

Information Network of Kansas Board Meeting Minutes

March 2022 Regular INK Board Meeting March 3, 2022

Opening

A meeting of the INK Board was called to order via online videoconference in Zoom at 10:00 a.m. by INK Board Chair Tom Sloan with the following members present:

Lori Blake, representing the Kansas Association of School Boards
Mark Burghart, Secretary of Revenue
Kate Butler, representing the Kansas Bar Association (*joined at 10:05 a.m.*)
Jennifer Cook, representing the Secretary of State (*left at 11:35 a.m.*)
Jim Haugh, representing the Secretary of Commerce
Vicky Ortiz, representing the Kansas Library Association (*joined at 10:12 a.m.*)
Kristy Wilson, representing the Kansas Association of Insurance Agents
Glen Yancey, representing the Executive Branch Chief Executive Technology Officer

Others Present

Joe Flasher, Open Data Lead, Amazon Web Services (AWS); Chris Stoner, Environmental Data Lead, Open Data, Amazon Web Services (AWS); Ken Nelson, Director, Data Access and Support Center; Susan Mauch, INK Board Counsel; Duncan Friend, Information Network of Kansas; Nolan Jones, James Adams, and Ashley Gordon, Kansas Information Consortium, LLC.

Consent Agenda

The Consent Agenda for the meeting originally included the draft meeting minutes for the regular meetings of the Board on November 4, 2021, January 6, 2022, and February 3, 2022, along with KanPay payment processing contracts for City of Olsburg and Osage Public Library.

Friend noted before the Consent Agenda was approved that the January and February meeting minutes were not yet complete, and should be removed so that only the November 4, 2021 minutes and the two KanPay Counter contracts remained.

Action Taken: Yancey moved to approve the Consent Agenda, without the January 6 and February 3, 2022 meeting minutes, seconded by Blake. There was no discussion. The motion was approved unanimously.

Regular Agenda

Regular Business

1) Amazon Open Data Program / AWS Data Exchange

In support of continuing efforts during strategic planning to present different perspectives on public data to the Board, Joe Flasher, the Open Data Lead at Amazon Web Services (AWS) made a presentation on their Open Data program. *A copy of the presentation is attached.*

Action Taken: None.

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2) Kansas Data Access and Support Center (DASC) Overview

In support of continuing efforts during strategic planning to present different perspectives on public data to the Board, Ken Nelson, Director of Kansas' Data Access and Support Center that sets strategy for and delivers geospatial data in Kansas presented on their program. The INK Executive Director is a member of the state Geographic Information Systems Policy Board and the DASC has previously received grants from the INK Board. *A copy of the presentation is attached.*

Action Taken: None.

3) Executive Session: Attorney Consultation on Personnel, Financial, and Contractual Matters

At this point, the meeting was running about 20 minutes behind schedule and in consultation with Sloan, Friend offered that he felt like 20 minutes could address the topics anticipated for the Executive Session. Sloan called for a motion to move into Executive Session.

Action Taken: Haugh moved that the meeting of the Information Network of Kansas Board of Directors be recessed for a closed executive meeting for twenty minutes beginning at 11:10 a.m. for three purposes - pursuant to K.S.A. § 75-4319(b)(2) for consultation with an attorney for the public body which would be deemed privileged in the attorney-client relationship involving 1) financial matters of the board related to the grant program; 2) for personnel matters of non-elected personnel involving the Executive Director, and 3) for consultation involving the Information Network of Kansas Network Manager Contract renewal, the Information Network of Kansas Board of Directors to resume the open meeting at the current Zoom conference at 11:30 a.m. and that this motion, if adopted, be recorded in the minutes of the Information Network of Kansas and be maintained as a part of the permanent records of the Board and that the board members in attendance, their proxy representatives, Friend, and Mauch attend. Seconded by Wilson. The motion was approved unanimously.

The Board returned to open session at 11:30 a.m.

Action Taken: None.

4) INK Annual Audit – Engagement Letters with BTCO

Friend explained that there were two proposed engagement letters for the annual financial audit of INK that had been produced by Berberich Trahan and Co (now BTCO), noted the slight price increase in the audit and asked for the Board's approval of to execute those agreements to have them conduct the audit of the 2021 INK financial statements and perform their standard Agreed-Upon-Procedures audit of KIC compliance with a selection of agency contracts this year. He noted that they had been performing the audit for a number of years, but they had rotated personnel/management across that time. Mauch confirmed she had reviewed them and they looked appropriate. Sloan asked if there were any question for Friend or Mauch. Seeing none, he said asked for a motion to approve and authorize Friend to execute them.

Action Taken: Burghart moved to approve both engagement letters. Seconded by Blake. There was no discussion. The motion was approved unanimously.

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Note: Cook left the meeting at 11:35 a.m.

5) February 2022 Network Manager Report

Jones, along with Gordon and Adams went over the written Network Manager Report to provide an overview of the material included. During the report, Friend asked Jones and Adams to show the real-time statewide web traffic analytics web page they have implemented.

Sloan asked Jones to expedite the overview as the meeting had run out of time. Jones did so, then Sloan asked if the members had any questions. Blake asked Jones if there were any way they could provide more information on the “who and the what” under the local leads and opportunities section. She observed that there are numbers being provided, but that doesn’t really talk about the activities that they are pursuing.

Jones said that this was a good question that has come up occasionally. He said that the challenge was that they are a company and providing services out there, but this document is an open record. So, if too much information is provided, other entities that are also interested in that work would get access to that, so there has always been a sensitivity about providing too much information. Friend asked to intervene briefly. He stated that this is an actual thing that happens. For example, PayIt just now stopped attending INK meetings and receiving copies of the board materials. So, they actually do that. Conversely, Friend said, there’s no reason why the information can’t be provided to himself and perhaps there’s some way he can proxy that information to the Board members. It is clearly something that’s needed. It might seem overblown to do that, but he said that this is something he’d like to talk about in executive session as they go forward in looking at the contract – how to deal with this public-private aspect and competitive aspect of what they are doing. To sum up, Friend continued, it seemed like KIC could certainly provide it to him, and if they want it provided publicly, that is up to the Board’s discretion.

Blake said she didn’t think it needed to be provided publicly, but as part of their packet, like contract information, but as a Board they have the right to see that. Friend noted that the packet would also be an open record – he actually mails that to vendors, so they would see that. He is not protesting, just clarifying for the good of the order. He continued that it is a dilemma they have with INK, how can they keep the Board fully informed about business and competitive decisions and also shield them from competition – he thought it should be talked about in executive session with the attorney. But, he said, the point was well taken and he agreed also. Sloan added that it might be something they could do in executive session.

Action Taken: Blake moved to accept the February 2022 INK Network Manager report. Seconded by Wilson. There was no discussion. The motion was approved unanimously.

6) Strategic Planning Update

Friend summarized this topic briefly. Molly from Shockey Consulting had spoken with almost everyone on the Board and said she has good feedback from the 15 people she’s talked with. She is making progress. He does need to go out and reschedule the special meetings they had originally scheduled, most likely for April – but he needed to hold hands with her to make sure she is ready.

Action Taken: None.

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7) INK Board Nomination Status

Friend recapped the nominations the Board had previously transmitted to the Governor's office and the situation with the Kansas Library Association nominations that would go directly to the Governor's office that they were waiting on. The Governor's office also said that they'd been short-staffed, but had a new person starting at the end of February that should help move things forward. They thought they should have something on the position where Wilson was being renominated by the end of March.

Action Taken: None.

New Business

Friend recalled for the Board the outstanding status of the revised / updated State Home Page. The most current status is the Samir Arif, the Public Information Officer for the Department of Administration told Friend and Jones via email that he now has a meeting with the Governor's Office to talk over the site. Friend offered to be a part of that, which he thinks is a larger strategic question about roles and how this has all played out. Then, Arif would come back to him after that and talk about structuring the feedback from the public information officers.

Adjournment: Wilson moved to adjourn the meeting at 12:05 p.m. The motion was approved unanimously.



Open Data on AWS

<https://opendata.aws>

Joe Flasher, Open Data Lead

Why does AWS care about open data?

Many AWS customers supply data to the public to accelerate research and product development.

Many AWS customers use data shared on AWS to create new products, services, and insights.

“...data must be organized, well-documented, consistently formatted, and error free. Cleaning the data is often the most taxing part of data science, and is frequently **80% of the work.**”

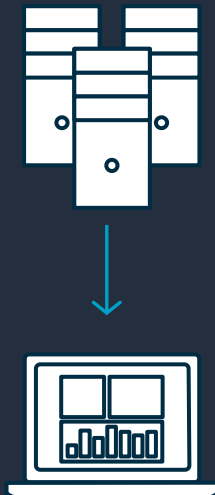
— Data Driven by DJ Patil and Hilary Mason

Undifferentiated heavy lifting

Flipped data flow in the cloud

Traditional approach:

Move data to computing resources.

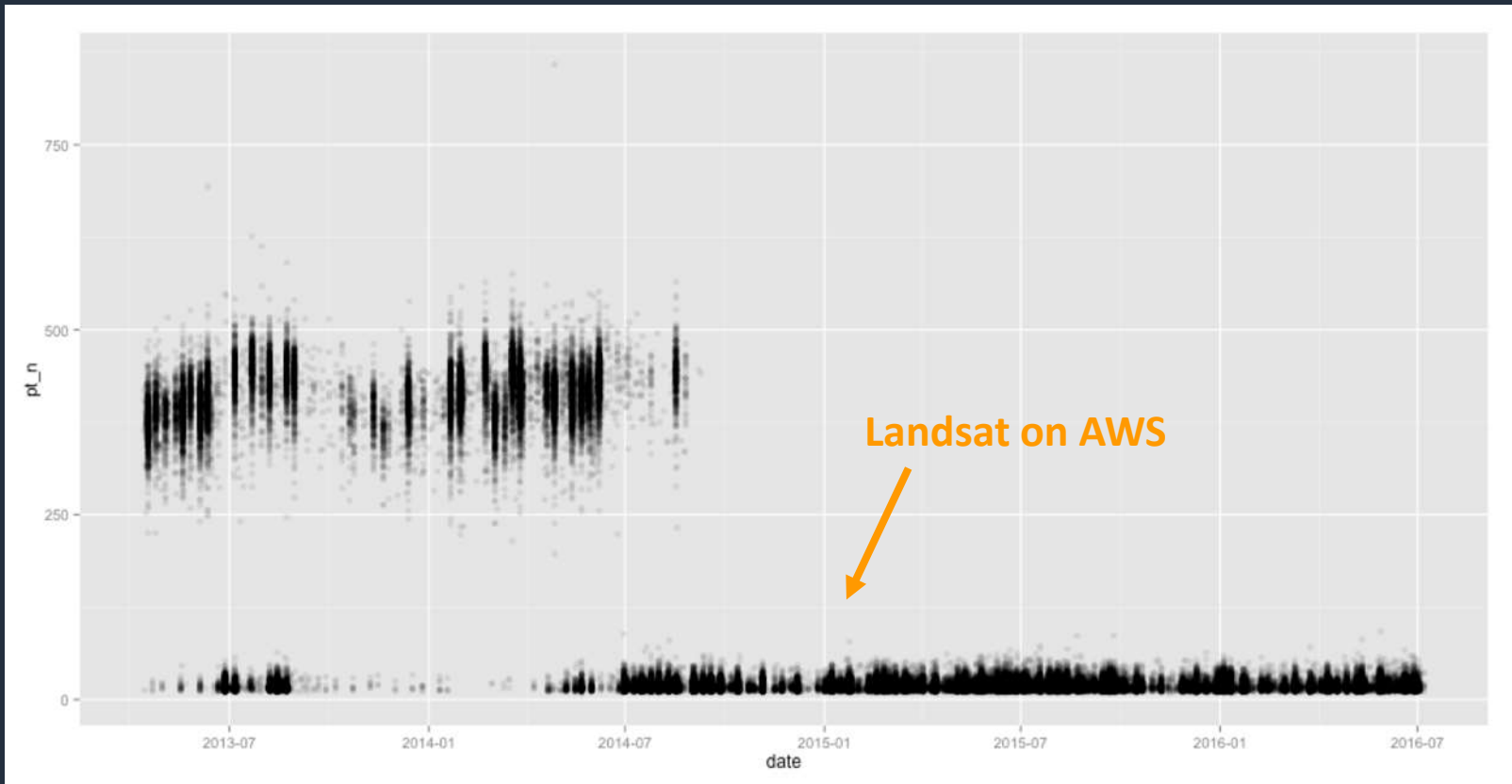


Cloud approach:

Move computing resources to data.



Data at work



Graph by Drew Bollinger (@drewbo19) at Development Seed

Monitoring at-risk bodies of water from space

The **Blue Dot Observatory** uses Sentinel-2 satellite data on AWS to monitor water bodies around the world.

“The cost to process one month of data for about 7,000 bodies of water currently in the system is 6 EUR. It is possible to set up world-scale systems with a shoestring budget.”

opendata.aws/bluedot



Opening high-resolution elevation data

The **US Geological Survey (USGS)** shares over 10 trillion lidar point cloud records from across the US on AWS.

“The democratization of elevation data [...] promises to revolutionize approaches to applications from flood forecasting and geologic assessments to precision agriculture and infrastructure development.”

— Kevin Gallagher, USGS

opendata.aws/usgs-lidar




Sharing data (on AWS)

What we've learned

What makes a dataset successful?
It is treated like a product.

Common Crawl - Registry of Open Data on AWS

Secure | <https://registry.opendata.aws/commoncrawl/>

Registry of Open Data on AWS 

Common Crawl

[encyclopedic](#) [machine learning](#) [internet](#)

Description

A corpus of web crawl data composed of over 5 billion web pages.

Update Frequency

Monthly

License

This data is available for anyone to use under the [Common Crawl Terms of Use](#)

Documentation

<http://commoncrawl.org/the-data/get-started/>

Contact

<http://commoncrawl.org/connect/contact-us/>

Usage Examples

- [Building a Web-Scale Dependency-Parsed Corpus from CommonCrawl](#) by Alexander Panchenko, et al.
- [Dresden Web Table Corpus \(DWTC\)](#) by Database Systems Group Dresden
- [Index to WARC Files and URLs in Columnar Format](#) by Sebastian Nagel

Resources on AWS

Description
Crawl data (WARC and ARC format)

Resource type
S3 Bucket

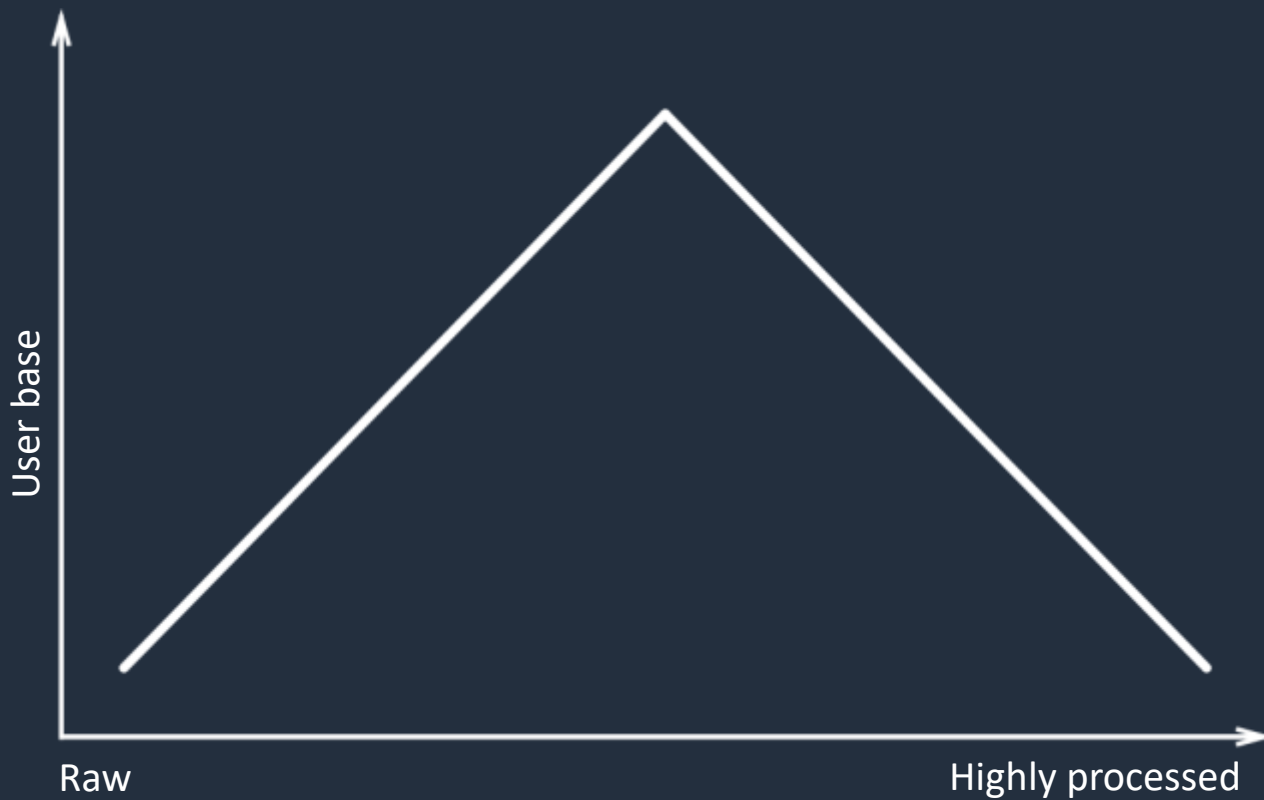
Amazon Resource Name (ARN)
`arn:aws:s3:::commoncrawl`

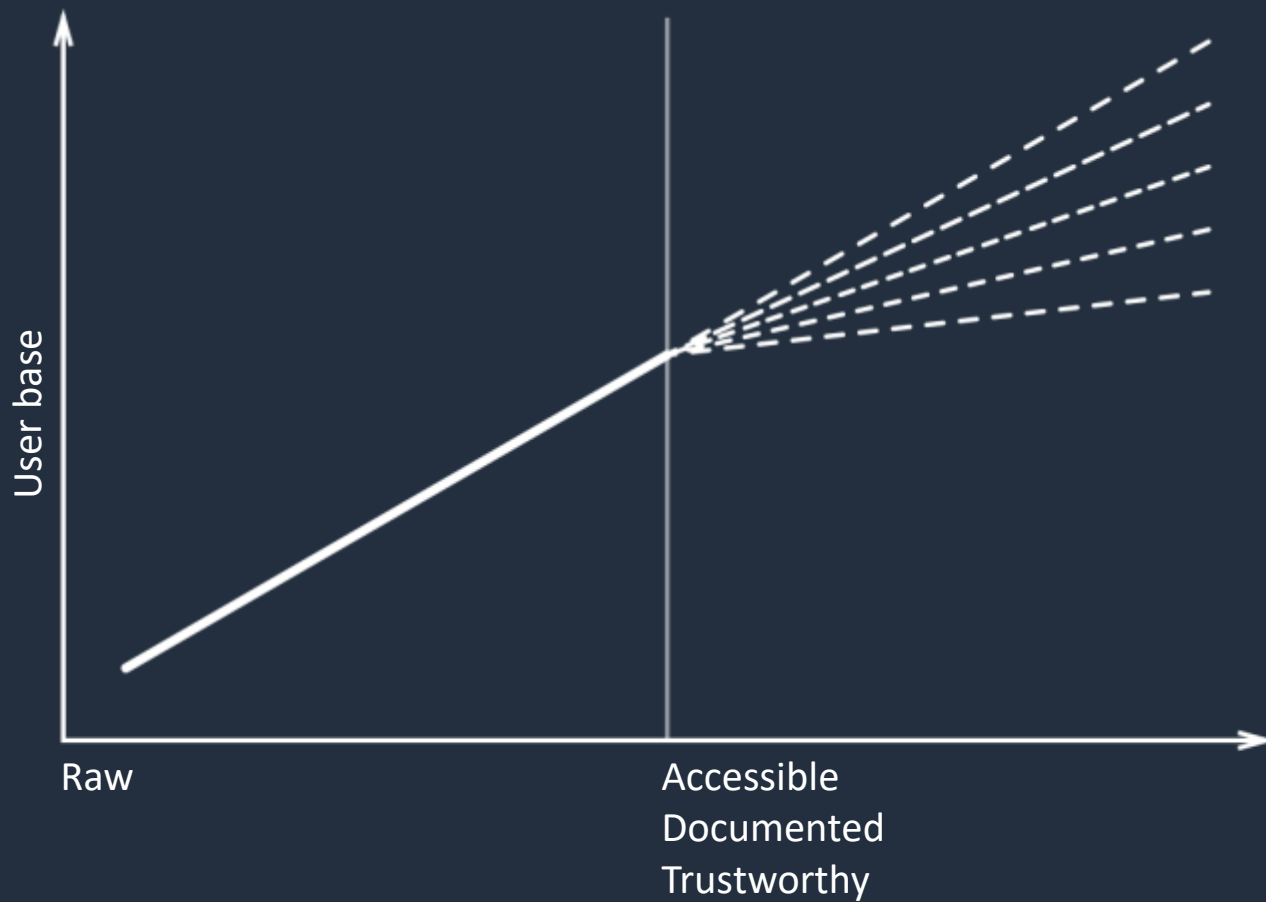
AWS Region
`us-east-1`

What makes a dataset successful?

It is treated like a product.

It is optimized for analysis.





What makes a dataset successful?

It is treated like a product.

It is optimized for analysis.

There is a community around it.

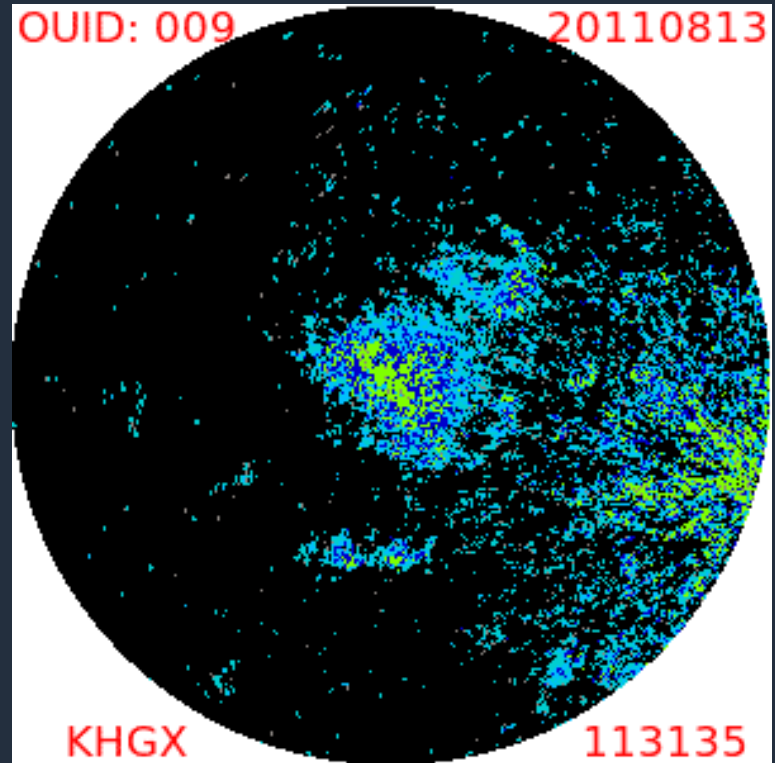
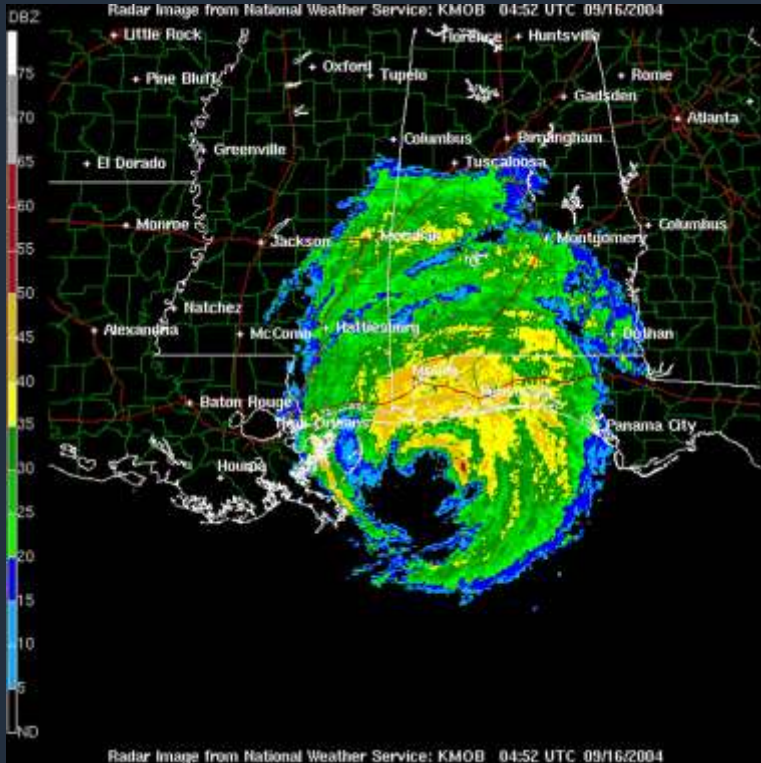
“Recently, the National Oceanic and Atmospheric Administration and Amazon Web Services (AWS) Cloud made available one of the largest datasets describing animal movement ever compiled: ...”

— Adriaan M. Dokter et al. Nature (2018)

“Recently, the National Oceanic and Atmospheric Administration and Amazon Web Services (AWS) Cloud made available one of the largest datasets describing animal movement ever compiled: [the Next Generation Weather Radar \(NEXRAD\) archive.](#)”

— Adriaan M. Dokter et al. Nature (2018)

opendata.aws/bird-radar



Thank you!

jflasher@amazon.com



Kansas Data Access & Support Center overview

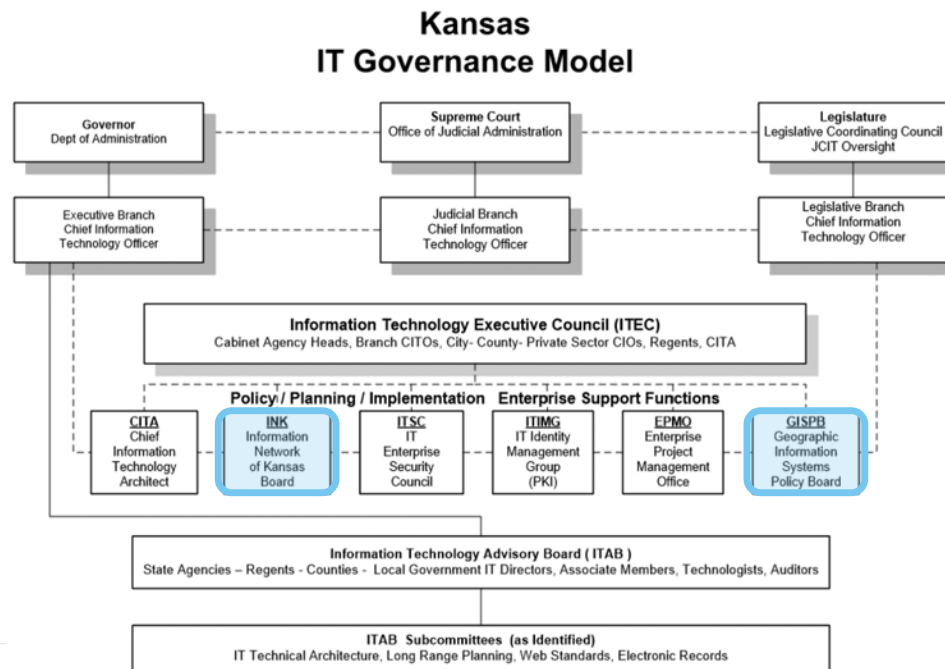
*Information Network of Kansas
Board of Directors*



March 3, 2022

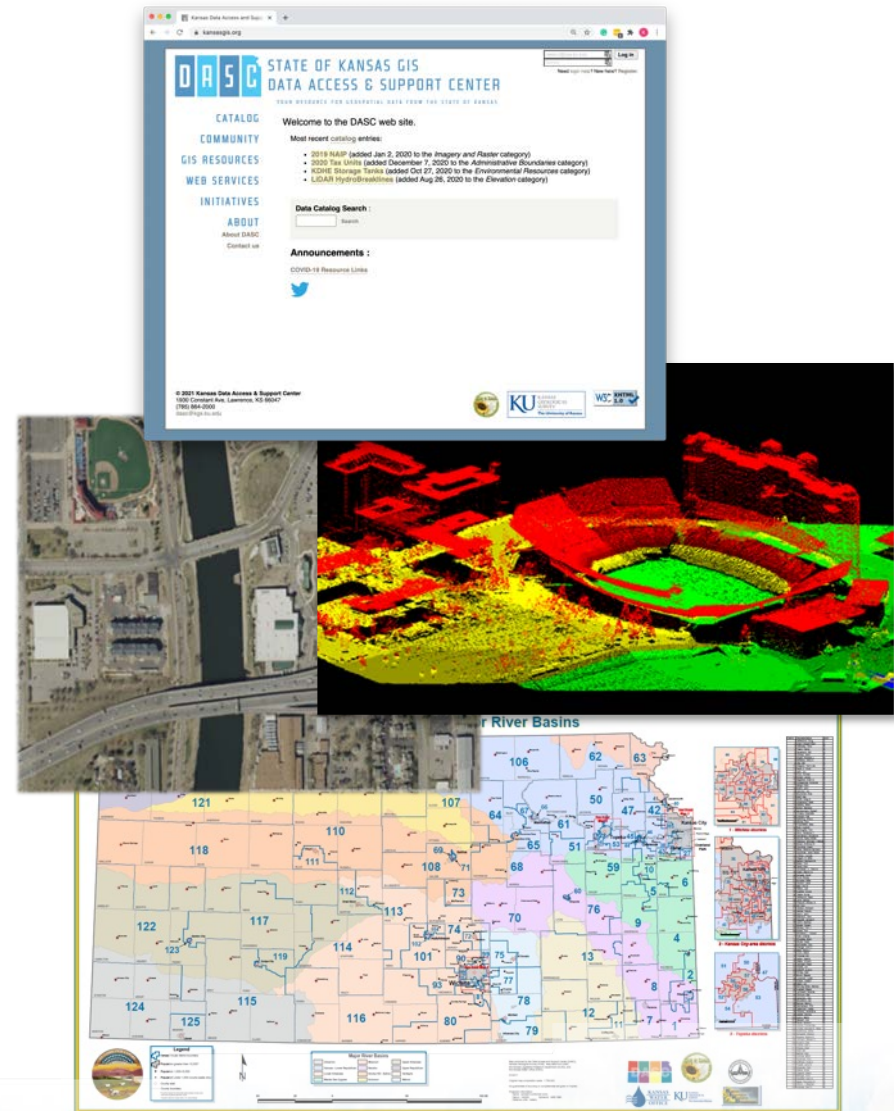
DASC Overview

- Established by the GIS Policy Board in 1991
- Located at the Kansas Geological Survey at the University of Kansas
- Central repository of GIS databases of statewide & regional importance
- Operates under agreement with the Kansas Department of Administration's Office of Information Technology Services (OITS)



DASC Services

- Database [archival](#) and [distribution](#)
- Database development & integration
- GIS web application development and hosting
- State & local government [coordination & outreach](#)
- Coordinate & manage the state government Esri software Enterprise Agreement
- Geospatial metadata development assistance
- Cartographic development
- Promotion of the Kansas GIS Initiative
- Development and maintenance of the DASC portal – <https://www.kansasgis.org>



DASC projects & initiatives

- **Kansas Department of Agriculture**
 - Kansas Online Water Use Report
 - Base Flood Elevation Portal
- **Kansas 911 Coordinating Council**
 - Next Generation 911 Program
- **Kansas Department of Revenue**
 - Open Records for Kansas Appraisers
 - Statewide Tax Unit Database
 - Streamlined Sales Tax Database & Web Service
- **KDOT/Traffic Records Coordinating Council**
 - Crash Mapping
- **Kansas State Historical Society**
 - Historical Property Inventory
 - Archeological Sites Inventory
- **Kansas Department of Wildlife, Parks, & Tourism**
 - Fish & Wildlife Contracts and Reporting application hosting
- **Kansas State Department of Education**
 - School Travel Audit Web Service
- **Kansas Water Office**
 - Public Water Supply Mapping Portal
- **Kansas Department of Health & Environment**
 - Data & map service hosting for public datasets
- **Kansas Division of Emergency Management**
 - ArcGIS Server hosting
 - Portal development

Coordination & Outreach

- **GIS user groups**
 - ArcGIS User Group
 - Coffee & Code User Group
 - Esri Enterprise Agreement Stakeholder Group
- **MidAmerica GIS Consortium (MAGIC)**
 - Steering Committee member
 - Clearinghouse Summit – Planning Committee Chair
- **National States Geographic Information Council (NSGIC)**
 - State Representative
 - Board of Directors
 - Geo Enabled Elections Steering Committee
 - Geospatial Maturity Assessment (GMA) Committee
- **Kansas Next Generation 911**
 - Kansas NG911 GIS User Group
 - Kansas 911 Coordinating Council member (non-voting)
 - Kansas 911 Coordinating Council Executive Committee
 - GIS Committee Chairperson & committee member
- **Kansas Association of Mappers**
 - Association members
 - Conference sponsor

Kansas GIS Program Reach (abridged)

- Federal government:
 - Natural Resources Conservation Service
 - US Geological Survey
 - US Census Bureau
 - US Department of Transportation
- State government:
 - Office of Information Technology Services
 - GIS Policy Board
 - 911 Coordinating Council
 - Traffic Records Coordinating Council
 - Numerous state agencies
- Local government:
 - Public Safety Answering Points
 - County Appraisers
 - County Clerks
 - GIS/Mapping Departments
- GIS service providers:
 - ATCi
 - GeoComm
 - Kimball Mapping
 - SAM (R&S Digital)
- Imagery & LiDAR:
 - Surdex
 - Hexagon
 - Atlantic
- Software:
 - Esri Enterprise Agreement
- NG911 service providers:
 - AT&T
 - Motorola
 - Intrado
 - RapidDeploy
- Professional organizations:
 - Kansas Association of Mappers
 - MidAmerica Geographic Information Consortium
 - National States Geographic Information Council

Initiative highlights

- Esri Enterprise Agreement
- Kansas Next Generation 911
- Statewide orthoimagery acquisition
- Raster data services
- DASC Portal architecture redesign
- GIS Data Planning Committees

Esri GIS Software Enterprise Agreement

Overview:

- Negotiated flat-rate agreement that defines access to a specific set of Esri products & services
- Unlimited access to Esri core technology
- Limited access defined for other products such as ArcGIS Online
- Kansas EA available to state agencies, boards, and commissions only

Benefits:

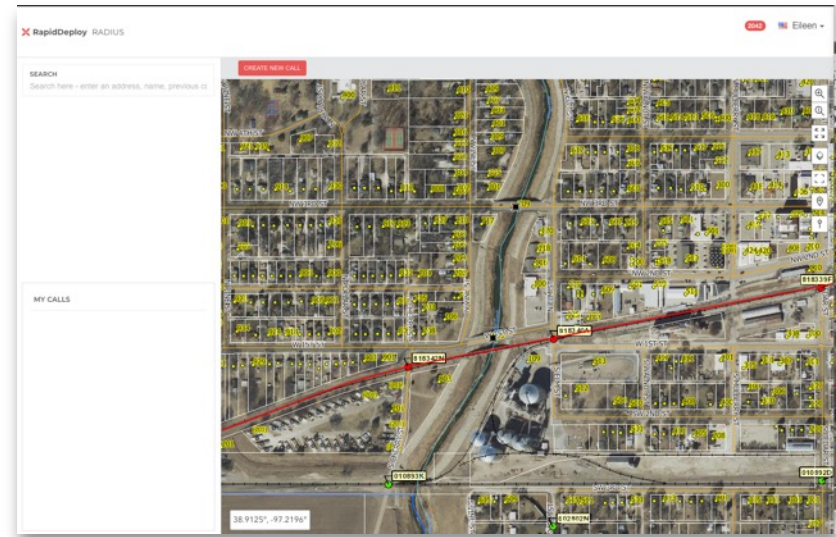
- Unlimited access to core technology
- Substantially reduced procurement costs
- Flexibility to deploy the necessary software products when and where needed
- Allows agencies to experiment with different software packages and configurations
- Standardized budget over the term of the agreement
- Improved coordination across the enterprise

Period of performance:

- Current agreement – February 1, 2021 – January 31, 2024

DASC support for Kansas NG911 program

- GIS data QA, aggregation, and publication
 - Aggregate GIS data submissions from all jurisdictions
 - *Address Points, Road Centerlines, Emergency Service Boundaries, additional layers (optional)*
 - Publish data in multiple file and web service formats to support various aspects of the NG911 system
 - *AT&T, Intrado, RapidDeploy (Apple & Google ECL integration)*
- Publish and support map, imagery, and geocoding services for the call handling map (RadiusPlus)
- Kansas NG911 QA GIS Toolbox
- Kansas NG911 Program Portal
- Coordination & Outreach
- Kansas NG911 data standard & annual training



Kansas NG911 GIS Data Workflow

GIS data maintenance performed by NG911 GIS Data Maintainer

GIS data submitted to the Kansas NG911 Program Portal

GIS data is aggregated into statewide layers and published on a weekly basis

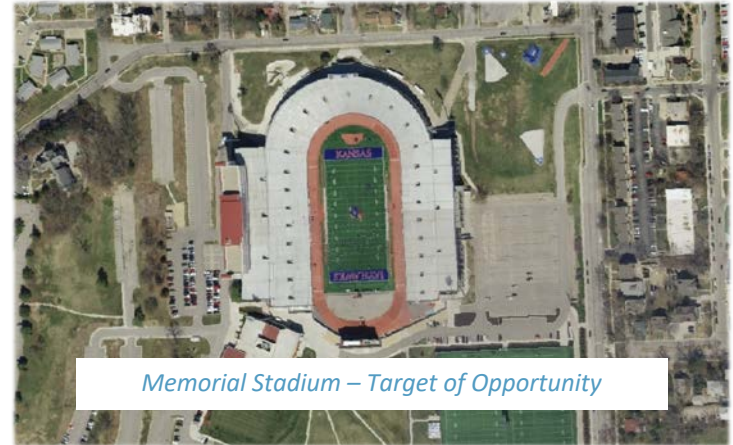


Local validation using the NG911 GIS QA Toolbox

Data submissions are validated using the NG911 GIS Toolbox. Data must adhere to the KS NG911 Data Model. Data issues are reported to the Data Maintainer & Data Steward.

Orthoimagery Program Update

- 911 Coordinating Council's Strategic Plan calls for imagery update every three years
- Primarily funded by the 911 Coordinating Council with some cost-share provided by KDOT/TRCC and KDOR
- Acquisitions:
 - 2014/15
 - 2018
 - 2021
- Specifications:
 - Statewide, leaf-off, 1-foot pixel resolution
 - 4-band (R,G,B, near IR)
- Agreement overview:
 - Surdex Corporation (St. Louis, Mo)
 - Three-year agreement (w/one three-year renewal option)
 - [Buy-up program](#) over the life of the agreement
 - [Emergency response imagery services](#)
- Uses:
 - Supports NG911 GIS data maintenance and call handling mapping system (RapidDeploy)
 - Default imagery layer within the Open Records for Kansas Appraisers (ORKA) application
 - Utilized by nearly all state and local government GIS/mapping departments



DASC Raster Data Services

- Architectures tested/considered:
 - ArcGIS Image for ArcGIS Online
 - ArcGIS Image Dedicated (Azure)
 - [ArcGIS Enterprise on Azure](#)
- Leveraging Azure Block Blob storage
- Formatting data as Cloud Optimized GeoTIFFs
- Dynamic and tiled services
- Support for visualization, analysis, and download
- Why?
 - Improved uptime
 - Better performance
 - Leverage cloud platform/resources
 - Millions requests/year made to our on-prem services utilized by a variety of users and applications

Statewide Digital Orthophoto Quarter Quadrangles (DOQQ)

- 1991 1-meter Panchromatic
- 2002 1-meter Panchromatic

National Agricultural Imagery Program (NAIP)

- 2003, 2004, & 2005 at 2-meter resolution
- 2006, 2008, 2010, 2012, 2014, 2015, 2017, 2019, 2021 at 1-meter resolution

NG911 Statewide Orthoimagery Projects

- 2013/14 1-foot, leaf-off, natural color
- 2018 1-foot, leaf-off, 4-band
- 2021 1-foot, leaf-off, 4-band (Q2 2022)
- Buy-up program

High-resolution Orthoimagery (local government)

- 100+ imagery data sets
- 3-inch, 6-inch, and 1-foot resolution
- Panchromatic, Natural Color, 4-band (Color/CIR)
- Collection dates span the past 15 years

Historical aerial photography

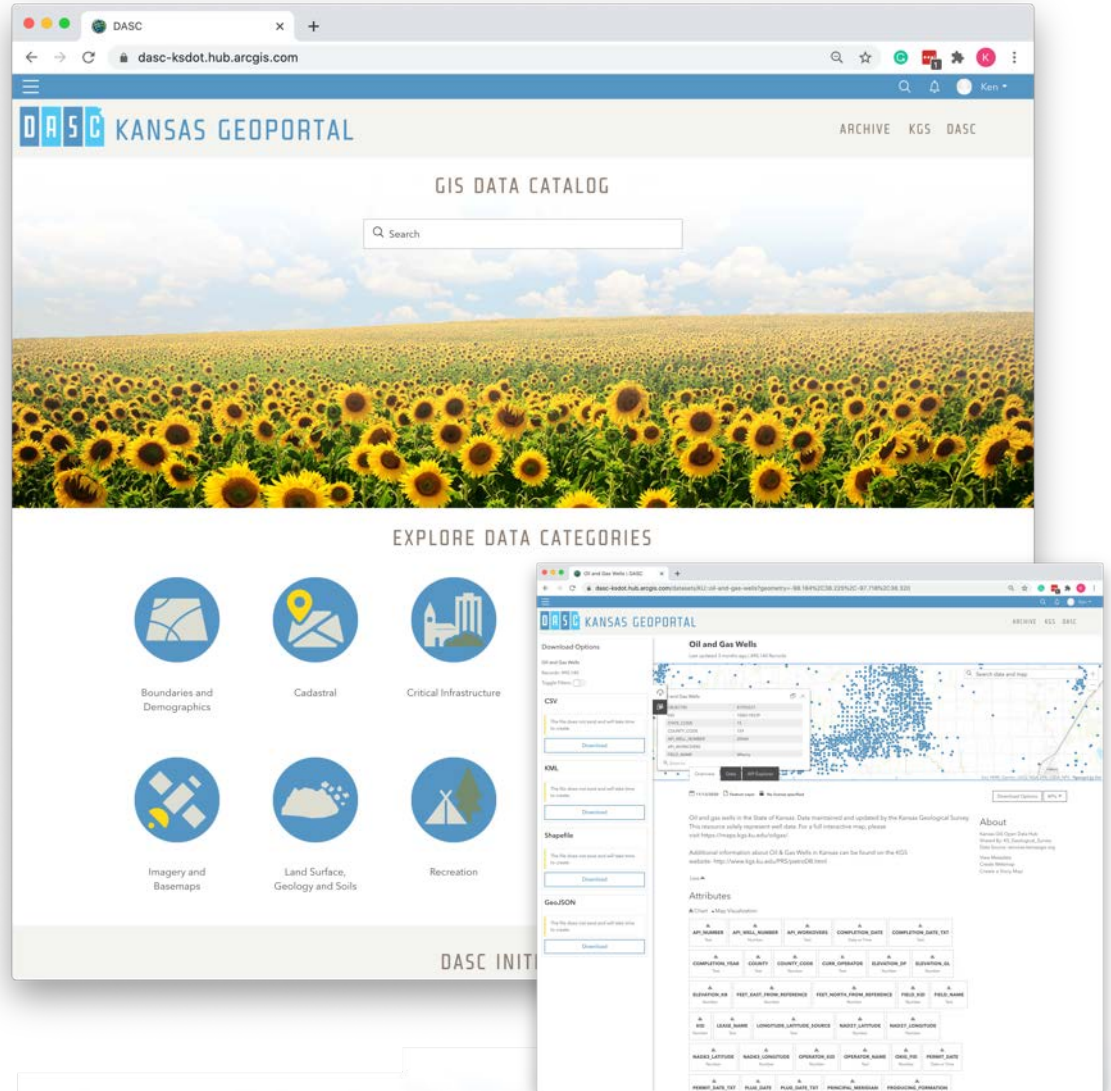
- 50+ cities
- Emporia State University/NRCS partnership
- Large collections of scanned photography (KGS/K-State/others)

Airborne Light Detection & Ranging (LiDAR)

- Statewide QL3 (available)
- Statewide QL2 (Q1 2022)
- Pilot area QL1 (Q1 2022)

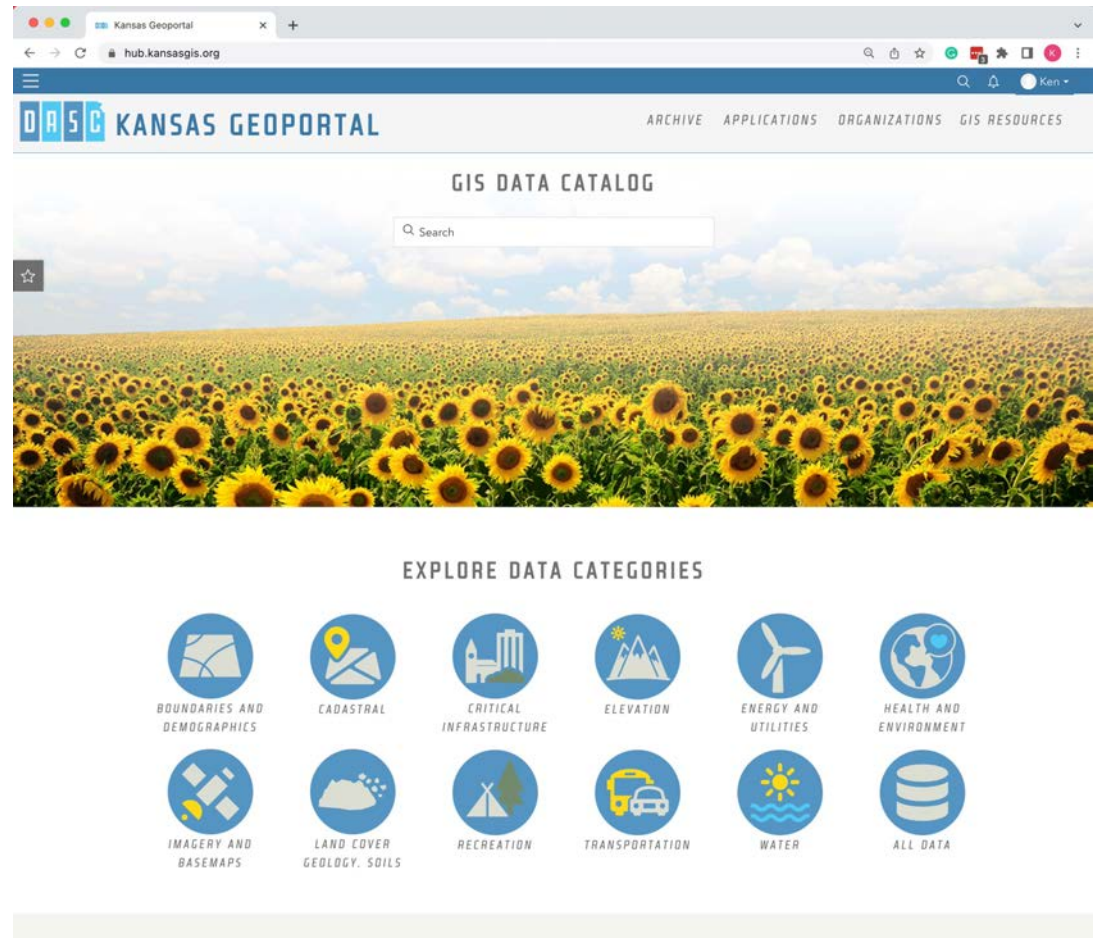
DASC Portal Architecture Redesign

- Migrate from custom development to the ArcGIS Hub/Open Data platform
- Aggregate content from multiple ArcGIS Online organizational accounts
- Enable search, discovery, visualization, download, map services, API, and metadata of [authoritative geospatial data](#) that exists across the state & local government, and regents institutions
- Enhance interagency & intergovernmental geospatial data sharing capabilities



DASC Portal Architecture Redesign

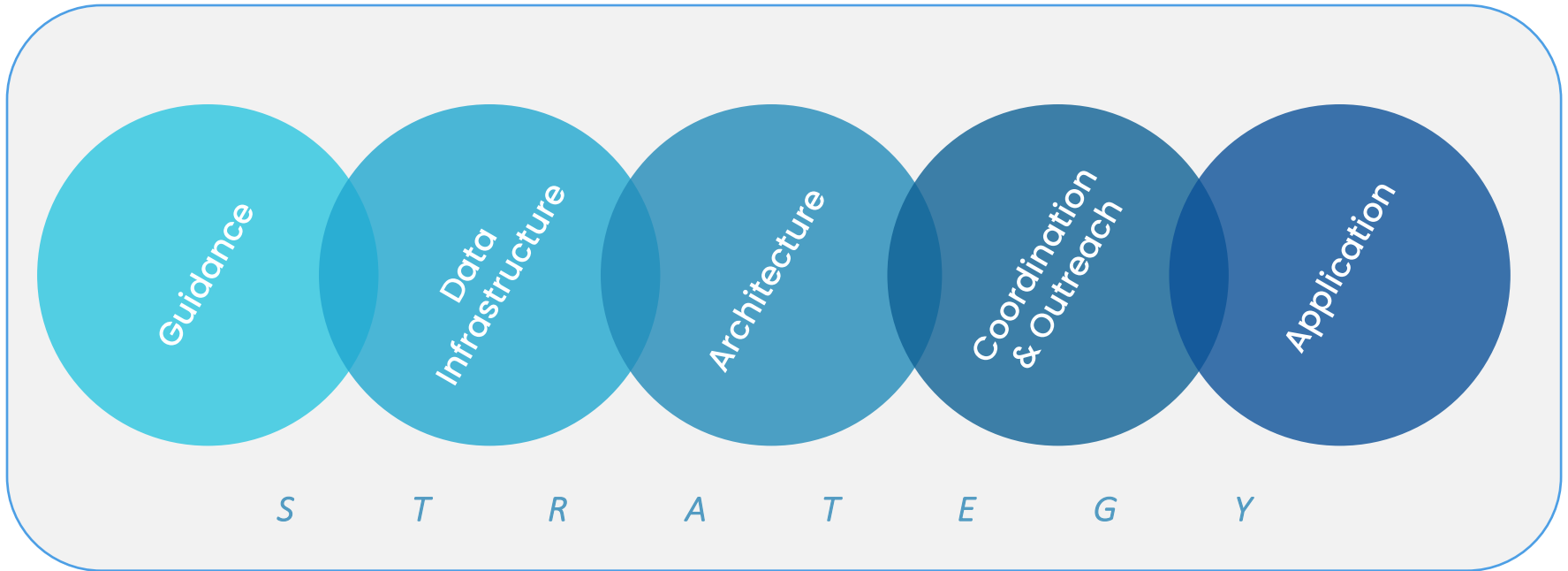
- Lower the technical barriers related to GIS & geospatial technologies
- *Enable access to an ever-growing collection of authoritative geospatial data*
- Encourage the adoption of geospatial technology across the enterprise
- Support the application across...
 - Research institutions
 - Local, state, and federal government
 - Private sector



Strategy Components

Development and update of planning documents...

- **Data Business Plan**
- Communications Plan
- Architecture Plan
- Implementation Plan



Data Committees

On base:

- Administrative Boundaries Data Committee
- Imagery & Elevation Data Committee
- NG911 GIS Committee

At bat:

- Infrastructure & Buildings

On deck:

- Water Resources

Dugout:

- Cultural and Recreational
- Environmental Resources
- Geodetic control
- Land Surface/Geology/Soils
- Transportation
- Utilities and Energy Resources

Thank you

Questions?