Federal GIS Conference

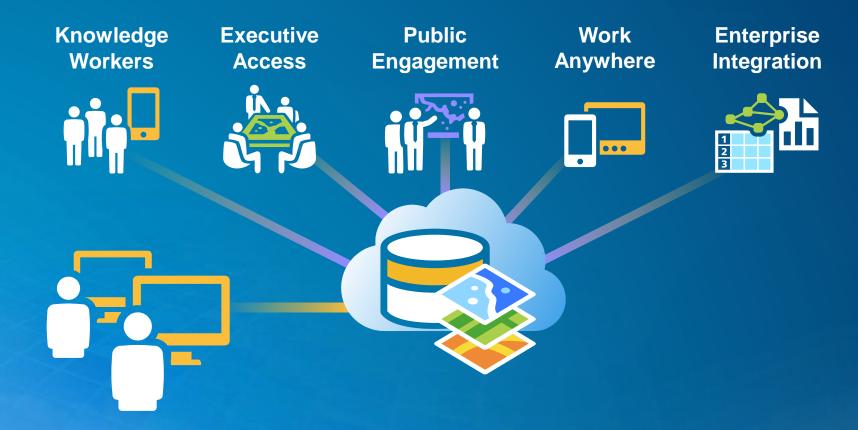
February 9-10, 2015 | Washington, DC



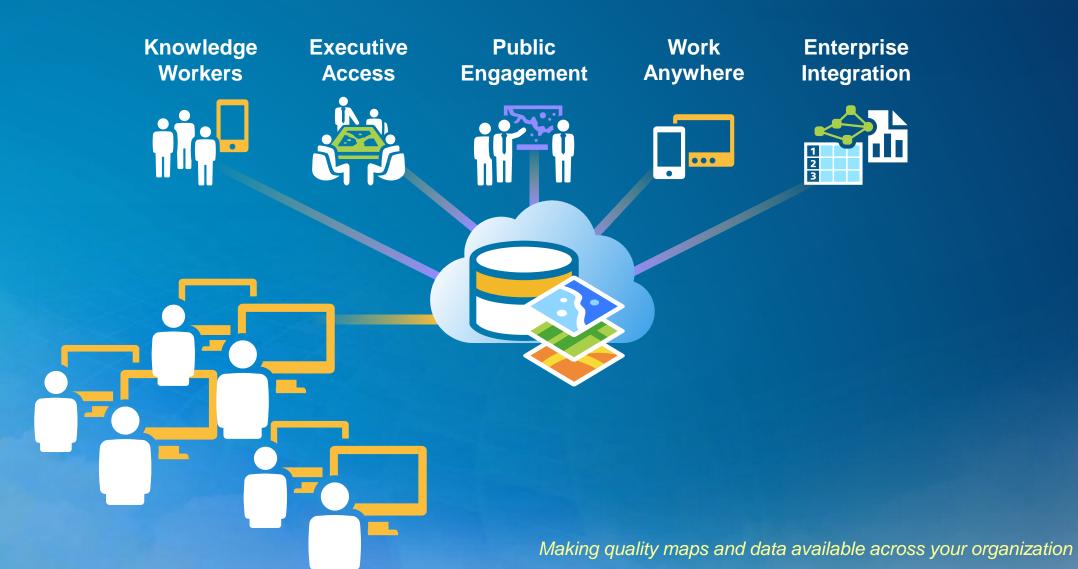
Standardized Data Production Strategies Across Your Enterprise

Amber Bethell
Sherry Fagin

Authoritative content producers



Authoritative content producers



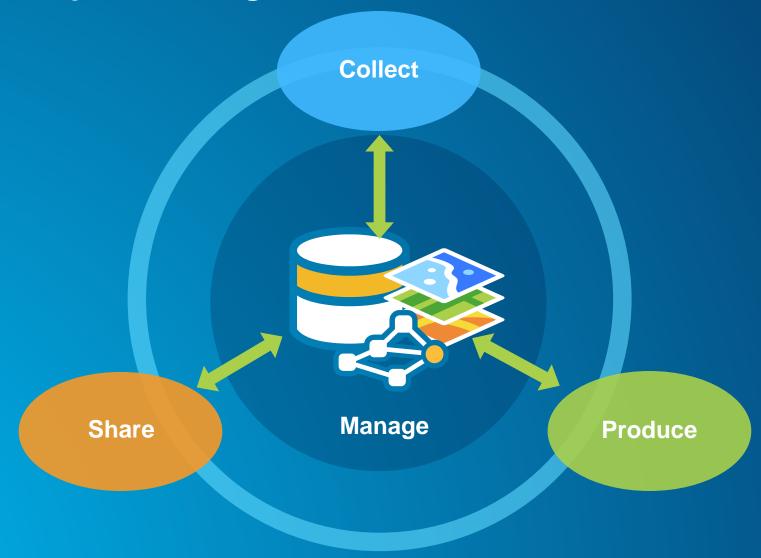
Production Challenges



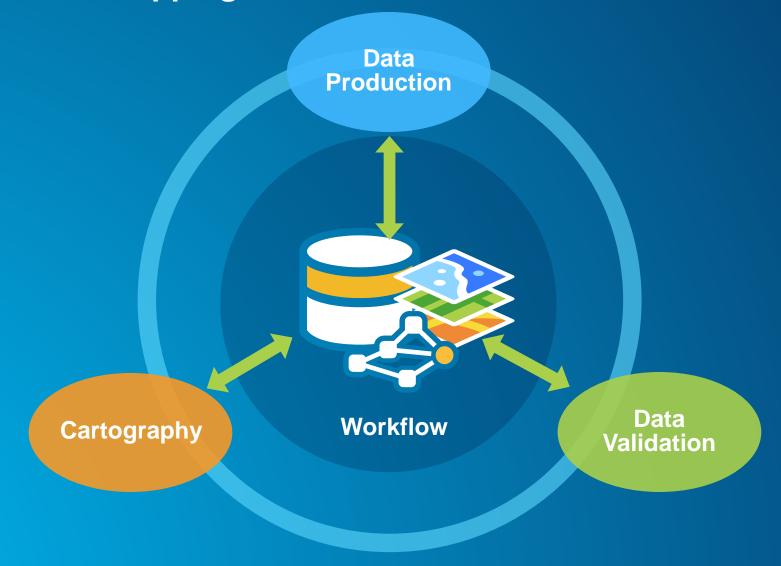
Traditional strategies



Effective enterprise strategies



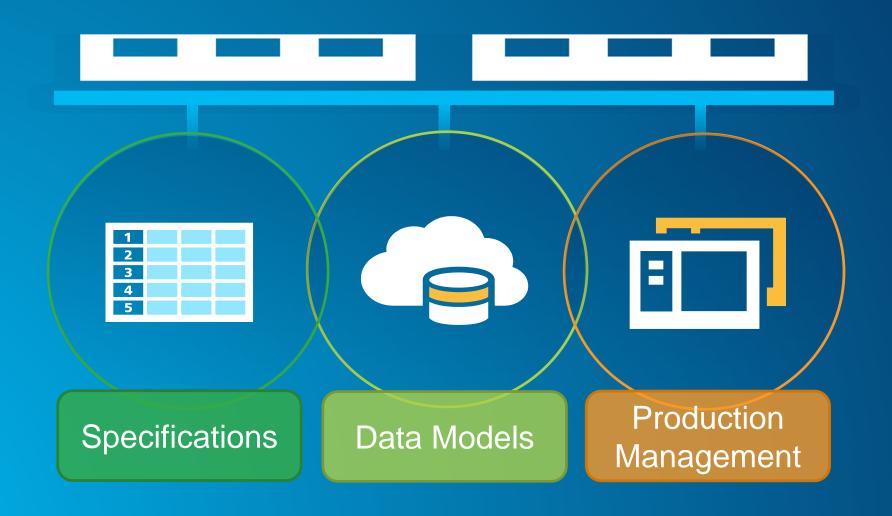
Esri Production Mapping solution



Manage

Manage

Providing solid foundation for your enterprise





Parcels

Use	Define land ownership
Source	Compiled from local governments
Attributes	Parcel Id, Land use
Topological rules	Parcels cannot overlap
Scales	1:1000 – 1:2500





Manage your standards

Workflows

Editing Rules

Maps & Files

Validation Rules

Cartographic Rules

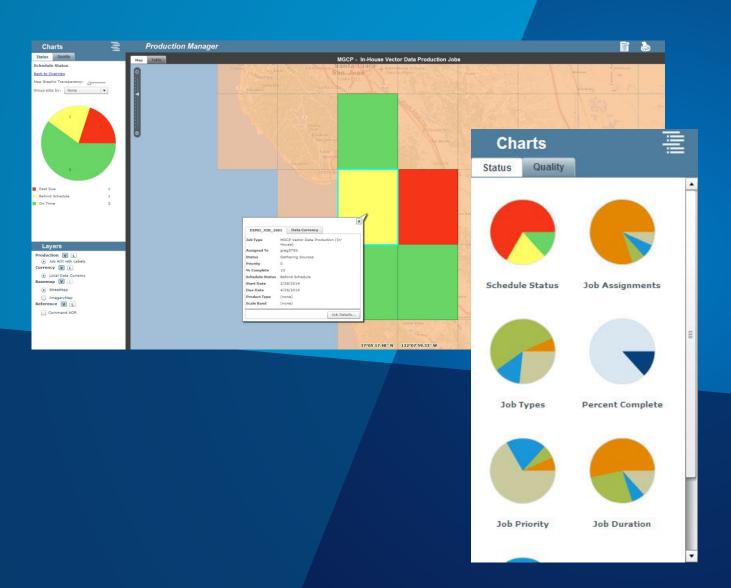


Product Library

Manage ongoing work

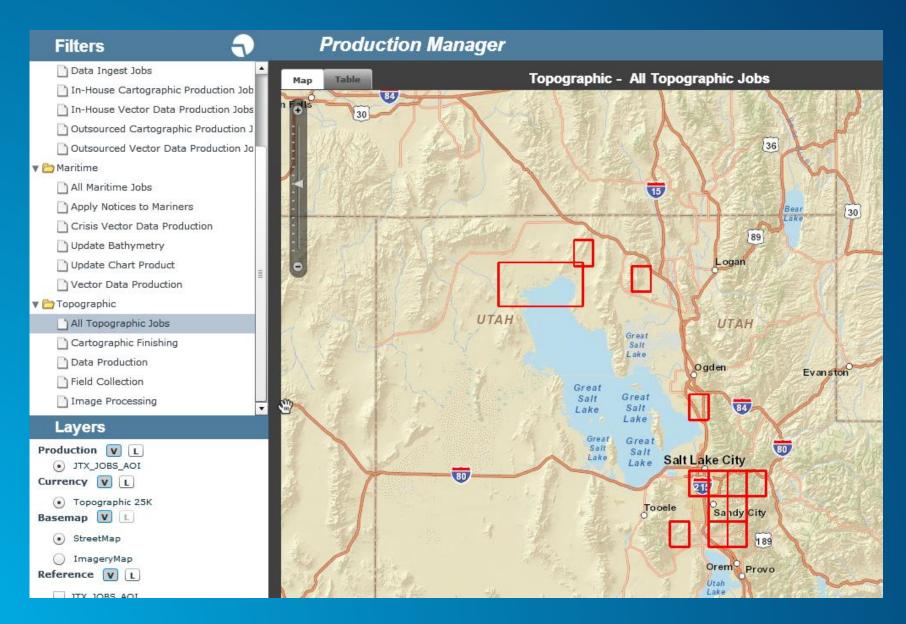
Using repeatable workflows





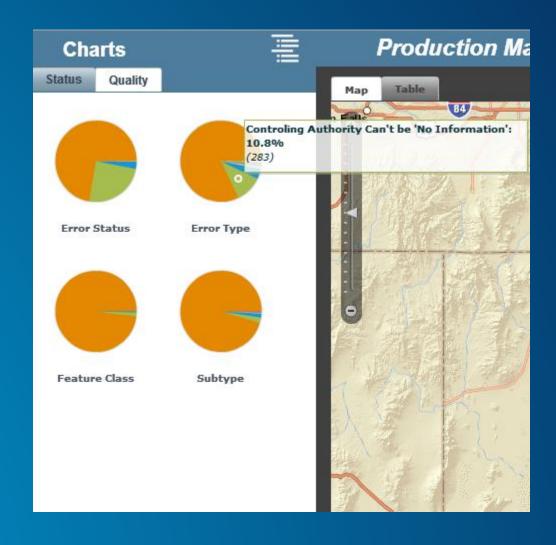
Manage ongoing work with Production Manager

Amber Bethell

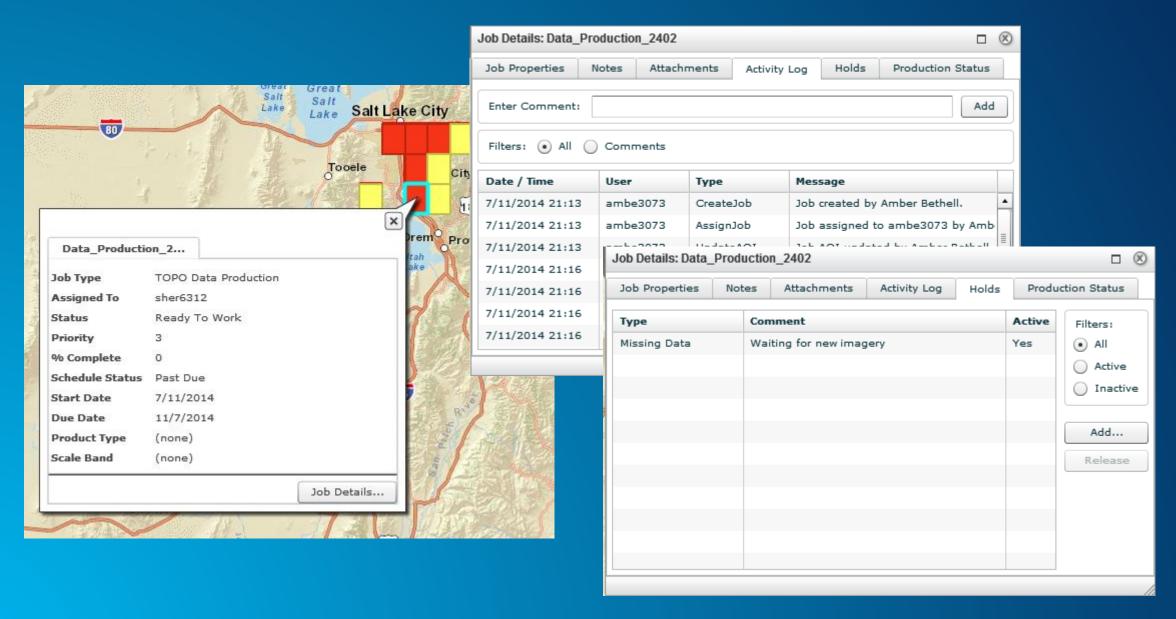


Run queries to determine where work is happening in your organization.

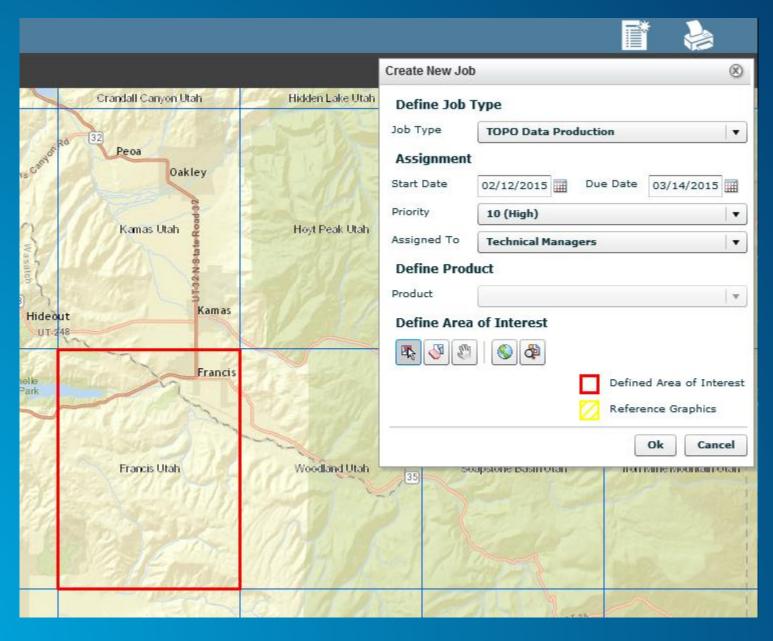




Charts report information about project and quality status.



Information about jobs can be reported so you know the history of a job and why it is not actively being worked.

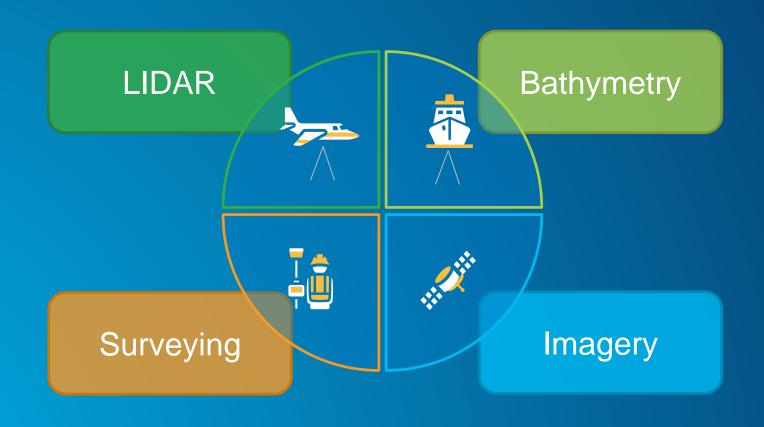


New units of work can be quickly created over the desired area of interest.

Collect, Produce and Share

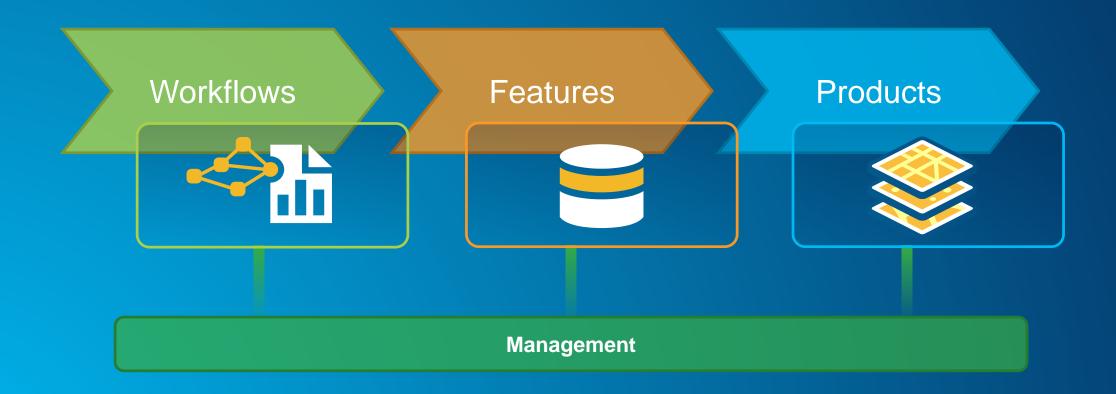
Collect

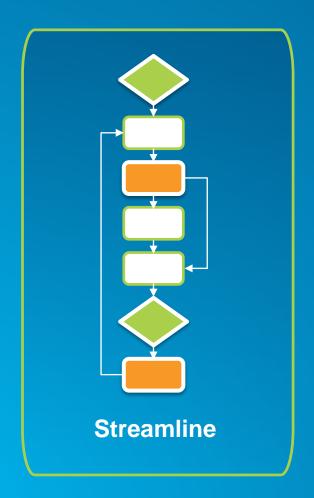
Bringing together source data



Produce

Creating data and maps that meet standards







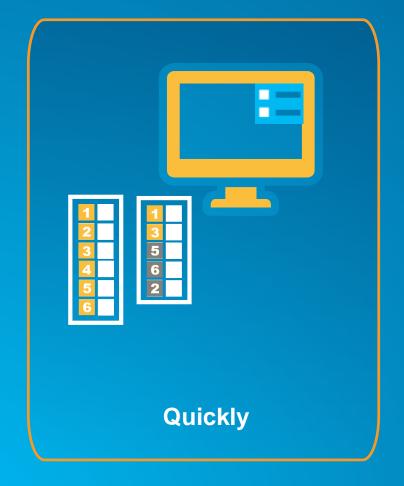


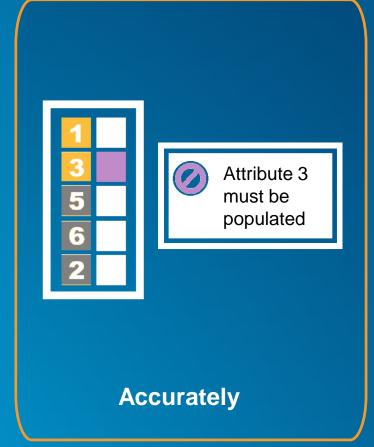
Produce Features

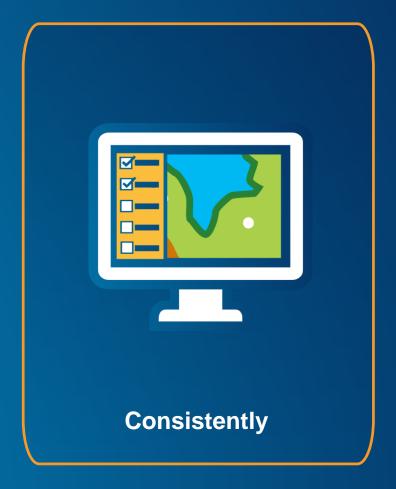
Workflows

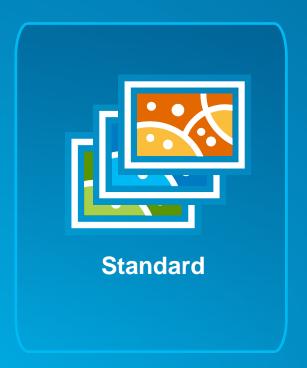
Features

Products













Share

Making relevant products easily available



Share and organize content

- Geospatial Collaboration
- Mobile and Web
- On Premise and Public Cloud



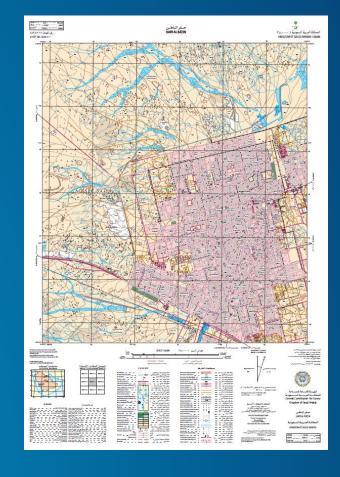


Share products

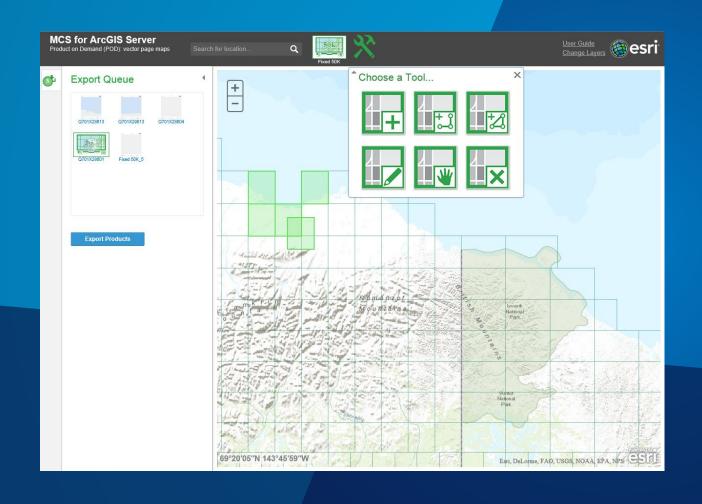
- Printed and Digital Products
- Leverage standard templates
- Self-service mapping (POD)





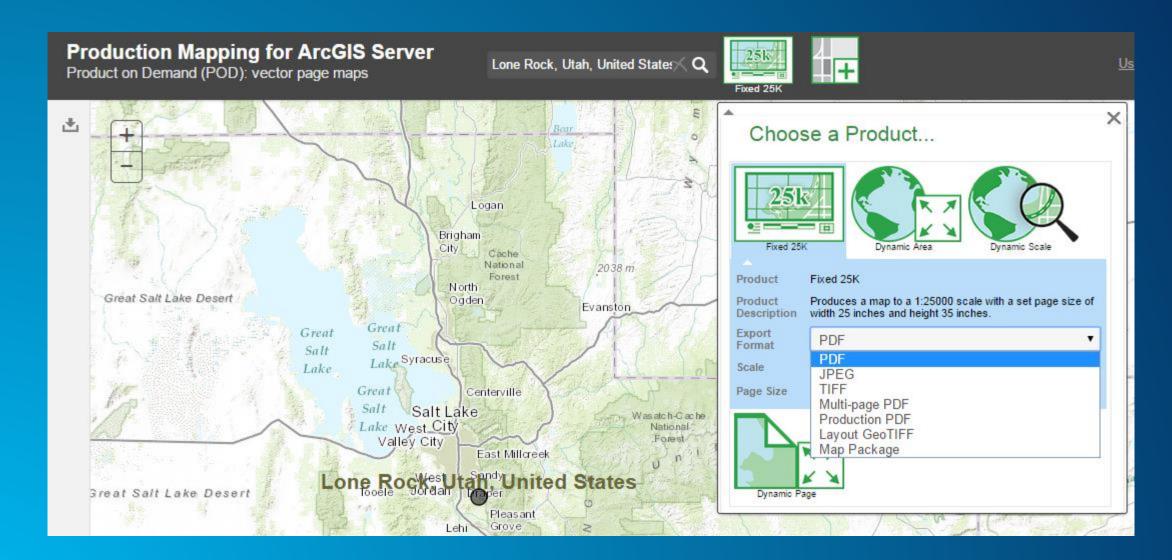




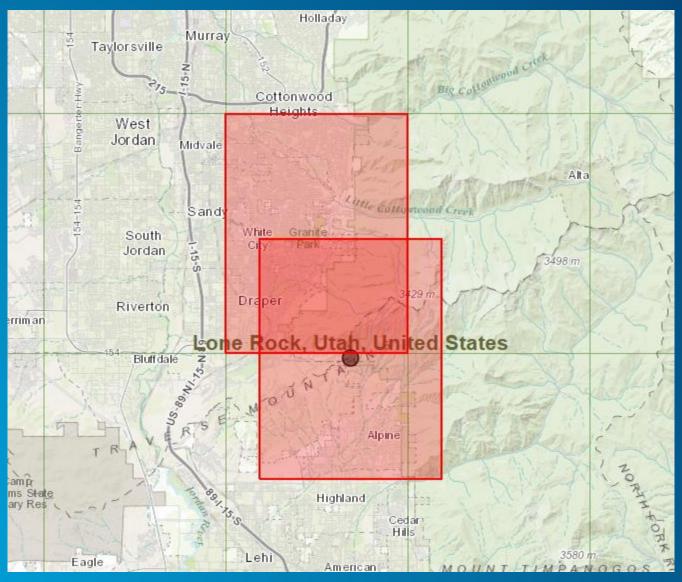


Creating maps to specification with Production Mapping Server

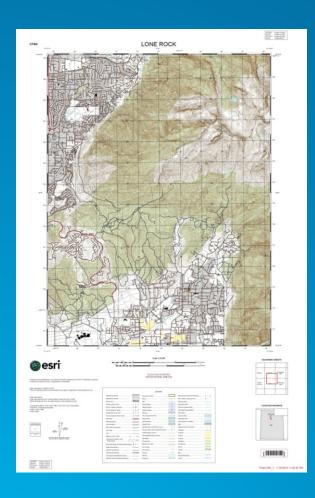
Sherry Fagin

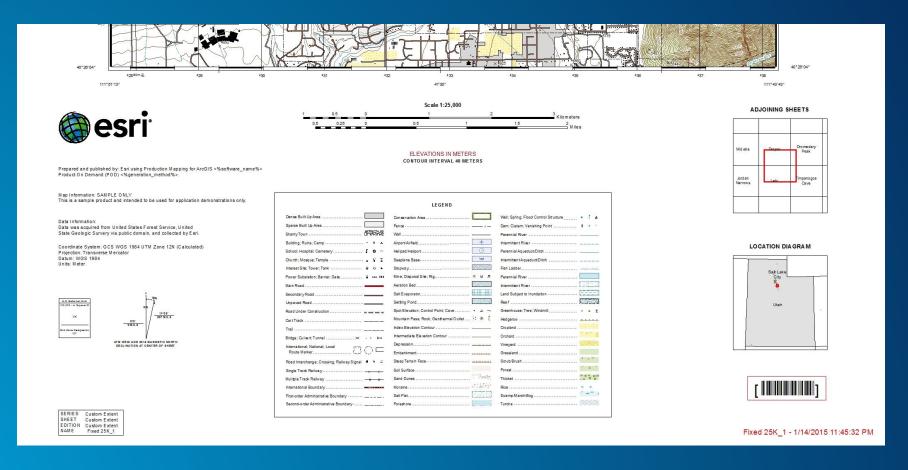


You can choose the type of map to be produced and the format you want it in



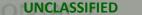
You can create a map that follows the traditional map sheet extents or an extent that better covers the desired ground area.





Army Geospatial Center

Mr. Michael Cioffi





ARMY GEOSPATIAL CENTER

ENABLING GEOSPATIAL INFORMATION DOMINANCE

Topographic Data Management – Urban Tactical Planner (UTP)

Presented by: Michael A. Cioffi

E: michael.a.cioffi@usace.army.mil

P: (703) 428-6932

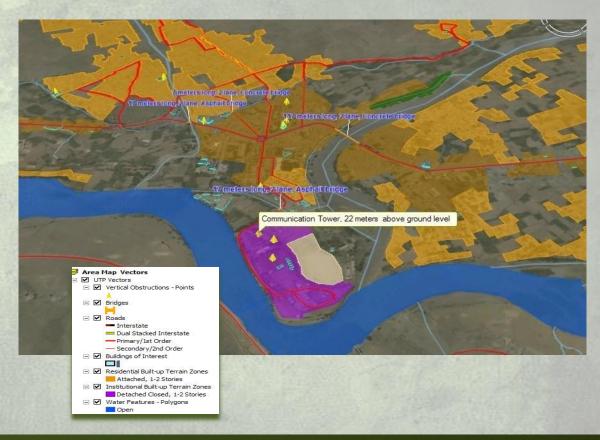
DATE: 10 February 2015





Urban Tactical Planner (UTP) Overview

- iew 🎊
- Product goal: Map the urban terrain in an expedient and substantive manner.
- Data extracted and collected in a Personal Geodatabase (.mdb)
- Present the urban terrain as an aggregate of features that affect urban area operations (full level analysis):
 - Built-Up Terrain Zones (BTZs)
 - Key Features
 - Buildings of Interest
 - Vertical Obstructions
 - Open Urban Areas
 - Airfields
 - Text Pages
 - Lines of Communication
 - Water Features
 - Forest
 - Geography





UTP Product Development



 Moving towards the National Feature Data Dictionary (NFDD) and Ground Geospatial Data Model (GGDM)

UTP Product Development Between ESRI and AGC with plans to move to new GGDM production in 2014-2015 (ArcGIS 10)



Transition to Standard Data Model

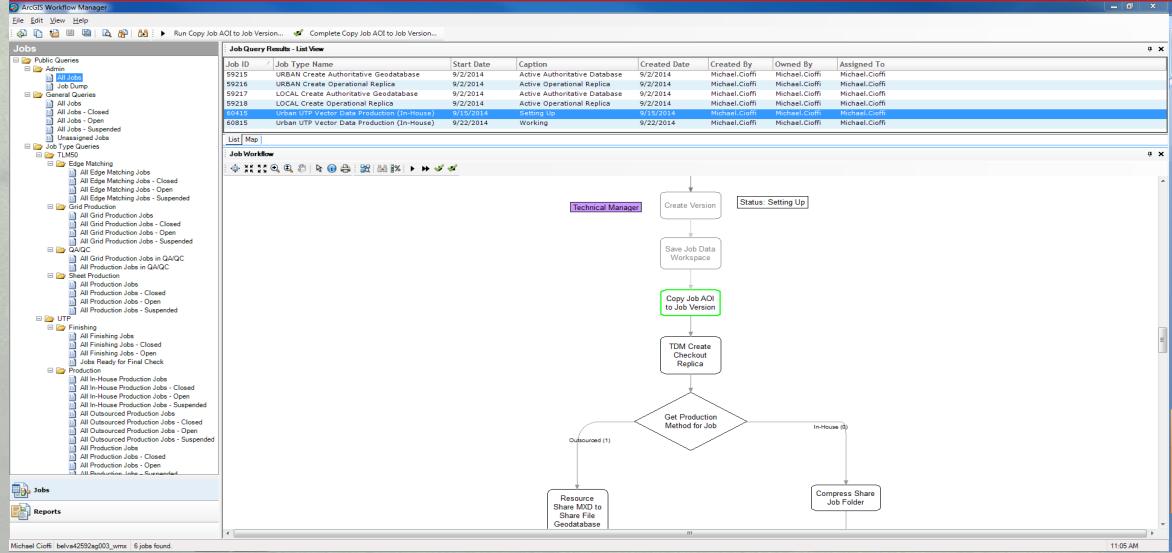


- Translate existing UTP data to GGDM
- ESRI-built system for Topographic Data Management using Workflow Manager
- Develop UTP Product Library for feature classes, subtypes and cartographic representations
- Enable UTP Field Configurations for large attribute tables



Workflow Manager









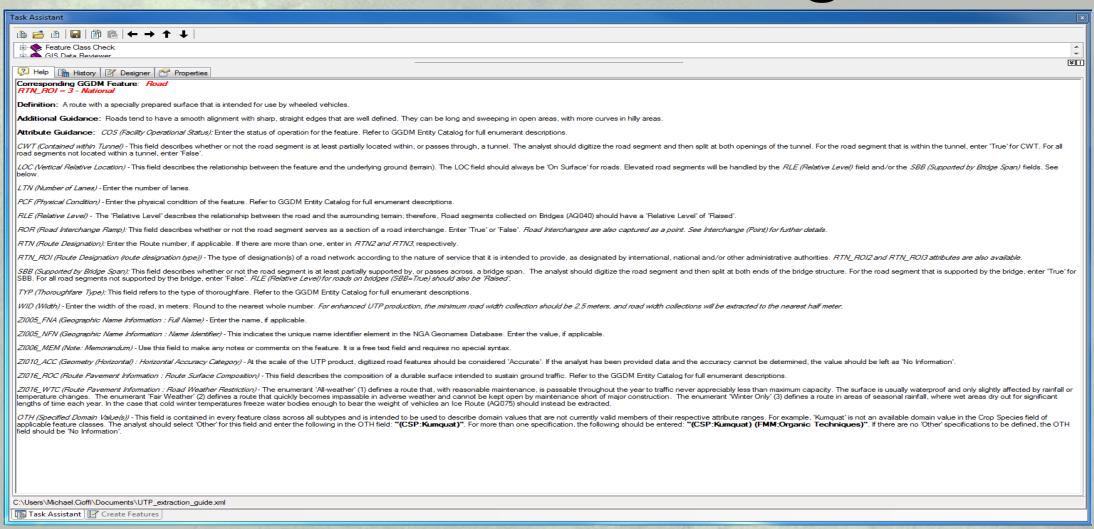


- Defines collection specifications
- Rules to define feature collection and extraction
- Eliminate duplicate or unnecessary features
- Ensure correct geometry type
- Automatically enables the correct template for the feature class and subtype
- Standardize procedures



Task Assistant Manager





Feature/Template Selected: Road

UTP attribution specifics and definitions







- GGDM 85 Feature Classes total
- Current UTP 21 Feature Classes total
- Each GGDM feature class has large attribute tables, but not all attributes are collected in UTP specifications
- Field Configurations dramatically help the analyst determine what attributes are required







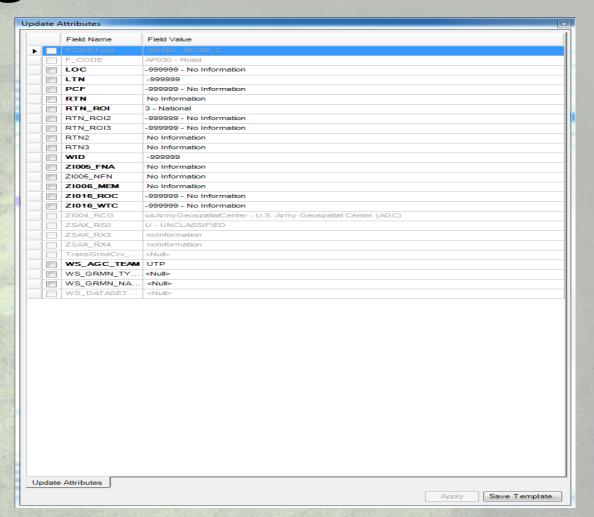
 Attributes that are always constant throughout production are populated and cannot be changed – reduces risk of attribution error



Field Configurations



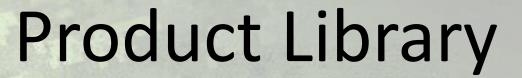
	Field Name	Field Value	
_	OBJECTIO	1791413	
	FCSubType	100152 - ROAD_C	
	A00	-999999	
	ARA	-99999	
	AWP	-999999	
	BCC	-999999	
	BMC	-999999	
	BMC2	-999999	
	ВМС3	-999999	
	BOT	-999999	
	BRN	noInformation - No Information	
	BSC	-999999	
	BSC2	-999999	
	BSC3	-999999	
	BSM	-999999	
	CAA	-999999 - No Information	
	CAT	-999999	
	CON	-99999	
	cos	13 - Operational	
	CTC	-99999	
	CTL	-99999	
	CWT	1000 - False	
	DEV	-99999	
	DZC	-99999	
	DZP	-999999	
	EXP	-99999	
	F_CODE	AP030 - Road	
	FCO	-99999 - No Information	
	FFN	-99999	
	FFN2	-99999	
	FFN3	999999	
	FSC	-999999 - No Information	
	GTC	-999999	
	HCA	-999999	
		-999999	
	HEI		
	HGT	-999999	
	HST	-999999	
	HST2	-999999	
	HST3	-999999	
	LC1	-99999	
	LC2	-999999	
	LC3	-999999	
	LC4	-999999	
	LEA	-999999	
late	Attributes	·	Т



No Field Configuration Set

Field Configuration Set

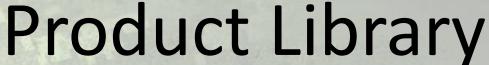






- Geodatabase that stores information about features and their representations
- Representation Rules
- SQL statements for Subtypes and their attribution
- Processing Orders







Visual Specifications Advanced View										
rocessing Ord	der Rule Description	Workspace	▼ Dataset	Layer	Rep/Field Name	Pre Code SQL Statement	/ Properties			
13	Golf Course	-	RecreationSrf	RecreationSrf	RecreationSrf_UTP	SELECT < Target Table.OID > FROM < Targe	Property	Value		
14	Public Course		RecreationSrf	Recreation Srf	RecreationSrf_UTP	SELECT < Target Table.OID > FROM < Targe	Rule Type	Representation		
35	Zoo		Recreation Srf	Recreation Srf	RecreationSrf_UTP	SELECT < Target Table .OID > FROM < Targe	Rule Description	Key Features - Cultural		
14	Golf_Driving_Range_A		Recreation Srf	Recreation Srf	Recreation Srf_UTP	SELECT < Target Table .OID > FROM < Targe	Workspace			
15	Stadium_A		RecreationSrf	RecreationSrf	RecreationSrf_UTP	SELECT < Target Table .OID > FROM < Targe	Dataset	RecreationPnt		
55	Amphitheatre_A		RecreationSrf	RecreationSrf	RecreationSrf_UTP	SELECT < Target Table.OID > FROM < Targe	Layer	RecreationPnt		
74	Amusement_Park_Attraction_	A	Recreation Srf	RecreationSrf	RecreationSrf_UTP	SELECT < Target Table .OID > FROM < Targe	Rep/Field Name	RecreationPnt_UTP		
76	Racetrack_A		RecreationSrf	RecreationSrf	RecreationSrf_UTP	SELECT < Target Table .OID > FROM < Targe	Pre Code			
7	No Symbol - Recreation Point		RecreationPnt	RecreationPnt	RecreationPnt_UTP	SELECT < Target Table .OID > FROM < Targe	SQL Statement	SELECT <targettable.oid> FROM <targettable> WHERE FCSubType IN (100064</targettable></targettable.oid>		
66	Key Features - OpSig		RecreationPnt	RecreationPnt	RecreationPnt_UTP	SELECT < Target Table .OID > FROM < Targe	Expression			
91	Key Features - Cultural		RecreationPnt	Recreation Pnt	RecreationPnt_UTP	SELECT <targettable.oid> FROM <targe< td=""><td>Preview</td><td>m Key Feature - Cultural</td></targe<></targettable.oid>	Preview	m Key Feature - Cultural		
279	Amusement_Park_Attraction_		RecreationPnt	RecreationPnt	RecreationPnt_UTP	SELECT < Target Table .OID > FROM < Targe	Explicit Override Fields	s		
280	Ski_Jump_P		RecreationPnt	RecreationPnt	RecreationPnt_UTP	SELECT < Target Table .OID > FROM < Target	Post Code			
150	Vertical Obstruction Point		RecreationPnt	RecreationPnt	RecreationPnt_UTP	SELECT < Target Table .OID > FROM < Targe				
6	No Symbol - Recreation Curve		RecreationCrv	RecreationCrv	RecreationCrv_UTP	SELECT < Target Table .OID > FROM < Targe				
65	Key Features - OpSig		RecreationCrv	RecreationCrv	RecreationCrv_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
90	Key Features - Cultural		RecreationCrv	RecreationCrv	RecreationCrv_UTP	SELECT < Target Table .OID > FROM < Targe				
303	Racetrack_L		RecreationCrv	RecreationCrv	RecreationCrv_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
304	Ski_Run_L		RecreationCrv	RecreationCrv	RecreationCrv_UTP	SELECT < Target Table .OID > FROM < Target				
55	No Symbol - Port Harbour Surf	30	PortHarbourSrfExt	PortHarbourSrfExt	PortHarbourSrfExt_UTP	SELECT < Target Table .OID > FROM < Targe				
54	No Symbol - Port Harbour Surf	30	PortHarbourSrf	PortHarbourSrf	PortHarbourSrf_UTP	SELECT < Target Table .OID > FROM < Targe				
164	Key Features - Op Sig		PortHarbourSrf	PortHarbourSrf	PortHarbourSrf_UTP	SELECT < Target Table .OID > FROM < Target				
227	Dry Dock		PortHarbourSrf	PortHarbourSrf	PortHarbourSrf_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
228	Floating Dry Dock		PortHarbourSrf	PortHarbourSrf	PortHarbourSrf_UTP	SELECT < Target Table .OID > FROM < Target				
229	Port		PortHarbourSrf	PortHarbourSrf	PortHarbourSrf_UTP	SELECT < Target Table .OID > FROM < Targe				
i3	No Symbol - Port Harbour Poin	t	PortHarbourPntExt	PortHarbourPntExt	PortrPntExt_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
163	Key Features - Op Sig		PortHarbourPntExt	PortHarbourPntExt	PortrPntExt_UTP	SELECT < Target Table .OID > FROM < Target				
278	Achorage_P		PortHarbourPntExt	PortHarbourPntExt	PortrPntExt_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
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62	Key Features - OpSig		PortHarbourPnt	PortHarbourPnt	PortHarbourPnt_UTP	SELECT < Target Table .OID > FROM < Targe				
195	Vertical Obstruction Point		PortHarbourPnt	PortHarbourPnt	PortHarbourPnt_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
51	No Symbol - Port Harbour Cun	e	PortHarbourCrv	PortHarbourCrv	PortHarbourCrv_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
161	Shoreline_Constuction_L		PortHarbourCrv	PortHarbourCrv	PortHarbourCrv_UTP	SELECT < Target Table .OID > FROM < Targe				
189	Shoreline_Ramp_L		PortHarbourCrv	PortHarbourCrv	PortHarbourCrv_UTP	SELECT <targettable.oid> FROM <targe< td=""><td></td><td></td></targe<></targettable.oid>				
0	No Symbol - Physiography Sur	a	PhysiographySrfExt	PhysiographySrfExt	PhysSrfExt_UTP	SELECT < Target Table .OID > FROM < Targe				
160	Key Features - Cultural		PhysiographySrfExt	PhysiographySrfExt	PhysSrfExt_UTP	SELECT < Target Table .OID > FROM < Targe				
19	No Symbol - Physiography Sur	a	Physiography Srf	Physiography Srf	Phys Srf TITP	SELECT <tamettable oid=""> FROM <tame oid="" tamettable=""> FROM <tame oid="" tamettable=""> FROM <tame oid="" tamettable=""> FROM <tamettable oid=""> FROM <tam< td=""><td></td><td>III</td></tam<></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tamettable></tame></tame></tame></tamettable>		III		
_						•				
Show: Al	Selected Options :	·>						OK Cancel Appl		

WHERE
FCSubType IN (100064, 100077)

These features receive Key Feature – Cultural symbol

Processing Orders

Low

FROM RecreationPnt

WHERE

HGT >= 15

These features receive Vertical Obstruction symbol



QA/QC Checks - Data Reviewer



- Data Reviewer Standard extension to ArcGIS for Desktop
- Complete quality control system for data, map products
- Analyst can perform automated quality review functions before assigning to QA/QC team
- Error documentation and reporting







- Tracks all anomalies/errors located during review
- Navigates to error from table
- Records correction and verification status
- Contains tools to manage the records
- Not a "catch-all", but effectively saves some manual QC execution

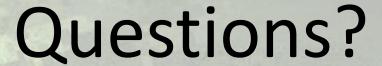






- Importance of data standards to enable and facilitate sharing of information
- Inter/Intra Agency support
- Data cooperation reduce data redundancies







Urban Tactical Planner Point of Contact:

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Presented by:

Mr. Michael A. Cioffi

(703) 428-6932

michael.a.cioffi@usace.army.mil

Conclusion

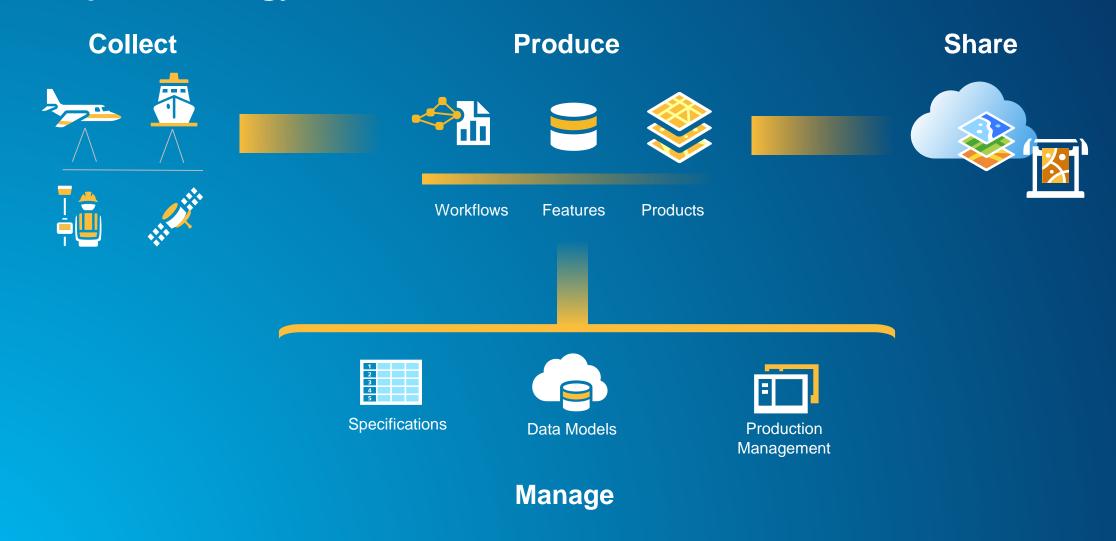
Conclusion

Collect









Successful enterprise implementations

More than just technology

- Vision and Leadership
- Management Support
- Planning
 - Technical Architecture
 - Standards
 - Organization
 - Processes and Procedures
- Team by-in

ArcGIS Extensions Covered

- Workflow Manager for ArcGIS and Task Assistant
 - www.esri.com\workflowmanager
- Data Reviewer for ArcGIS
 - www.esri.com\datareviewer
- Production Mapping and Production Mapping Server
 - www.esri.com/productionmapping
 - Includes Workflow Manager, Task Assistant and Data Reviewer
- Email questions and comments productionmapping@esri.com

Federal GIS Conference

February 9–10, 2015 | Washington, DC



Don't forget to complete a session evaluation form!

Federal GIS Conference

February 9–10, 2015 | Washington, DC



GIS Solutions EXPO, Hall D

Monday, 12:30pm - 6:30pm

Tuesday, 10:45 AM-4:00 PM

- Exhibitors
- Hands-On Learning Lab
- Technical & Extended Support
- Demo Theater
- Esri Showcase



Understanding our world.