Improving Understanding of the Operating Environment

The Esri Defense Team

2021 ESRI USER CONFERENCE

The Esri Defense Team

Tom Smedley

Julia Bell

Chris Lee

Thomas Warner

The Operating Environment Across-

All Domains

Land

Air

Sea

Space

Cyberspace

All Functions

Intelligence

Joint Operations

Logistics

Defense Health

Installation Management

Recruiting & Manpower

Modeling, Training, & Simulation

All Echelons

Strategic

Operational

Tactical

All Phases

Train/Plan/Prepare → Operations → After Action

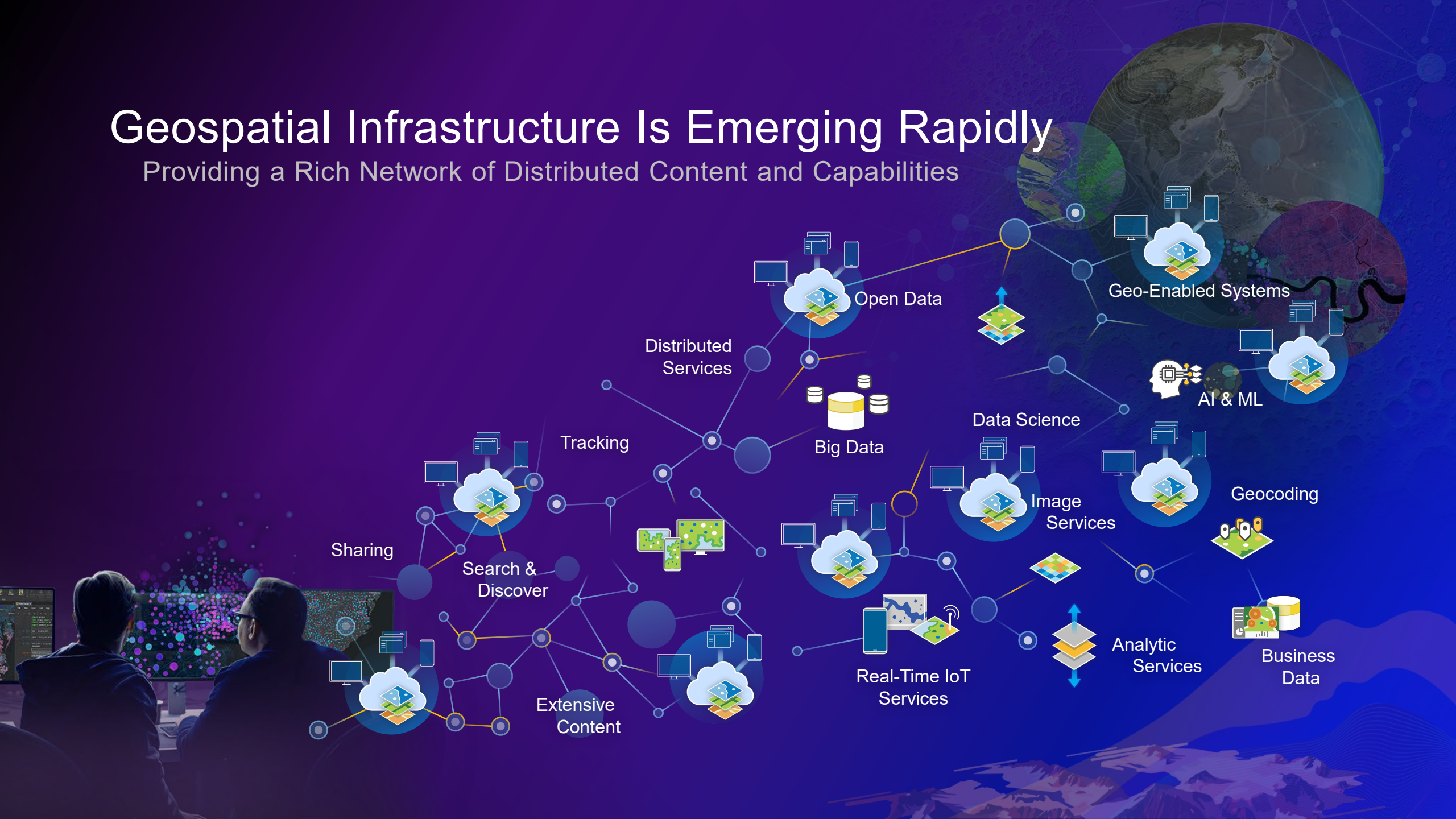
GIS

Provides a Process
and Framework . . .

. . . for Creating and
Applying Geographic
Knowledge Widely

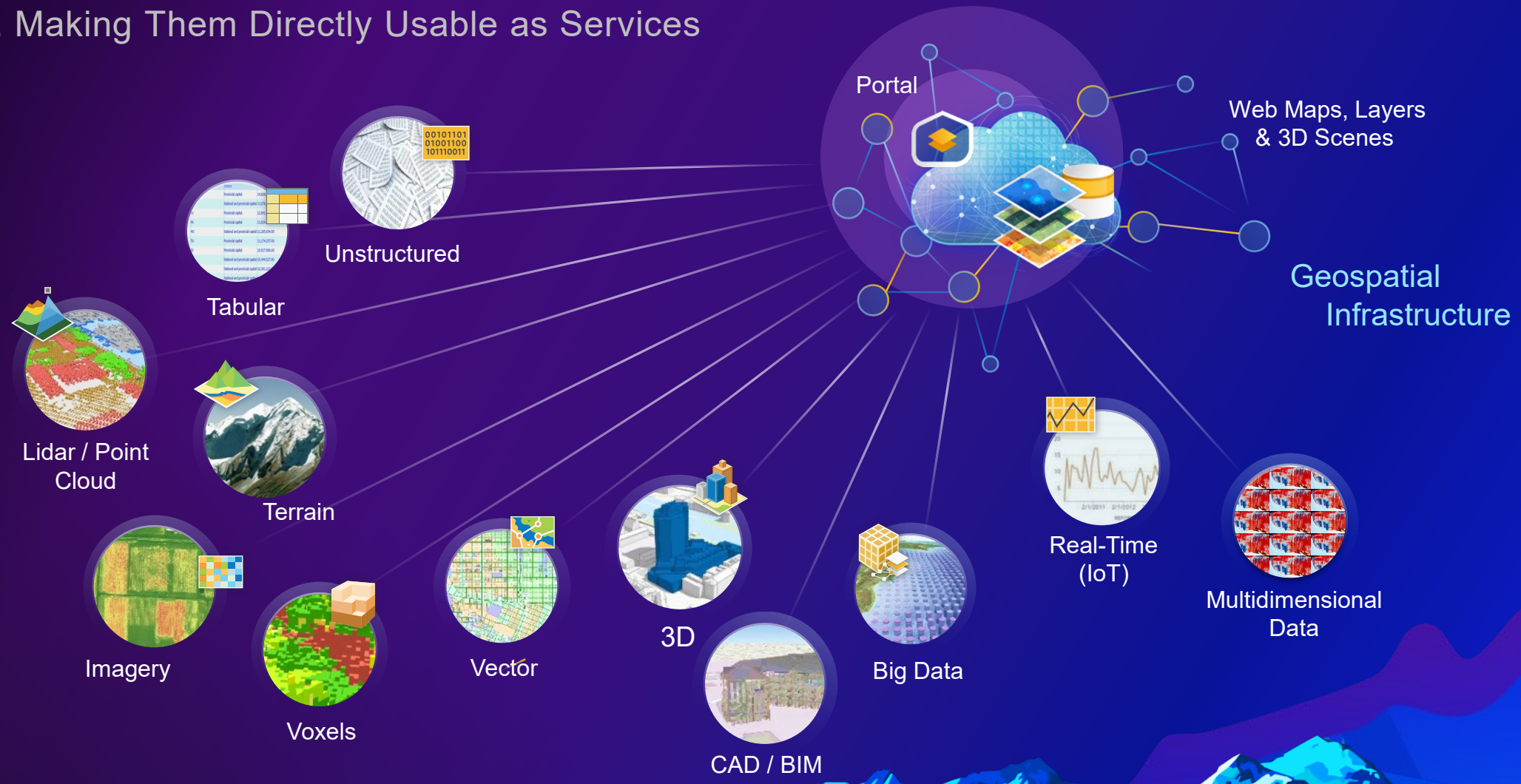
Geospatial Infrastructure Is Emerging Rapidly

Providing a Rich Network of Distributed Content and Capabilities



Integrating Every Type and Format of Data

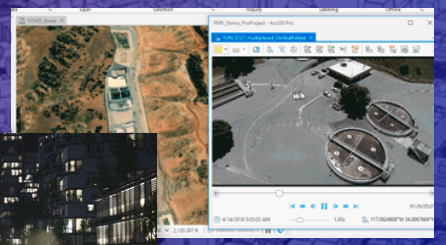
. . . Making Them Directly Usable as Services



Visualization, Modeling and Analytics

Advancing Science and Creating New Insights

Imagery and Drones

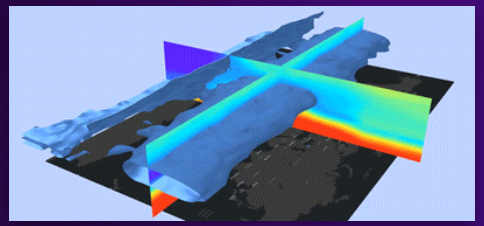


Vehicle Tracking

Real-Time / IoT

3D Cities

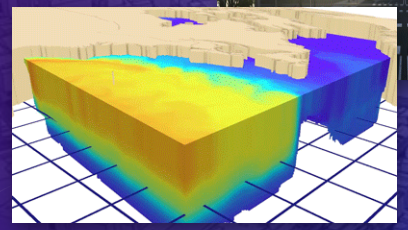
Atmospheric Temperature



Big Data Modeling

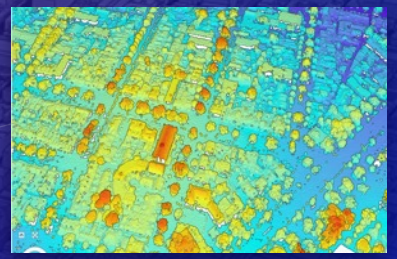
GeoOptics

Ocean Temperature



Multidimensional Data

Object Detection



AI and Machine Learning

Cloud-Based Big Data Processing

Integrating Open Data Science and Tools

TensorFlow

jupyter

Leveraging Technical and Scientific Innovations

Sea Surface Temperature

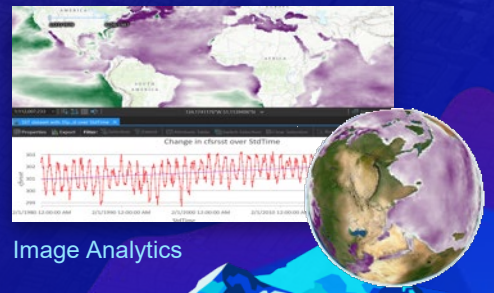


Image Analytics

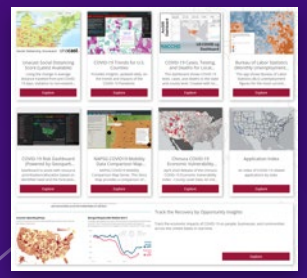
GIS Maps and Dashboards Are Becoming Pervasive

Opening the World's Eyes to the Power of Real-Time and Data-Driven Visualization

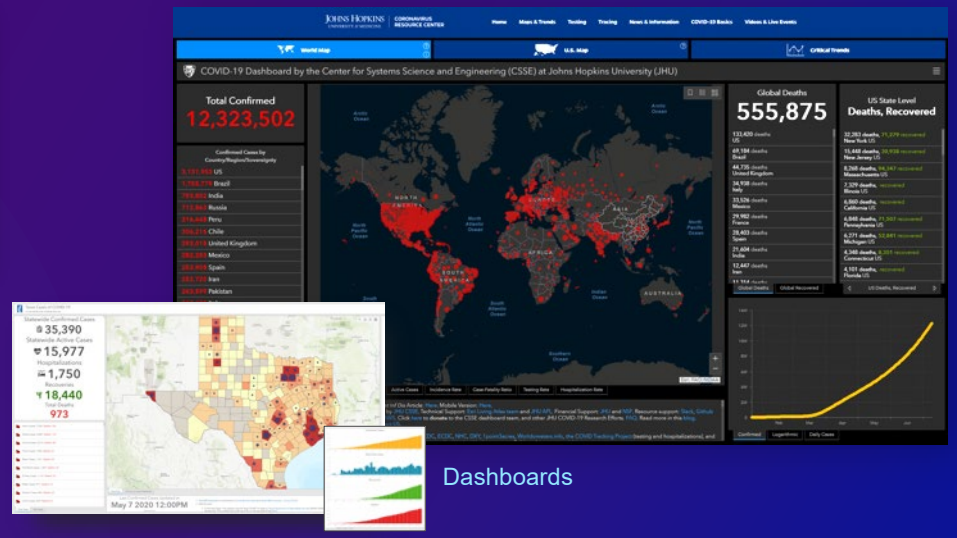
Dynamic &
Interactive

Analytic

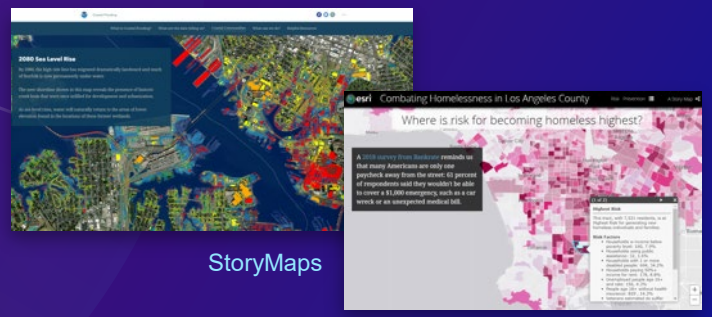
Geospatial
Infrastructure



Maps



Dashboards



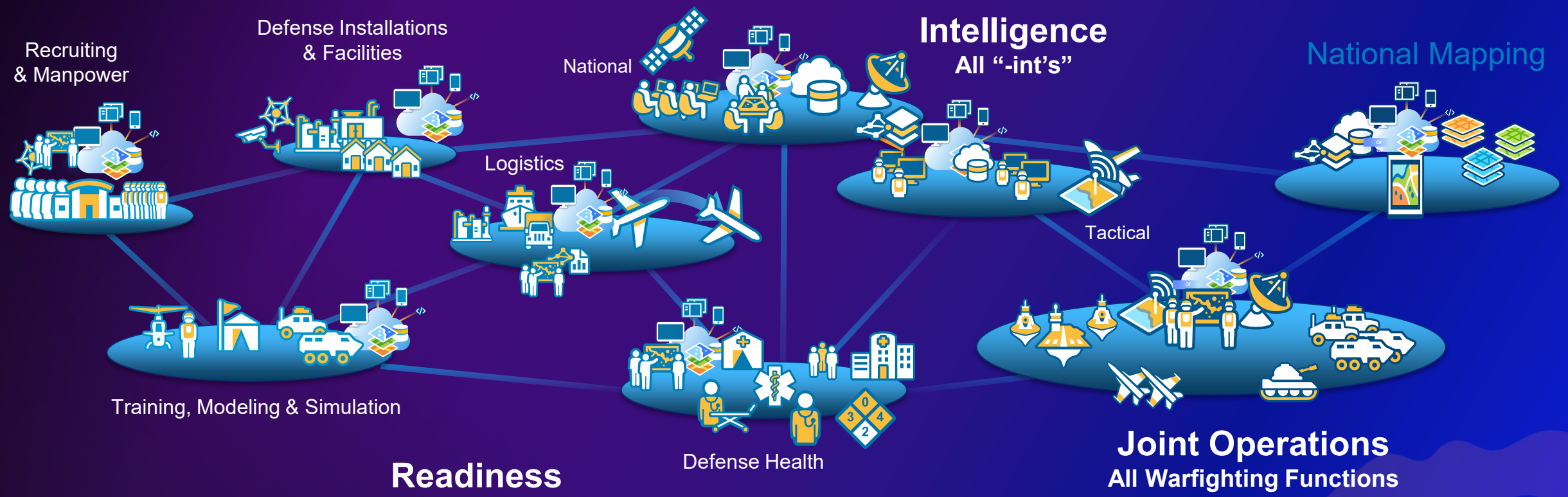
StoryMaps

Public

Decision Makers

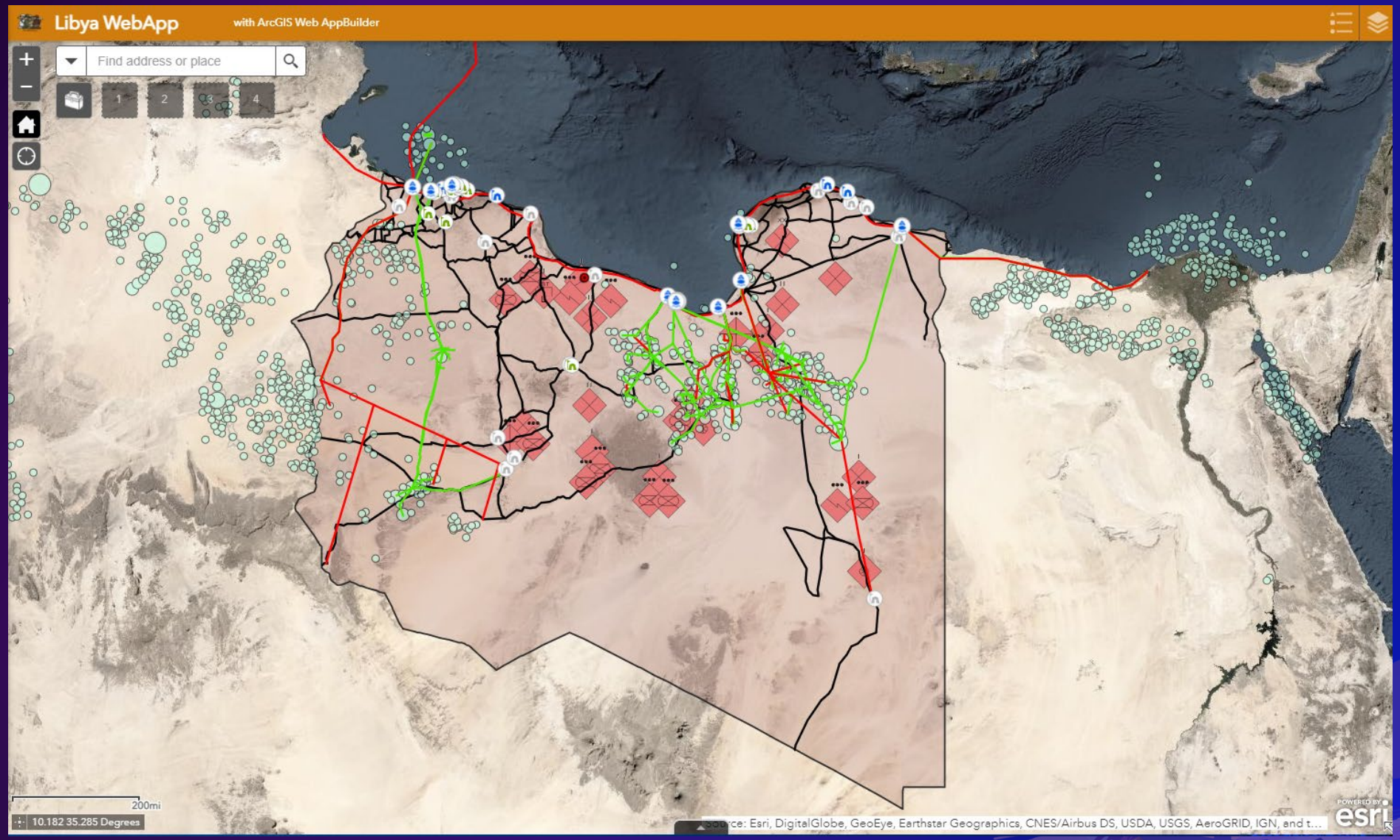
Policy Makers

GIS Serves/Supports all DoD Missions



Intelligence – Operations – Readiness

Integrating Intelligence for Product Creation

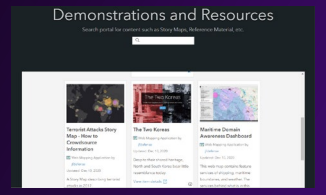


Integrating Intelligence for Product Creation

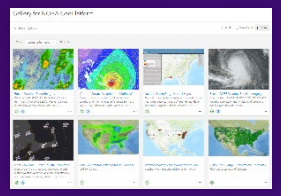
Source Materials

Geospatial Infrastructure

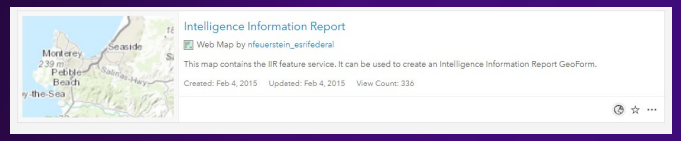
Sites



Gallery



Search



Data from Esri / Mission Partners

Basemaps

Data from ArcGIS Online

Living Atlas

Other GIS

Ingest Data

ArcGIS Pro

GeoEvent

GP Services

Python API

Data

Web Map

Apps

Dashboards

Mobile Apps

Templates

Web Apps

User Needs

Operational Awareness

Field Mobility

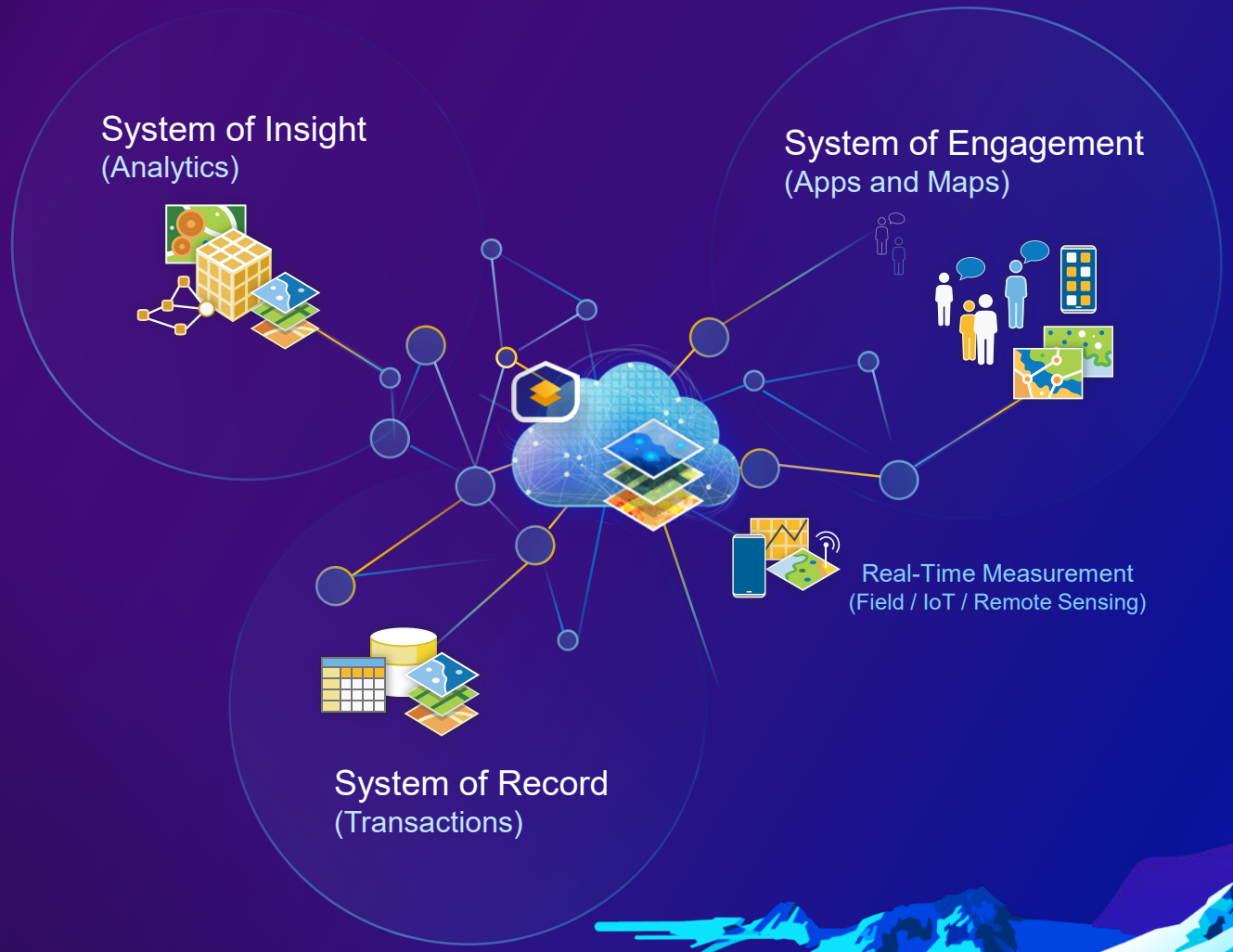
Command

Demos: Integrating Intelligence

Julia Bell
Chris Lee
Thomas Warner

ArcGIS

Supports Three Fundamental Systems



Geospatial Infrastructure Is Transforming Organizations

Integrating and Leveraging Many Technologies

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