

Sustainable Spatial Technologies for Cadastral Systems

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Proven Return on Investment Location Applied to Government Problems

Save Time

Increase Revenue

Cost Avoidance

Increase Efficiency

Increase Productivity

Increase Accuracy

Increase Communication & Collaboration

Manage Resources

Support Decision Making

Reduce Costs

Automate Workflows

Improve Access to Government

Aid in Budgeting

Build Information

Today's GIS Transforms How Government Professionals Work

Improving How They Organize and
Share Their Knowledge



Enriching
Your Own Work



Improving Your Productivity . . .

You Can't Have a Smart Community
Without Cadastre





Land Administration

GIS is the platform for land administration

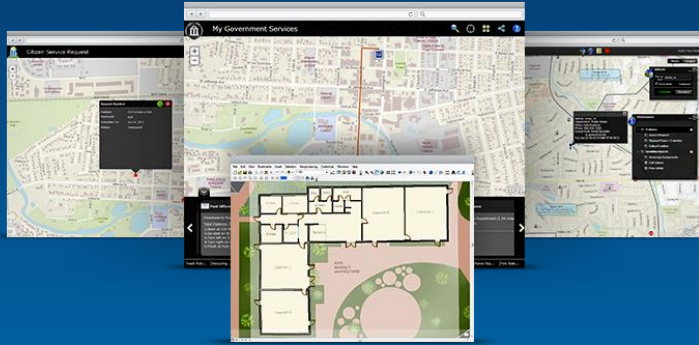
Land administration is the process of determining, recording, and disseminating of information about ownership, value and use of land when implementing land management policies.

Source: UN/ECE Land Administration Guidelines 1996

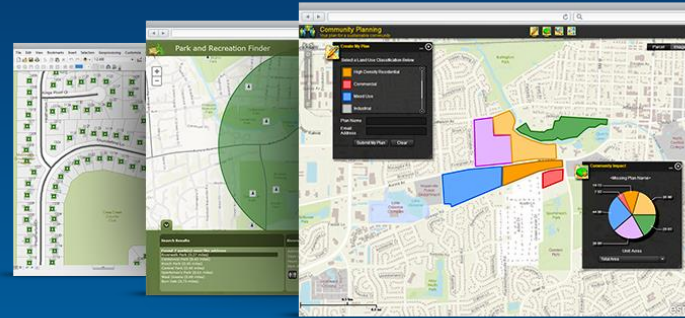


Sustainable smart communities rely on good Land Administration....

Government Relies on Cadastre



Public Works



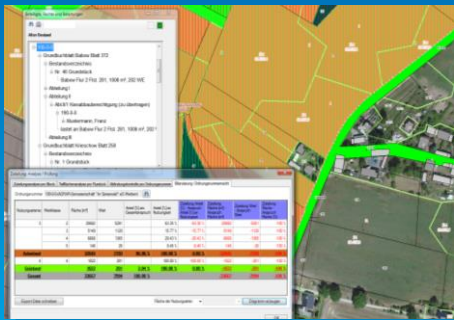
Planning and Development



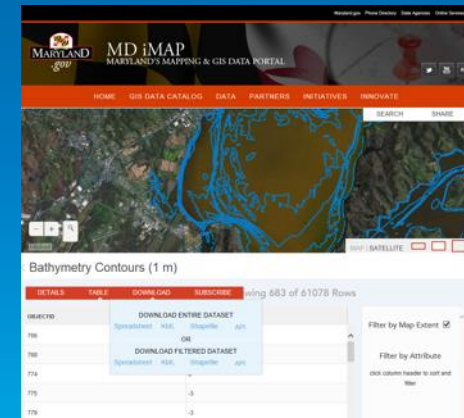
Water Utilities

Open Data

Land Consolidation



Fire Service



Secure land rights and data availability....

Cadastral System Challenges

Efficiency

Growth

Improving Customer Satisfaction

CAPACITY

Changing citizen expectations

Security

Keeping Data Current

Access to data

transparency

Workflow Management

Standards

Public Access

Ad hoc mapping

Cost Containment

IT Resources
accountability

new devices

Sustainability Challenges

Standards

IT Resources

Security

CAPACITY

new devices

Access to data

transparency

Required for a Sustainable System

CAPACITY

Security

IT Resources

new devices

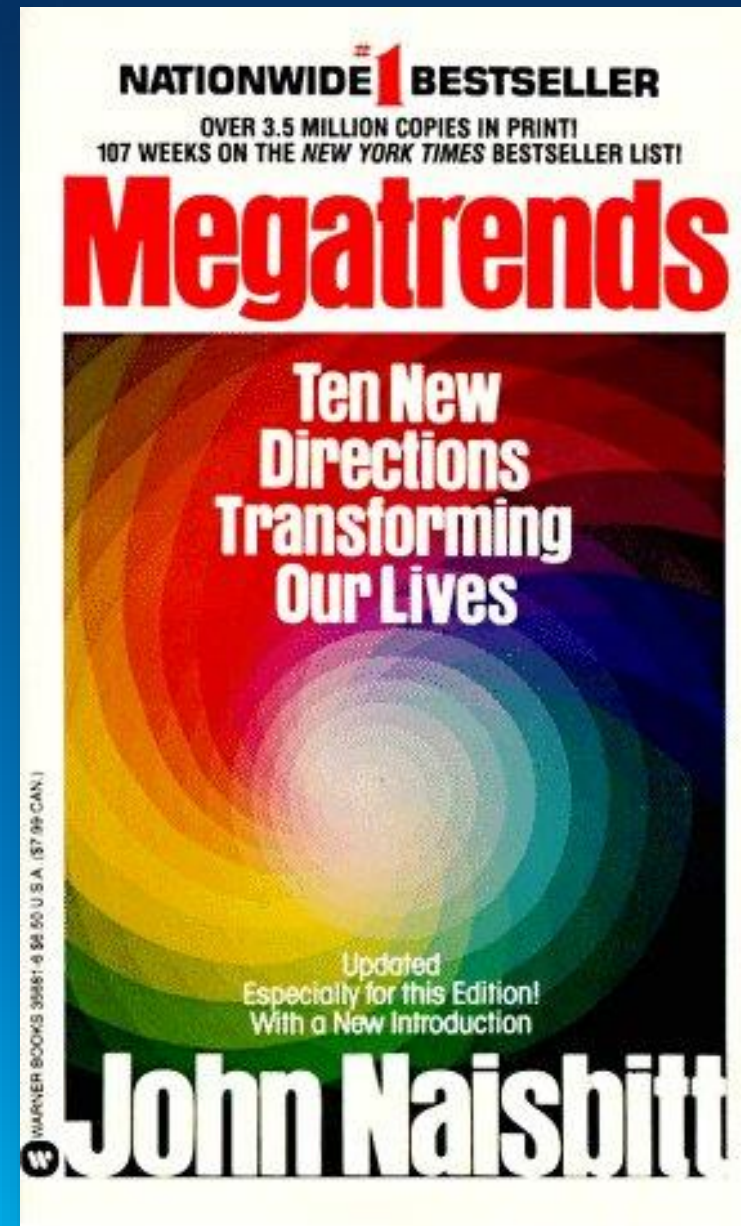
Standards

transparency

Access to data

Evolvable

A Few Geospatial Megatrends



Capacity

Everyone is becoming empowered...

7 billion people

6.8 billion cell phones.....

Increasing demand for IT Resources

Complicated custom systems are maturing – very costly to maintain and expand...

**We can't afford programmers
or a large IT staff.**

New Devices

Tablet Users to Surpass 1 Billion Worldwide in 2015 - eMarketer

The Death of the PC Has Not Been Exaggerated

- Mark Rogowsky, Forbes

Standards

Land Administration Domain Model – ISO 19152:2012.....

**We aren't as different as we
would like to think.**

Transparency

Sunlight is the Best Disinfectant - -Justice Louis Brandeis

**Open data opens new
economies.**

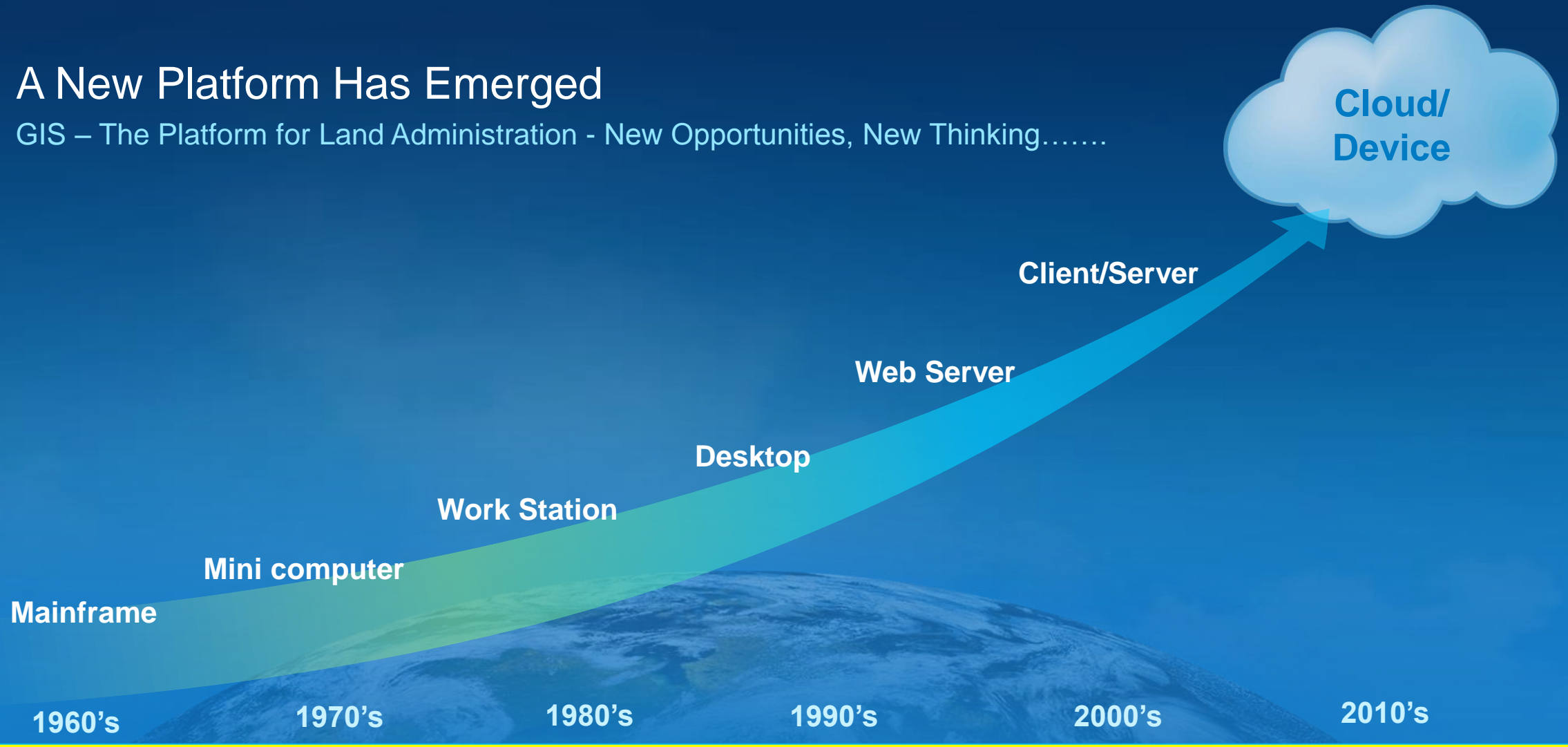
Access to Data

Satellites, drones, geodetic networks, the crowd.....

Data Availability

A New Platform Has Emerged

GIS – The Platform for Land Administration - New Opportunities, New Thinking.....



Web Services

Modern Data Sharing, Collecting and Publishing.....

Map Services

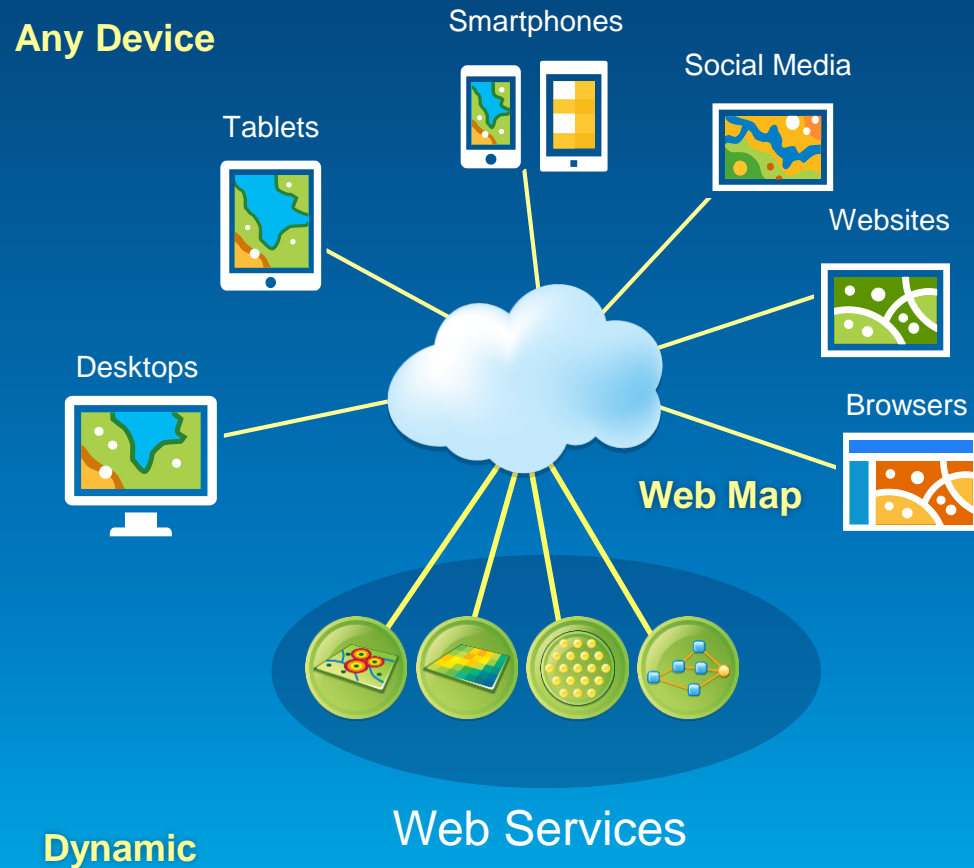
Feature Services

Geoprocessing Services (tasks)

Both Internally and securely on the Web.....

Web Maps are the New Medium

GIS is the Platform for Integrating Data



Supporting Visualization,
Query, Editing, and Analysis

Making Dynamic Geographic Information Available Anywhere

The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency.

The second is that automation applied to an inefficient operation will magnify the inefficiency.

- Bill Gates

Leverage Megatrends

Leverage and grow existing capabilities....

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data

6.8 Billion cell phones

Leverage Managed Technology

Cadastral Systems are Banking Systems for Land....

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data



Implement Scalable, Durable Systems

The Cloud is Part of Any Modern Solution....

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data



Plan for the Unknown

Plan for a rapidly changing environment....

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data



Standardization Creates Opportunities

Many companies supporting and innovating....

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data



ISO 19152:2012 

Geographic information -- Land Administration Domain Model (LADM)

Citizens Understand the Value of Data

Available and usable authoritative data prevents duplication....

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data



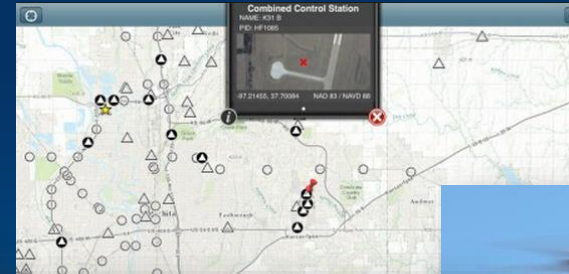
Usable, Accessible Data Will Grow

Current technologies are required to meet growing new data....

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data

A screenshot of the Esri Marketplace interface displaying several data products. The products are arranged in a grid and include:

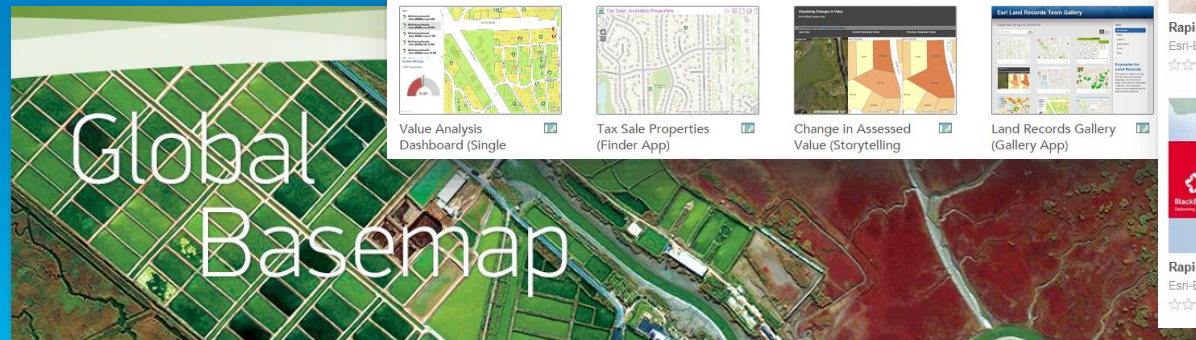
- Thematic Imagery** (Airbus DS Thematic Imagery | Airport...): Airbus DS Thematic Imagery | Airport... Esri-Airbus DS Marketplace (0)
- Thematic Imagery** (Airbus DS Thematic Imagery | Airport...): Airbus DS Thematic Imagery | Airport... Esri-Airbus DS Marketplace (0)
- HEXAGON** Hexagon Imagery Program: Hexagon Imagery Program Current professional high-resolution imagery (2)
- AccuWeather** Canadian Severe Weather: Your Only Source for Esri-ready Data DATA Canada Severe Weather Esri-Airbus DS Marketplace (0)
- Metropol-Regionen Deutschland** Grenzen: Metropol-Regionen Deutschland Grenzen Esri Deutschland (1)
- Metropol-Regionen Deutschland** Kreise: Metropol-Regionen Deutschland Kreise Esri Deutschland (1)
- DigitalGlobe** Global Basemap: DigitalGlobe Global Basemap Service Esri-DigitalGlobe Marketplace (0)
- DigitalGlobe** Multispectral: DigitalGlobe Multispectral Service Esri-DigitalGlobe Marketplace (0)
- FranceRaster** FranceRasterV4 - By Esri France: FranceRasterV4 - By Esri France Esri France - Direction Conatus (1)



A screenshot of a map application showing 'Assessor's Operation View' with a map of a city and various data points.

A grid of 'RAPIDEYE MOSAICS' for various countries, each with a map thumbnail and product name:

- RAPIDEYE MOSAICS™ NORTH KOREA**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ OMAN**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ PAKISTAN**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ SOMALIA**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ UZBEKISTAN**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ CAMEROON**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ DR CONGO**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ EQUATORIAL GUINEA**: Esri-BlackBridge Marketplace (0)
- RAPIDEYE MOSAICS™ INDIA**: Esri-BlackBridge Marketplace (0)



Use What is Built

Use others' innovation....

6.8 Billion cell phones

- Capacity
- Security
- IT Resources
- New Devices
- Standards
- Transparency
- Data

FedRAMP
Ensuring secure cloud computing for the Federal Government

FISMA Authorization & Accreditation

TRUSTe
CERTIFIED PRIVACY

US • EU SAFEHARBOR
US DEPARTMENT OF COMMERCE

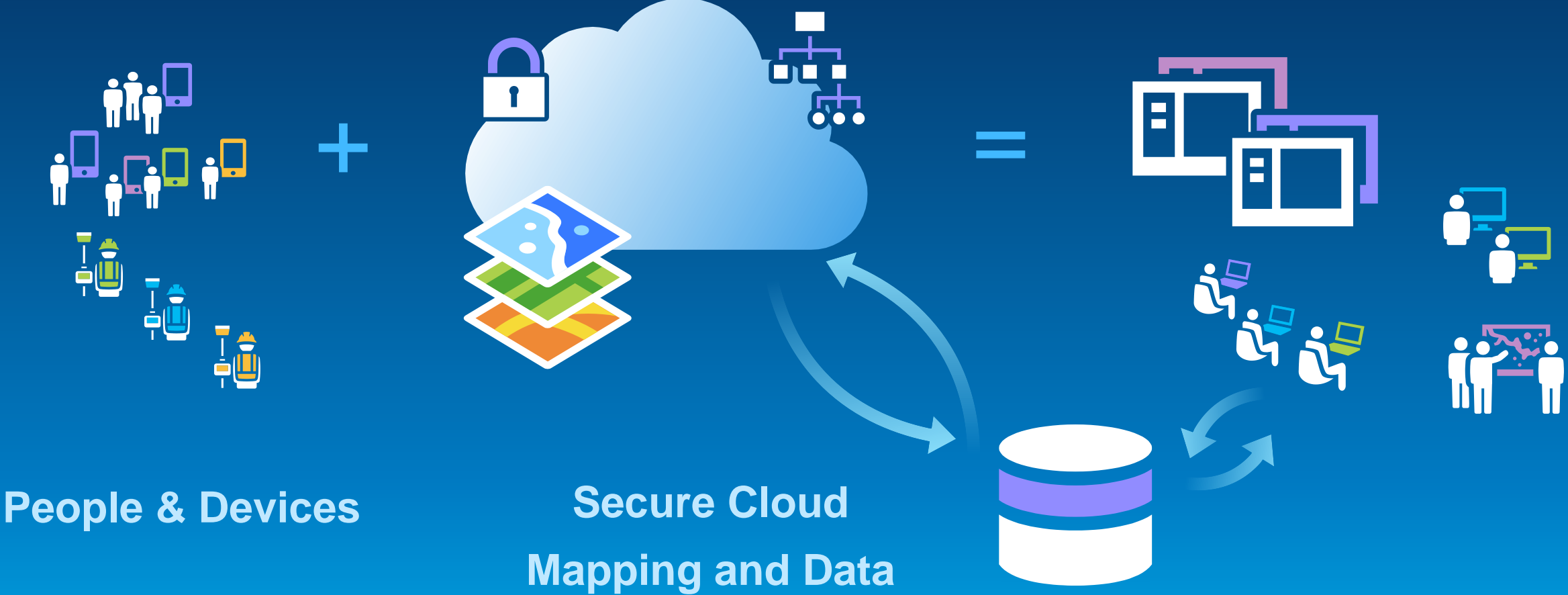
ISO

ISO 19152:2012
Geographic information -- Land Administration Domain Model (LADM)

Ethiopia Online

Global Basemap

Desktops & Devices



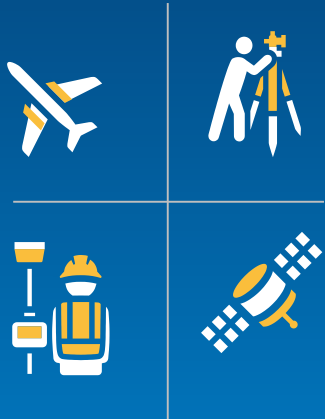
People & Devices

Secure Cloud
Mapping and Data

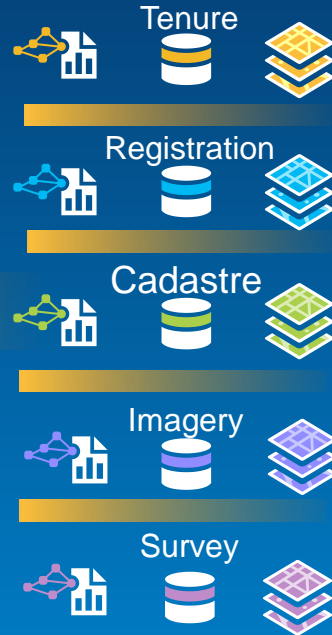


Enterprise Cadastral Systems

Collect



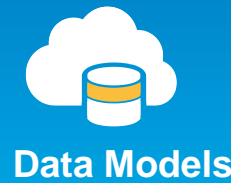
Process



Share



Portal



Manage

Web GIS

The sustainable platform for land administration.....



Web GIS



Understanding our world.

Get Started Today

www.esri.com/smartcommunities