



How to Speak Data Geek

November 16, 2021



- Don't forget to connect with us on social media!



ACUA Virtual Learning Director
Lisa Gendusa, CIA, CFE
Internal Auditor
Texas State University System



ACUA Virtual Learning Volunteer
Jonathan G. Stadig, Senior Auditor
University of Massachusetts

Introduction of Speakers

Kate Head, CPA, CFE, CISA, CIG

- Associate Director of Internal Audit, University of South Florida
- BS in Accounting
- Over 20 years experience with Data Analytics (ACL) and 30 years of Audit & Investigation experience

Joselyn De La Cruz-Rameau, Ed.D./ET

- Data Analyst for the University of Texas at San Antonio Audit/Cons.
- BA in Business Administration, MS in Info. Systems Mgmt., Doctorate in Education with spec/Educational Technology
- Over 20 years in database programming, reporting, and analysis

Session Objectives

- Steps to developing a data strategy
- Tips for discussing data analytic needs with data stewards
- Ways to create a more accurate and complete data request

Poll #1: How would you describe your maturity level with data analytics?

- a. New to data analytics, but ready to learn
- b. Have some experience, but looking to raise my skill level
- c . Proficient with data analytics, but want to be a “Rock Star”
- d. I am a data analytics “Rock Star”

Steps to Developing a Data Acquisition Strategy

Do Your Homework

- Understand your organizations data security policies
- Have insight into the data governance/management structure in place:
 - Data Governance/Stewardship Committee
 - Data Owner
 - Data Custodian/Data Steward
- Be familiar with the existing data classification scheme:
 - Confidentiality
 - Criticality

Steps to Developing a Data Acquisition Strategy

Explore the Data Analytics landscape

Know where your institutional data is stored, how it is accessed for reporting and analysis, and what tools are being utilized.

Who understands your data?

- Operational users
- Units that create key performance indicators dashboards
- IT Application Specialist/IT Security
- Other auditors

Understand the source of data stored outside the original application.

Steps to Developing a Data Acquisition Strategy

Identify Resources Available

Know where documentation about your institutional data is stored.

What information about your data is available?

- Meta Data Repositories
- Table Layouts/Record Layout
- Data Dictionaries/Data Definition Matrix/Data Glossary
- Query/View Documentation

Steps to Developing a Data Acquisition Strategy:

Assess Audits Needs

Determine how Audit will be accessing the data.

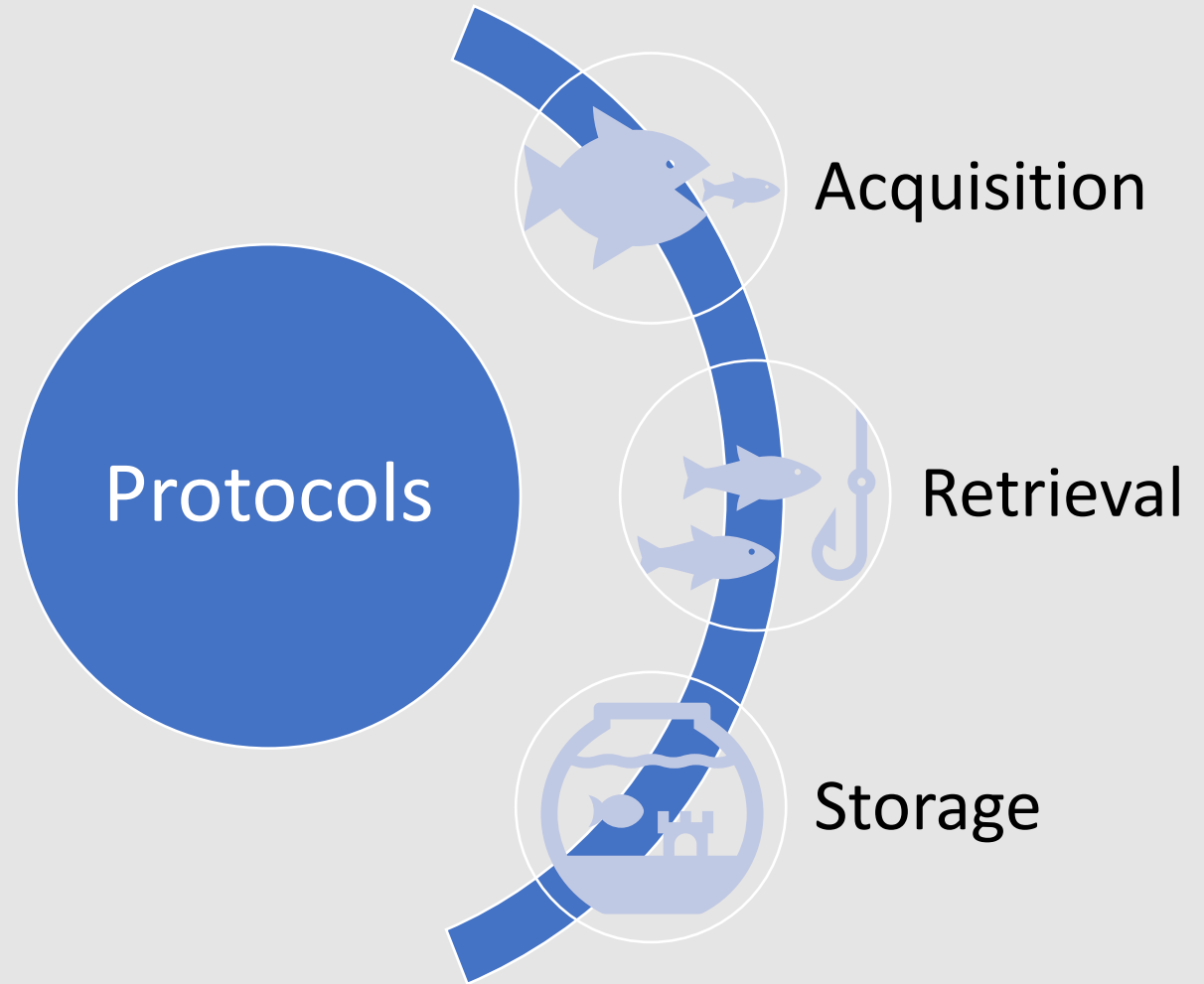
- Frequency
- Method
 - Individual data requests
 - Standard data queries or views
 - Direct access to established data repositories
 - Direct access to “live” systems/applications

Poll #2: Which of the following is your most common method for obtaining your data?

- a. Individual data requests
- b. Standard data queries or views
- c. Direct access to established data repositories
- d. Direct access to “live” systems/applications
- e. There isn't a common method we use them all!

Steps to
Developing a
Data
Acquisition
Strategy

Establish
Protocols





Data
Acquisition
Protocol

Audit will be relying on others to provide the data.

- How will data request be made?
 - Standard Service Request
 - Audit Developed format
- Who will approve the request?
 - Internally & Externally
- What type of turnaround (SLA) can we expect?



Data
Acquisition
Protocol

Using queries
developed in
house or with
external
assistance

How will they be validated?

Where will queries be
stored?

Who will be able to run
them?

Who can modify them?

What type of documentation
will be maintained?

Direct Access Acquisition Strategies

Data Pulled
by Audit

Where is the data and how can it be accessed?

Internally Stored Data

- Direct Connection to the Application
- ODBC Connection to Application
- Data Warehouse

Risk



Externally Stored Data

- ODBC Connection to Application
- Vendor Provided Data Dump
- Existing Application Reporting Process



Data
Retrieval
Protocol

Audit will be relying on others to provide the data.

- Who will coordinate the hand-off?
- What will be data transmission method?
- How long will data remain in temporary location?
- How will Audit know data is complete?



Data
Retrieval
Protocol

Audit will be pulling the data or running the queries

- Who will have access?
- What training will be needed?
- How will sensitive data be handled?
- How will completeness be validated?
- What software will be used?
- What documentation is maintained?

Storage

Confidentiality

- Special Handling Protocols
- Limited Access

Integrity

- File Storage Structure
- Established "Owner"

Availability

- Access
- Retention
- Disposal



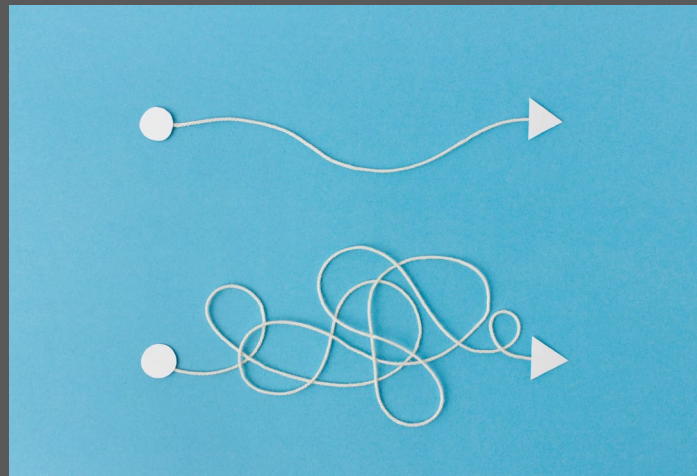
Poll #3: What are important elements to storage of the data?

- a. Availability, security, storage
- b. Confidentiality, integrity, availability
- c. Integrity, and putting People first
- d. None of the above

Tips for discuss data analytic needs

Start with the End in mind.

- What is the data pull going to be used for?
- How often will the data be used by Audit?
- How many team members will need access to the data?
- Will the data be used for multiple audit purposes?
- What “data visualizations” are planned?



To Describe Data Quality

Granularity

Level of
detail or
degree of
aggregation

Uniqueness

Level of
uniqueness,
to be useful
data must be
unique

Conformity

Level of
conformity
to a ridged
format

To Describe the Data Source



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Completeness

- Is the table a clone of a table in the database or a subset

Aggregation

- Data is a combination of data or data tables combined due to their commonality

Derived/Data Derivation

- Data that is no longer in its original state but is derived from existing data

Reidentified/Normalized Data

To Describe Data Access



Schema

- A database schema represents the logical configuration of all or part of a relational database.

Fine Grain Access

- Controls access within a table
 - Row Level Security
 - Tree Based Access
 - Data Element Level Security

Other Important Terms



Effective Dated

- Each change in the data has a different row, and sequence versus the most current data value.

Current Value

- The value based on the last time the data was updated.

View

- Virtual/logical table formed as a result of a query from one or more tables.

Ways to create a more accurate and complete data request

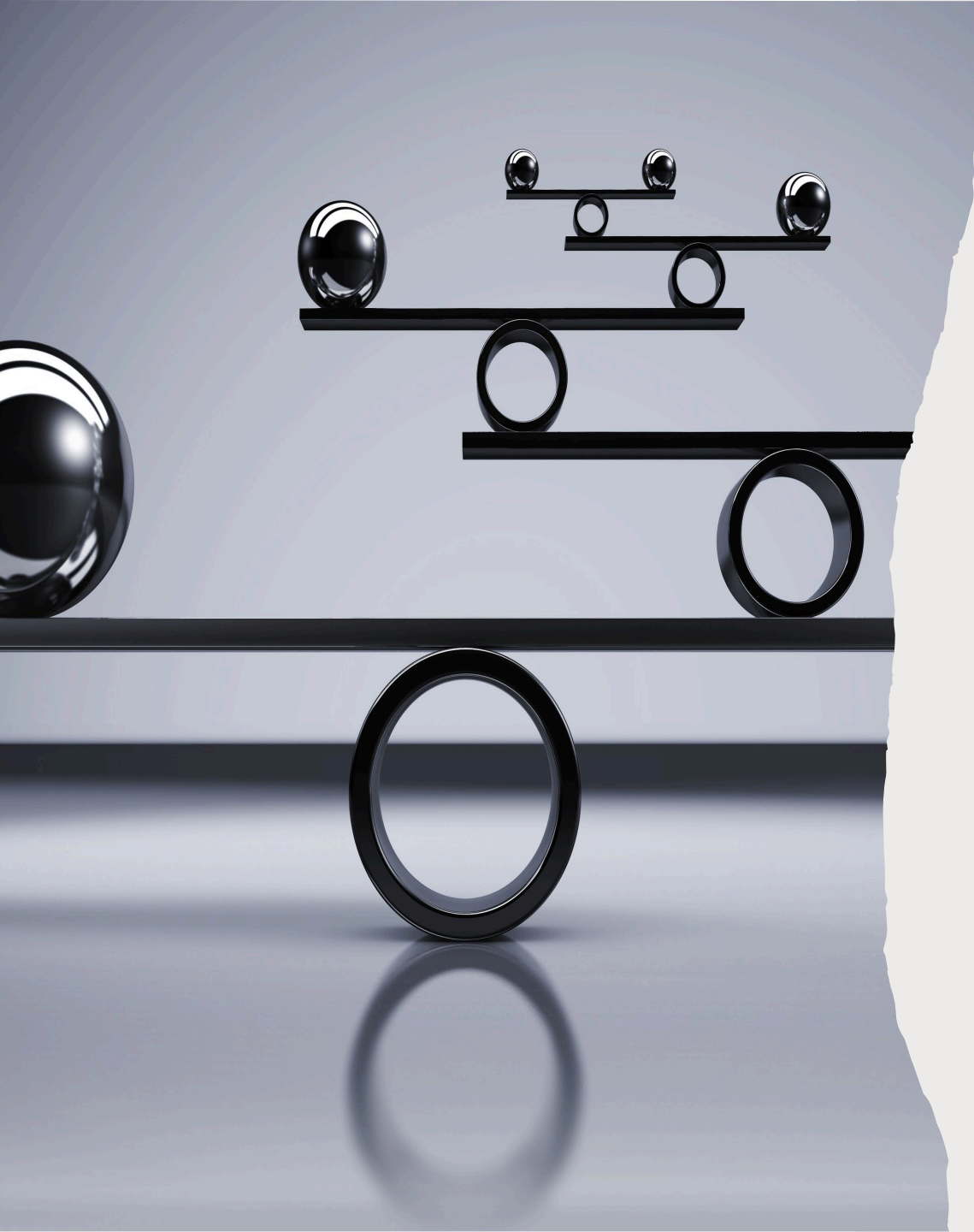
- Create a data request template/form
- Hold a data planning meeting to ensure you have sufficient information regarding your data needs.
- Confirm your understanding of the data in advance with a data steward.



Data Request Form— Header Information

- Requestor
- Contact Information
- Date of Request
- Date Needed
- Preferred file format
- Anticipated Retention Period if Audit isn't storing data
- Approval (if required)





Data Request Form: Rationalization

- Purpose of Request
- Usage statement for any confidential or sensitive Data
- Evidence of required training (FERPA, HIPPA etc.)

Data Request Form- Data Information

Date Bounds/Deadlines

- Period to be covered or as of date and date the file is needed

Filter Criteria

- Be conservative. You can always filter the data down once you receive it

Granularity

- Level of detail required

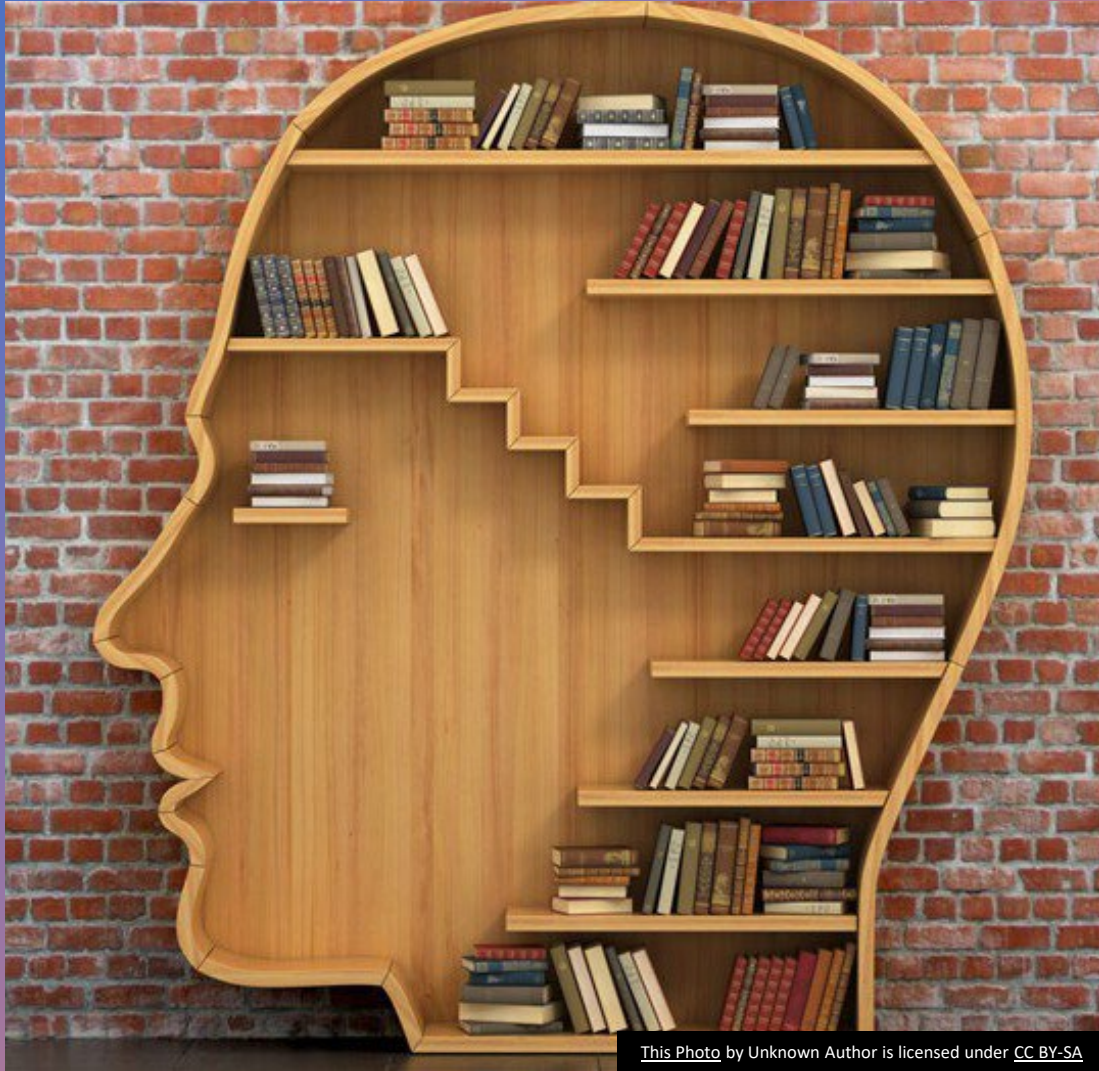
Data Elements (be specific)

- Name of system, table, file, or report and fields to be included



Poll #4: What can I do if I would like additional information on the contents covered in this webinar?

- a. Review the ACUA Data Analytics Kickstarter : Data Acquisition and Validation
- b. Review the ACUA Data Analysis – Glossary of Term
- c. Utilize the ACUA Data Analytics Forum to ask questions
- d. All of the above



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Resources

ACUA Kick Starter : Data Acquisition & Validation

ACUA Data Analysis – Glossary of Terms



Thank-You

Kate M. Head, CPA, CFE, CISA, CIG

University of South Florida

Office of Internal Audit

(813) 974-3737

khead@usf.edu

Joselyn De La Cruz-Rameau, Ed.D./ET

University of Texas-San Antonio

Audit and Consulting

(210) 458-4237

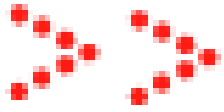
joselyn.rameau@utsa.edu



Did you know that Connect ACUA allows you to post new messages directly from your email without logging in to the Connect ACUA website?

For more details, check out the Quick Tip post on **[Connect.ACUA.org](https://connect.acua.org)**

Your Higher Education Auditing Connection



ACUA Kick Starters

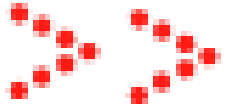
Use a Kick Starter to launch your next audit!

- Developed by ACUA members with subject matter expertise
- Focused on higher education specific topics

<https://acua.org/Audit-Tools/ACUA-Kick-Starters>



Do you have a great idea for an ACUA Kick Starter? Contact John Winn at HJWINN@mailbox.sc.edu.



New Kick Starter Available!

Control of Hazardous Energy: Lock Out Tag Out

Download today in the members-only Audit Tools section of www.ACUA.org





Next Kick Starter Release is Dec. 15th!

FERPA

Will be available in the members-only Audit Tools section of www.ACUA.org





ACUA Mentorship Program

- Mentorship is a proven method to help colleagues feel supported, drive workplace satisfaction, and foster member engagement in higher ed auditing.
- The program is no longer focused on only small audit shops! The program has been expanded to be more inclusive of all types of shops.
- The program is only a one-year commitment, but we encourage the mentorship to continue even after one year.
- Consider signing up! Watch for registration deadlines to be communicated via email. For more information, go to <https://acua.org/Member-Resources/Mentorship-Program>



Stay Updated

- The College and University Auditor is ACUA's official journal. Current and past issues are posted on the ACUA website.
- News relevant to Higher Ed internal audit is posted on the front page. Articles are also archived for your reference under the Resources/ACUA News.

Get Educated

- Take advantage of the several FREE webinars held throughout the year.
- Attend one of our upcoming conferences:
 - Audit Interactive**
March 27 – 20, 2022
Raleigh, NC
 - AuditCon**
September 11 - 15, 2022
Las Vegas, NV
- Contact ACUA Faculty for training needs.

Get Involved

- The latest Volunteer openings are posted on the front page of the website.
- Visit the listing of Committee Chairs to learn about the various areas where you might participate.
- Nominate one of your colleagues for an ACUA annual award.
- Submit a conference proposal.
- Present a webinar.
- Become a Mentor
- Write an article for the C&U Auditor.
- Write a Kick Starter.

Connect with us



www.ACUA.org

Connect with Colleagues

- Subscribe to one or more Forums on the Connect ACUA to obtain feedback and share your insights on topics of concern to higher education internal auditors.
- Search the Membership Directory to connect with your peers.
- Share, Like, Tweet & Connect on social media.

Solve Problems

- Discounts and special offers from ACUA's Strategic Partners
- Kick Starters
- Risk Dictionary
- Mentorship Program
- NCAA Guides
- Resource Library
- Internal Audit Awareness Tools
- Governmental Affairs Updates
- Survey Results
- Career Center.....and much more.



**Join us for
our upcoming
webinar.**





Upcoming ACUA Events

November 18, 2022

Webinar – Baker Tilly – How to Perform a NIST Cybersecurity (CSF) Assessment in Seven Easy Steps

Audit Interactive

March 27 - 30, 2022