# Data Analytics Transformation for Internal Audit

Crowe

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## Learning Objectives

Identify the potential value of integrating data into your audit approach.

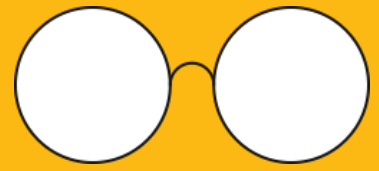
Define data analytics within internal audit.

Identify common challenges of integrating data into your audit approach.

Learn the approach to developing analytics for an audit area.

# Data Analytics can enable you to do all of this.

Be more proactive about risks.



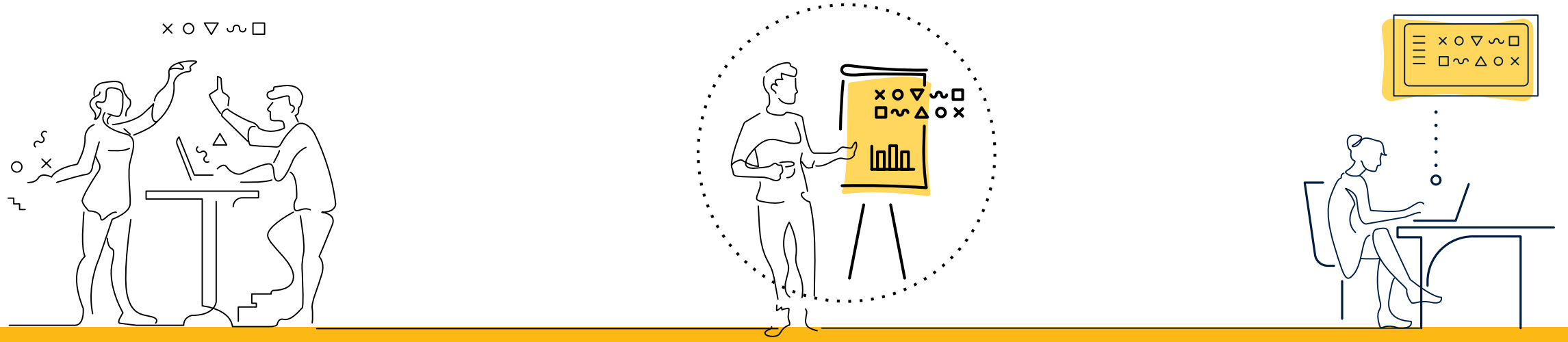
See trends more clearly.

Be a trusted advisor to the business.

Put the control in the hands of management.

Facilitate continuous audit.

# Data Analytics helps propel the individual, the business, and the industry.



**Plan**
for the year and your audit scope

**Identify**
where to focus the audit using data and select samples

**Evaluate**
effectiveness of controls and data governance

**Polling Question #1:**

Which of the following can data analytics NOT enable you to do?

a. See trends more clearly
b. Incorporate data into your audit
c. Be more proactive about risks
d. Eliminate the need for professional judgement
e. Create visualizations and reports

# Traditional audit process

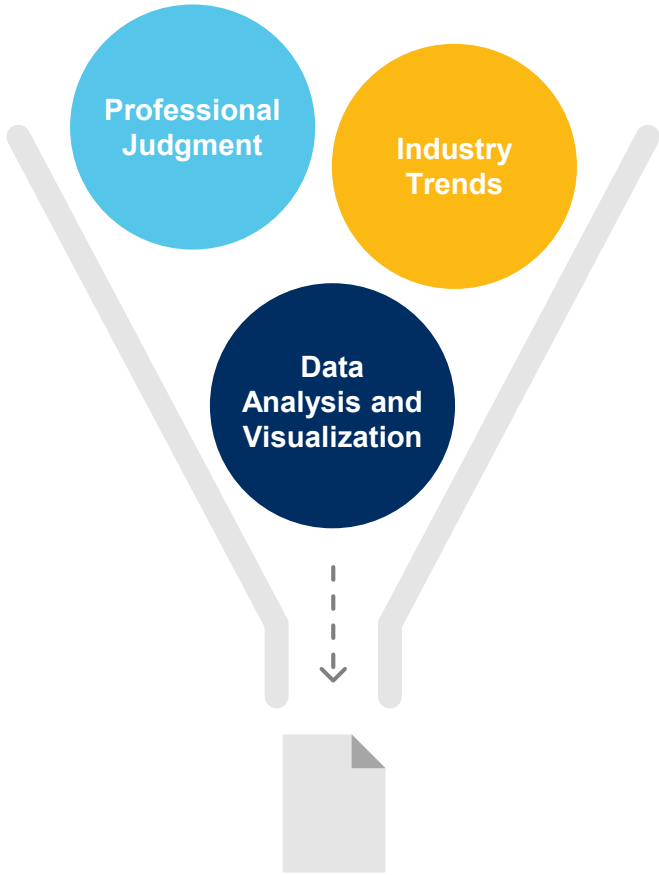
# Primary Risk Assessment

Improved with data analytics

**01**

Risk Assessment
and Audit Plan

**Portfolio-level data visualization to support the risk assessment process**



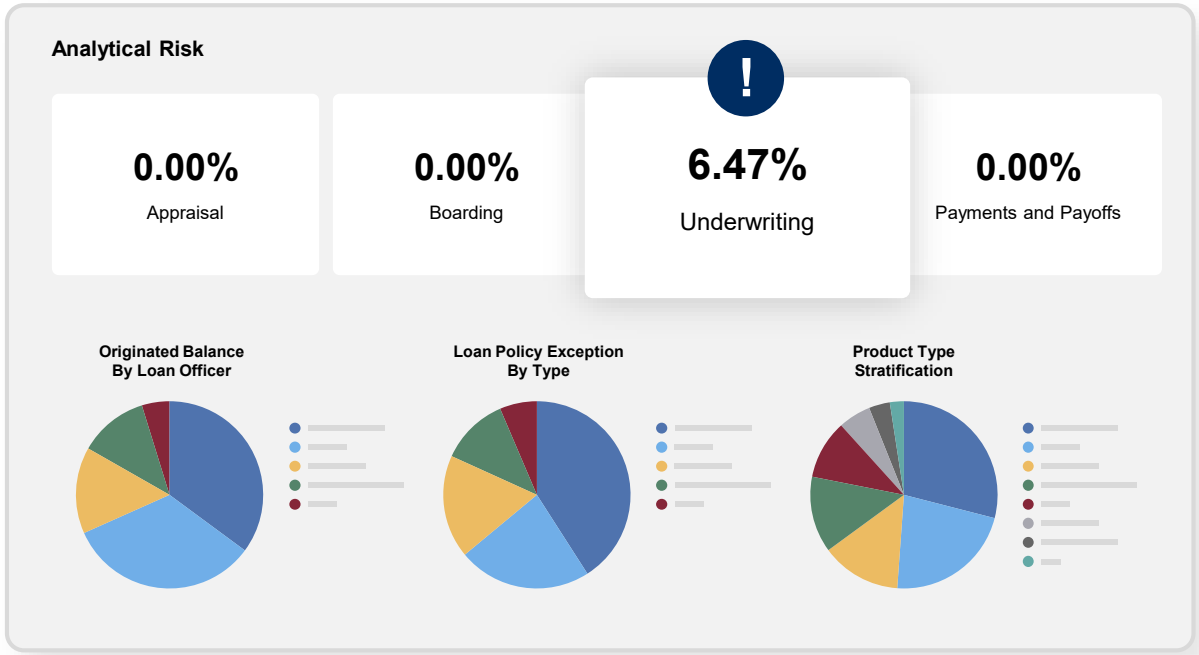
# Secondary Risk Assessment

Improved with data analytics

**02**

Secondary Risk Assessment / Audit Planning

**Portfolio- and account-level data visualization to support the risk-based scoping process**



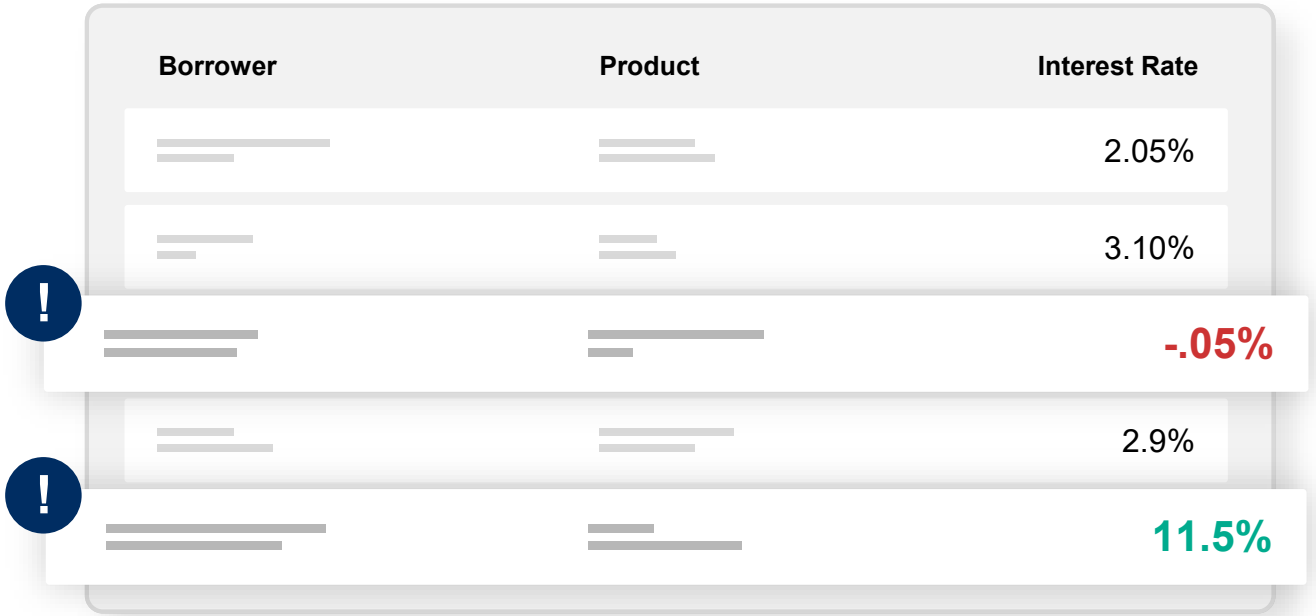
# Sampling

Improved with data analytics

**03**

Sampling

**Rules-based analytics at the transaction and/or account level to identify anomalies and outliers**



# Audit Execution

Improved with data analytics

**04**

Audit Execution

**Analytical results that can be shared with management**

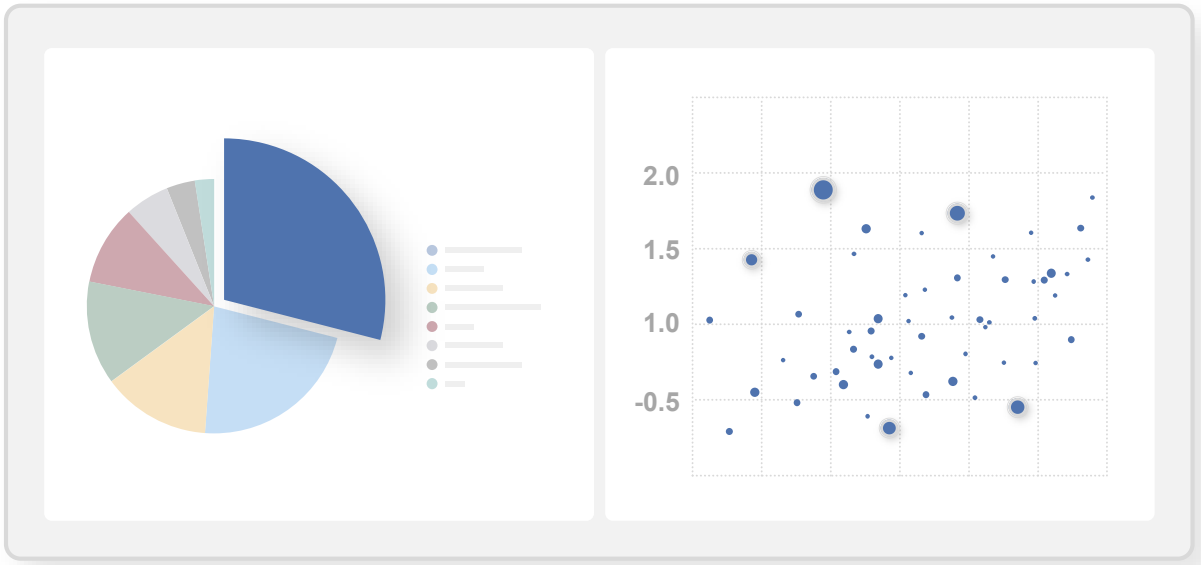
# Reporting

Improved with data analytics

**05**

Reporting

**Visualizations to support audit approach; detailed results to qualify risk exposure**



# Future audit process

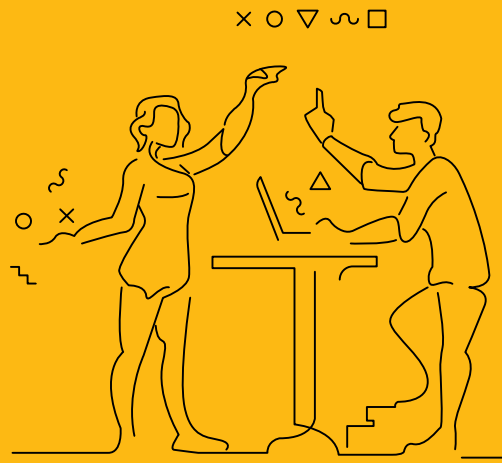
- Combine data analytics and professional judgement to create a data driven risk assessment
- Select samples based on an analysis of the population using rules-based analytics.
- Identify anomalies or outliers that may uncover underlying issues. Data used as evidence.
- Present dynamic reports and visuals that contextualize the risk exposure.

## **Polling Question #2:**

Where can you integrate data analytics during an audit?

a. Planning
b. Sampling
c. Risk Assessment
d. Testing
e. All of the above

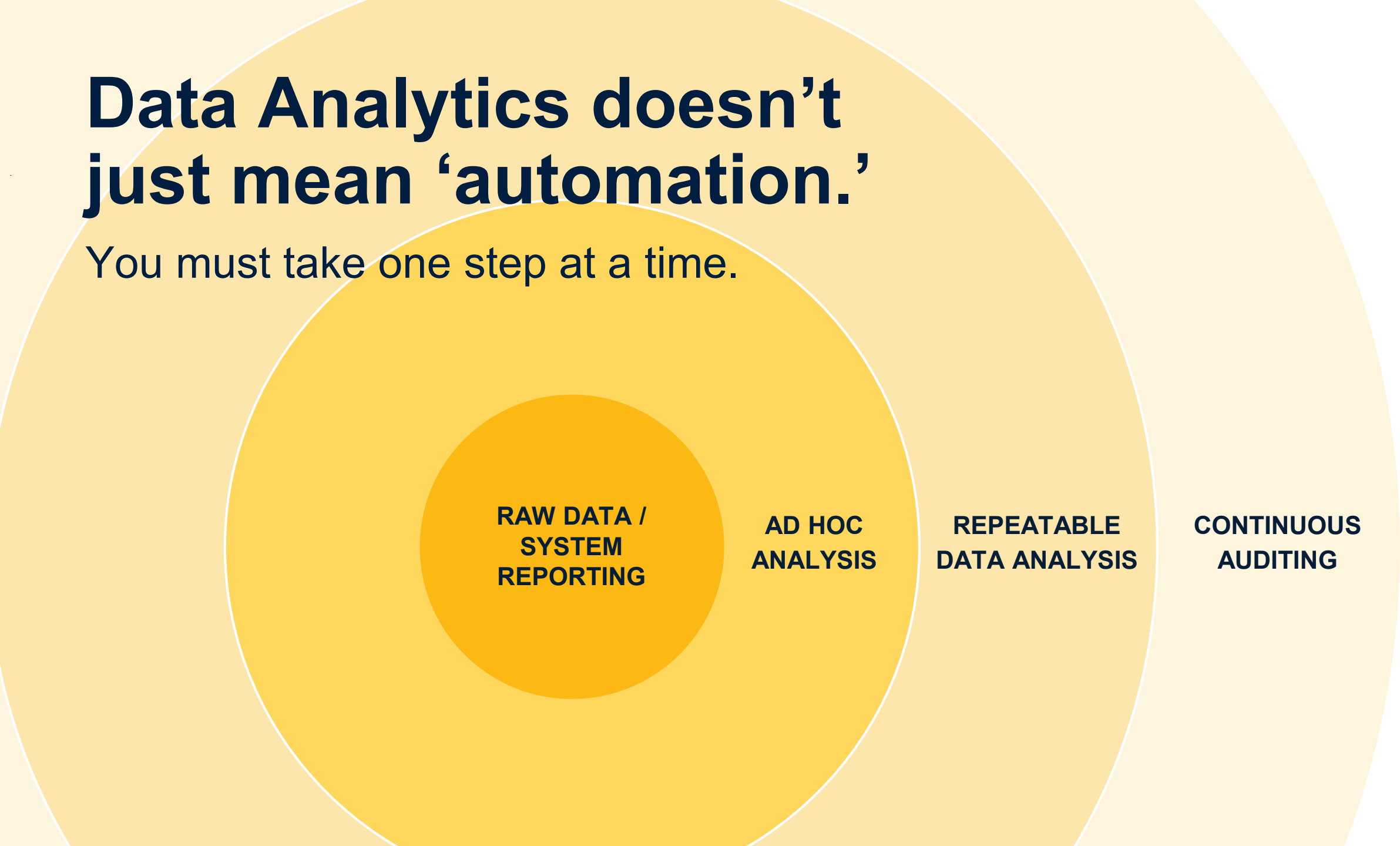
# Approach & Implementation to developing data analytics



Start with the fundamentals.

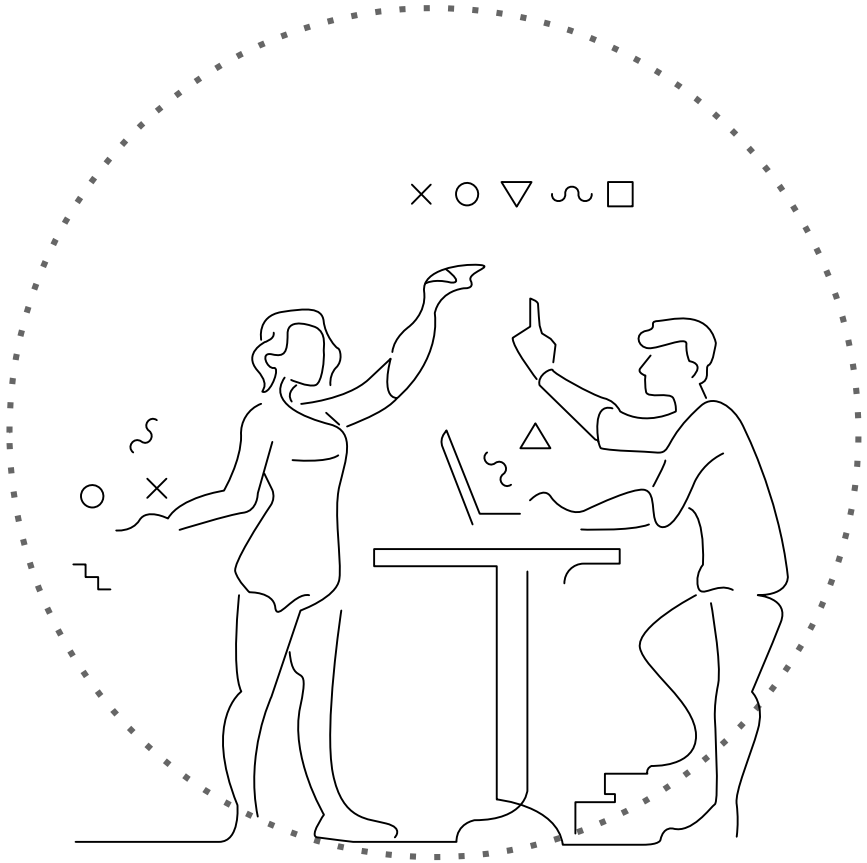
# Data Analytics doesn’t just mean ‘automation.’

You must take one step at a time.



# When developing a Data Analytics plan:

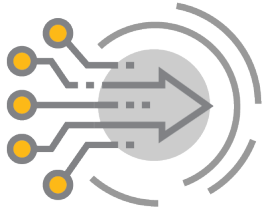
- Define your goals as an organization.
- Identify what data you have available.
- Create analytics that map back to risks and controls.



# Here’s what you need

Internal
Audit SME

Security &
Accessibility



Standardized
Data Set

Reporting
Tool

# Here’s how to develop data analytics

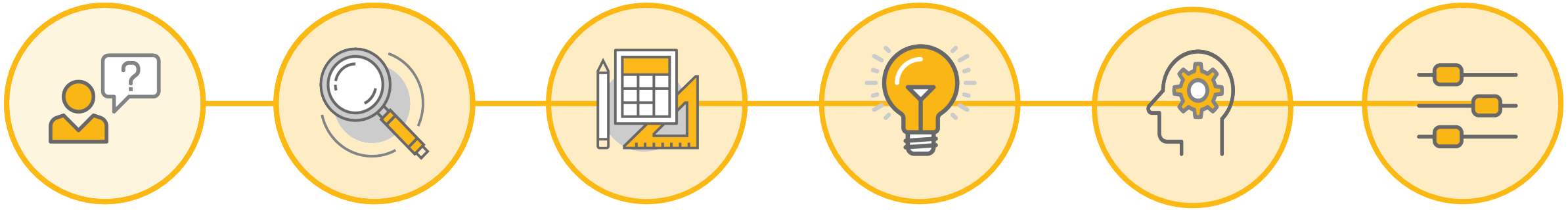
- Evaluate your risk and controls to understand what is quantifiable
- Translate test procedures into rules around the data
- Write your analytics to uncover attributes that bypassed the control
- Pinpoint the data fields required for the analysis
- Determine if it is a repeatable process

# Here’s how to develop data analytics (cont.)

- Define who is the audience or end user
- Tailor the report’s organization and functionality for intended use
- Ensure you are using complete, accurate, and reliable data

The approach

# Roadmap to incorporating data analytics



1. Understand
2. Identify
3. Develop
4. Find Meaning
5. Interpret
6. Refine

# Our Approach

- Audit area SME's reviewed our entire methodology and RCM's.
- Assessed which of these relied on data
- Crafted rules, detailed requirements, and relevant data fields for applicable areas.
- Standardized data ingestion
- Incorporated data management and storage
- Designed reports in Power BI to visualize these results.
  - Reports specific to each auditable area.
  - Pages in those reports dedicated to sub-process areas.
  - Analytics that evaluate populations down to the individual account or transaction level.

# Using Power BI

Here's how we used Power BI to implement DA in IA with CAA.

- We use a combination of visuals and tabular data to present the analytical results to the user.
- The visuals are shown at a high-level view to give a comprehensive overview.
- The supporting tables give granular details to identify exact accounts / transactions to further investigate or sample.
- Power BI is dynamic in nature so you can filter, slice and dice the data.
- We use the export functionality to:
  - Select samples
  - Provide management a list of accounts that need attention
  - Incorporate visuals into final reports

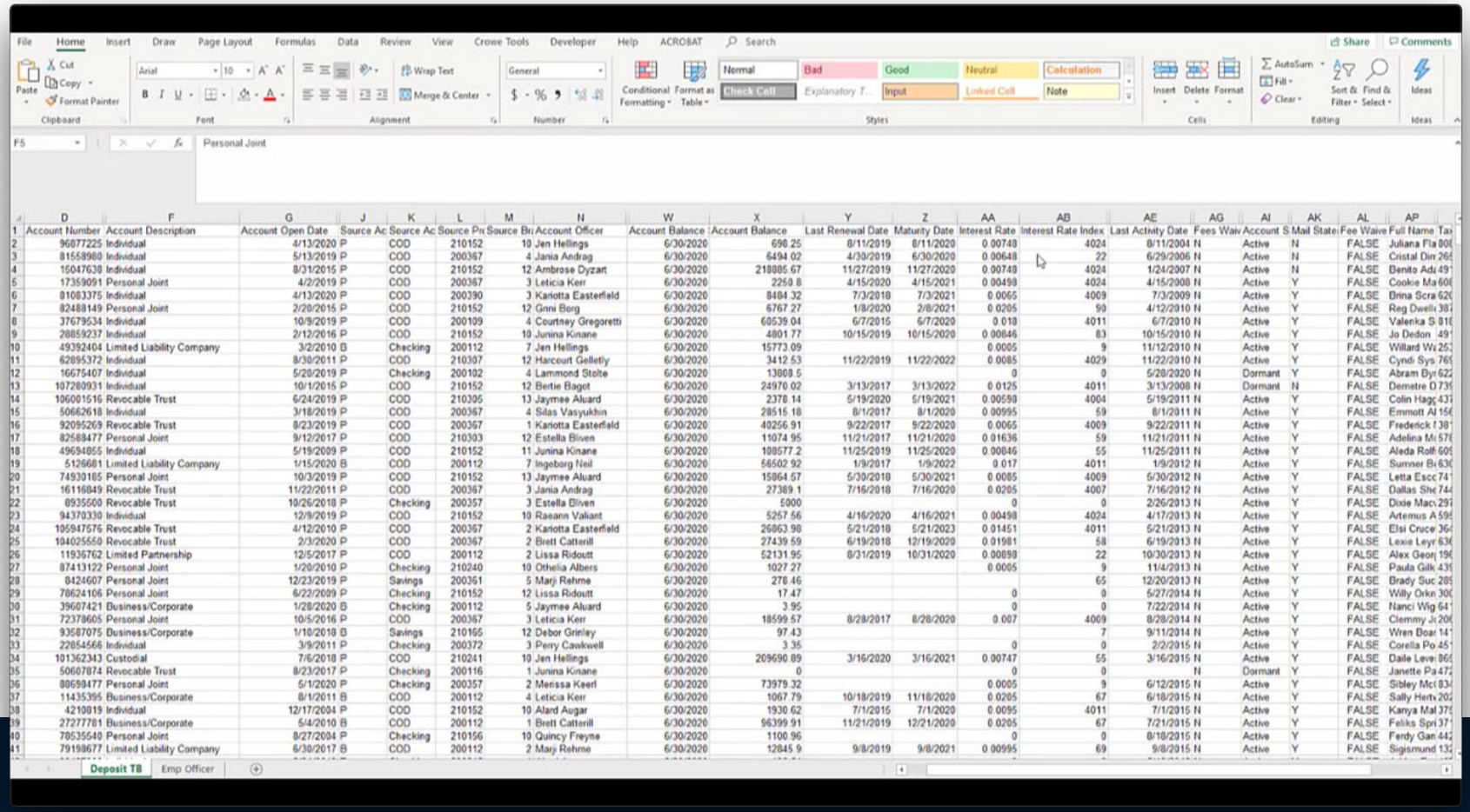
**Polling Question #3:**

Which of the following is a crucial step in your data analytics journey?

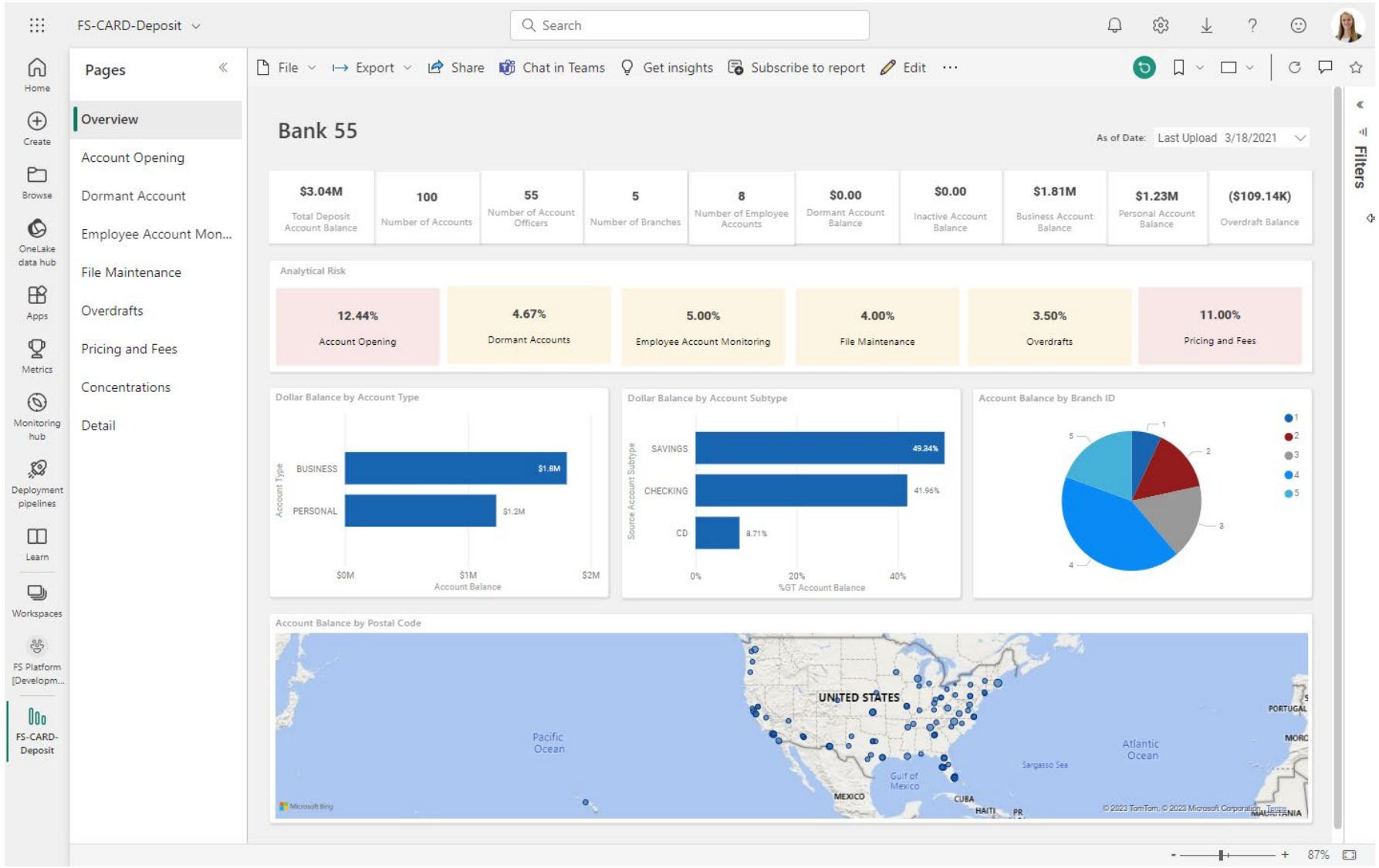
a. Building fancy reports
b. Ensuring your data is complete, accurate, and reliable
c. Giving access to everyone
d. Posting your analytics online
e. Asking everyone what they want

The approach

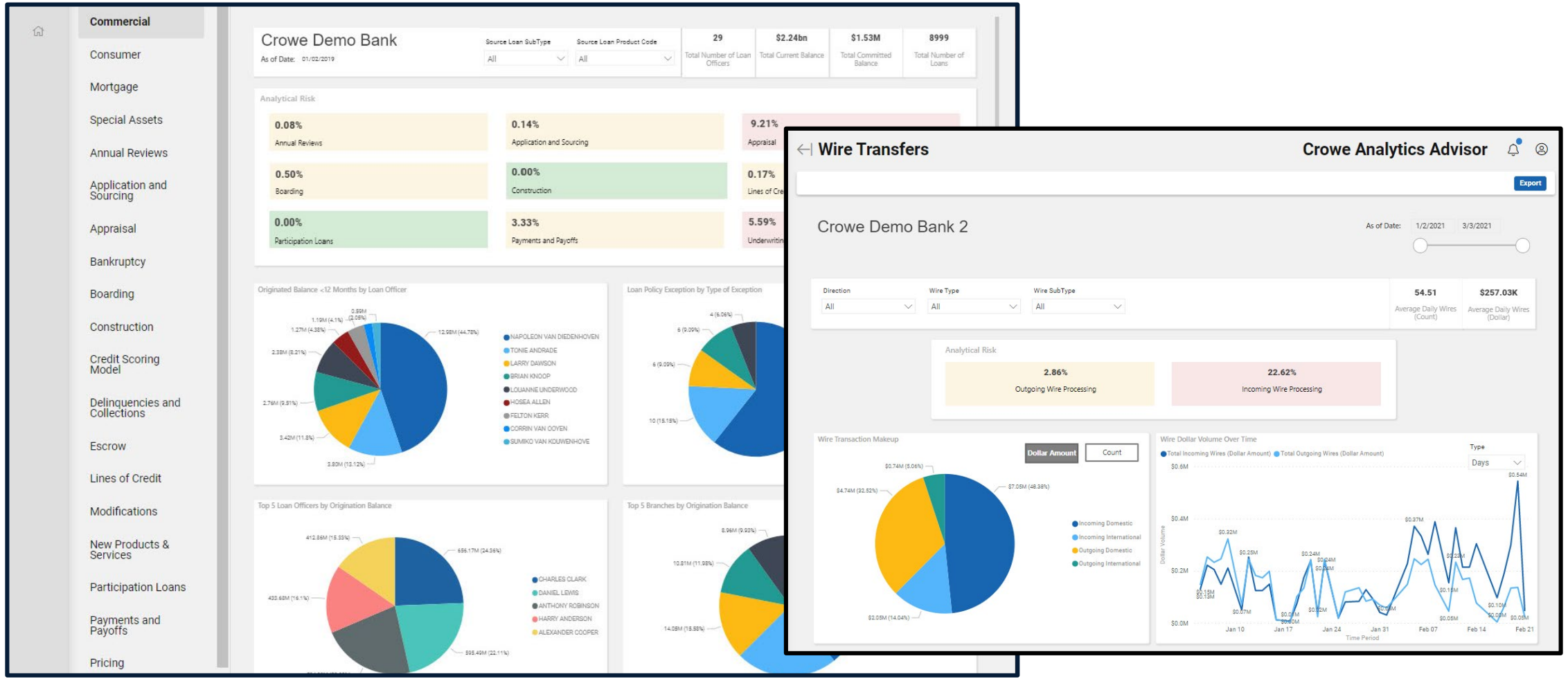
# Utilizing full portfolio data extracts in excel



# Crowe Analytics Advisor - Deposits



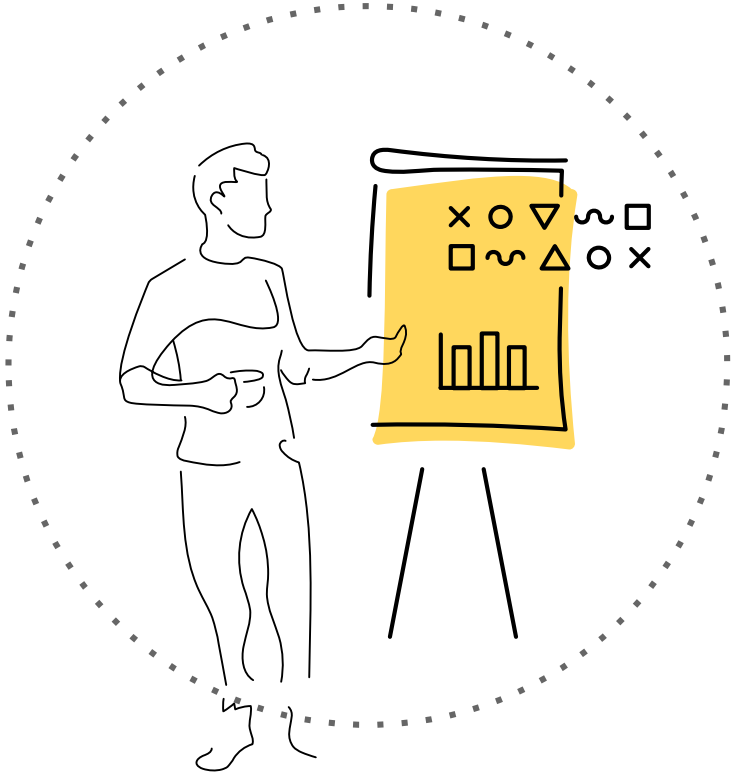
# Example of how we used Power BI to implement data analytics.



Demo recap

# When using Data Analytics to focus an audit:

- Understand what's available and what you have going for you already.
- Get creative when making connections between data and audit procedures.
- Allow the data to point you in new directions.



# Evaluate effectiveness of controls and data governance

**Developing a proactive process benefits everyone.**

**Polling Question #4:**

In internal audit, what does the term “continuous monitoring” refer to?

a. Real-time monitoring of controls and transactions
b. Annual monitoring of financial statements
c. Quarterly review of compliance regulations
d. Assessment of internal policies
e. Constantly watching the business

**We know there’s fear, skepticism, and challenges to overcome when it comes to Data Analytics.**

# Challenges

- Organization adoption
- Data quality & availability
- How strong is your data governance?
- Developing relevant content
- Build something people will use
- Talk to your users (usability testing)
- Technical knowledge / skill set

Open Forum

# Questions?

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