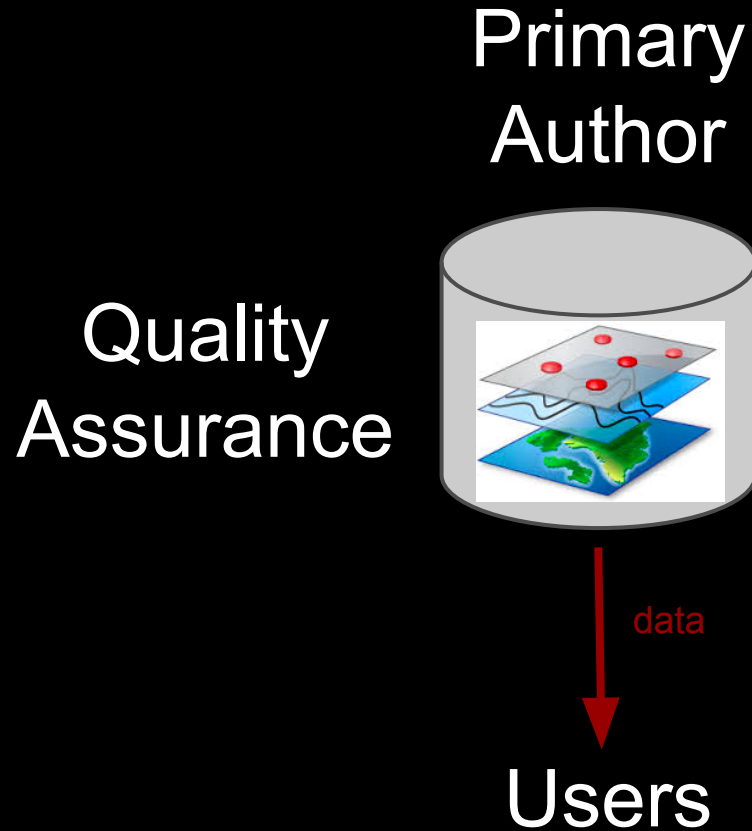


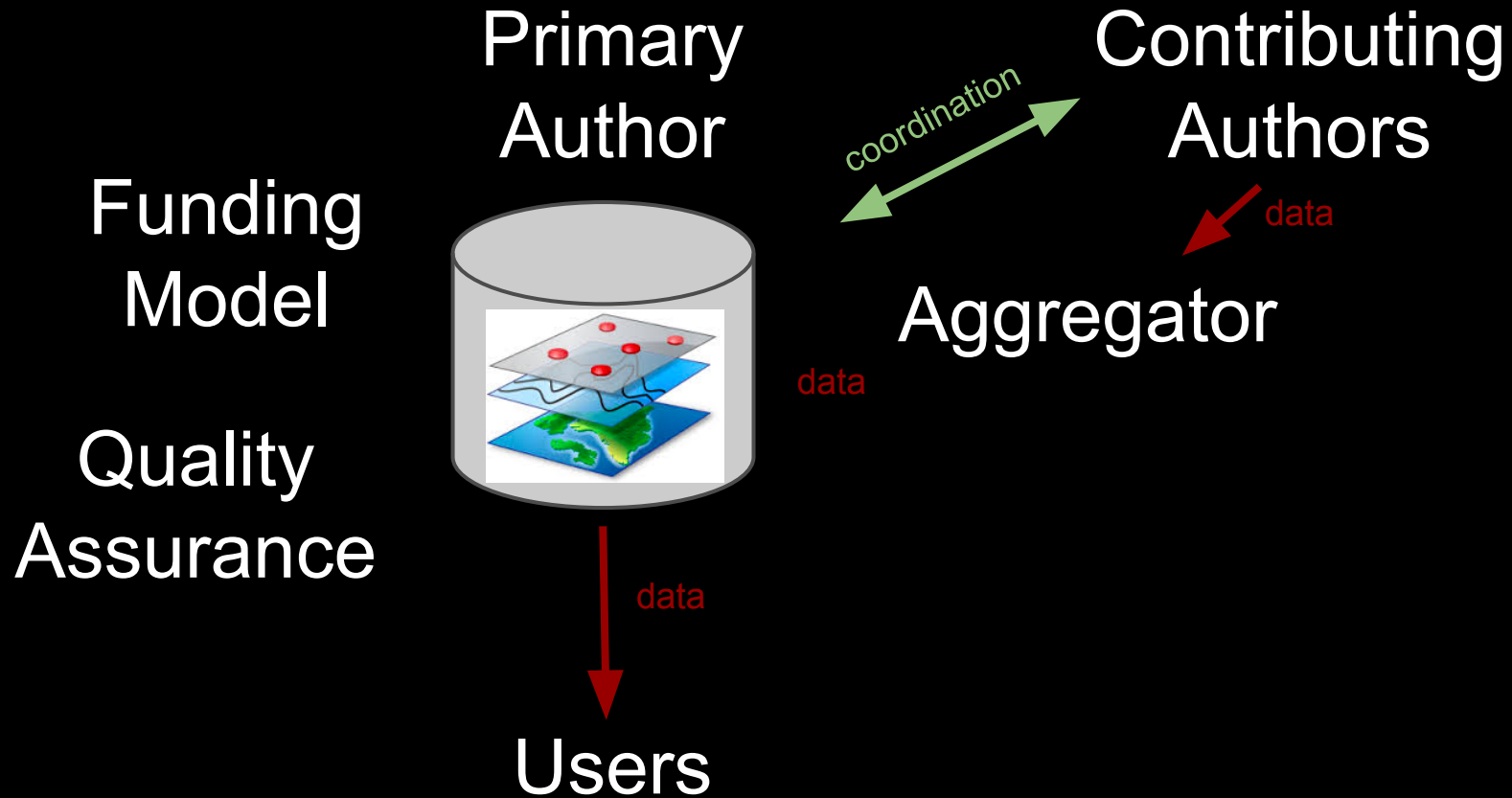
Thoughts on Geospatial Stewardship

Bert Granberg, Utah AGRC
gis.utah.gov

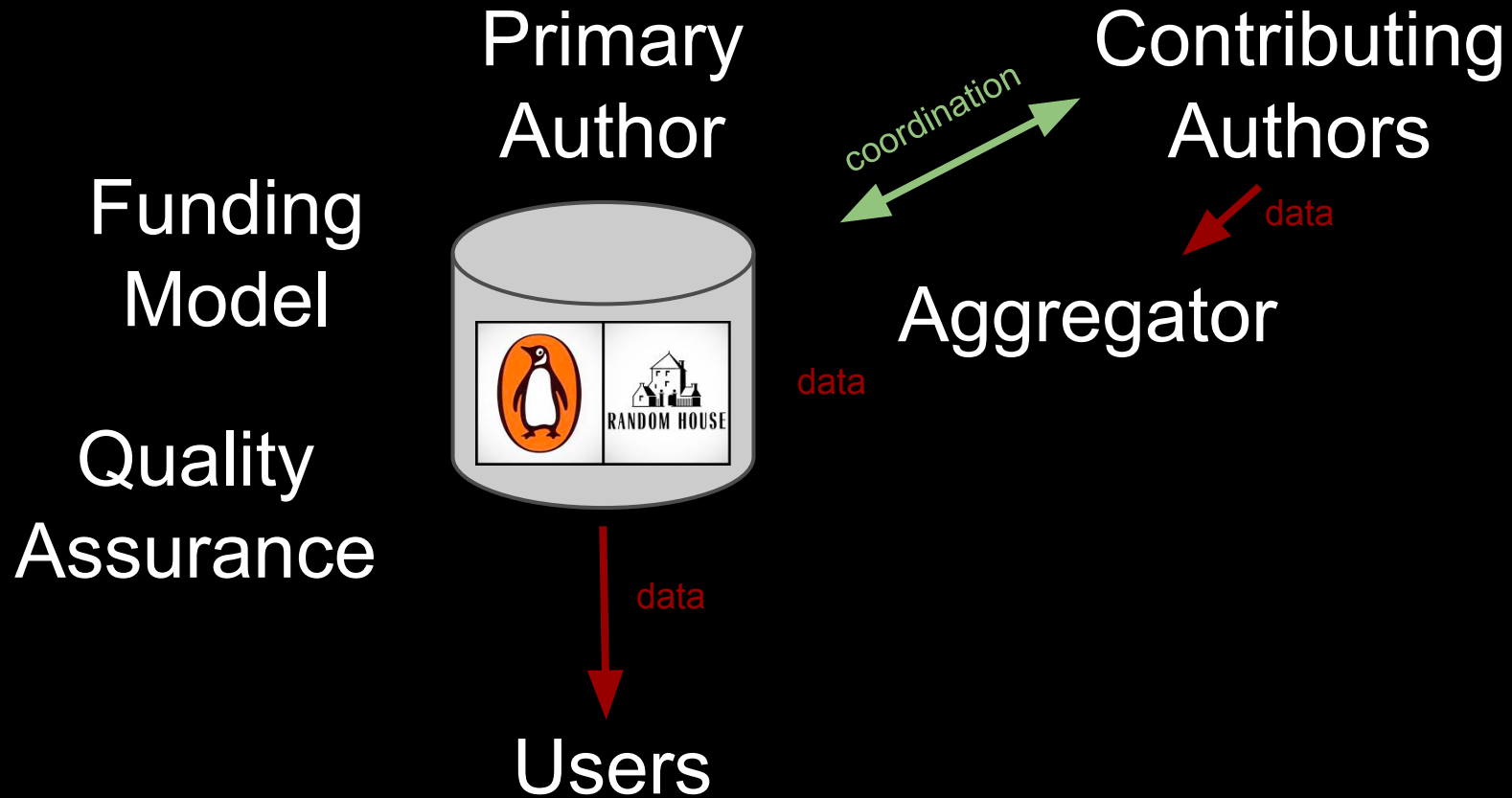
Treating GIS Data as a 'Content' Product



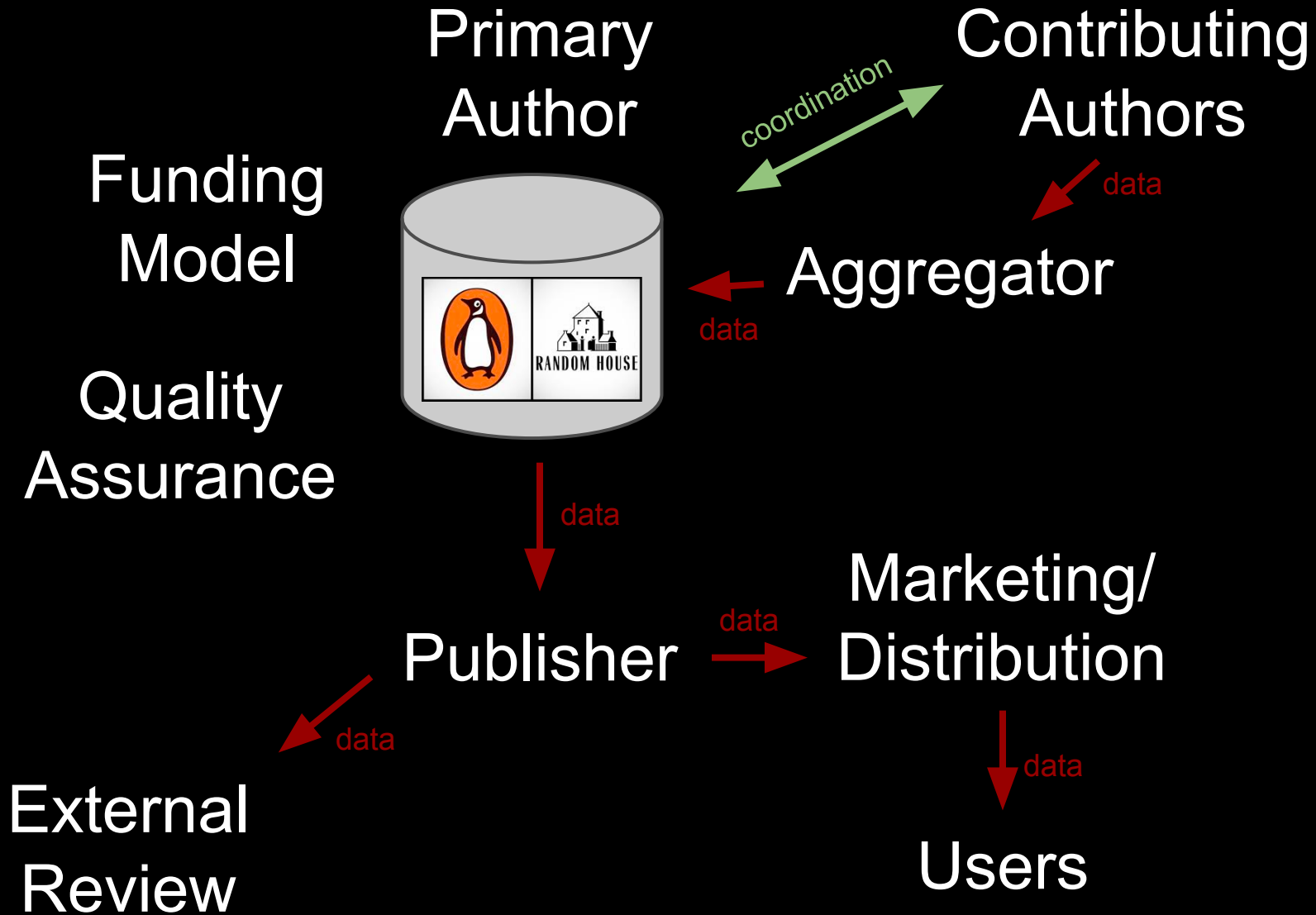
Treating GIS Data as a 'Content' Product



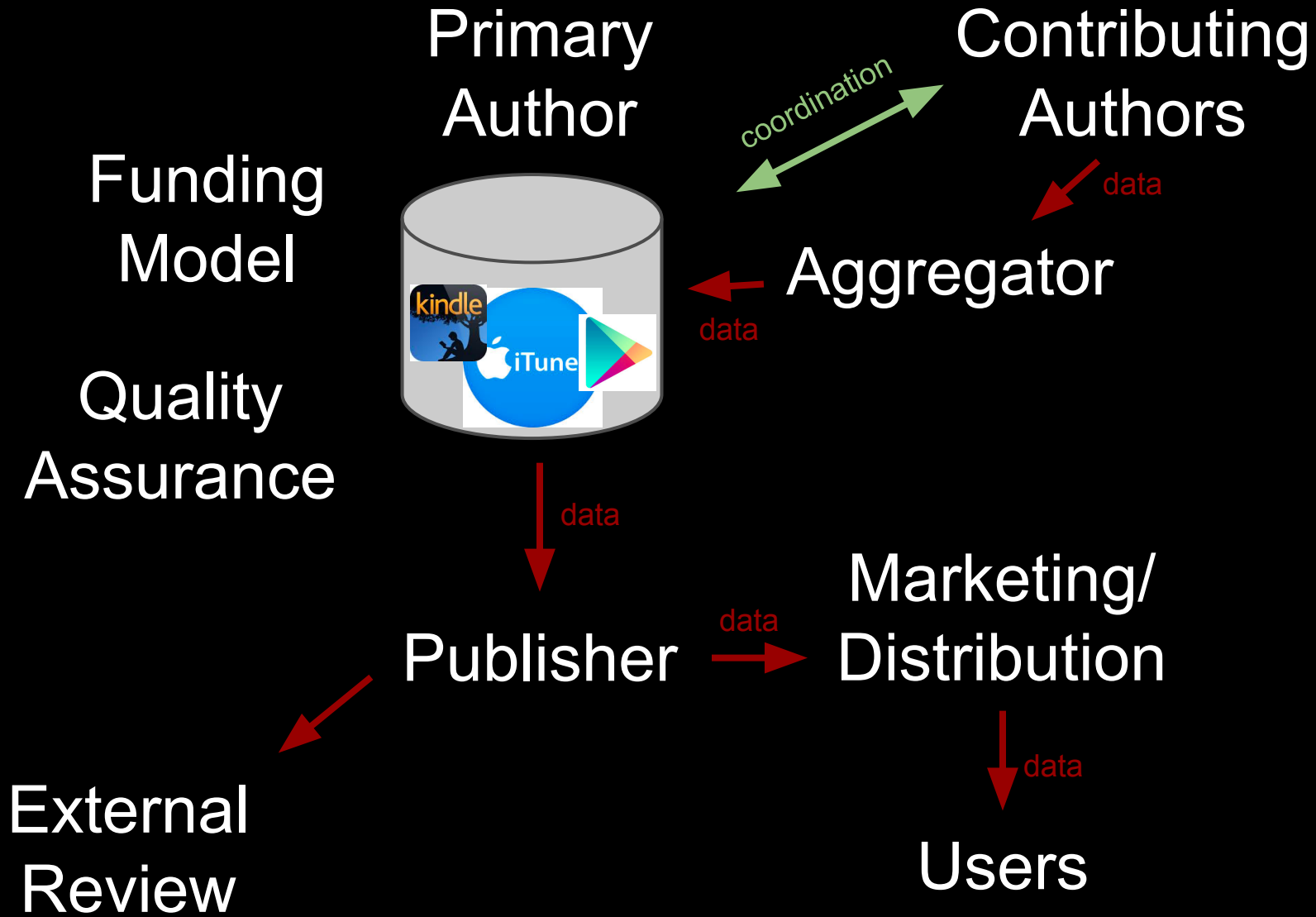
Treating GIS Data as a 'Content' Product



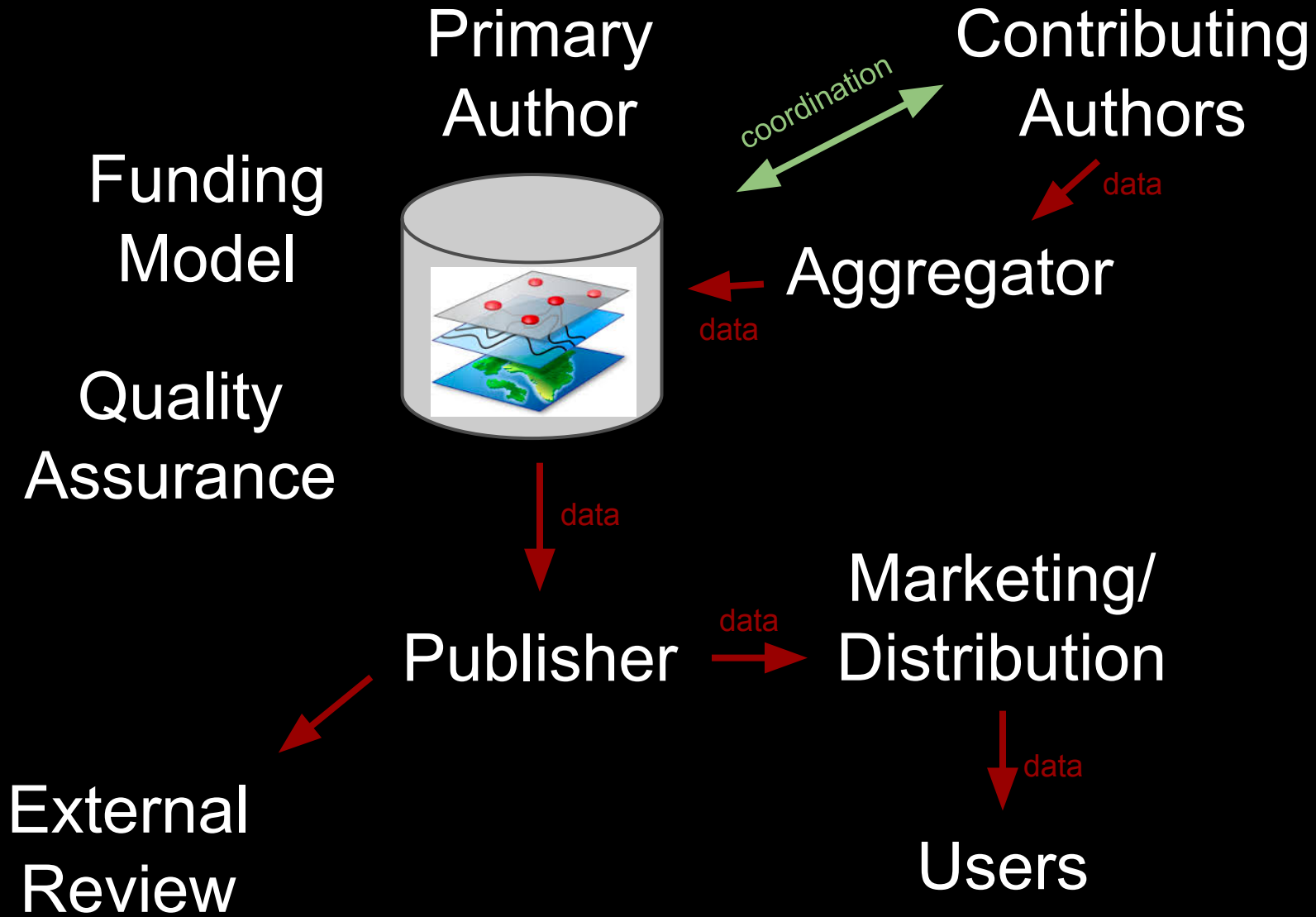
Treating GIS Data as a 'Content' Product



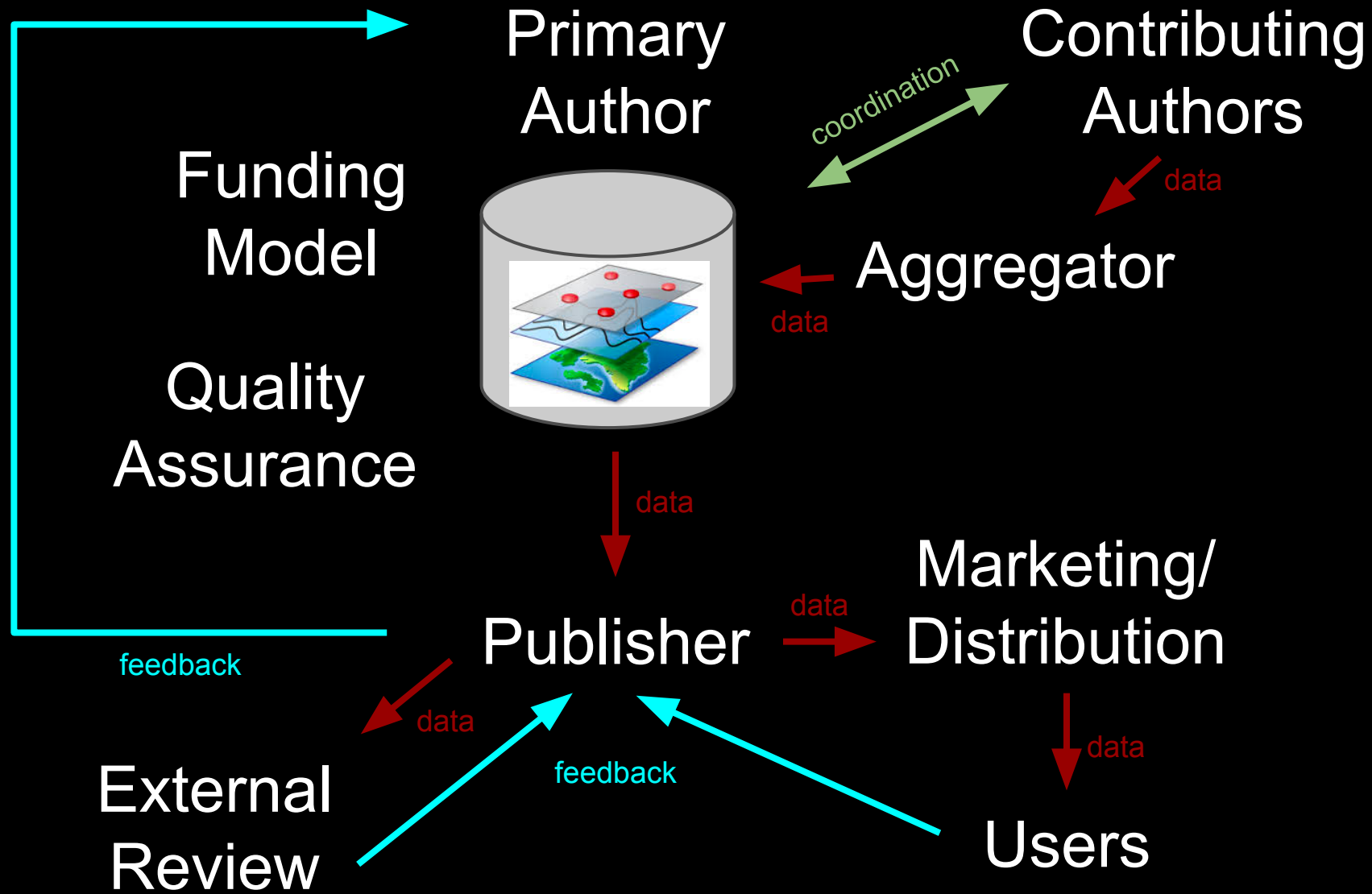
Treating GIS Data as a 'Content' Product



Treating GIS Data as a 'Content' Product



Treating GIS Data as a 'Content' Product



NGDA Next Steps: Prioritize for Users

2014-09-10-themes-leads-datasets.xlsx

Search in Sheet

Home Layout Tables Charts SmartArt Formulas Data Review

B181 TIGER/Line Shapefile, 2013, Series Information File For The All Roads County-Based Shapefiles

	A	B	C	D	E	F
171	Transportation					
172	Airports	Airports (National)	Transportation	DOT-BTS		
173	Bridges	National Bridge Inventory	Transportation	DOT-BTS		
174	Inland Electronic Navigation Charts (IENC)		Transportation	DOD-USACE		
175	Intermodal (Freight)	Freight Intermodal Facility (National)	Transportation	DOT-BTS		
176	Intermodal (Passenger)	Passenger Intermodal Facility (IPCD) (National)	Transportation	DOT-BTS		
177	Locks	Waterway Locks (National)	Transportation	USACE		
178	Ports	Major Ports (National)	Transportation	USACE		
179	Rail Lines	Rail Lines (National)	Transportation	DOT-BTS		
180	Rail Nodes	Rail Nodes (National)	Transportation	DOT-BTS		
181	Roads (All Roads)	TIGER/Line Shapefile, 2013, Series Information File For The All Roads County-Based Shapefiles	Transportation	DOC-Census		
182	Runways	Runways (National)	Transportation	DOT-BTS		
183	Traffic Analysis Zone		Transportation	DOC-Census		
184	Transit (Line)	Fixed-Guideway Transit Lines (National)	Transportation	DOT-BTS		
185	Transit (Stations)	Fixed-Guideway Transit Stations (National)	Transportation	DOT-BTS		
186	Waterway Network		Transportation	USACE		
187	Transportation Count			15		
188	Utilities					
189	BSEE Pipelines		Utilities	DOI-BSEE		
190	BSEE Platforms		Utilities	DOI-BSEE		
191	Utilities Count			2		
192	Water - Inland					
193	National Hydrography Dataset (NHD)	USGS TNM Hydrography (NHD)	Water -- Inland	DOI-USGS		
194	National Inventory of Dams (NID)		Water -- Inland	DOD-USACE		
195	National Levee Database (NLD)		Water -- Inland	DOD-USACE		
196	National Wetlands Inventory (NWI)	National Wetlands Inventory - Wetlands	Water -- Inland	DOI-FWS		
197	Watershed Boundary Dataset (WBD)		Water -- Inland	DOI-USGS		
198	Water - Inland Count			5		
199	Water - Oceans and Coasts					
200	Coast Line - Atlantic NAD83		Water -- Oceans and Coasts	DOI-BOEM		
201	Coast Line - Pacific NAD83		Water -- Oceans and Coasts	DOI-BOEM		
202	Continental Shelf Boundary - Alaska NAD82		Water -- Oceans and Coasts	DOI-BOEM		
203	Continental Shelf Boundary - Atlantic NAD83		Water -- Oceans and Coasts	DOI-BOEM		
204	Continental Shelf Boundary - Pacific NAD83		Water -- Oceans and Coasts	DOI-BOEM		
205	Continuously Updated Shoreline Data	Continuously Updated Shoreline Data	Water -- Oceans and Coasts	DOC-NOAA		
206	Electronic Navigational Charts (ENC)	NOAA's Electronic Navigational Charts	Water -- Oceans and Coasts	DOC-NOAA		
207	Maritime Limits and Boundaries of the United States of America	Maritime Limits And Boundaries Of United States Of America	Water -- Oceans and Coasts	DOC-NOAA		
		<small>ODIN: Observational Data Interactive Navigation. An Interactive Map Of All CO-OPS</small>				

NGDA Theme Leads NGDA Datasets +

Normal View Ready Sum = 0

Identify Enterprise Dataset Tiers


→ *Differentiate:*

- Crown Jewels
- Have to Haves
- Nice to Haves
- Program Outputs
- Others

NGDA Next Steps: Prioritize for Users

Focus on Tier 1
Datasets as Products:

Stewarding Agency(s)

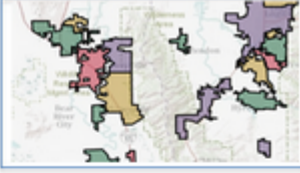


Lt. Governor
DTS
UTAH AGRC
Automated Geographic Reference Center

Utah Enterprise GIS Data Resource Maturity Assessment (v01.01)

Municipal Boundaries, Statewide

description: Incorporated city and town boundaries
 steward: AGRC, mheagin@utah.gov
 funding: AGRC, general fund
 info url: gis.utah.gov/data/boundaries/municipal
 document status: updated 20140320



Frequency of Update:

Goal	10	Live, near live, automated
Status	9	Nightly, automated
8	Weekly, automated	
7	Monthly	
6	Every 3 months	
5	Every 6 months	
4	Every 2 years	
3	Every 3 years	
2	Annually	
1	Defined, greater than 3 years	
0	Not defined	

Update Goal Notes: There are no restrictions on the effective dates for municipal boundary changes so updates can be sporadic. Updates are received from the Lt. Governor's certification process and the goal is to publish updates at least once a month.

Quality/Usability:

Goal	10	Published, defined SLA
Status	9	Published, 3rd party review
8	Published, best effort w/metrics	
7	Published, best effort	
6	Published as draft	
5	Shared working document	
4	Initial complete draft	
3	Progressing draft	
2	Poor, limitations disclosed	
1	Poor	
0	Unknown/undefined	

Quality/Usability Notes: A possible Quality Assurance process would be to inform cities and counties when changes are made in their area and invite their review and feedback. Additionally, an annual review by counties in January is recommended.

Completeness: (Geometry + Attributes)

Goal	10	Measure defined: 100%
Status	9	Measure defined: > 99%
8	Measure defined: < 99%	
7	Measure defined: < 95%	
6	Measure defined: < 90%	
5	Measure defined: < 85%	
4	Measure defined: < 75%	
3	Measure defined: < 50%	
2	Measure defined: > 25%	
1	Measures, but not yet assessed	
0	No completeness goal/measure	

Completeness Notes: A Quality Control plan is needed. FIPS, GNIS place name IDs, and population estimates are not readily available for new cities. A no overlap, no gap goal is maintained.

Accessibility: (Findability & Share Medium)

Goal	10	Accessible, findable well-documented APIs
Status	9	Interactive data viewer with well-documented APIs
8	Interactive data viewer with downloadable files	
7	Findable, downloadable file, recognized open format	
6	Downloadable file, open format SEO'd URL for data resource	
5	Findable, downloadable file	
4	Discoverable, openly shared, but by request only	
3	In person or formal record request required – in bulk.	
2	In person or formal record request required – 1 at a time.	
1	In person or formal request	
0	Not online, not discoverable, or fee greater than sharing cost	

Accessibility Notes: This dataset must be updated on AGRC ftp & AGS servers (auto update). It should also be updated in AGOL and is expected to be available via the AGOL.

Return Outside Program

○ Potential Return Level ● Current Return Level ● n/a

ROI Notes: Substantial ROI and directly relates to State and Local business requirements, is part of Lt. Gov and DTS-AGRC statutory responsibilities

	Low	1	2	3	4	5	High
Home Division	○	○	○	○	○	○	○
Home Department	○	○	○	○	○	○	○
Multiple State Departments	○	○	○	○	○	○	○
Local/Regional Government	○	○	○	○	○	○	○
Policy/Decision Making Processes	○	○	○	○	○	○	○
General Public	○	○	○	○	○	○	○
Private Sector	○	○	○	○	○	○	○
Planning/Research	○	○	○	○	○	○	○
Other: US Census Bureau & elections	○	○	○	○	○	○	○
Other: _____	○	○	○	○	○	○	○

- Requirements
- Scope/Specs
- Schedule
- Strategy
- Budget
- **Feedback**
- Mgmt Measures

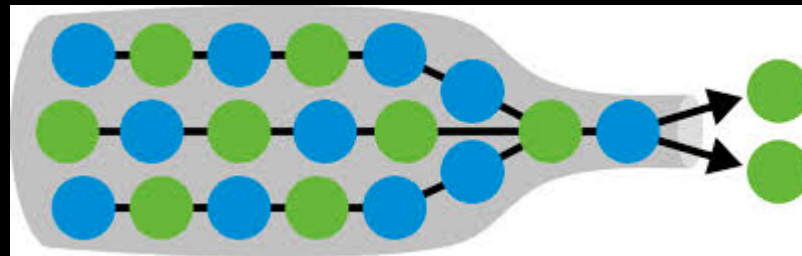
Evolve Strategy to
Maximize Data:

- Quality
- Data Currency
- Completeness
- Accessibility

We are **HERE** now, we
need to get to **THERE**

Beyond Portfolio Management?

- Product Management Level
- Requirements Analysis
- Define Products
- Act on *Constraints Analysis*



IMO -- Dataset: *major constraints*

Location

Address Points: *engaged locals, rollup process, data model, not NGDA theme*

Placenames: *too much focus on authoritative*

Community Anchor Institutions (Schools, Medical, Govt): *data model/platform*

USNG: *needs an authoritative "to/from" conversion web service*

Boundaries/Cadastral

Municipal Boundaries: *engaged states, verification*

County Boundaries: *engaged states*

Local Boundaries (Tax, Vote, Juris): *engaged, organized states*

Parcels: *existing local government revenue models, privacy*

PLSS: *federal-down model broken*

Public Land Ownership: *federal coordination, prioritization, PLSS quality*

Demographic Units: *feature/boundary precision, specs for unit division*

IMO -- Dataset: *major constraints*

Transportation

Roads (Address Ranges, Assets, Pathfinding): *data model specifications*

Highway Route & Milepost: *data model specifications, DOT engagement*

Rail: *proprietary, coarse scale*

Trails: *data model specifications (FGDC model is not for general use)*

Infrastructure

Critical Infrastructure: *use cases "I need to ___ so I can ___"*

Pipelines: *proprietary/security*

Electrical Transmission: *proprietary/security*

Mobile broadband: *tower sites/sectors for 911*

Fixed broadband: *coordination of data gathering from small businesses*

Public Safety LMR Communications: *distraction of NPSBN data network*

IMO -- Dataset: *major constraints*

Physical Features

NHD Water Model: *needs web editing platform*

Geology: *academic approach is strength & weakness*

Faults: *data model specifications*

Energy Resources: *data standard ???*

Non-discrete

Aerial Photography: *organizing/aligning to funding partnerships*

Elevation: *prioritization, funding partnerships*

Wetlands: *top down model broken, funding*

Soils: *resolution?*

Vegetation: *data currency?*

Maximizing Efficiency

Align Stewardship Model with existing 'natural forces'

Considerations:

- Genesis of real world feature
 - Pre-History?
 - From Observation
 - From Decision-making body
- Genesis data capture
 - Organization
 - Methods/sensors
- Public and Private Sector
 - Capabilities and funding
 - Existing, likely business models (attract EF? VC?)
- Geographic respect for organizational boundaries
- *Is protected?*
- Complexity of spatial data
- Complexity of tabular data
- Time to market & ability to generate, act upon feedback
- 'aaS' IT infrastructure demand and scaling

Stewardship Models

+ *Budget, Directive, Organizational Capacity*

- Local → State → National Rollup (Addresses, Parcels?)
- Local → National (Census LUCA)
- State → National (NHD, Broadband, Map21, etc)
- Partnering Verticals (3DEP)
- Federal open deliverable (LandSat)
- Web “Edit-in-place” Browser & Desktop Clients (OSM, NHD?)
- Private Sector subscription service (Imagery)
- Private Sector open data deliverable (OSM)

Policy, **Process**, **Products** ?

Align with Natural Processes

Focus on Product Constraints

Feedback Loop