



Mobile Asset Inventory and Inspection Including Integration with Asset Management Systems

Esri Transportation Practice



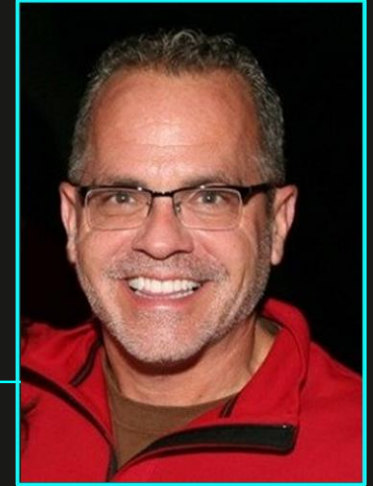
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Infrastructure Management & **20**
GIS Conference **20**

Today's Presenters

Jay Hagen, Senior Solution Engineer - Public Transit •



Michael Beavers, Senior Solution Engineer - Aviation •



Paul Giers, Solution Engineer - Highways •



Koya Brown, Solution Engineer - Asset Management •



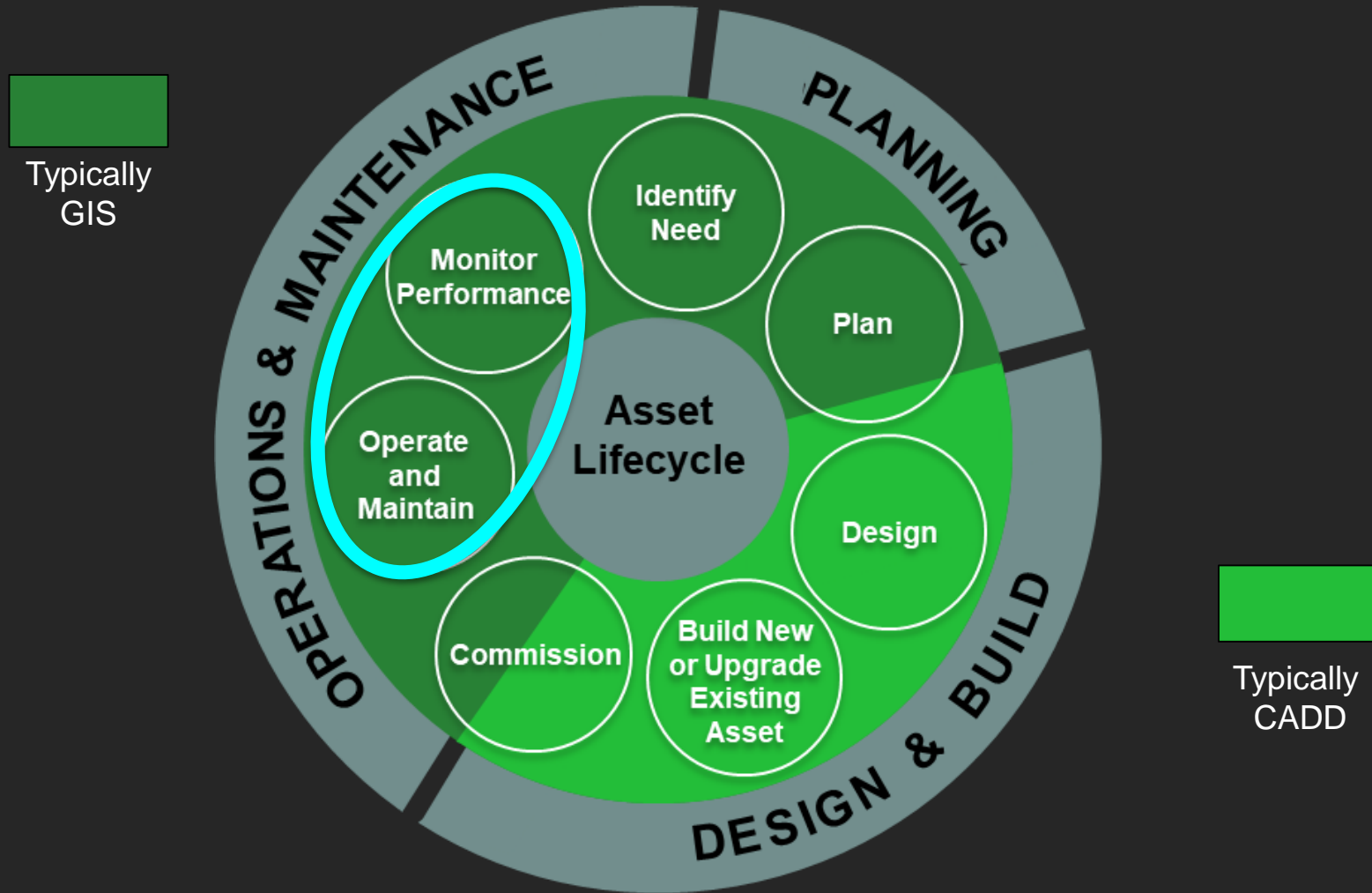
What to expect from this session

- **Overview: ArcGIS Mobile Applications and Field Workflows**
- **Demonstrations**
 - Night Inspections (ArcGIS QuickCapture)
 - Safety Remediation (ArcGIS Collector)
 - Airfield Inspections (ArcGIS Survey123)
 - Amenities Servicing (ArcGIS Tracker)
- **Integration with Asset Management Systems**
- **Deployment Options**
- **Wrap-Up**



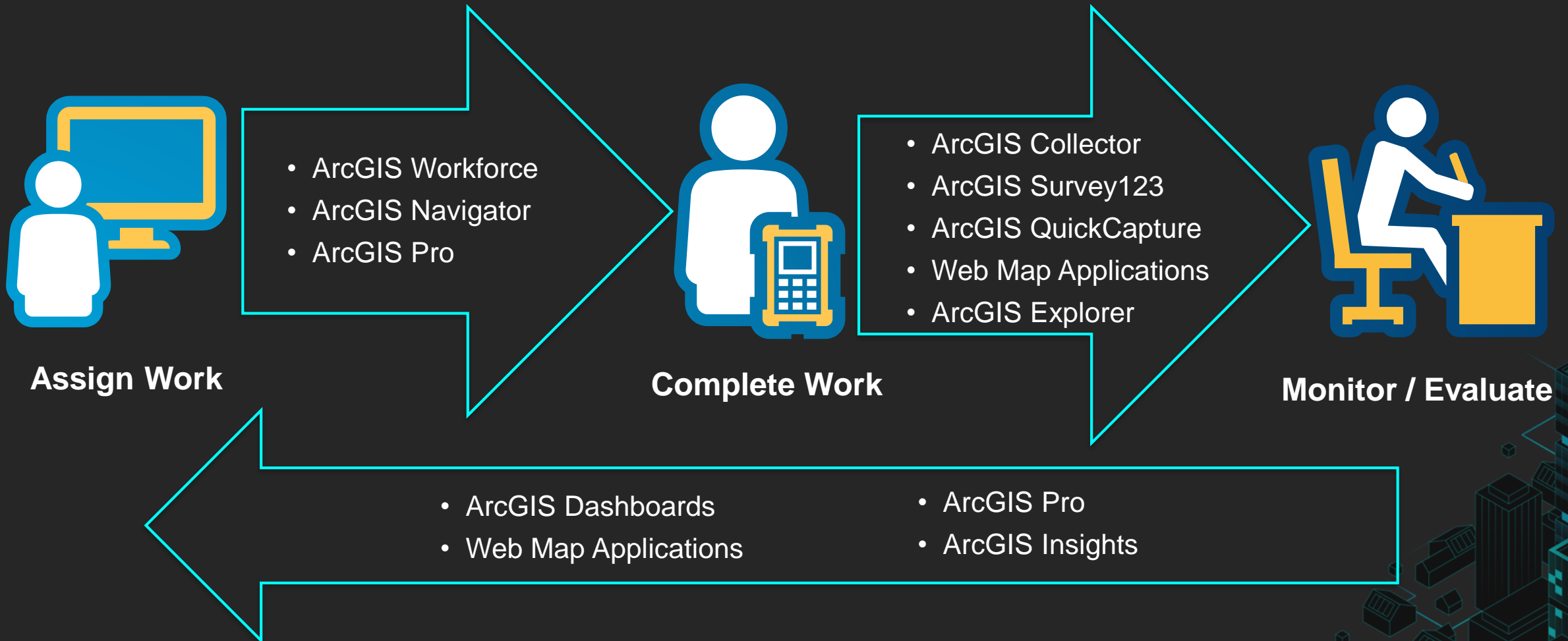
Asset Management Lifecycle

Moving asset location and descriptive data seamlessly with zero loss throughout its lifecycle



Field Data Collection/Update Workflow

Assign, Complete, Monitor



Night Inspections

Data Collection at Speed

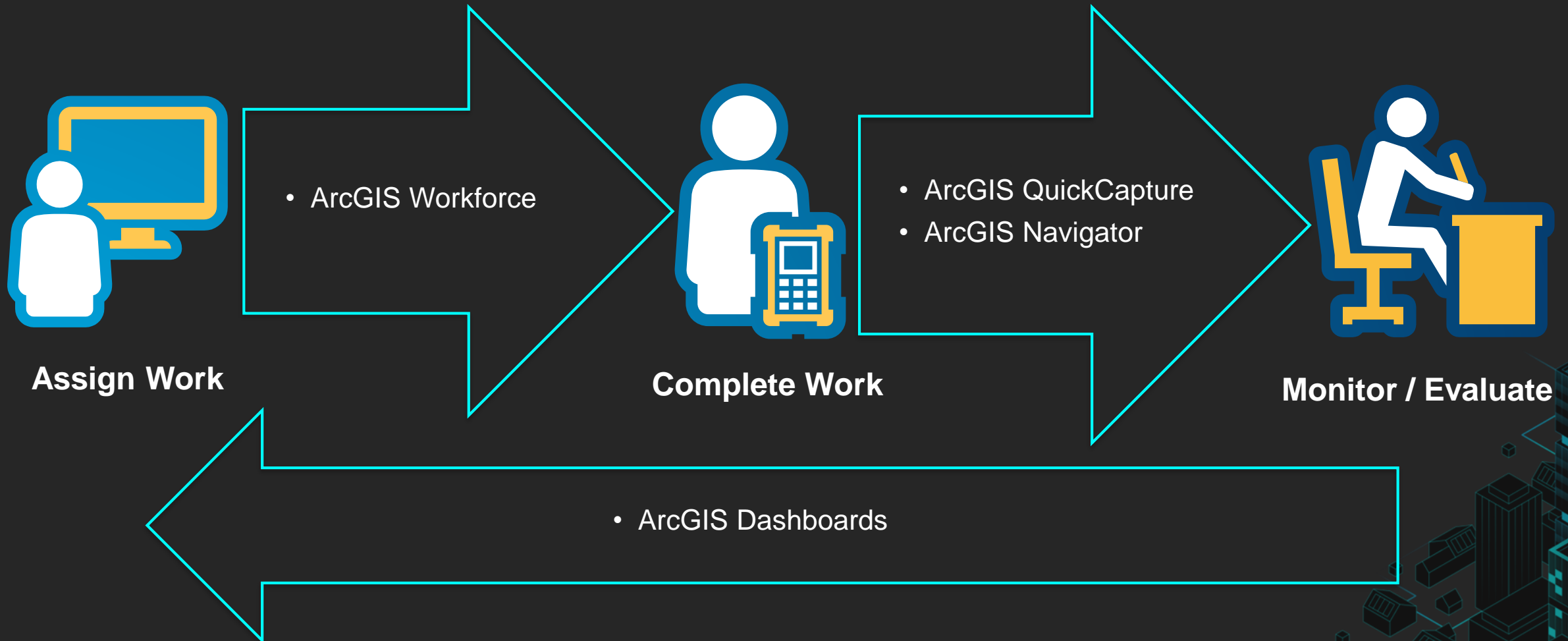
Paul Giers •



Demonstration

Field Data Collection/Update Workflow

Assign, Complete, Monitor



Safety Remediation

Utilizing Join Views

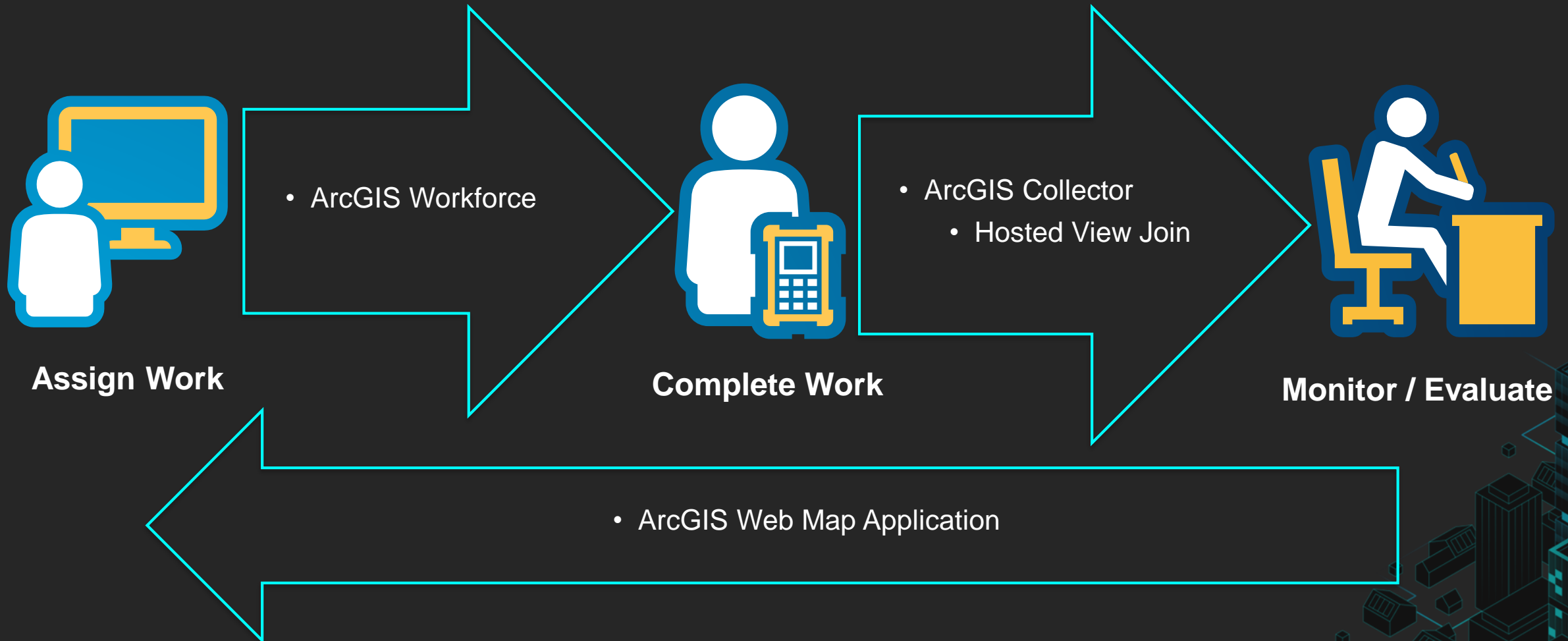
Jay Hagen •



Demonstration

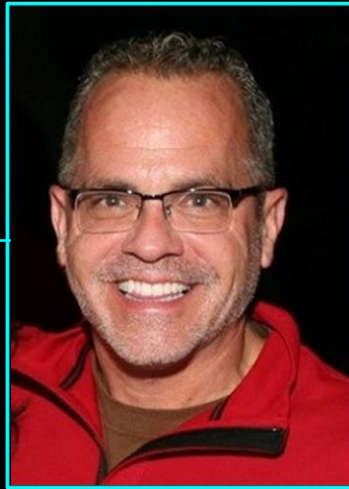
Field Data Collection/Update Workflow

Assign, Complete, Monitor



Airfield Inspections

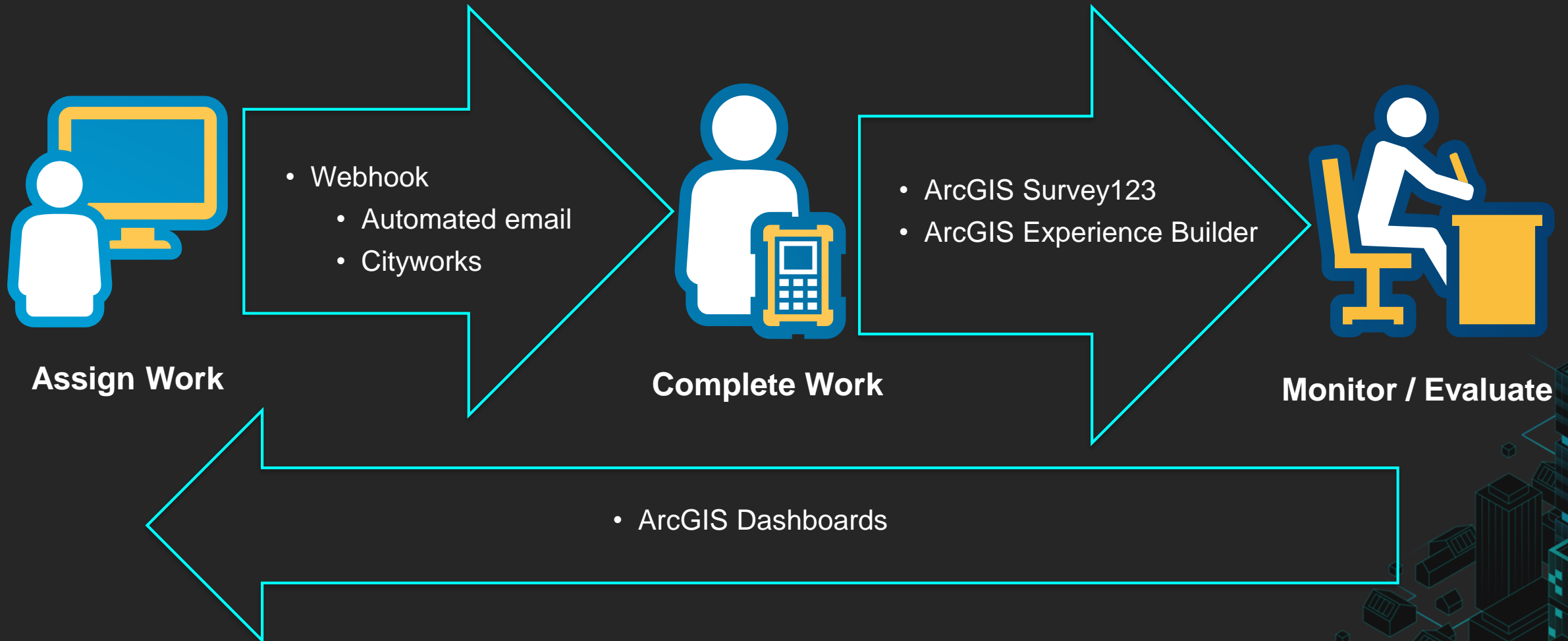
Michael Beavers •



Demonstration

Field Data Collection/Update Workflow

Assign, Complete, Monitor



Amenities Servicing

Jay Hagen •



Demonstration

Amenities Servicing Solution

Key Workflow Requirements

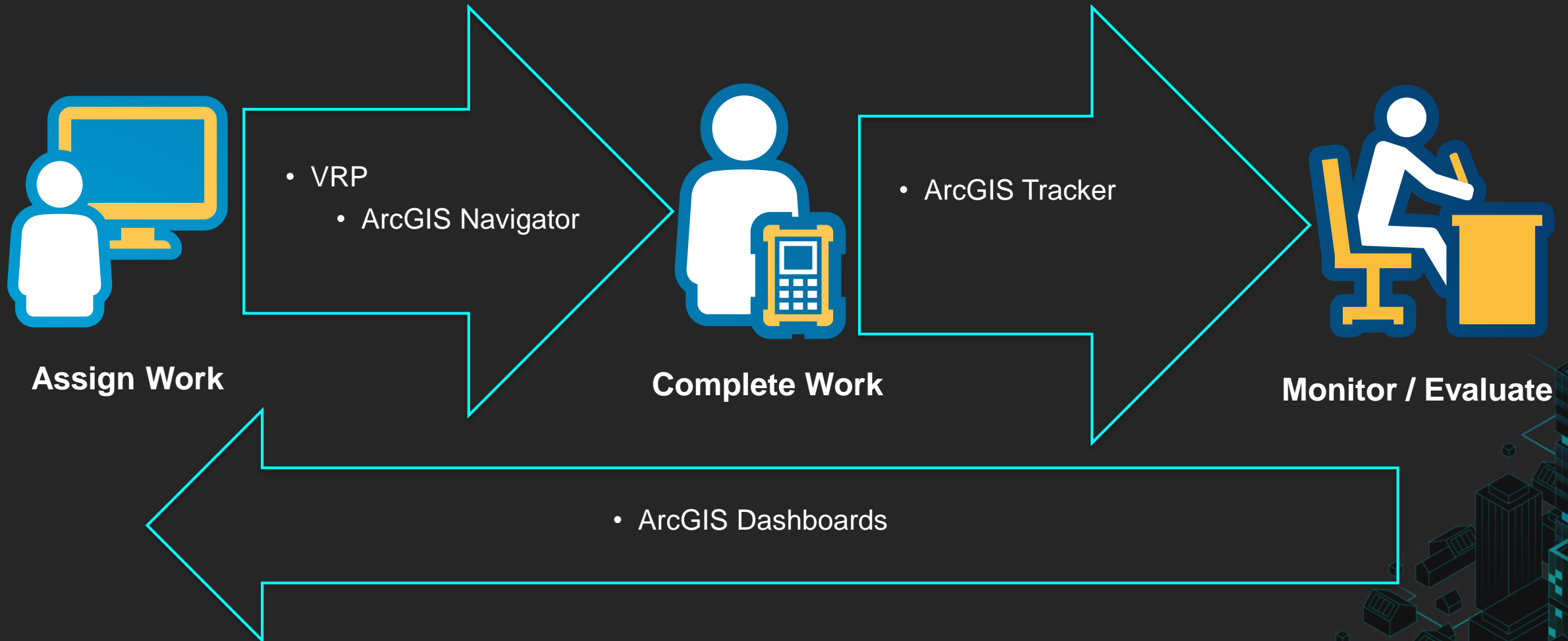
- Automated route assignments
- Minimize device use by field crews
- Track progress and metrics





Field Data Collection/Update Workflow

Assign, Complete, Monitor



Integration With Asset Management Systems

Koya Brown



Demonstration

Asset Management Integration

Koya Brown



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Best Practice

System of Systems



System of Systems Approach

Integrating with Esri GIS Platform?

- Use “System of Systems” approach or SOS
- Design = coexist within an ecosystem
- Function = System of Record for location data



Common Patterns

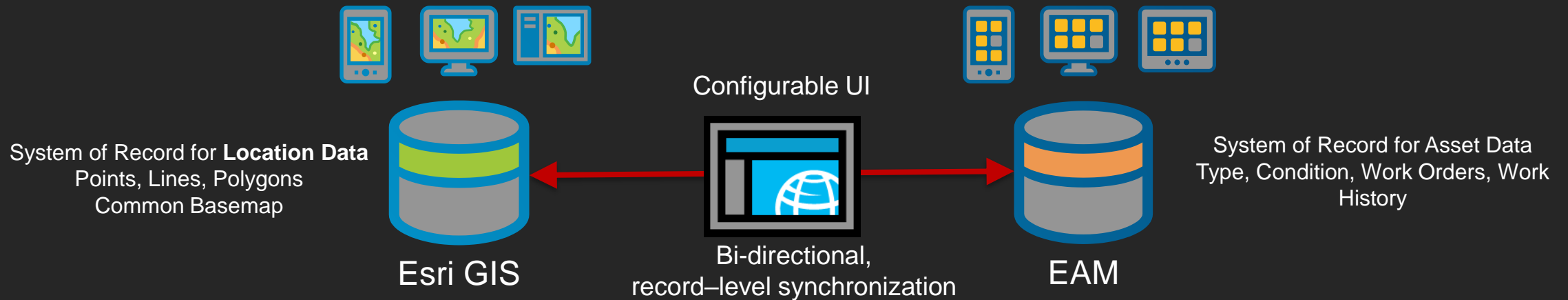
Esri-EAM integration



Pattern 1: Full synchronization

Examples: Maximo Spatial + CyberTec's Unity Tool (SAP)

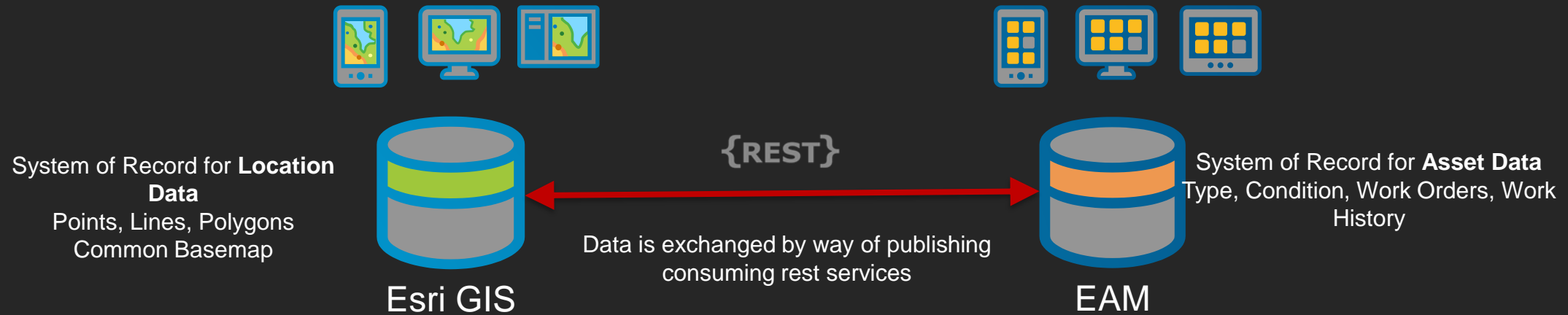
Uses configurable UI that provides full record level transactional integration



Pattern 2: Rest-Based Services Integration

Examples: IDS Asset Optimizer + SAM-IS has some elements

Both GIS and EAM systems publish and consume rest services.
There are not many that do this well.

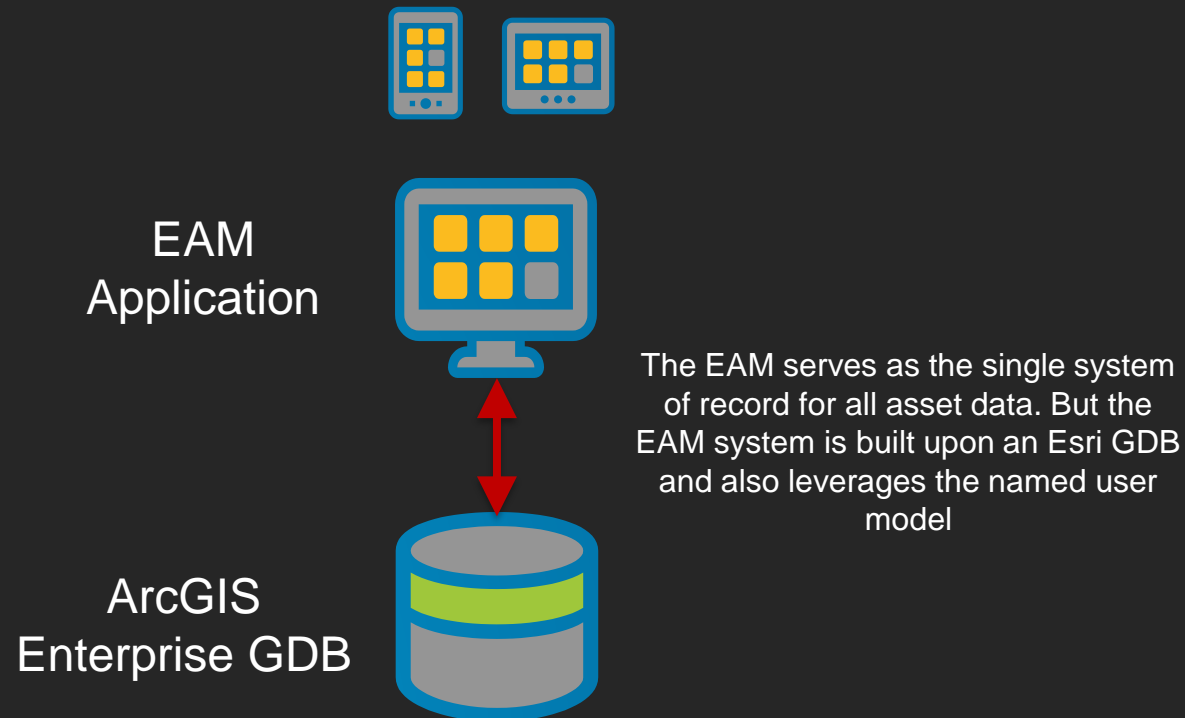


Pattern 3: ArcGIS Embedded in EAM

Examples: AgileAssets, SAM-IS + CityWorks

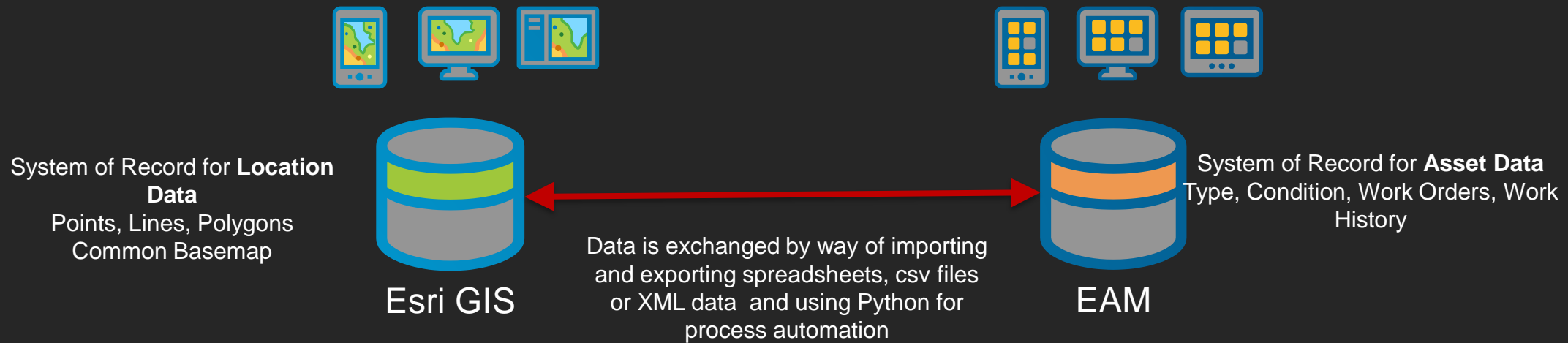
EAM system has directly embedded ArcGIS into their core offering

Application built on top of an ArcGIS GDB and leverages our named user model



Pattern 4: ETL or Data Exchange

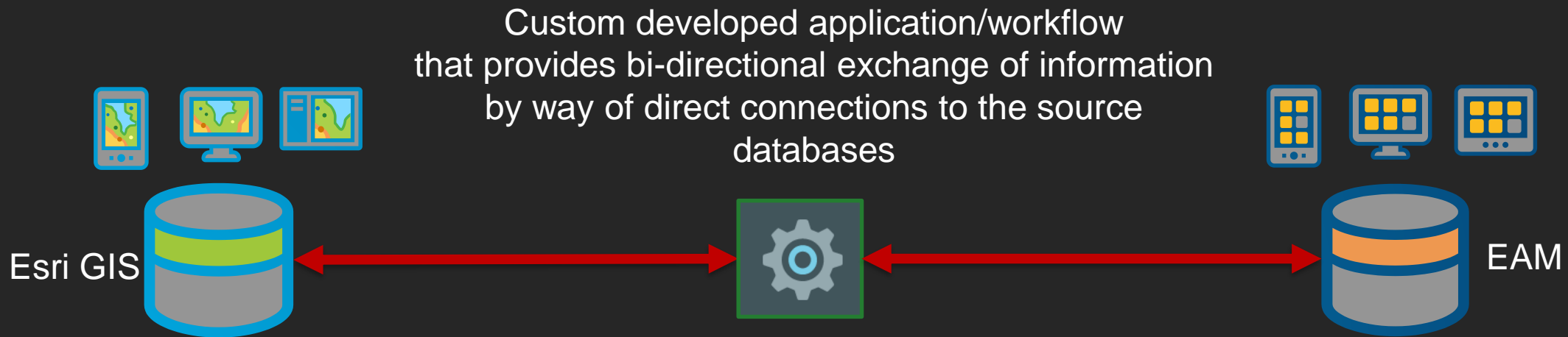
- Automated import/export functions to and from systems
- Common for EAM systems that have little or no mapping capabilities
- Rigorous adherence to maintaining the parent asset linkage



...sort of aligns to Pattern 4

Develop a fully custom application that is hard-wired directly to the EAM database

Output = combination of EAM data and GIS data, delivered as GIS data



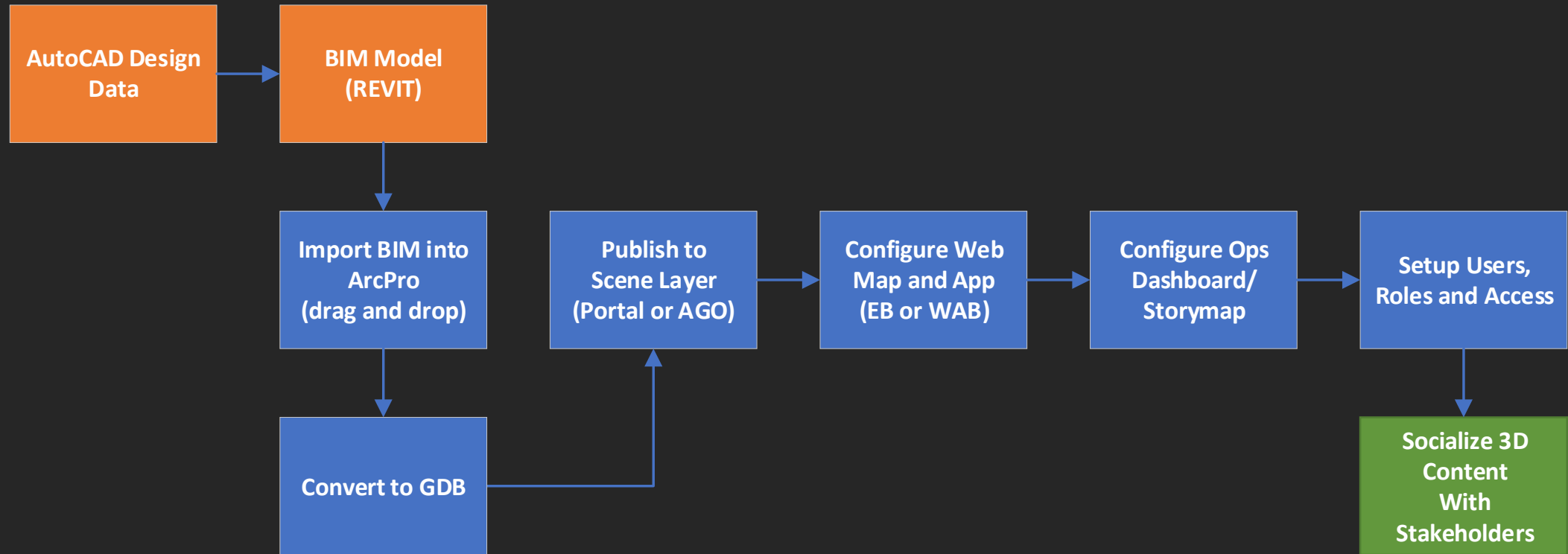
Manage Indoor Assets

Authoritative building models



GIS Integration with CAD-BIM

Authoritative Building Models



Esri-EAM Demo

Pattern #3 ArcGIS embedded in EAM



Deployment Options

Use these tools to work with your assets today

- **Configure first**
- **ArcGIS Solutions**
- **Technical Support**
- **Professional Services / Partner Implementation**



Summary

Supporting the Asset Management Lifecycle





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THE
SCIENCE
OF
WHERE