

Federal GIS Conference 2014

February 10–11, 2014 | Washington DC



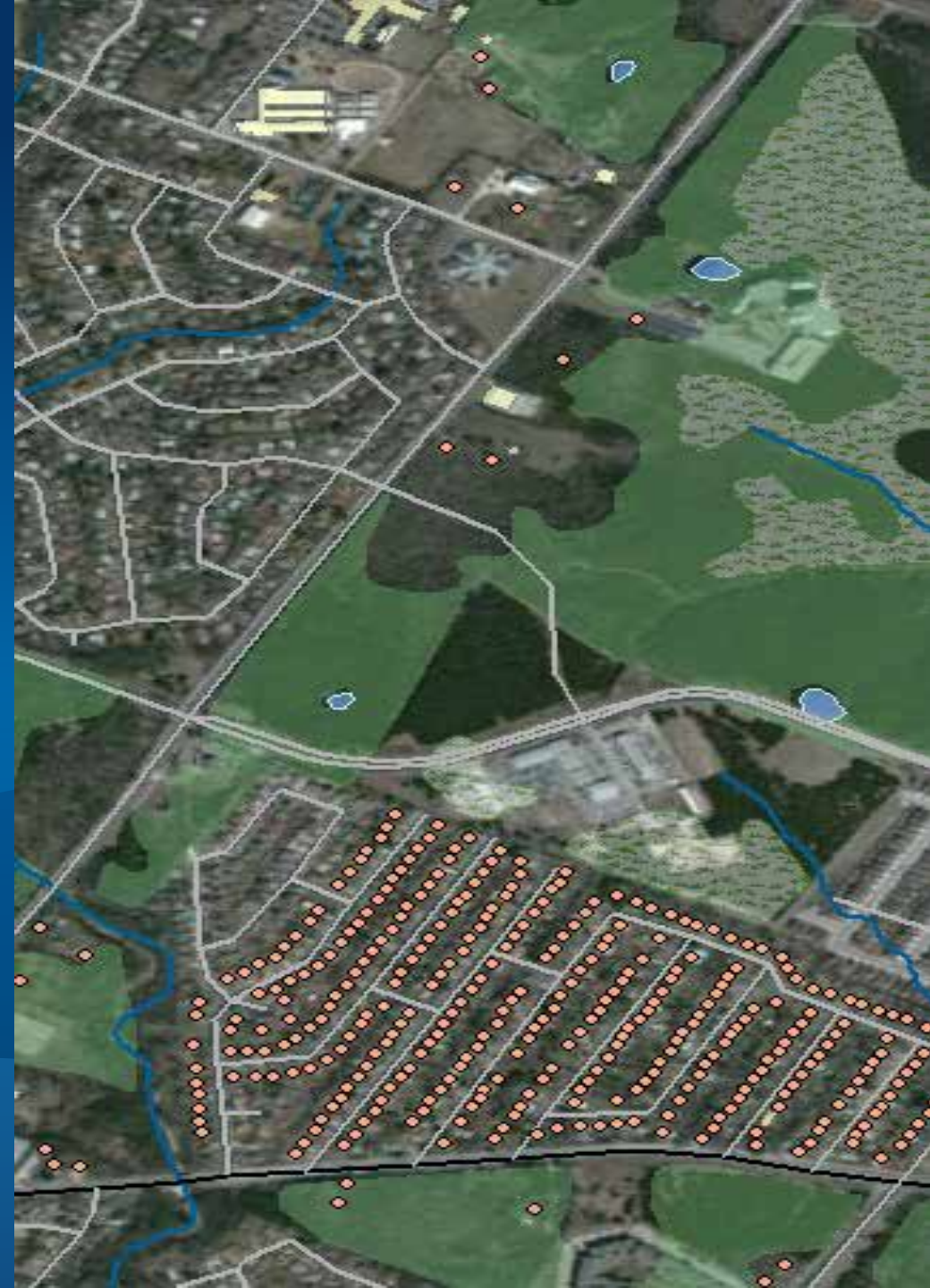
Producing GEOINT with Esri Defense Mapping

Heather Murnane & Brian Demers

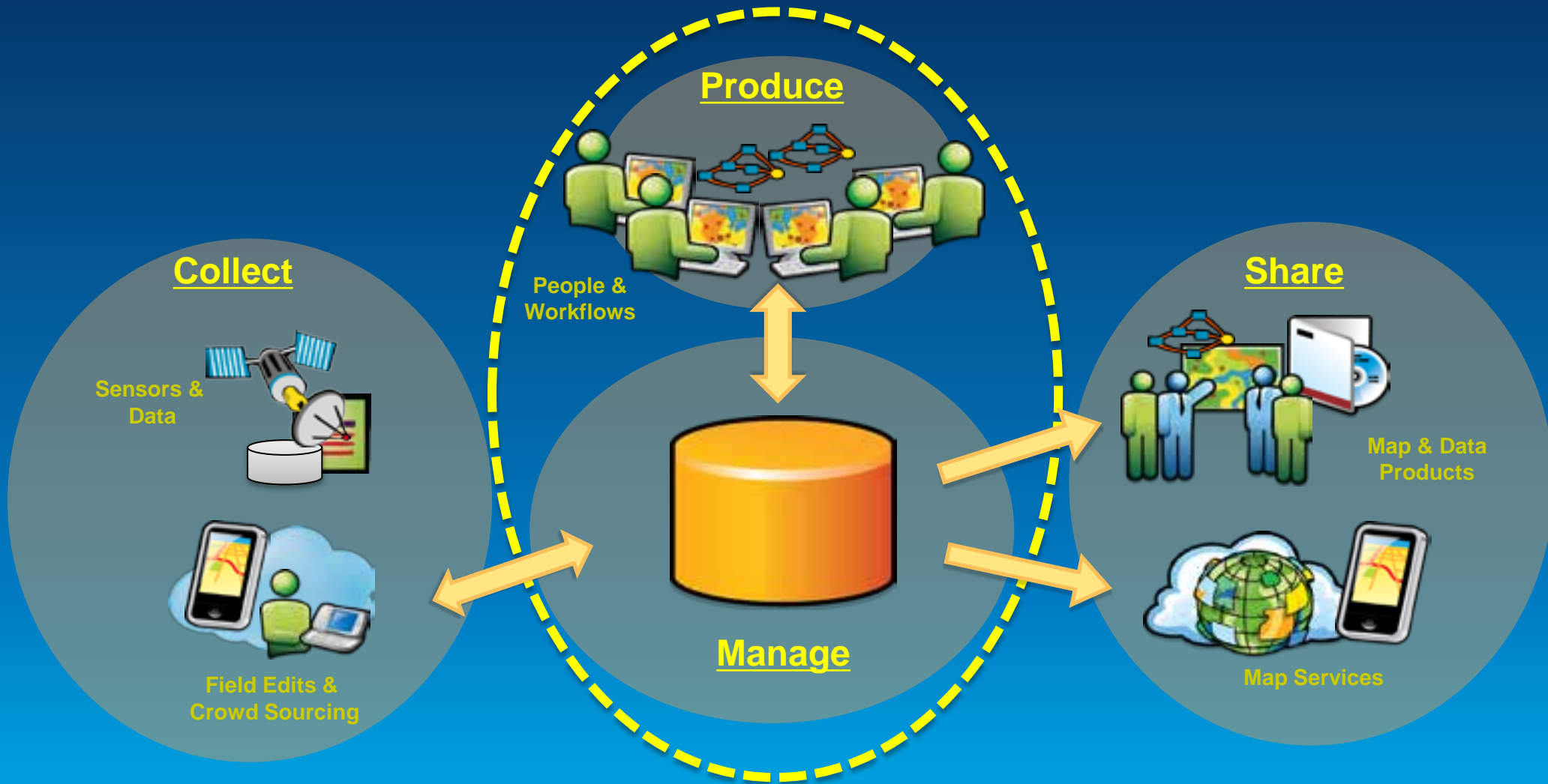
Presentation Agenda

- Introduction
- Manage production
- Feature extraction
- Maintain data quality
- Cartographic production

Introduction



Enterprise Data Production



... Real Time Data Management

Esri Defense Mapping Components

Desktop Products

**Esri Defense
Mapping
Solution**

Esri Production Mapping

Editing

Cartography

Product Library

Extensions

ArcGIS Data Reviewer
Desktop

ArcGIS Workflow Manager
Desktop

Server Products

ArcGIS Data Reviewer Server

ArcGIS Workflow Manager Server

Esri Defense Mapping

- **Designed to meet the standards set by defense community**
 - Create high quality authoritative databases and cartographic products
- **Effectively manage production in the enterprise**
- **Ready to use templates**
 - Extract features to a specification
 - Ensure quality standards
 - Create maps, symbology, and cartographic data
- **Continuously evolving to meet defense community needs**

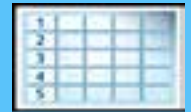
Esri Defense Mapping Support Files

- **Supported Products**

- TDS
- MGCP
- ICM
- TGD
- VITD
- GIFD
- VMAP1 & 2
- UVMAP
- Geofidelis
- Geonames

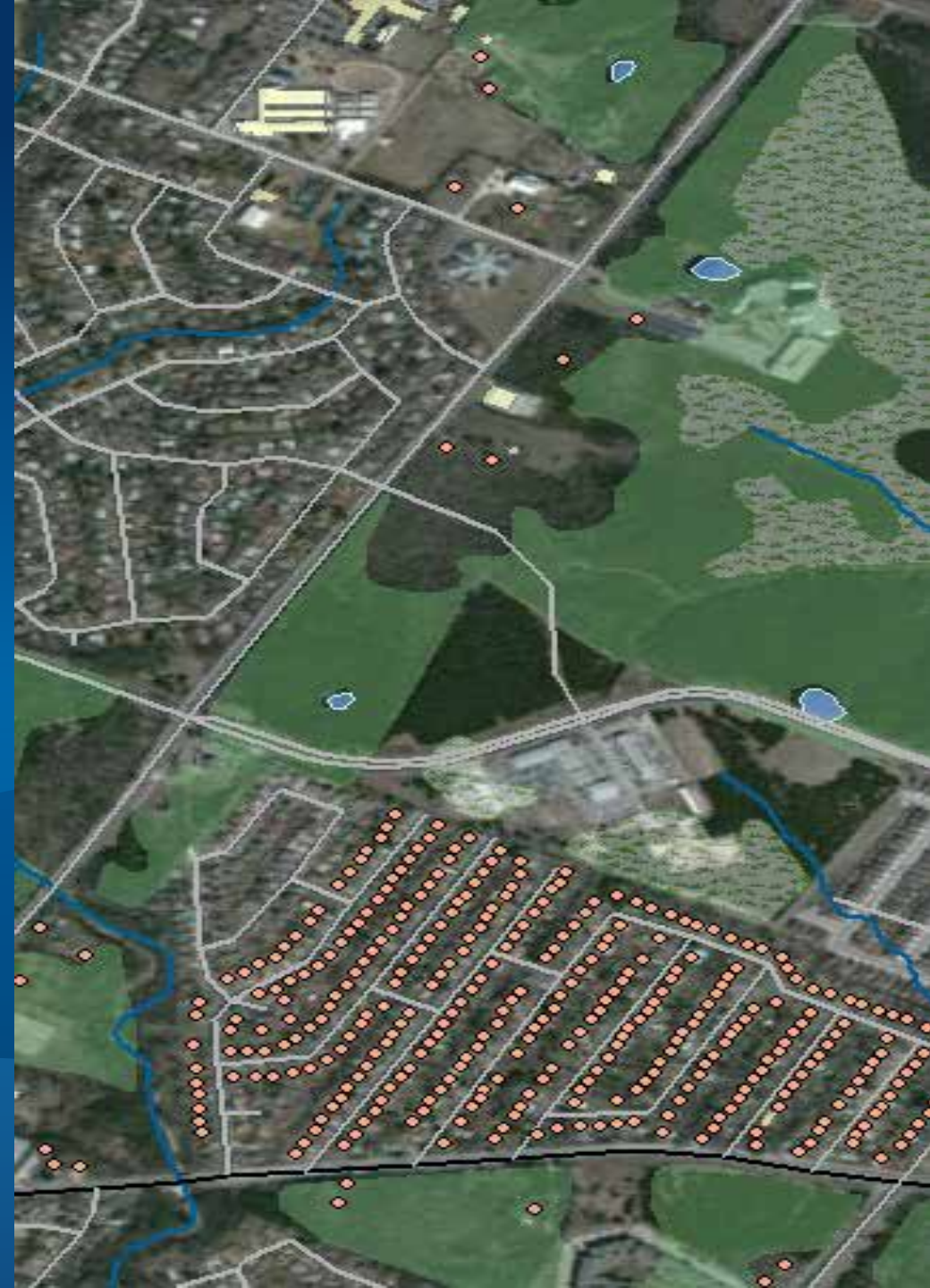
- **Templates Provided**

- Gedatabase schema
- Topologies
- Mapping files
 - Data conversion
- Reviewer Batch Jobs
- Grid Definition
- Map Templates
- Symbology (VST)
- Workflows
- Product Libraries



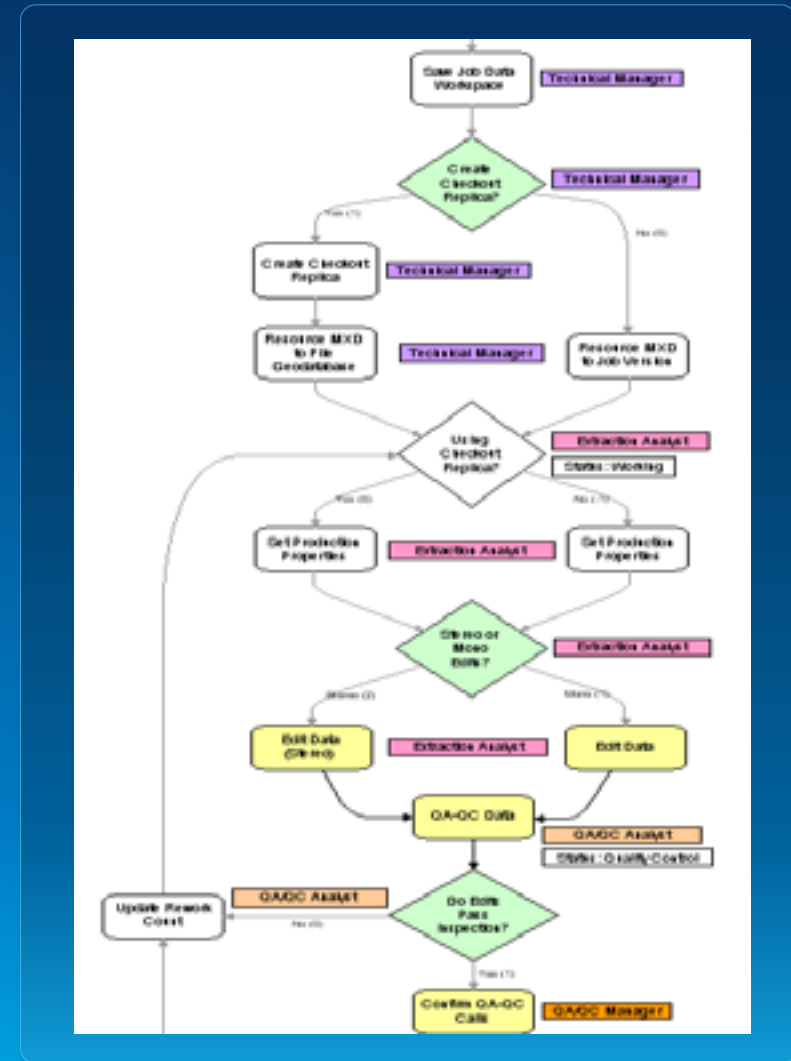
Workflow-driven Systems

Manage Production



Production Management

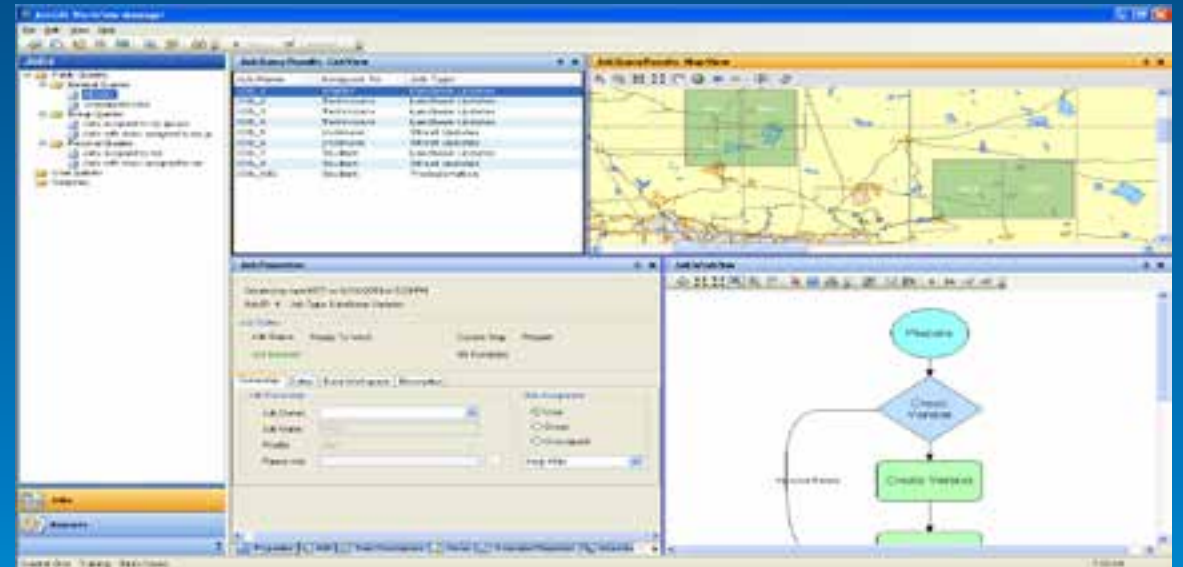
- Productivity
 - Preconfigured and repeatable processes
 - Simplification and automation
- Quality
 - Built-in QC procedures
 - QA/QC process enforcement
 - Accountability
- Rapid dissemination



Tools for Managing Production

Workflow Manager

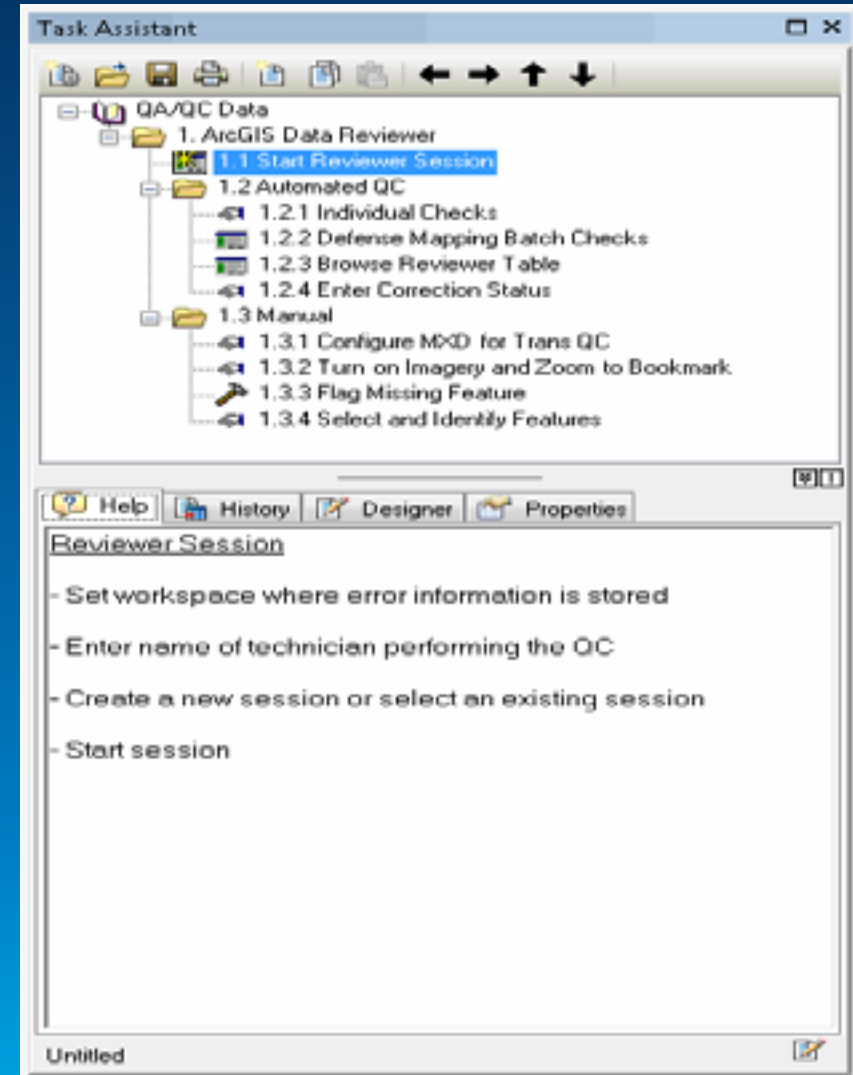
- **Workflow Manager Desktop Application**
 - Execute workflows
 - Tracks progress
 - Support job reassignment as necessary
 - Designed to prevent conflicts between jobs
 - Defense workflow templates
 - Support TDS & MGCP production for contractor/co-producer



Tools for Managing Production

Task Assistant Manager

- Create and Standardize workflows in ArcMap
- Promotes sharing of knowledge
 - Experienced users create workflows
 - Less experienced users execute
 - Communicate best practices
- Provides consistency and efficiency
- Delivered with workflows (TDS)



Tools for Managing Production

Production Manager

- **Production Manager for Esri Defense Mapping**
 - Web management dashboard
 - Graphical view of job information and data currency
 - Detailed views of job information
 - Job status and percent complete
 - Create new production jobs



Demo

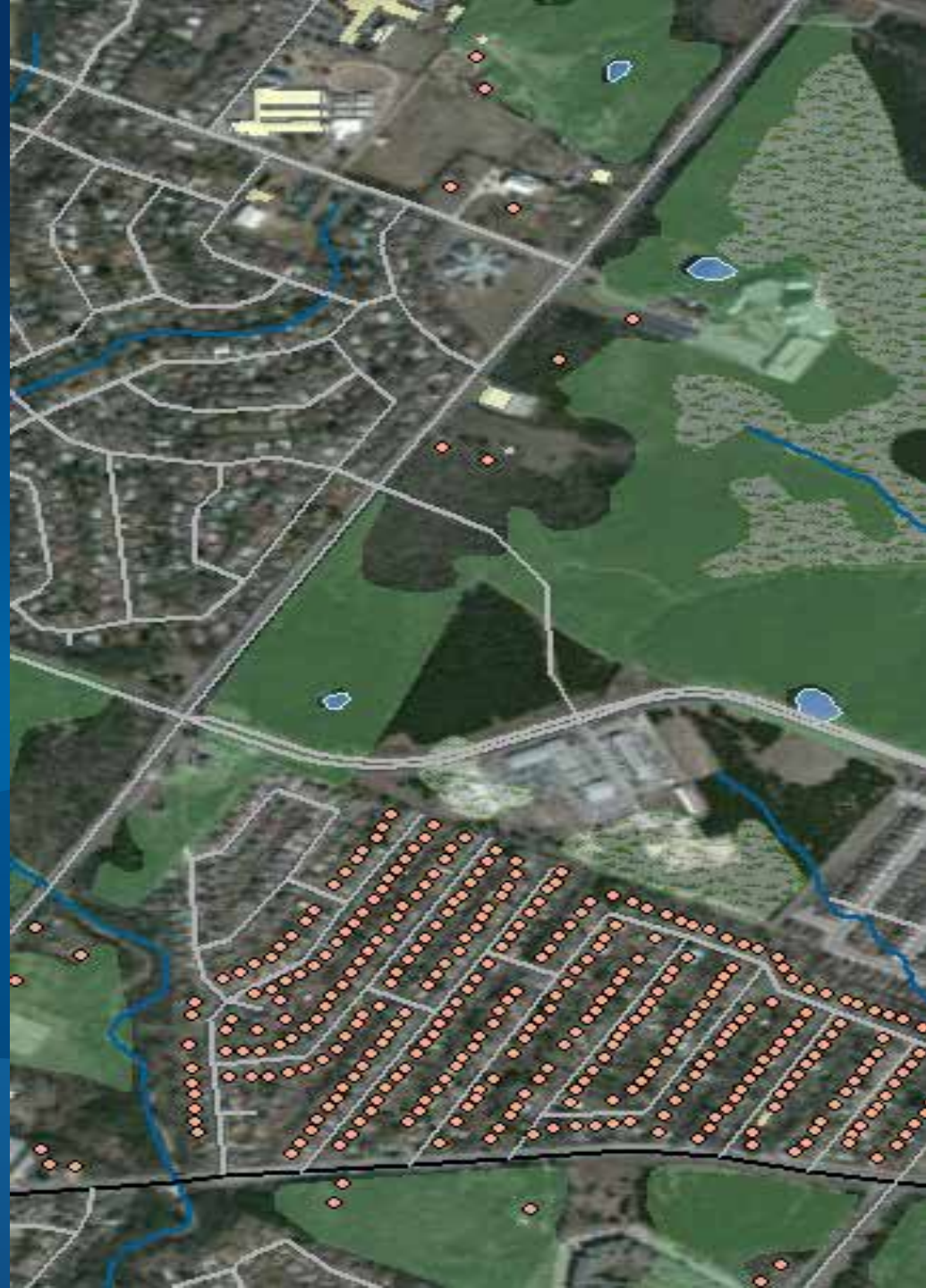
Production Management

Brian Demers



Enhanced Editing Tools

Feature Extraction



Defense Mapping editing tools

- **Designed to meet data requirements**
 - Creating features
 - Batch update attributes
- **MGCP production**
 - Ensure 100% land cover
 - Show extraction guide when creating features
 - Create compliant MGCP shapefiles



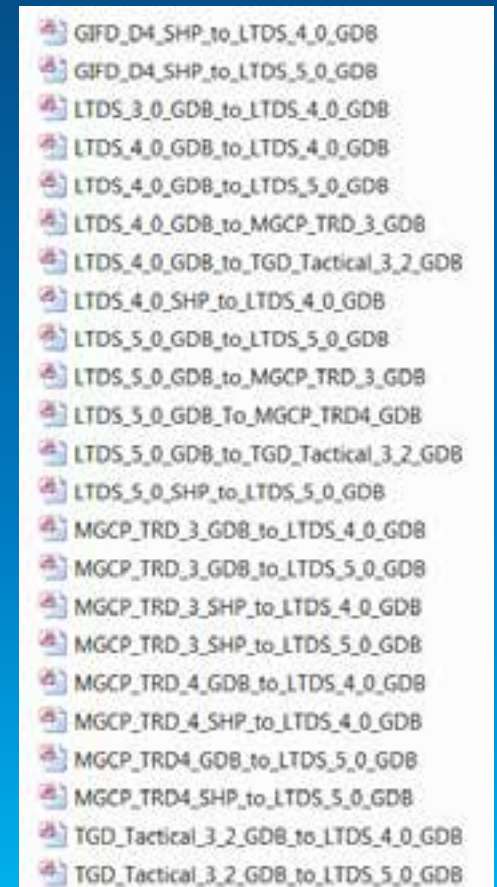
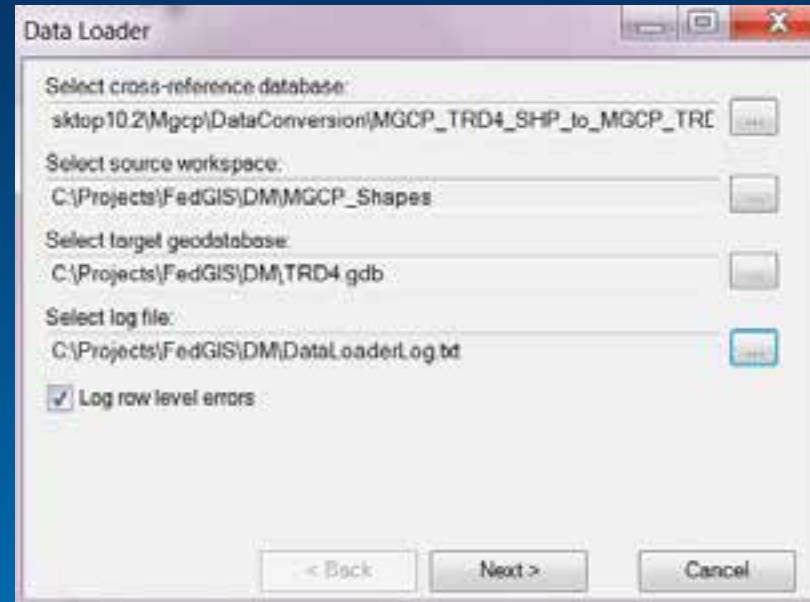
Data Loader

Scenario:

- Data delivered from a contractor or co-producer
 - Data routinely loaded
- Migrate data from one schema to another schema

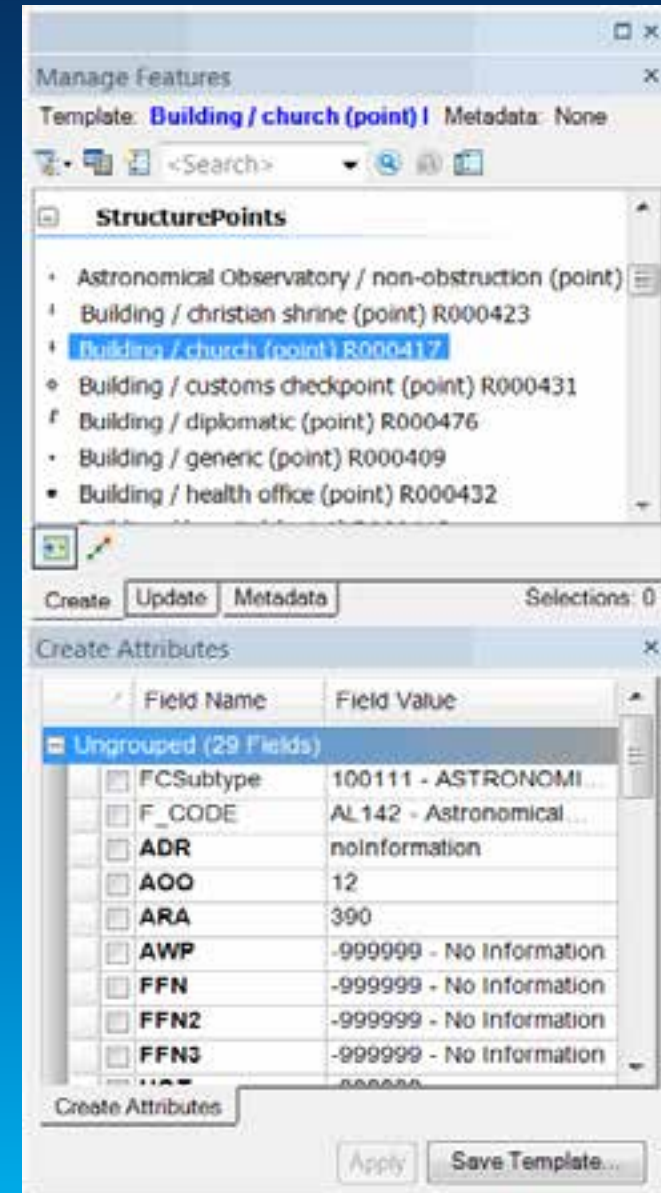
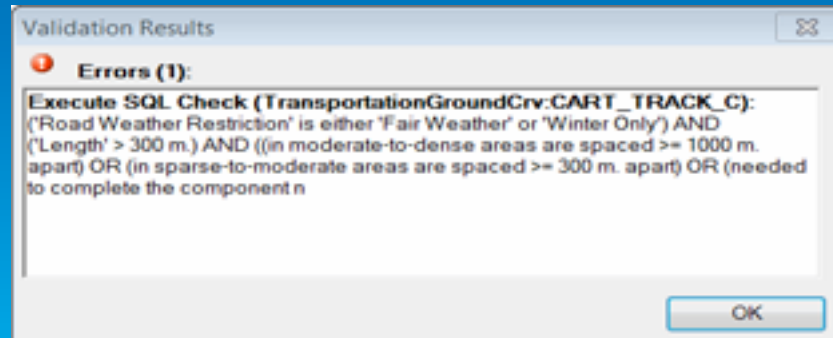
Components:

- Identifies how features from source are loaded into target
- Reusable:
 - Included in Defense Mapping install
 - Consistent data loading



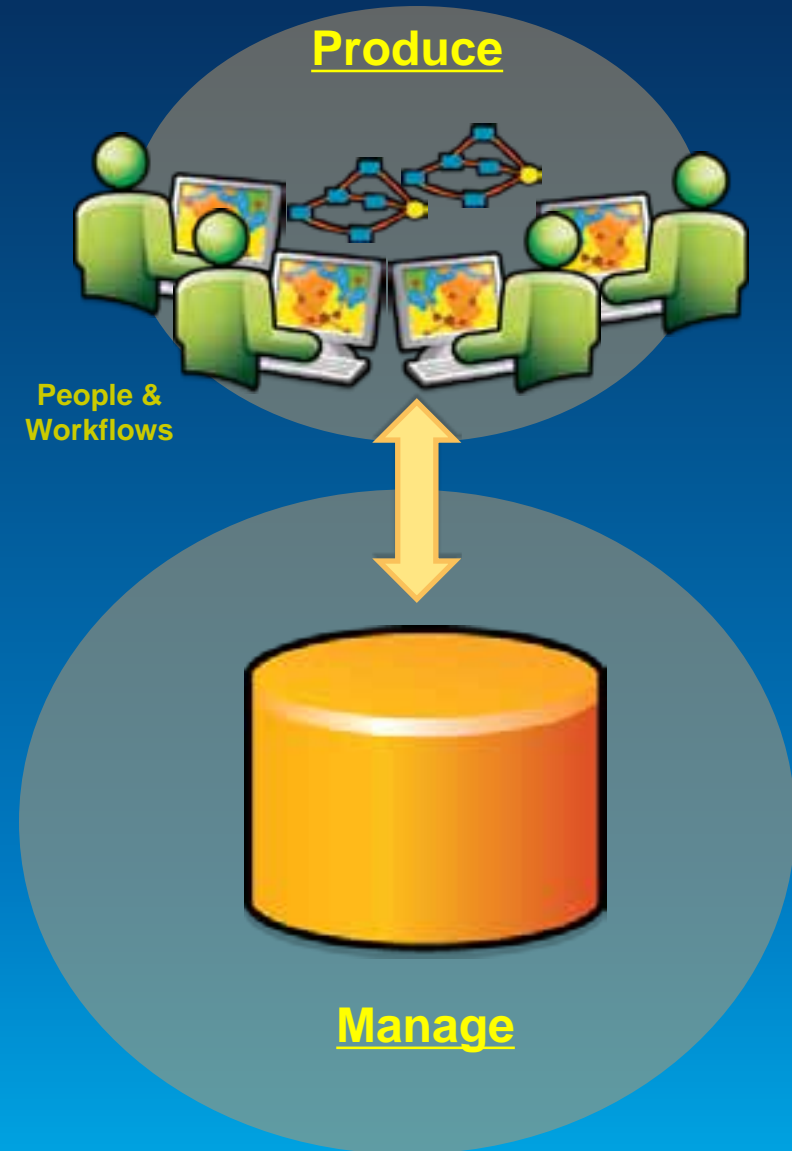
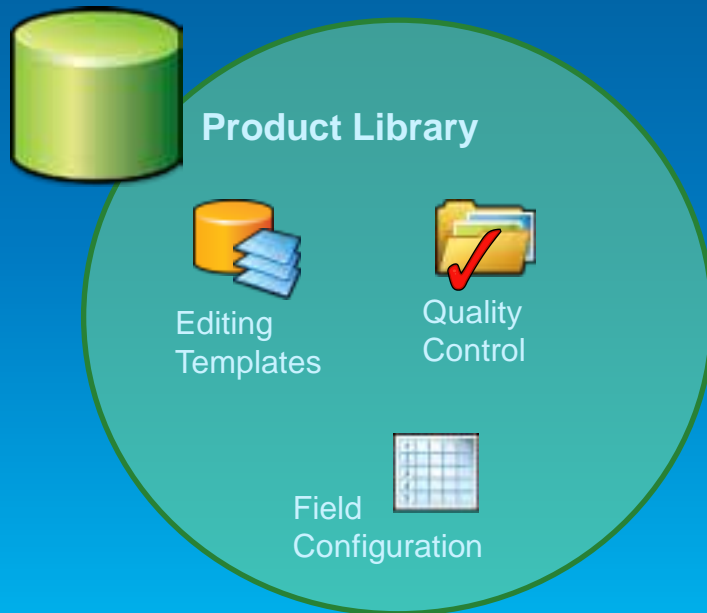
Increase Editing Efficiency and Quality

- Editing templates
 - Pre-defined attributes
- Quality control templates
 - Find errors while editing
 - Attribute and geometry
- Field Configuration templates
 - Display only relevant attributes



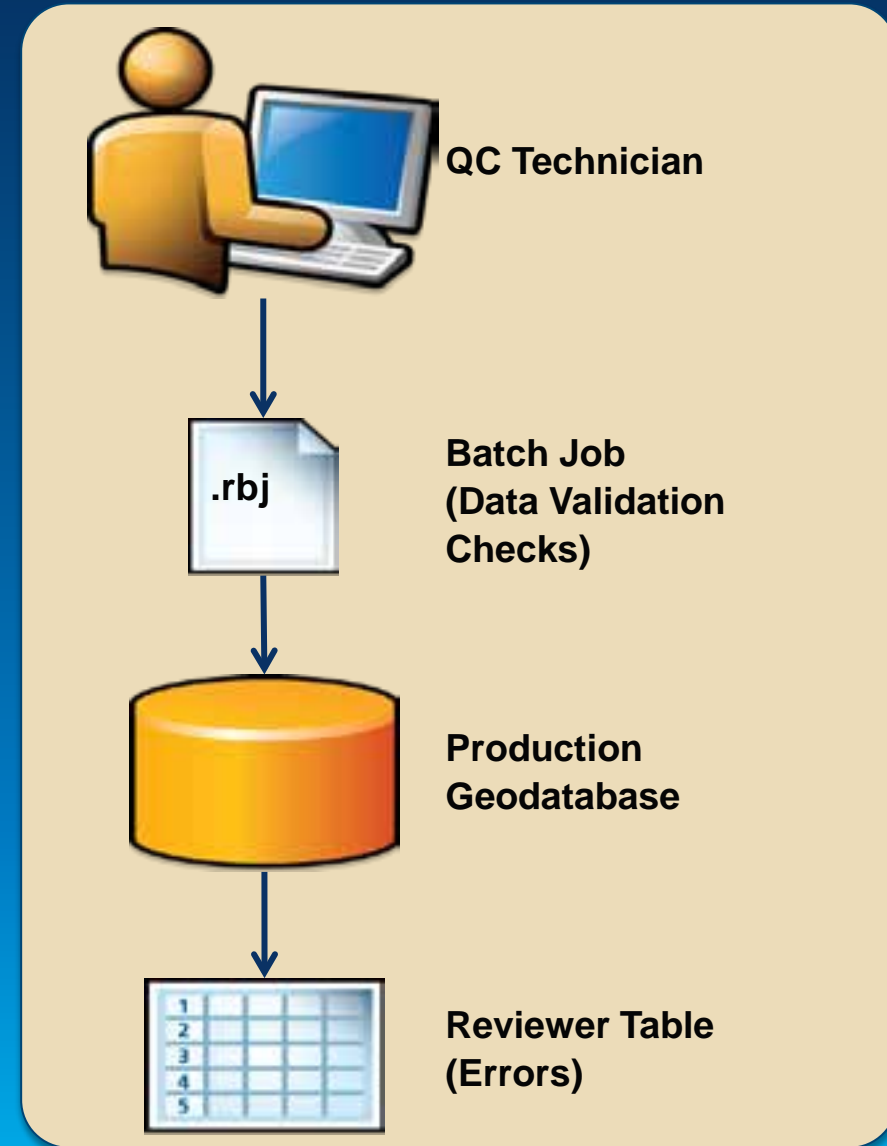
Product Library

- Distribute templates
- Common editing experience
- Extract data to specification
- Provided for supported databases



Quality Control Templates

- ArcGIS Data Reviewer
- Automated & Visual Review
- Batch Jobs
 - Available for supported data models
 - Easily distributed
- Errors centrally managed and tracked
- Run GAIT from ArcMap
 - Store errors in Reviewer table
- ArcGIS Data Reviewer for Server



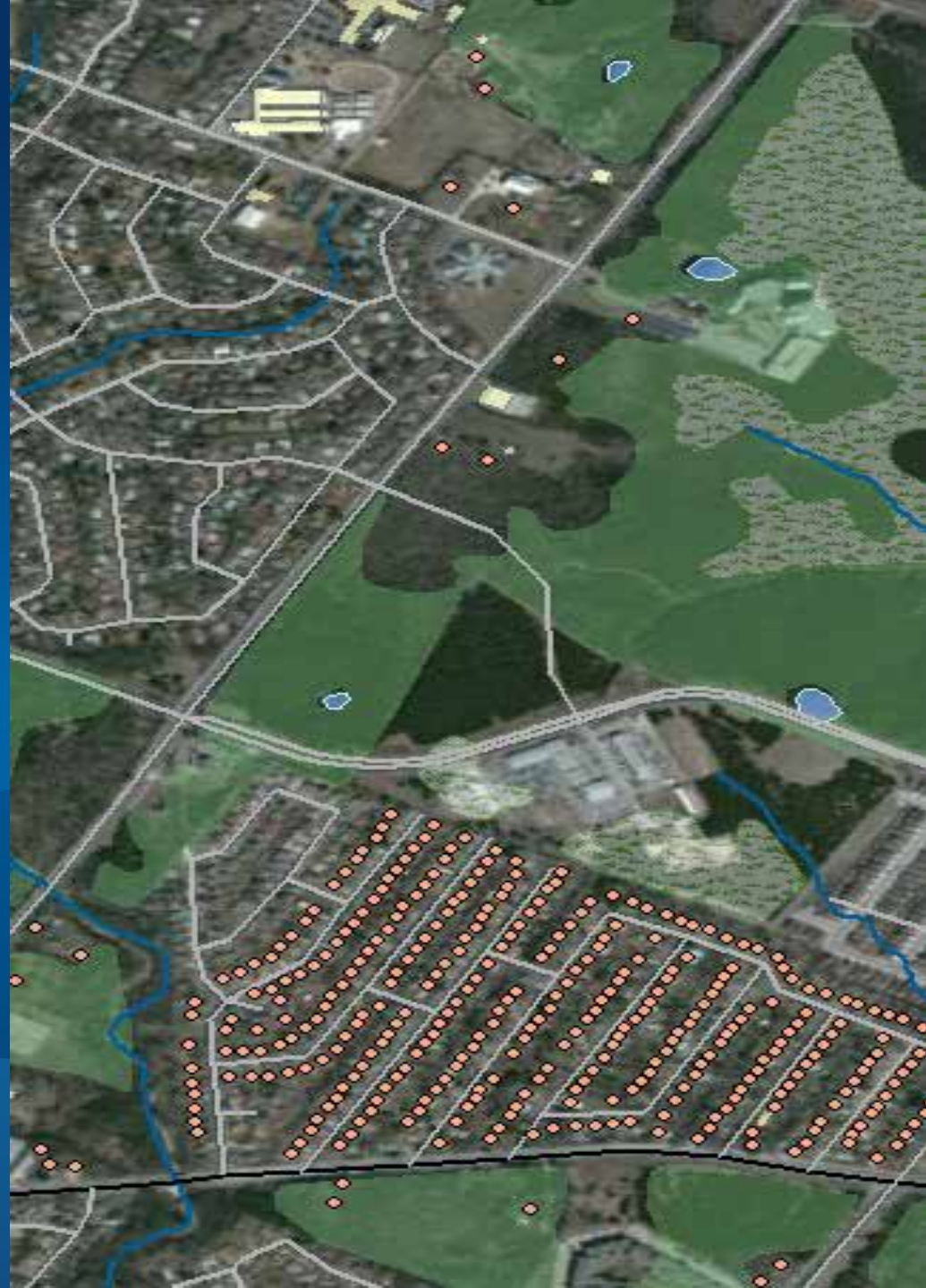
Demo

Feature Extraction & Quality Control



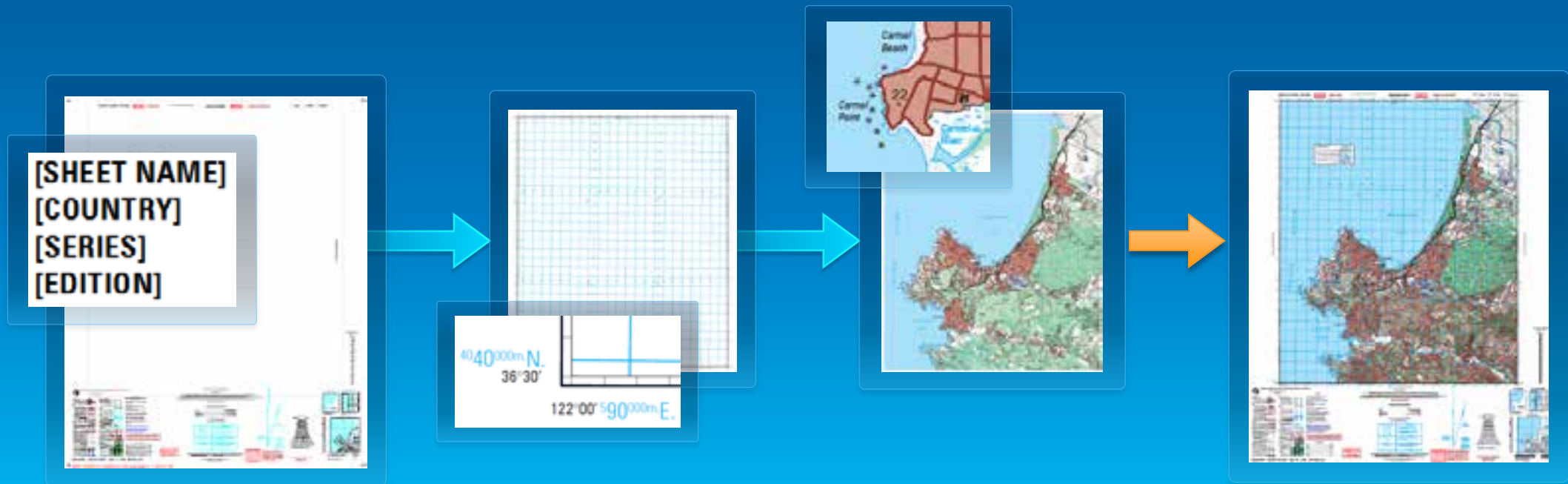
Workflow-driven Systems

Cartographic Production



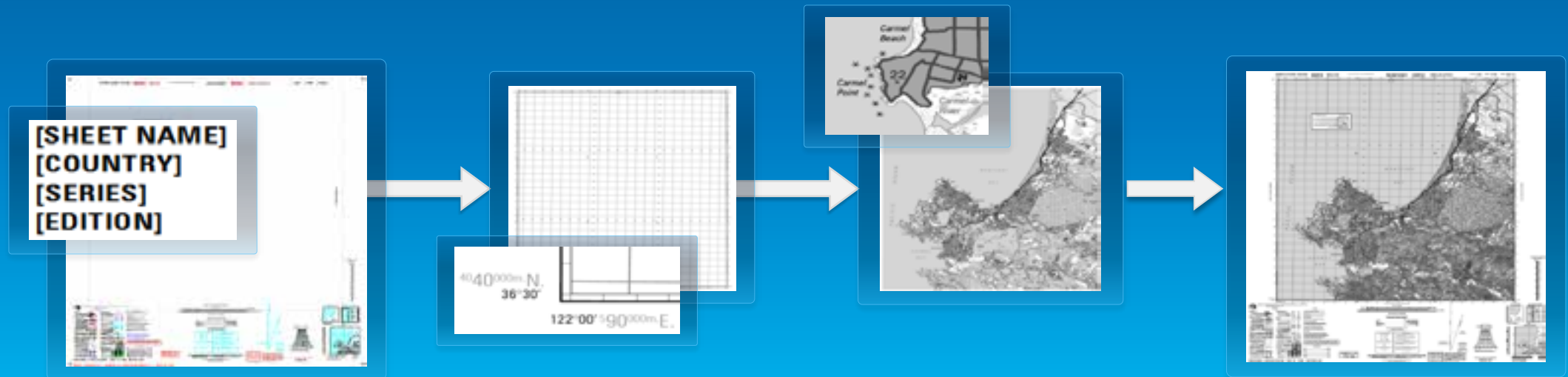
Cartography Workflow

- Defense Mapping templates for cartographic workflow :
 - Prepare Map Template
 - Edit Map Sheet Surround
 - Edit Cartographic Data
 - Export Map Sheet



Prepare Map Templates and Populate Surrounds

- Map templates built to specification
 - MDG, TLM, LDG
- Surround element templates (geoprocessing tool)
 - Populate sheet name, country, series, etc.
 - Elevation guide box
 - Meter Reference Guide

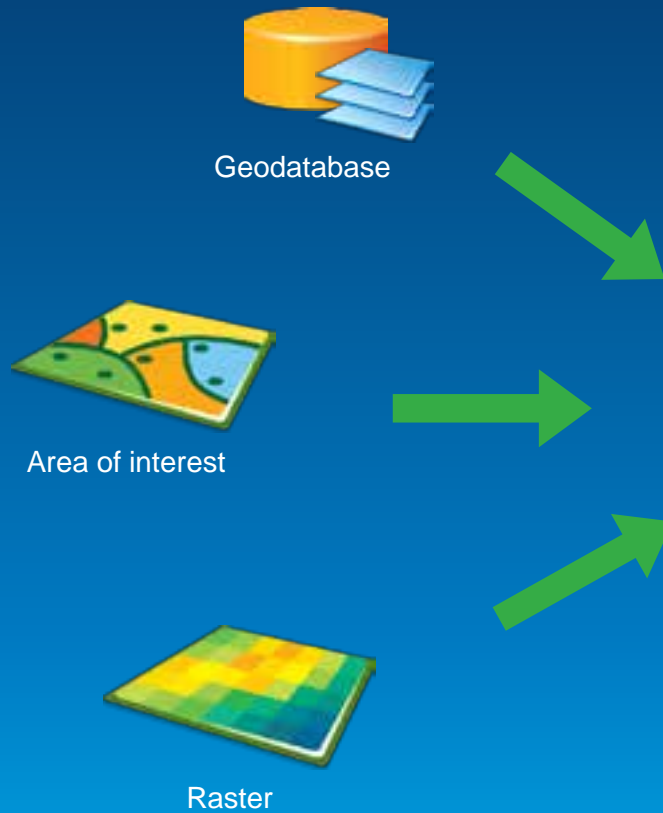


Edit Cartographic Data

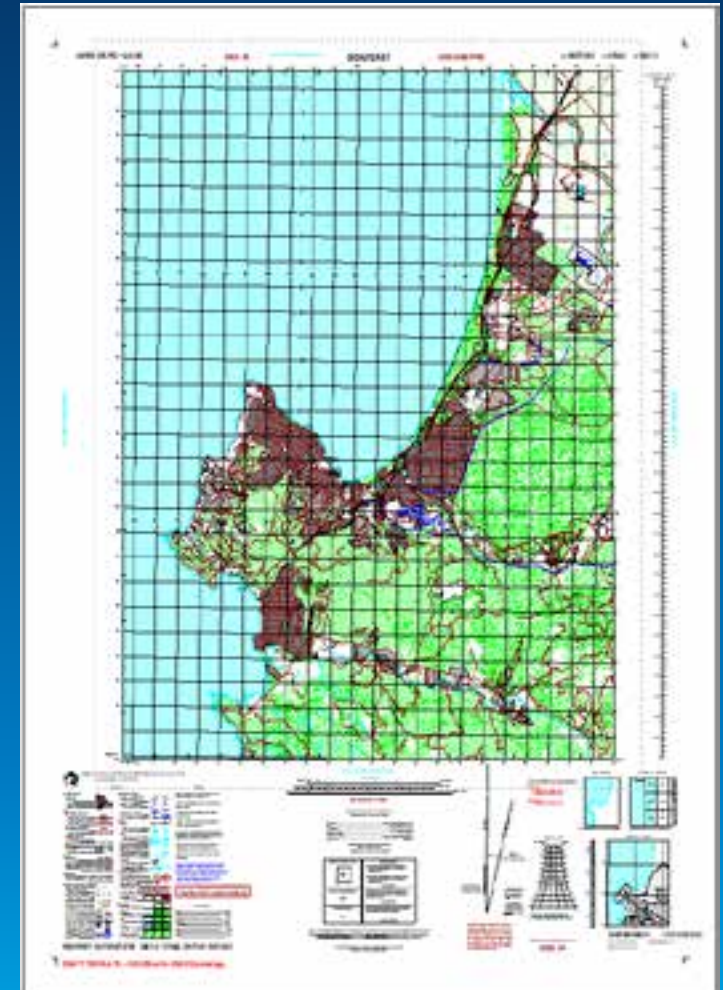
- Defense reference grid XMLs
 - Built to specification
 - Reuse on multiple maps
- Symbology tables
 - Visual Specifications (VST)



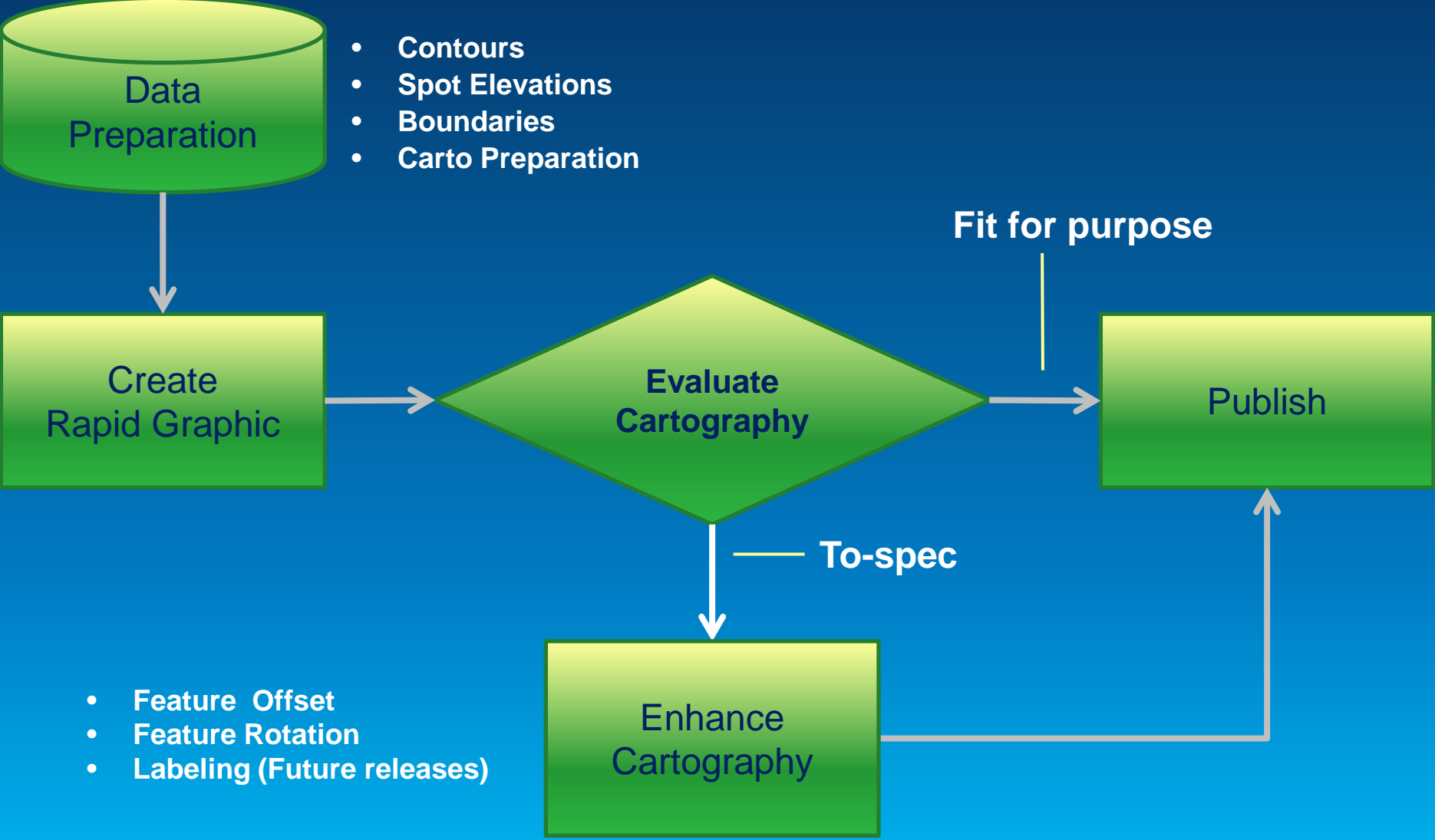
Rapid Graphic



- MRG50_MGCP
- MRG100_MGCP
- MRG50_TLM
- MRG100_TLM
- LRG50 (NSG LTDS)
- LRG100 (NSG LTDS)



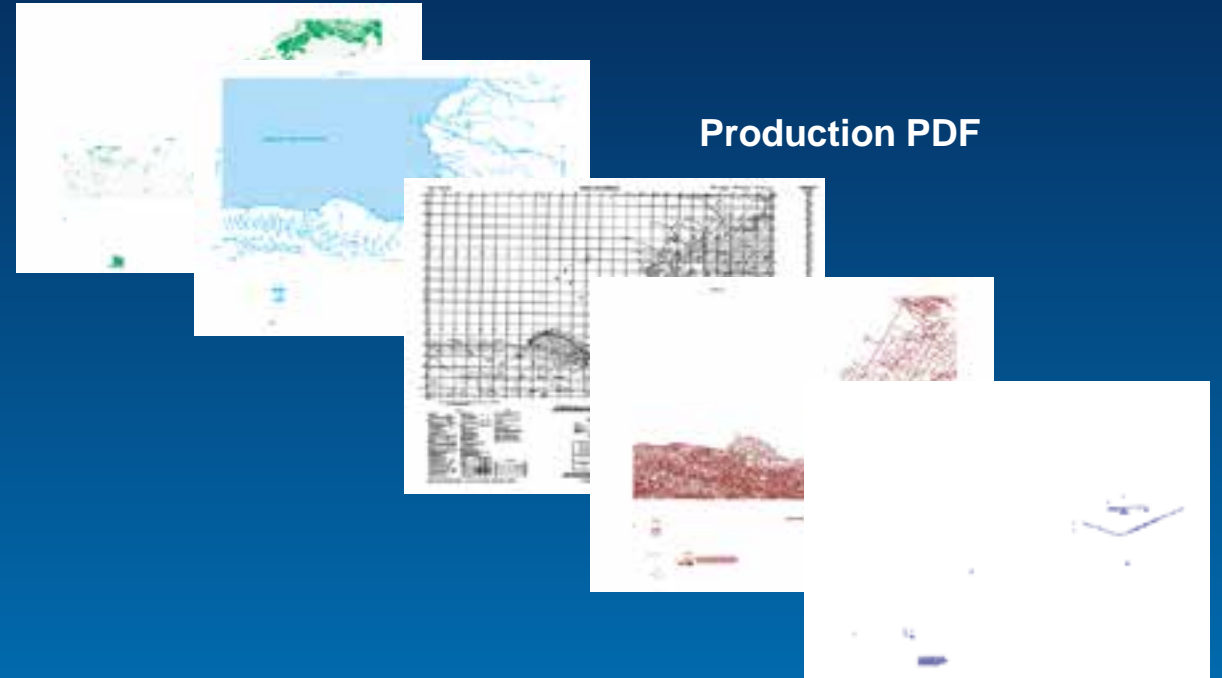
Rapid Graphic Workflow



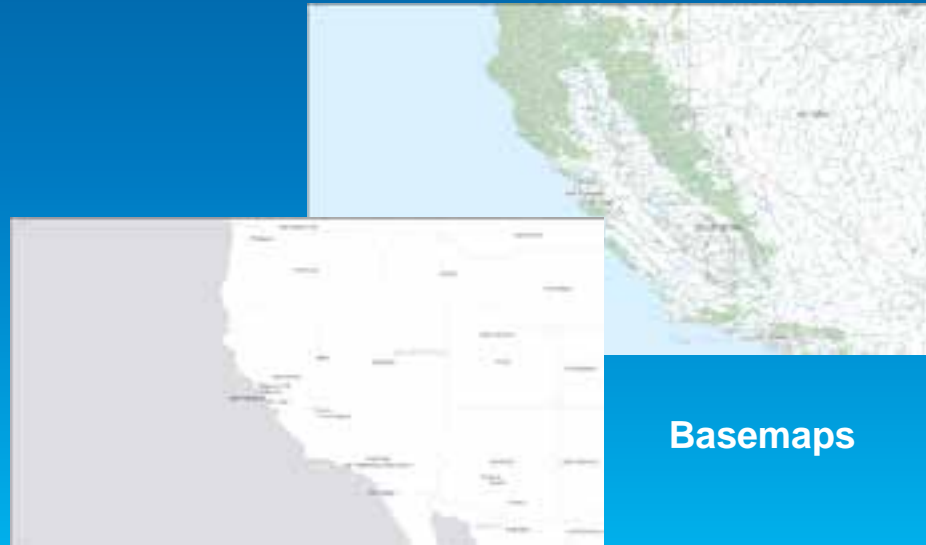
Publish

- **Publish Map**
 - Production PDF
 - PDF
 - GeoPDF
 - eChart
 - Separated TIFF Export

- **Web Services**
 - Map Services
 - Basemaps



Production PDF



Basemaps

Demo

Cartographic Production



Online Resources

- Esri.com à Support à Search: *Defense Mapping*
 - Help
 - Forum
 - Gallery
 - Ideas

The screenshot shows the ArcGIS Resource Center page for Esri Defense Mapping 10.0. The page features a navigation menu on the left with links for Defense Mapping, Help, Forum, Gallery, Ideas, System Requirements, and Installation Guide, along with a 'Get Support' button. The main content area includes a title 'Esri Defense Mapping', a descriptive paragraph, a link to 'What is Defense Mapping?', and a link to request a 60-day trial. Below this is a 'Helpful Resources' section with links to 'What's new in Defense Mapping 10?', 'Take a quick tour of Defense Mapping', 'FAQ's', and 'Defense & Intelligence User Community'. The page also displays several map thumbnails and a footer with language options and the Esri logo.

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Home » Defense Mapping 10.0 Version: 10.0

Esri Defense Mapping

Esri Defense Mapping allows defense users to produce and maintain high-quality topographic databases and cartographic products. It provides a platform for efficiently managing the production workflow, enabling users to do more with fewer resources.

To learn more about Defense Mapping, see [What is Defense Mapping?](#)

[Click here](#), to request a fully functional 60 day trial of Esri Defense Mapping.

Helpful Resources:

- [What's new in Defense Mapping 10?](#)
- [Take a quick tour of Defense Mapping](#)
- [FAQ's](#)
- [Defense & Intelligence User Community](#)

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Understanding our world.