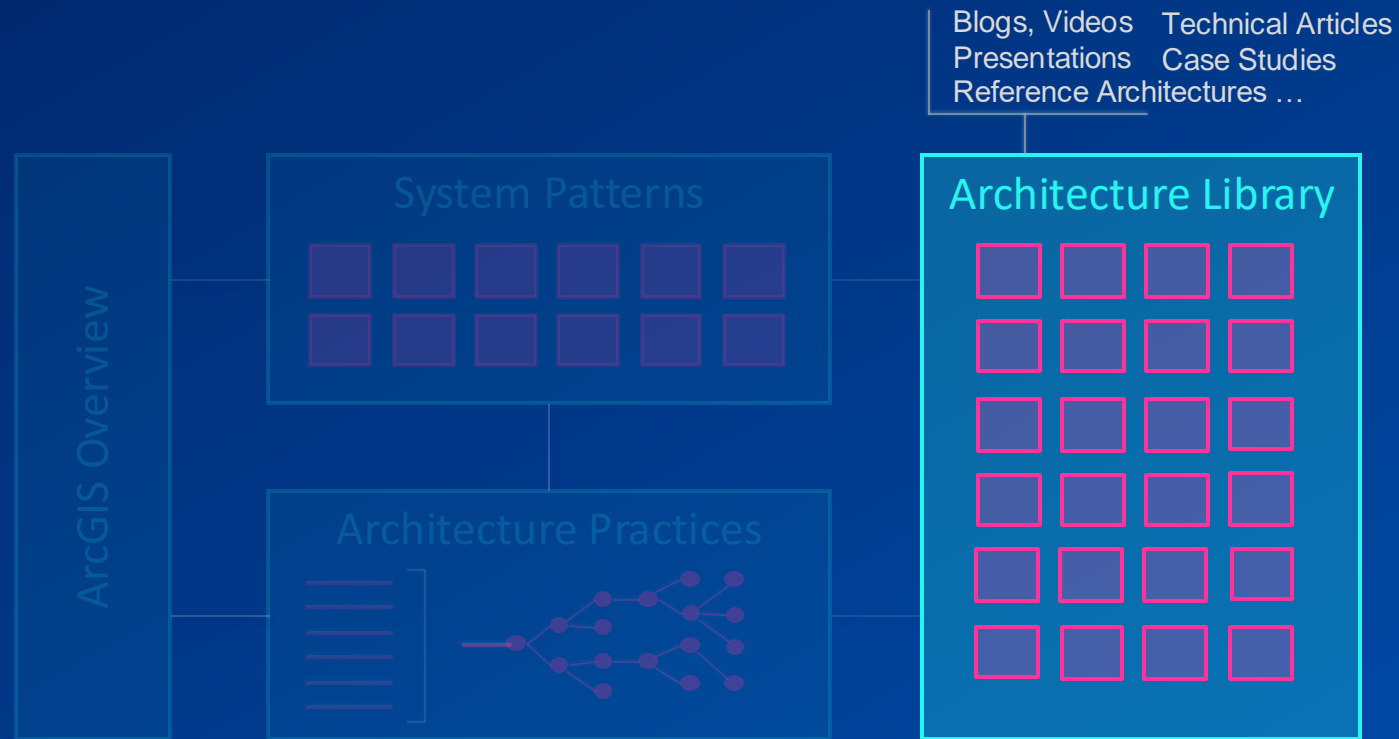
Secure network design

Zero trust architecture, and more than 30 other topics

Will grow and evolve with ArcGIS, GIS, and IT in general

ArcGIS Well-Architected Framework & Website

Architecture Library



General
High-Level

Specific
Detailed

ArcGIS Well-Architected Framework & Website

Roadmap

- Next major update November 2024
 - *More Reference Architectures*
 - *Expanded Test Studies*
 - *New practices and pillar topics*
 - *More on system composition & integration*

- Continuous product release alignment, library additions, and minor updates



NEW DIAGRAMMING RESOURCES



Architecture foundations and practices

The process of designing systems with ArcGIS is informed by a variety of topics, concepts and technologies. This section provides an overview of the architecture process, suggestions on approaching complex topics, and software selection as a part of solution design.

[Learn more](#)





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**THE
SCIENCE
OF
WHERE**[®]

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