



*Establishing an Information Ecosystem to Support Value  
Based Care Analytics*

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Columbia Convention Center

**HIMSS**

**SOUTH CAROLINA** *Chapter*

- **Conflict of Interest Disclosure**

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Has no real or apparent  
conflicts of interest to report.

- The Problem and Opportunity
- Common VBC Analytics Challenges
- Key Requirements for a Healthy VBC Analytics “Ecosystem”
- A “Data Governance Manifesto”
- Questions and Answers

# *Learning Objectives*

Explain how clean, integrated data sources support optimized VBC contract revenue

Describe three key steps for establishing a healthy VBC analytics ecosystem

Describe the role of an analytics blueprint in effective VBC performance measurement

# The Problem and Opportunity

Information must be comprehensive and trustworthy for VBC contract revenue to be optimized

## Problem

- Information required to support VBC is spread across disparate systems with varying levels of data quality

## Impact

- Inhibits the ability to gain a comprehensive picture of performance against quality measures
- Lowers visibility for measures that will improve care and increase revenue
- Creates a lack of trust in the information used to make VBC contract decisions

## Opportunity

- Align, cleanse, and integrate information across all VBC-related sources, enabling comprehensive analysis, visibility, and sound decision making to drive **action**

# *Common VBC Analytics Challenges*

Where is the data we need for VBC analytics? Is it clean, consistent, and accessible for easy drill-down and exploratory analysis?



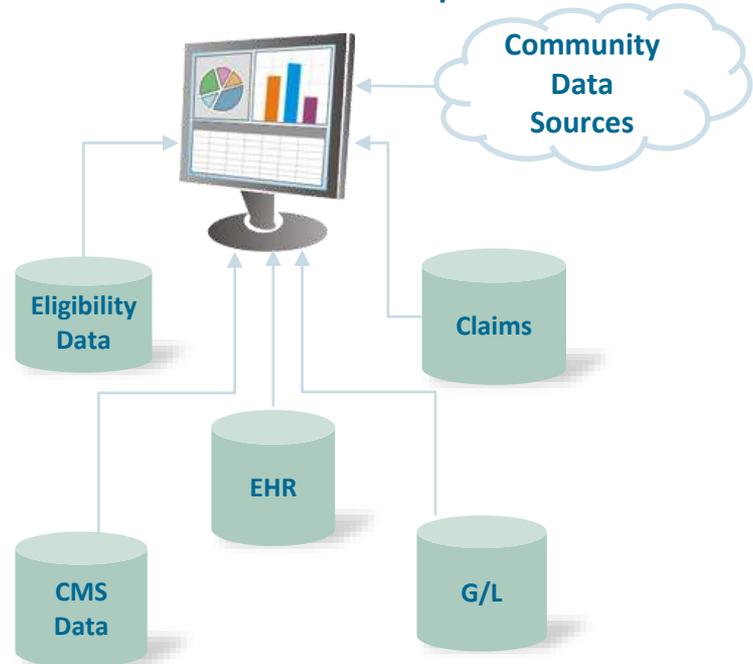
# Disparate Data Sources

Data silos inhibit the ability to acquire and conform the data required for VBC analytics

Internal clinical, ancillary, and financial systems

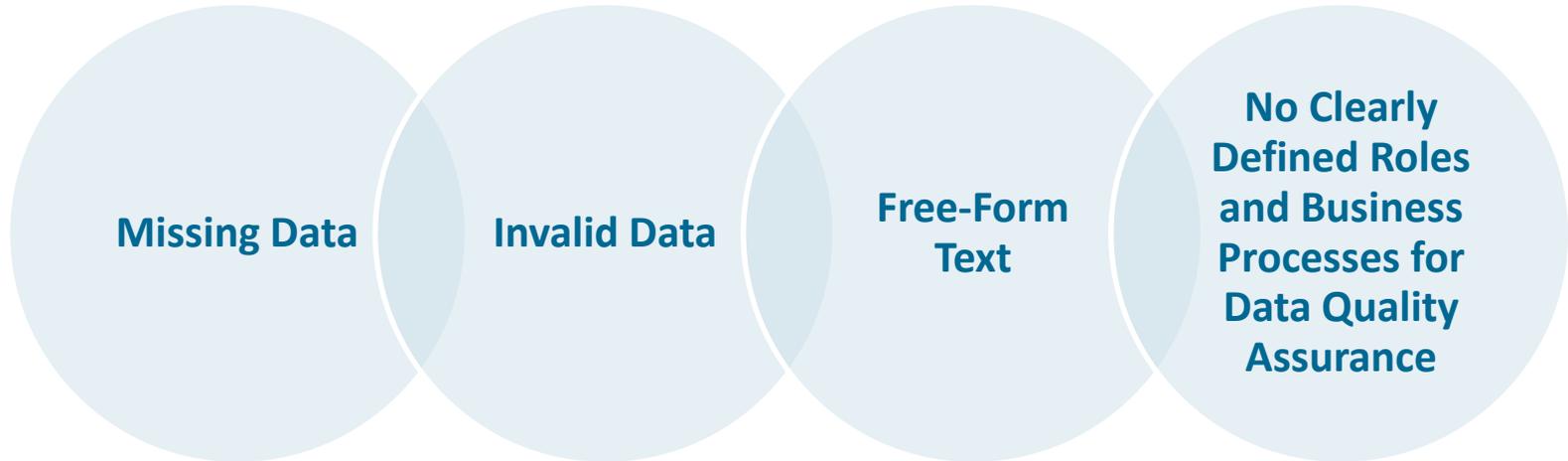
External data sources (e.g., payor data submissions and community data)

Vendor-supplied data repositories (e.g., Epic Caboodle or Cerner HealthIntent)



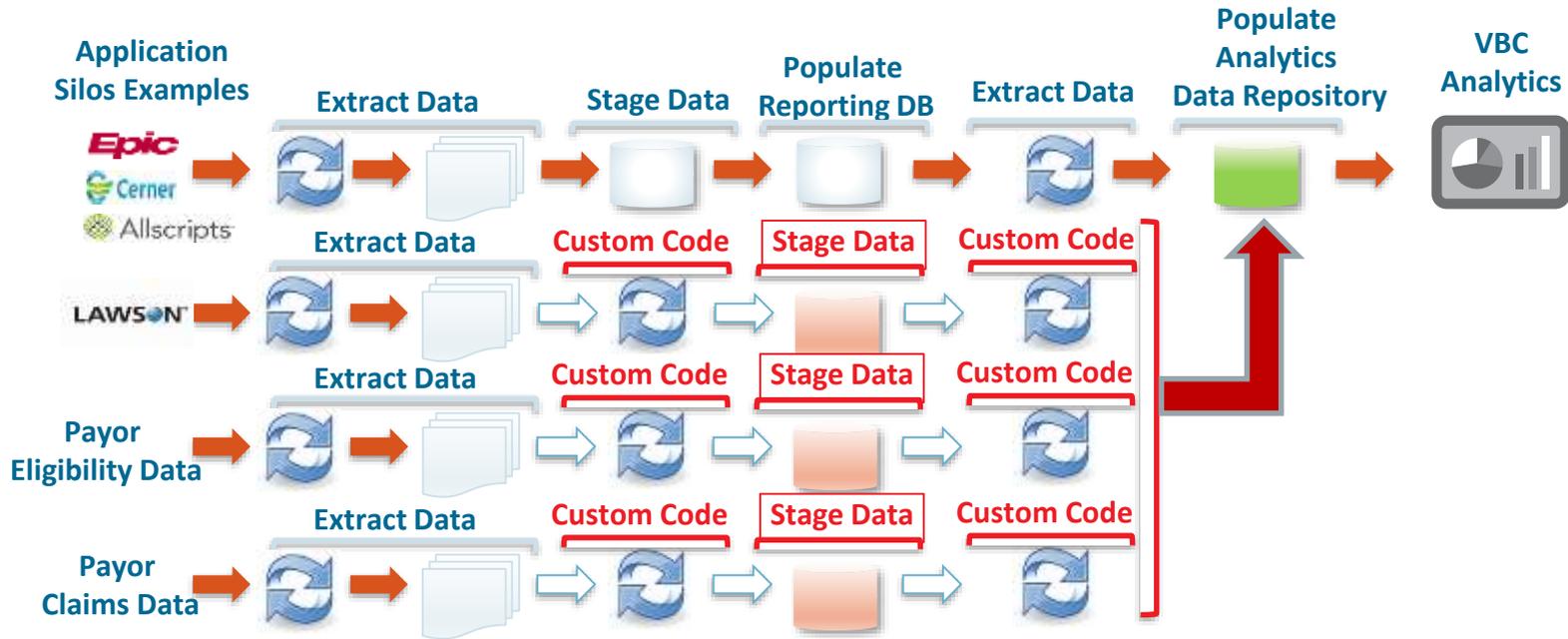
# *Inconsistent Data Quality*

Data from many disparate sources exacerbates an already ubiquitous problem



# Inadequate Analytics Framework

Many healthcare organizations lack an optimal information management “ecosystem,” inhibiting their ability to generate the required VBC KPIs



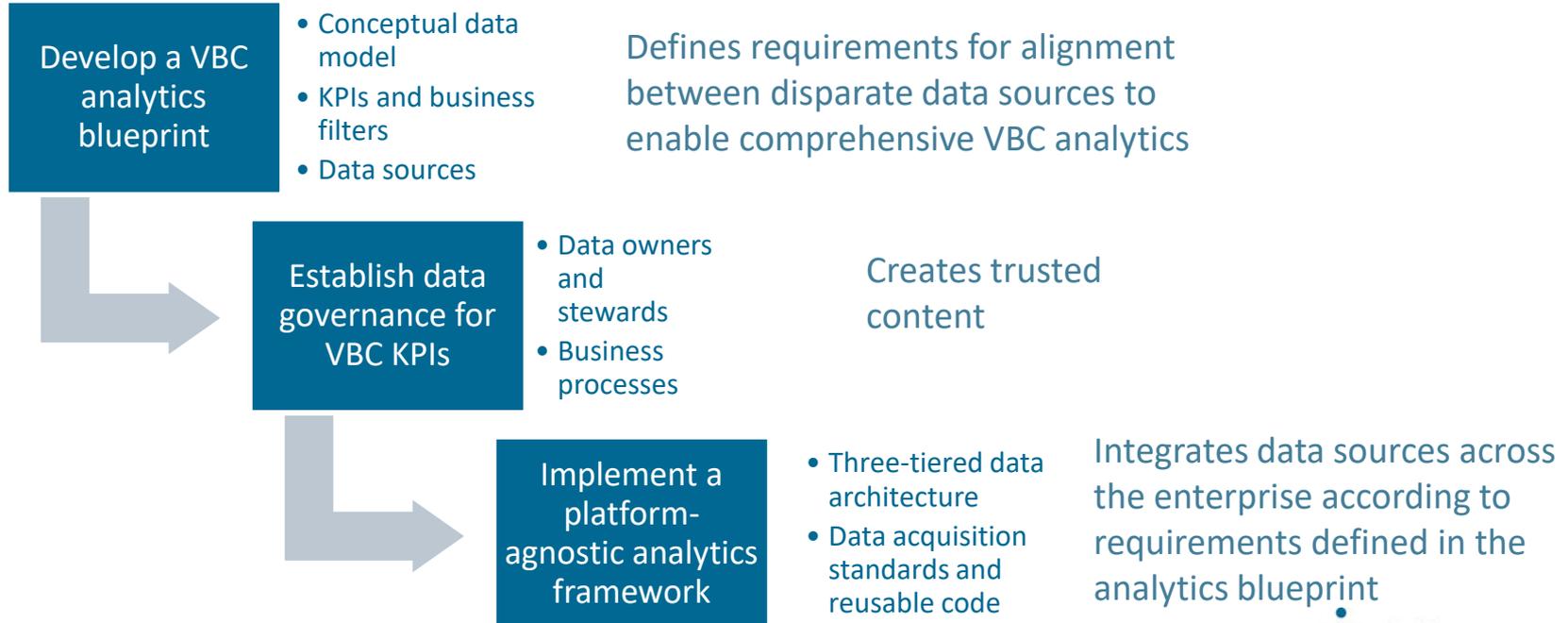


*Key Requirements for a Healthy  
VBC Analytics “Ecosystem”*

Transforming Raw Data into VBC KPIs

# Key Requirements for a VBC Analytics “Ecosystem”

Three very important steps you can take to establish a robust VBC analytics platform:



# Develop a VBC Analytics Blueprint

Spending the time up front to clearly understand what you need for effective VBC performance measurement and analysis can pay significant dividends

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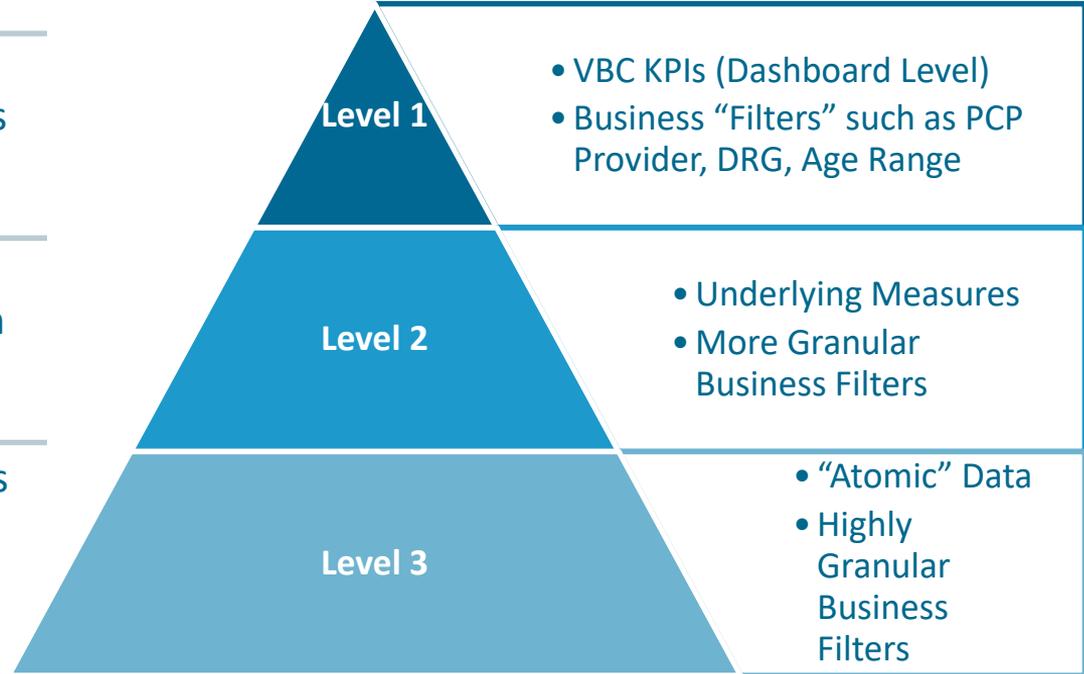
Graphically depicts the KPIs, underlying measures, and business filters required to manage VBC contracts

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It is intended to be a high-level, easy-to-understand representation of the future-state analytic requirements

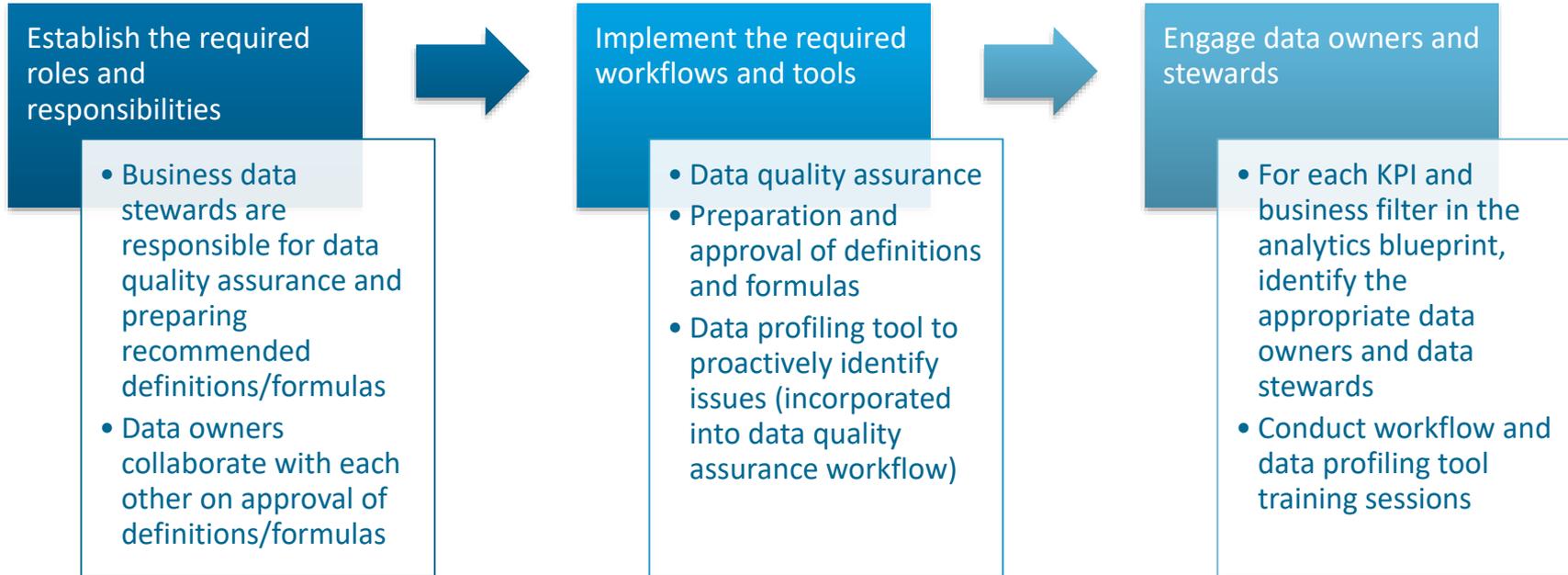
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Additional documentation includes the required data sources to populate the KPIs, measures, and business filters



# Establish Data Governance for VBC KPIs

If you don't already have a mature data governance program, take these three key steps to ensure data quality and consistency for your VBC KPIs



# Implement a Platform-Agnostic Analytics Framework

Leverage your existing EHR analytics platform wherever possible, but recognize its limitations and be prepared to address them

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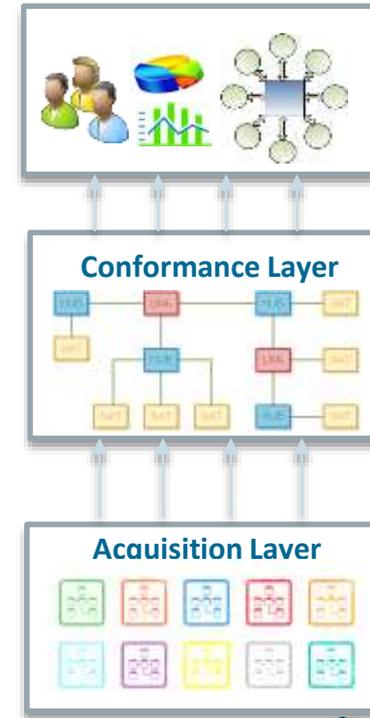
A very different data architecture is required for each of the three layers in a best-practice analytics framework.

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An Extract/Transform/Load (ETL) “hub” should be used for data acquisition rather than stored database procedures.

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Reusable ETL design patterns should be used to enforce standards and minimize maintenance costs.





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# A “Data Governance Manifesto”

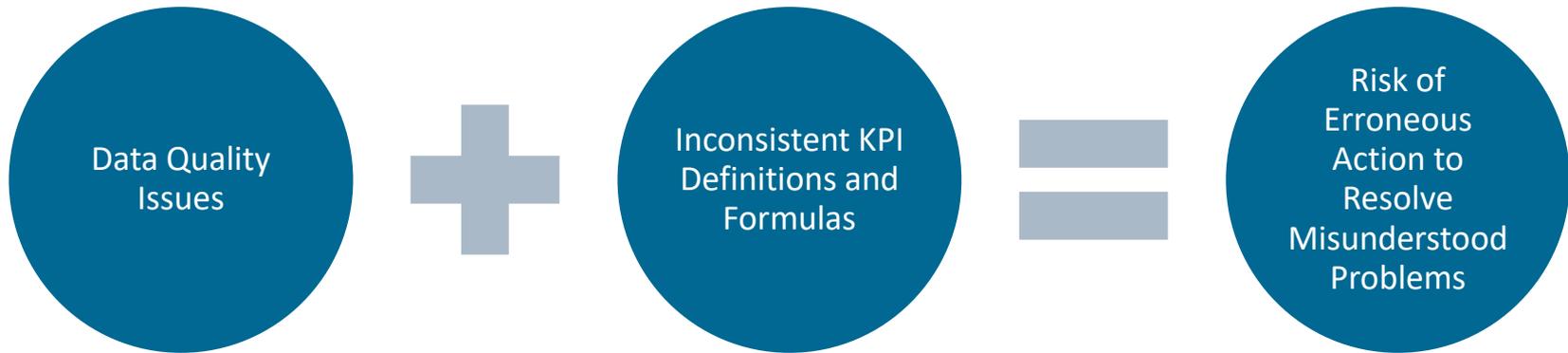
Drawing a Clear Line for Ensuring Data  
Quality and Information Consistency

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# Introduction

Recent Gartner research has found that organizations believe poor data quality to be responsible for an average of \$15 million per year in losses.\*



\*Smarter with Gartner, "How to Create a Business Case for Data Quality Improvement," June 19, 2018

# Goals of an Effective Data Governance Strategy

Well-run organizations have the ability to measure progress against strategic objectives and the ability to make sound business decisions

Progress measurement requires clearly defined **KPIs**, and sound business decisions are based on reliable **facts**.

A fundamental prerequisite of both KPIs and facts is high-quality, **trusted data** that has been gathered from a myriad of sources and transformed into **consistently defined information**.

Data is a raw material. Information is a product that is derived from that raw material, which is only useful if it is of high quality.

The overarching goals of a solid data governance strategy are to **ensure data quality** and **establish information consistency**.

# Three Steps to Tackle Challenges: Step 1

It is imperative that organizations define clear objectives to ***ensure data quality and establish information consistency.***

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## Step 1: Establish Clear Data Governance Objectives

**Proactively Identify Issues:** Determine how the organization is going to *profile* data in source applications (the preferable approach) or before it's loaded into the data warehouse.

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**Reactively Resolve Issues:** Many organizations don't have effective business processes in place to remediate data quality issues once they've been identified.

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**Enforce Standards:** Information consistency issues are caused by a lack of approved data definitions and business rules for KPIs and other business measures.

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# Three Steps to Tackle Challenges: Step 2

Establish the **who**, **what**, and **how** required to satisfy the Data Governance objectives

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## Step 2:

Establish Data Governance Roles, Responsibilities, and Business Processes

The data governance objectives identified in Step 1 highlight the need to determine **who** is accountable for data quality and information consistency (the roles), **what** tasks they need to perform (the responsibilities), and **how** they're going to perform these tasks (the business processes).

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Recommended roles and responsibilities and high-level business processes for ensuring data quality and information consistency are provided on the following slides.

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# Three Steps to Tackle Challenges: Step 2, cont.

Begin Step 2 by defining the **who** (roles) and the **what** (responsibilities)

Data Governance Roles	Responsibilities
Data Owner	<ul style="list-style-type: none"><li>• Ultimately responsible for data quality and consistency</li><li>• Coordinates efforts of Business and Technical Data Stewards</li><li>• Approves data definitions and business rules</li></ul>
Business Steward	<ul style="list-style-type: none"><li>• Performs data profiling to proactively identify data quality issues</li><li>• Improves business processes</li><li>• Prepares data definitions and business rules</li><li>• Determines data quality solutions</li></ul>
Technical Data Steward	<ul style="list-style-type: none"><li>• Supports the data profiling efforts of Business Data Stewards</li><li>• Coordinates implementation of data quality solutions</li><li>• Performs impact analysis</li></ul>
Gatekeeper	<ul style="list-style-type: none"><li>• Logs data quality issues and assigns them to the responsible Business Data Steward</li><li>• Monitors resolution status and generates weekly reports</li><li>• Escalates issues to Data Owner when necessary</li></ul>

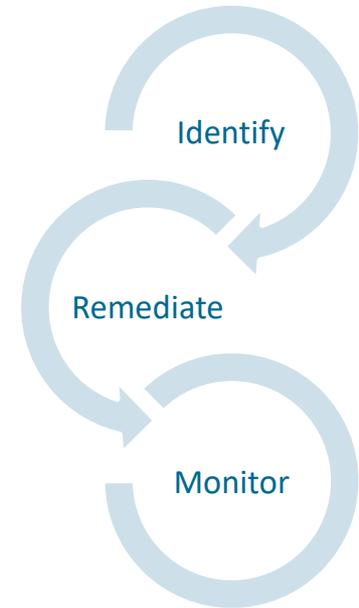
# Three Steps to Tackle Challenges: Step 2, cont.

The next step is to determine the **how** (*business processes*) for data quality assurance

**Identify:** Profile the data and establish a baseline

**Remediate:** Ensures that issues are correctly assigned, tracked, and escalated when necessary

**Monitor:** Ensures that issues are quickly identified by establishing a series of data validation “trigger points” that continually monitor information quality



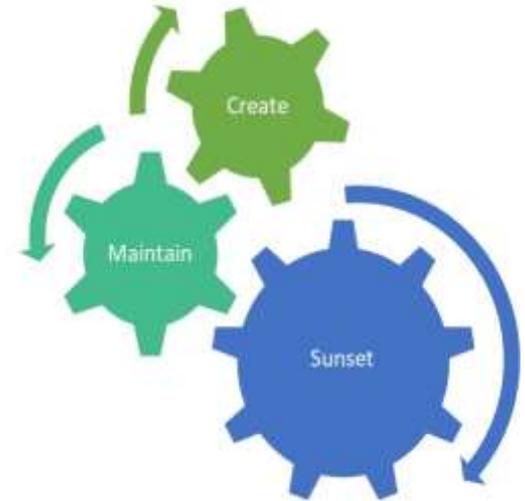
# Three Steps to Tackle Challenges: Step 2, cont.

Finally, determine the **how** (*business processes*) for ensuring consistent KPI/measure definitions and formulas

**Create:** Occurs when a new KPI or business measure is requested. Establishes the workflows for preparing the definition and formula and obtaining consensus and approval

**Maintain:** Used to update the definition and formulas for approved KPIs and business measures due to changing business requirements or regulatory mandates

**Sunset:** Used to retire an information asset when it is no longer relevant to the organization



# Three Steps to Tackle Challenges: Step 3

“Operationalization” of Data Governance ensures that its initial momentum is never lost and the critical tasks required to ensure data quality and information consistency don’t become a hobby

Update the job descriptions of those individuals who will be performing data ownership and data stewardship roles within your organization

Collaborate with your Human Resources department to add the expectations for data governance roles and responsibilities to the appropriate position descriptions

Ensure that each person clearly understands his or her data governance role and is evaluated accordingly

# Key Takeaways

If you're still struggling with poor data and inconsistent information, it's time to take these three concrete steps and begin to realize the tangible benefits of a sound Data Governance strategy

The data your organization needs for enterprise reporting and analytics can be considered raw materials that must be cleansed and transformed into consistently defined information assets.

A useful analogy is the transformation of crude oil (raw data) into a much more valuable product such as jet fuel (information).

Such a transformation requires clearly defined goals, roles and responsibilities, business processes, and job descriptions.



## Questions and Answers

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