



# Mastering Master Data



Presented by

Bill Wise, Enterprise Data Architect NCR

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# Introduction

Mary Levins, PMP

Principal, Sierra Creek Consulting

Value through Governed Data™



- **20 years experience** in Process and Data Re-engineering
- Proven success in bringing **Sustainable Business Value** and bridging the gap between the Business and IT
- **BS and MS in Industrial & Management Engineering, Project Management & 6 Sigma Certified**
- **Highly accomplished** Data Management expert across multiple industries including Healthcare, Finance, Manufacturing, Electronics, Automotive, Energy, and Retail



Agilent Technologies



SIEMENS



Manheim



EQUIFAX

Alcon



# Introduction – Bill Wise, Enterprise Architect at NCR

- **Bill Wise, Enterprise Data Architect with NCR and lead for the Customer MDM**
- **25+ Years in Data Management**
  - Instructor of Data Modeling, Encyclopedia Management and Methodology for KnowledgeWare
  - Heavily involved with development of B2B standard messages for RosettaNet and Open Applications Group
  - Implemented the Information Framework (IFW) at IBM for internal use - based on extension of Zachman Model called Evernden Model
  - Developed method for deployment of the canonical object for 'Invoice' at IBM – owner of US patent for method of deployment



# Everyday with NCR

## Fast Facts:

- Global leader in consumer transaction technologies
- Enables more than 485 million transactions daily
- Industries served: financial, retail, hospitality, travel, telecom and technology and

### At a Gas Station



More than 45 BILLION GALLONS of gas are sold annually through NCR POS

### At a Venue



60% of NFL; 40% of MLB; 30% of NHL and 20% of NBA teams use NCR solutions.

### At an ATM



NCR is the **#1** PROVIDER OF ATMS AROUND THE WORLD

**MORE THAN 94 MILLION** ATM transactions per day are powered by NCR

### At a Restaurant



### At a Retail location



### At a Grocery Store



**#1** GLOBALLY in self-checkout

More than 100,000 NCR self-checkout units enabling consumers to complete 14 million transactions - every day!

'Everyday made easier.'

### At a Movie

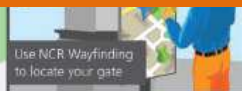


In the US, approximately 26% of cinema tickets purchased at the box office are sold through NCR solutions.



NCR is the **#1** provider of self check-in kiosks in the U.S.

NCR provides passenger-enablement solutions to all 5 of the world's top airlines.



Use NCR Wayfinding to locate your gate



**BANK YOUR WAY**  
Over 12 million customers manage their financial lives through our digital banking solutions.

### Hotel



### Small Business

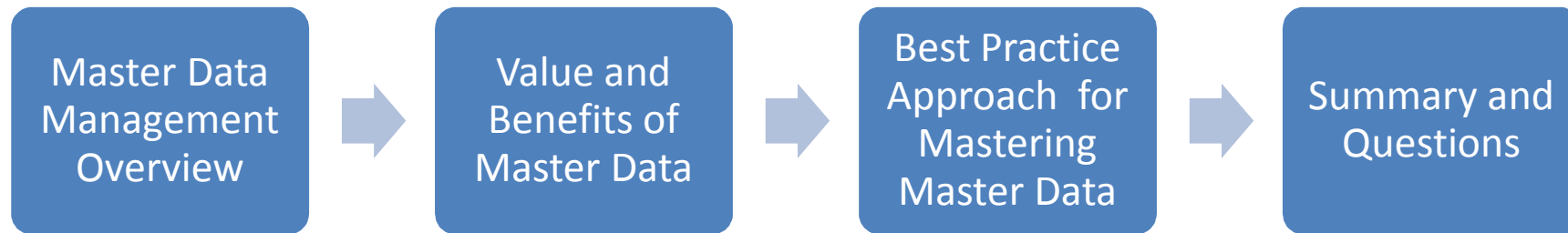
Merchants can keep doing



### Pick up Rental Car



# Mastering Master Data Agenda



# MASTER DATA MANAGEMENT OVERVIEW

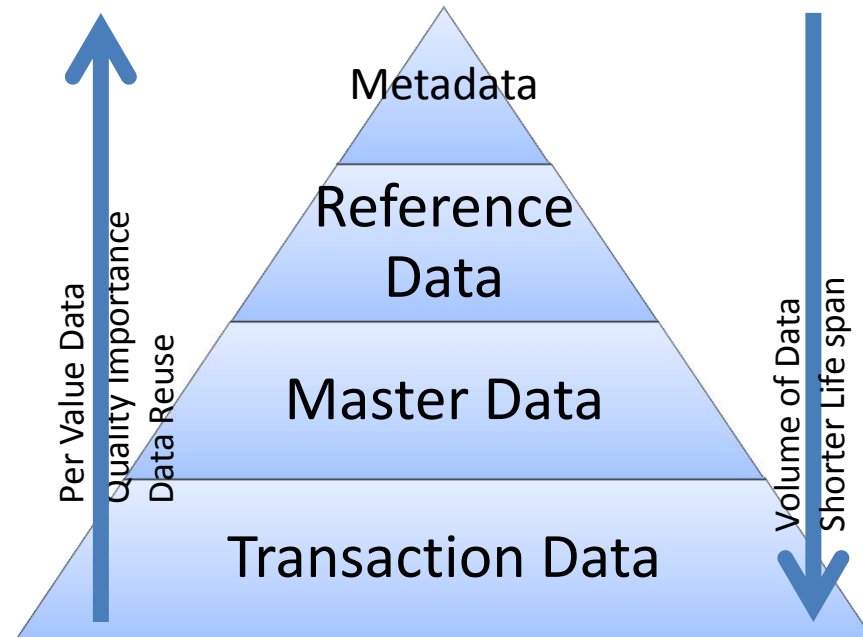


# Mastering Master Data – What is Master Data?

**Master Data** is data that is a critical company **asset** used by multiple businesses, functions, and users across one or many systems.

‘**Asset**’ is an **economic resource** owned by an organization to **produce value**

**Master Data** should be **managed** under the **Data Governance Umbrella**



Master Data is an Asset and should be managed under the Data Governance Umbrella



# Master Data Examples

## *NCR Focused Across common subject areas*

Data Subject Area	Core Master Data	Reference Data
Customer	Channel Partner Customer Accounts	Customer Classifications Customer Types NAICS, DUNS, Hierarchies, Status Codes
Supplier	Vendor	Classifications, Vendor Types, DUNS, Hierarchies, Status Codes
Product	Product, Item, Service, SKUs, Raw Materials	GS1, ISO, UOM, Taxonomies, Status Codes, Types
Location	Addresses Locations	GEO Codes, Country Codes, URL

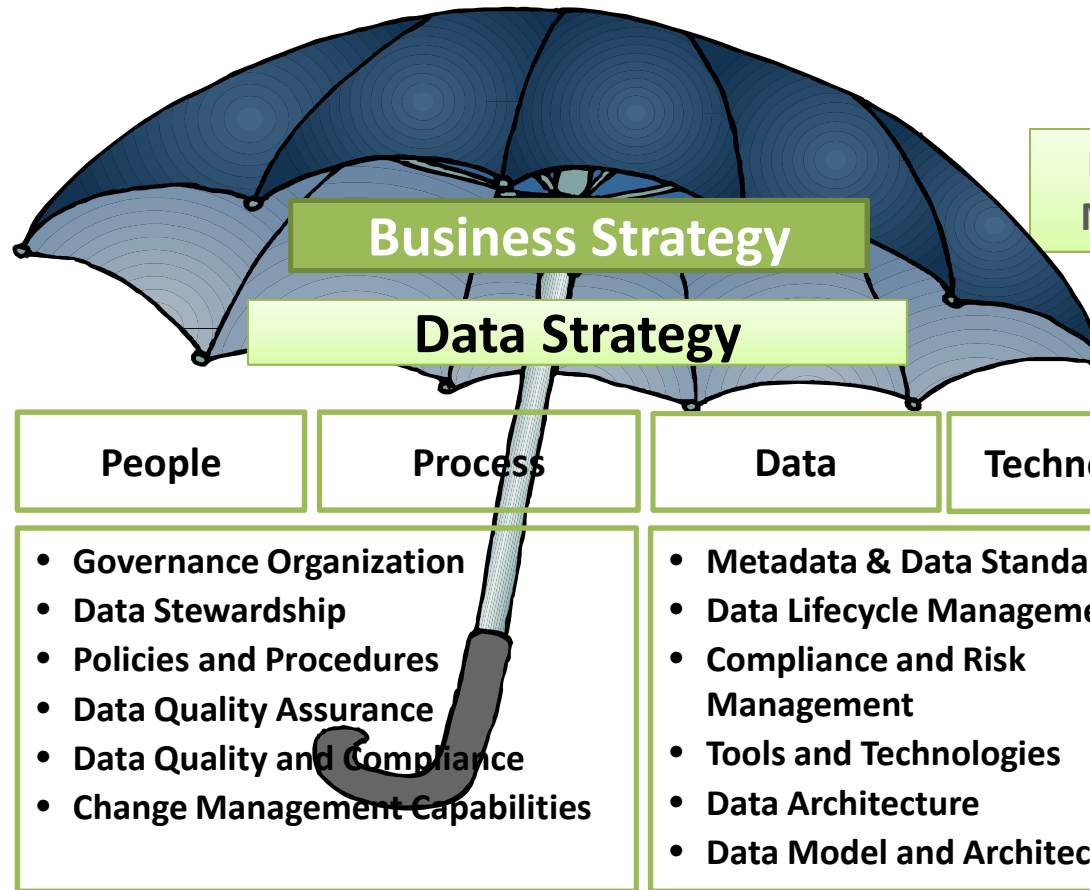
Note:  
Master Data will depend on your business





# Mastering Master Data – Data Governance is Foundational

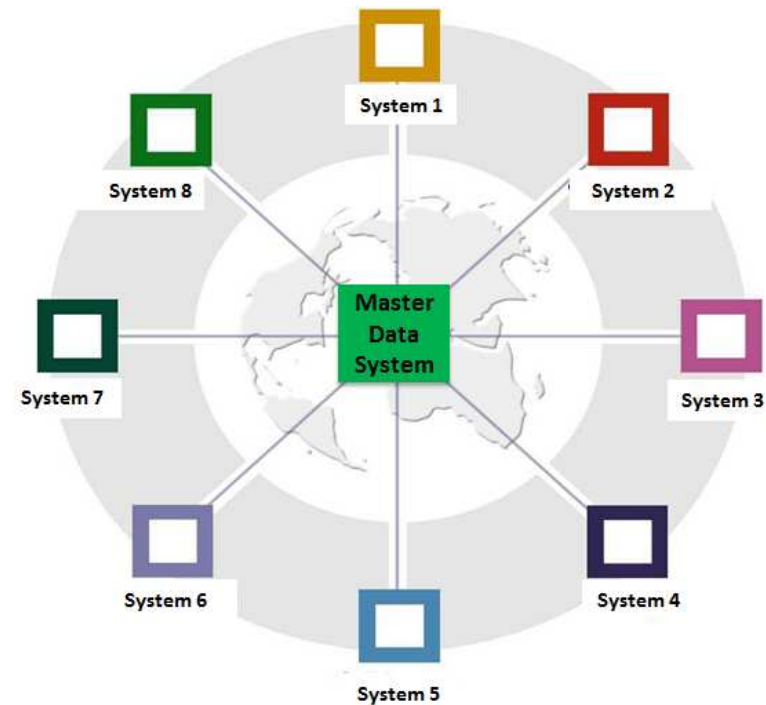
**Data Governance** is the **Framework** to align the business vision, by supporting the **Business Strategy** and ensuring adaption through communication and change management.



Data Governance and MDM go hand in hand

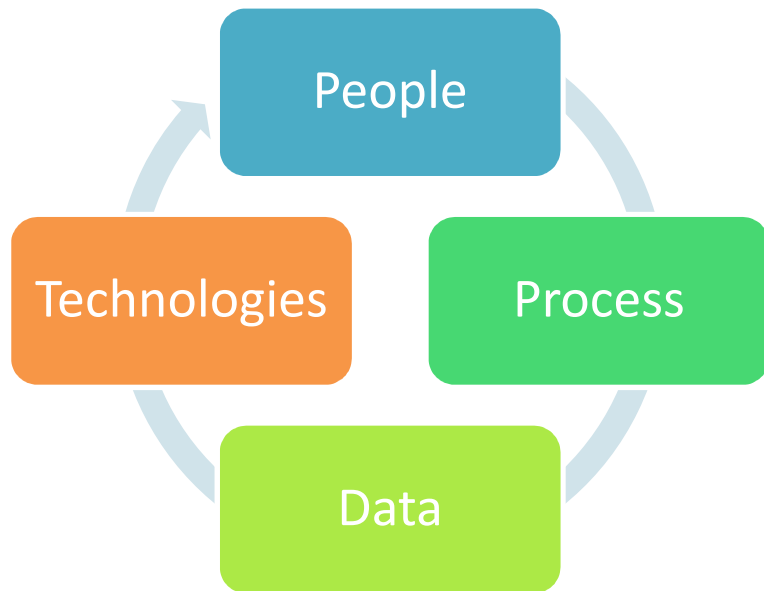
# Master Data Management (MDM) Definition

- Advanced Data Management Practice
- A set of processes and technologies used to **federate** key data assets to provide a **single view** across the enterprise

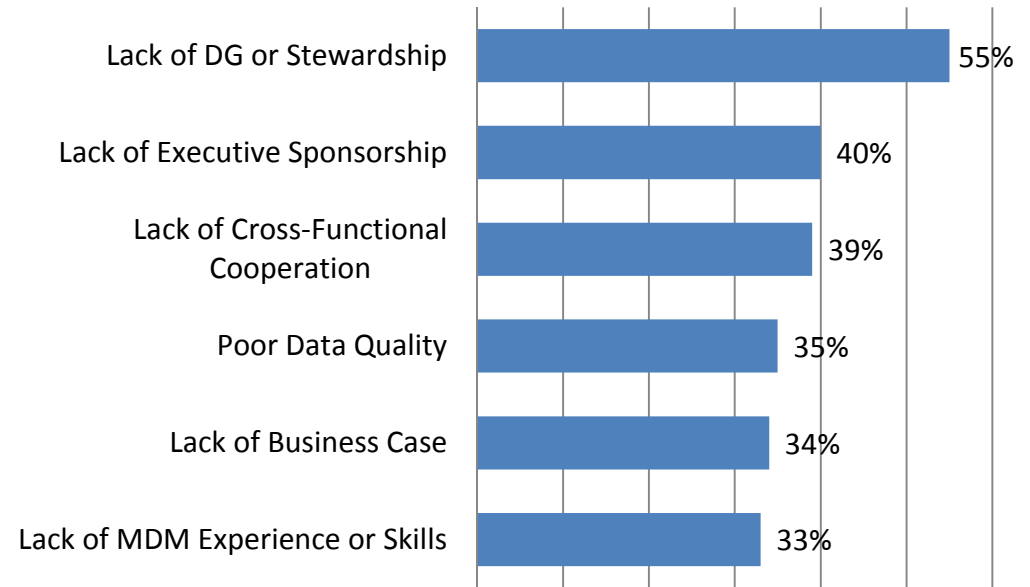


# Successful MDM initiative at NCR

## All 4 components Considered

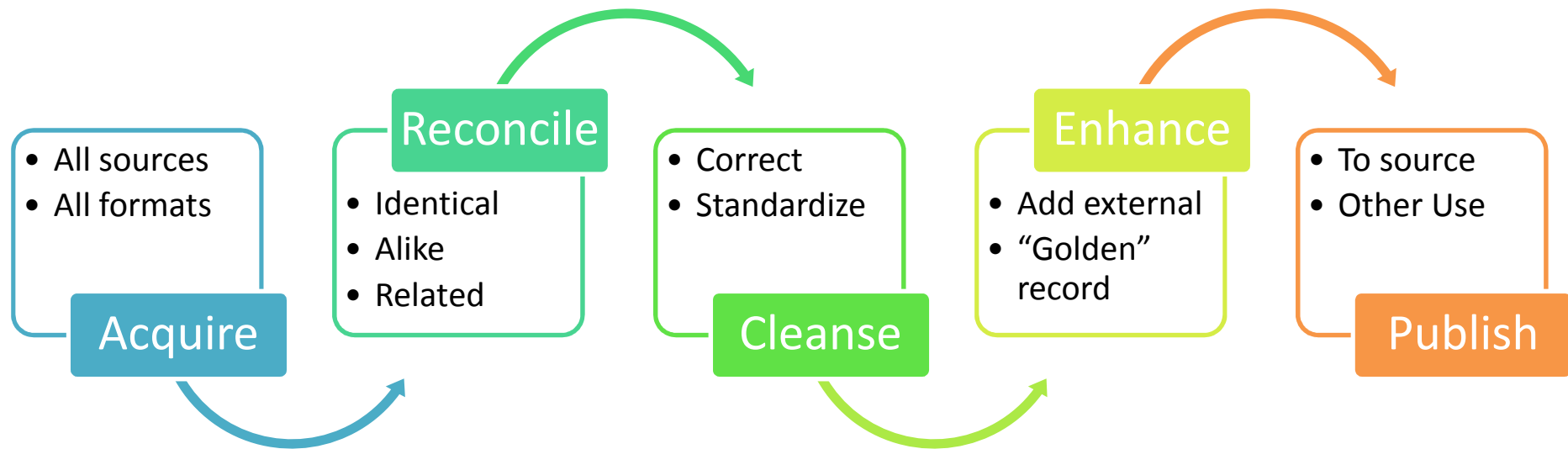


### Challenges to MDM Success



Source: TDWI Best Practices Report Q2 2012

# Master Data Management – *High Level Processes used at NCR*



All MDM tools will do these activities to some degree. You need to understand what is important to your business.

# VALUE AND BENEFITS



# Master Data Management Benefits

## Why Care about Data?

Data Decays at a rate of 2% to 4% per month (industry estimates) which can impact mail deliverability, email campaigns, sales follow-up calls, record completeness

“More than **half of US companies** work with **unreliable contact data**”, [2013 NetProspex Marketing Data Benchmark Report](#)

“The cost of bad data could be as much as **15 to 20% of corporate operating revenues**”, D&B

“A CRM with bad data is like a pair of glasses with an outdated prescription: they’re expensive, clunky, and keep you from seeing opportunities until it’s too late”. D&B

## Quality Data is critical for business success

- Improves customer perception and customer experience
- Decreases costs due to rework
- Increases revenue by providing trustworthy data to make business decisions, complete transactions, leverage business opportunities, and drive improvements in lead generation



# Example Benefits / Business Drivers

## *Customer Master Data Management*

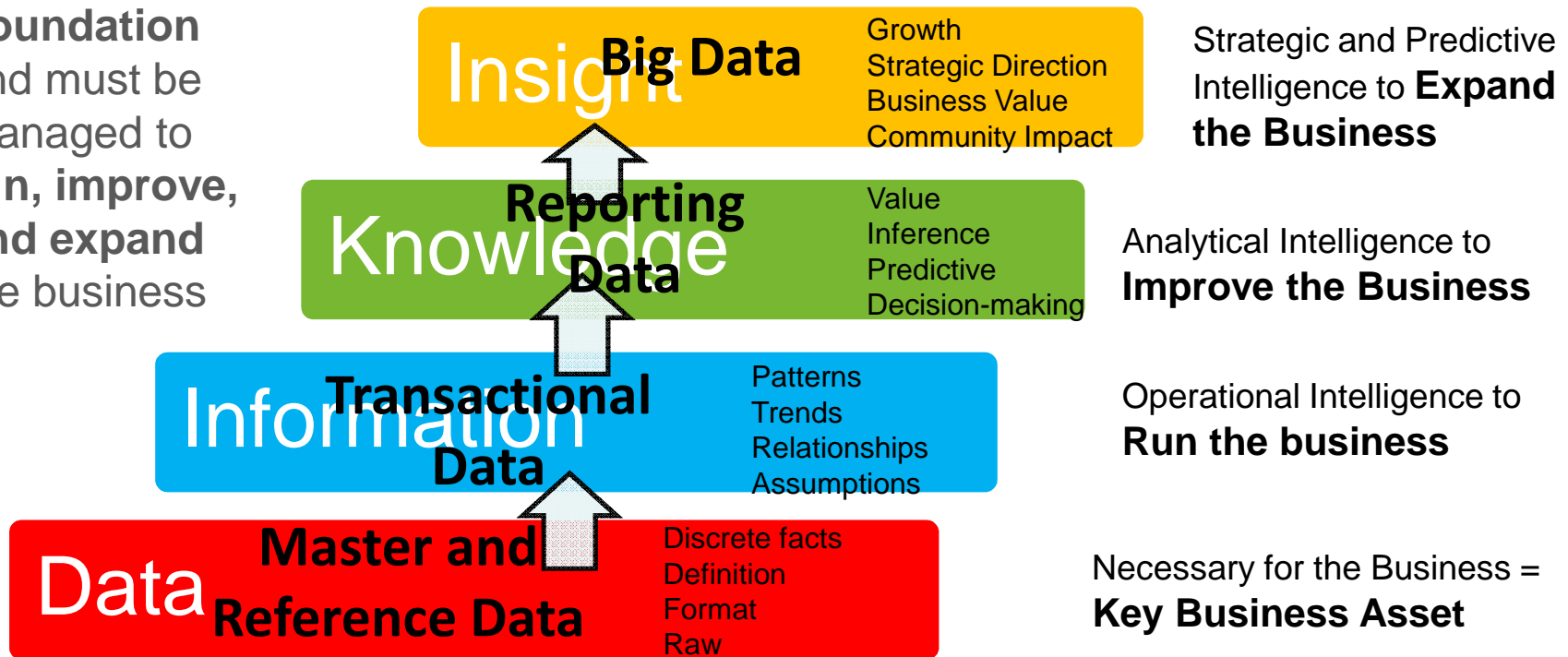
Legal/ Compliance	Regulatory	Operational	Sales/Marketing	Financial
Privacy Mandates	SOX	Efficiency	Marketing and Sales Promotions	Increased Revenue and Profitability per Customer
Fraud Prevention	Watch List	Effectiveness	Branding	Audit
Contracts	Reporting	Customer Support	Customer retention	Risk Management
Data Breach Protection		Organic Growth	BIG Data Analytics	Acquisitions



# Why is Mastering Master Data important?

## *Meaningful Information depends on Quality Data*

- Data is the **Foundation** and must be managed to **run, improve, and expand** the business

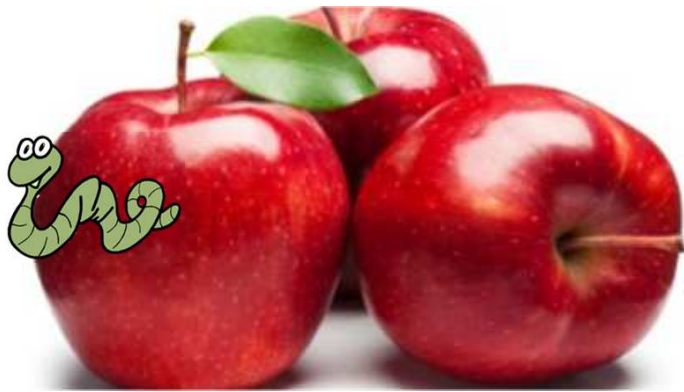




# Meaningful Information Depends on Quality Data

***NCR received many benefits from the Customer Master Data initiative ...***

- Who are our top customers by revenue?
- Can we rollup accounts consistently across systems for revenue and costs?
- Can we look at credit on an Enterprise Level?
- Can we Understand customer satisfaction across all accounts?
- Can we Easily Match Accounts from Acquisitions?



# BEST PRACTICE APPROACH FOR MASTERING DATA

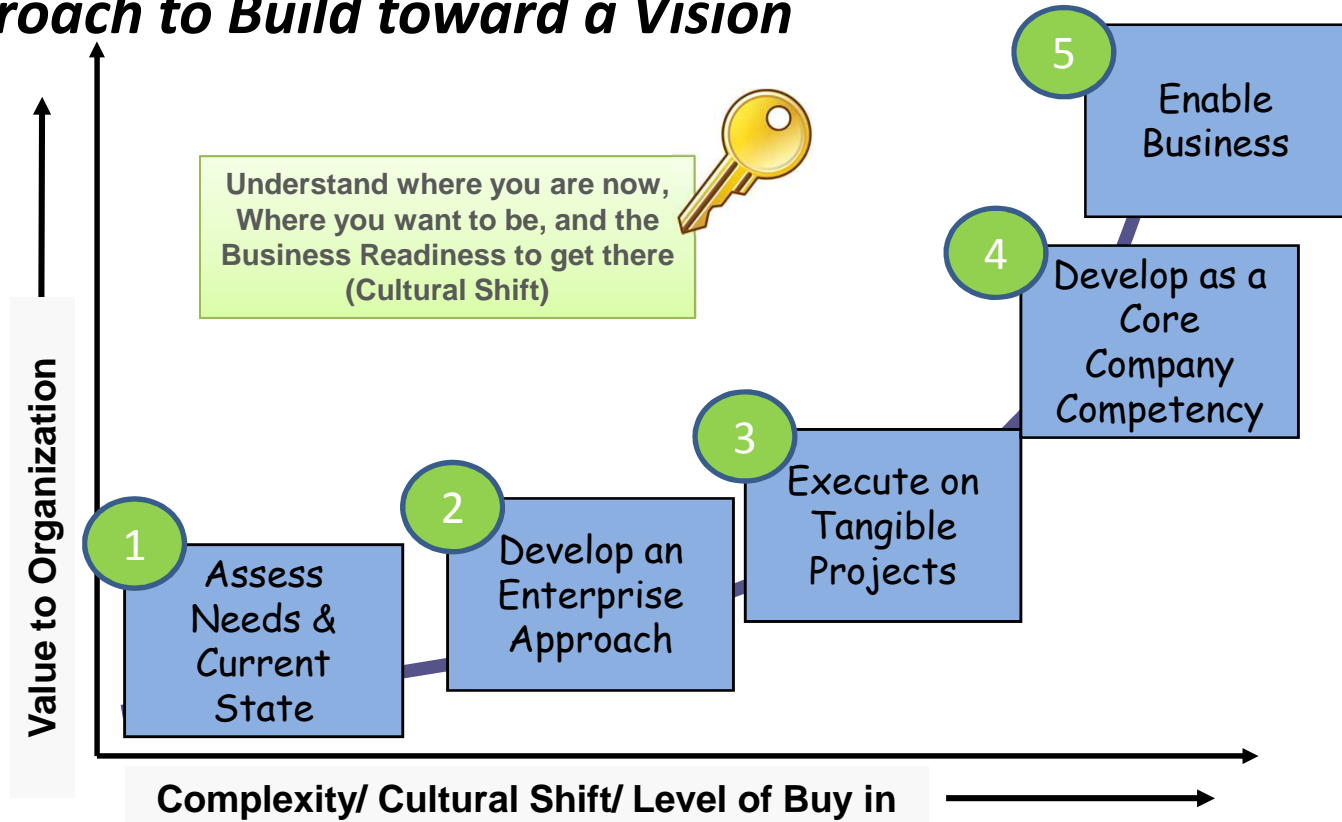


# Mastering Master Data

## Best Practice Approach to Build toward a Vision

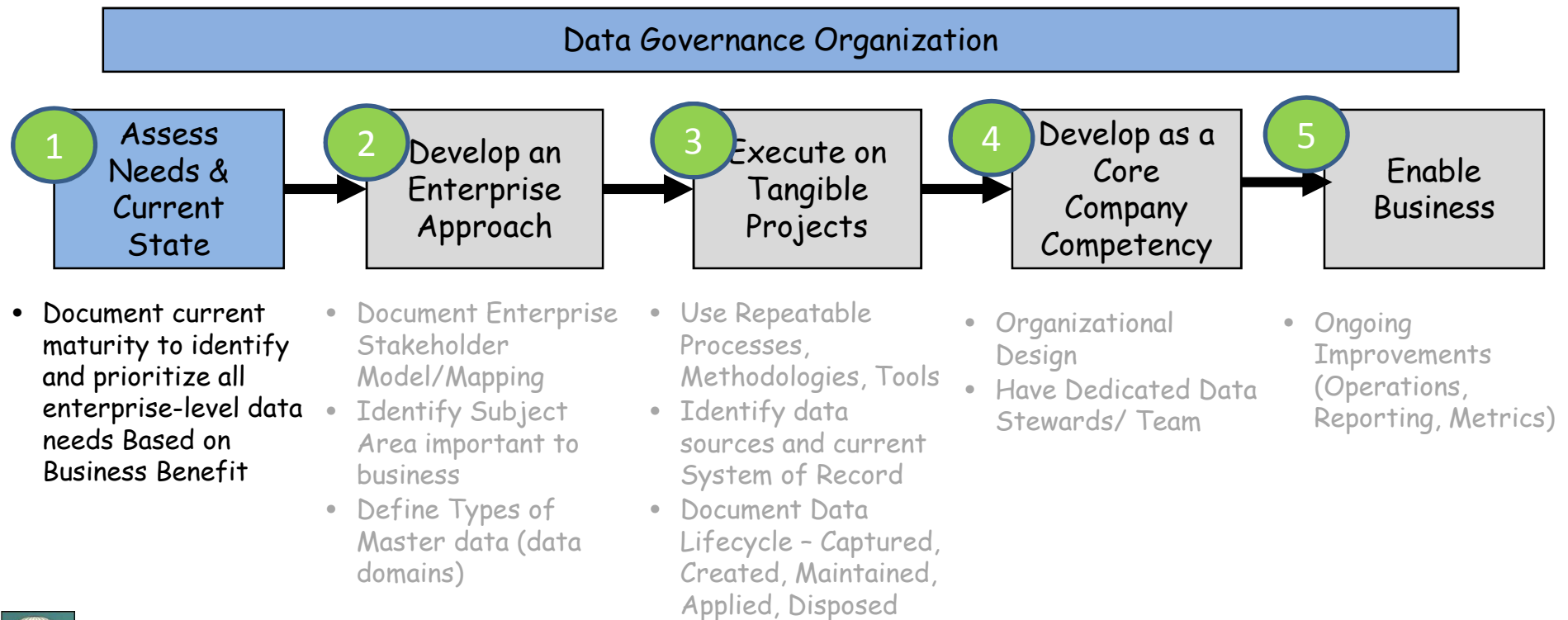
### To Ensure MDM Success

- Use manageable steps
- Show short term successes
- Build towards a vision to support the Business
- Ensure Business Readiness



# Mastering Master Data

## Best Practice Approach

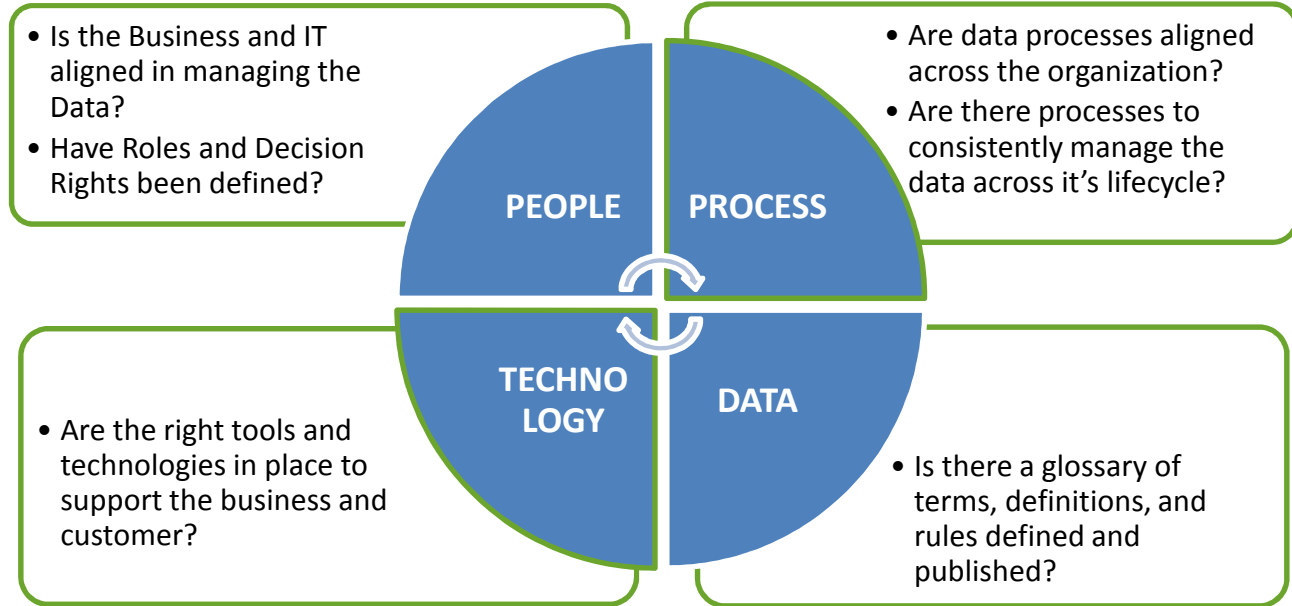


# Assess Current State

## How well does your organization Manage Data as an Enterprise Asset?

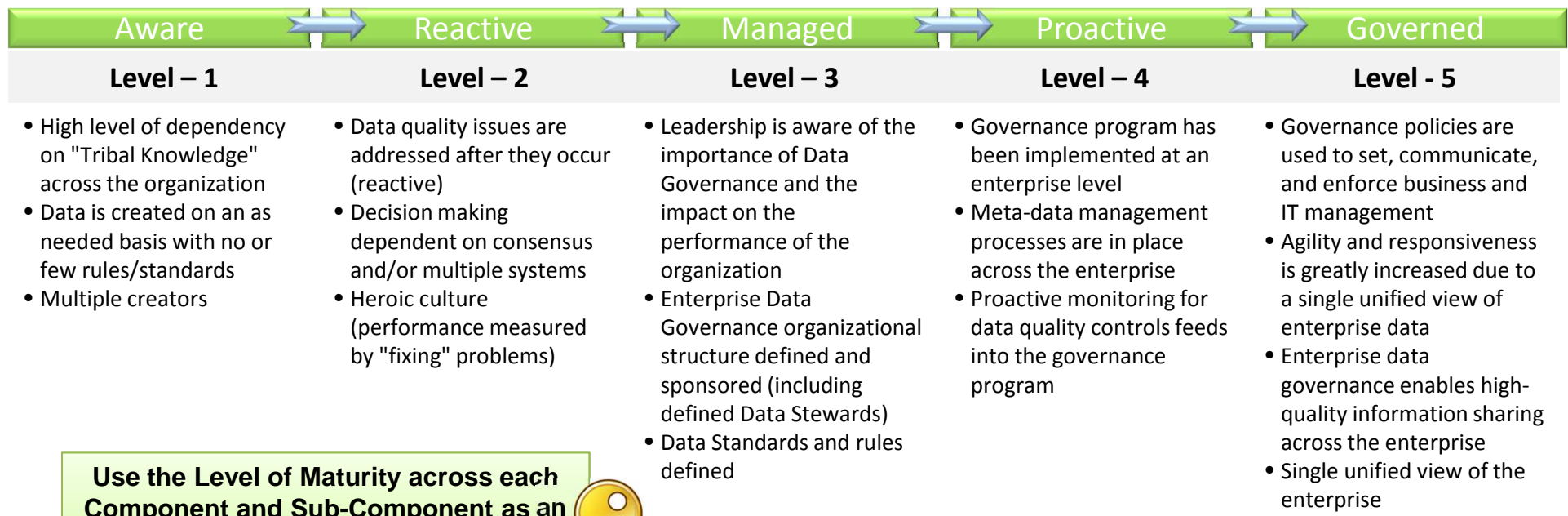
*A Data Governance Maturity assessment can help to identify opportunities to drive Value!*

- Document current maturity to identify and prioritize all enterprise-level data needs
- Document Stakeholder Model/ Mapping
- Create a Roadmap based on Business Benefit



# Data Governance and MDM Maturity

*Focus on improving the maturity as your organization and amount of data grows*

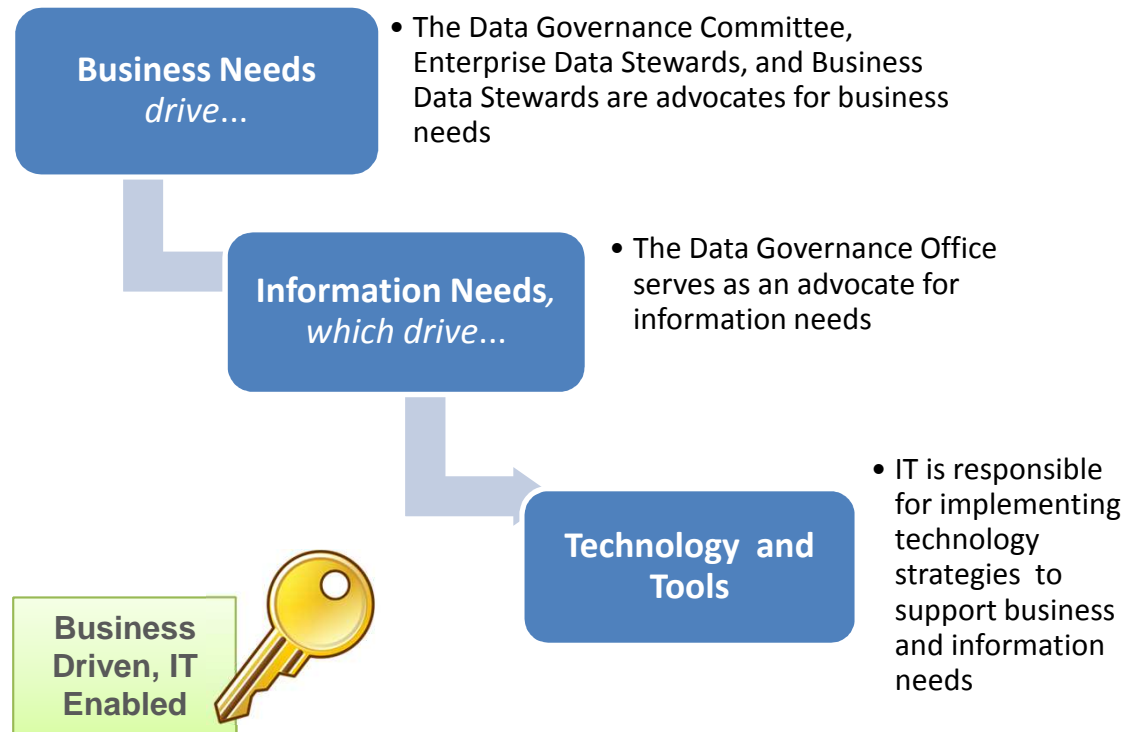


**Use the Level of Maturity across each Component and Sub-Component as an Improvement Metric**




# What are the Business Needs?

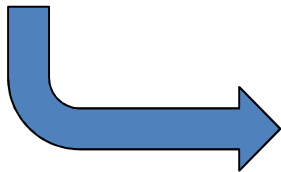
- The business needs to...
  - Trust their data
  - Understand its meaning
  - Know where and what data is available
  - Know how it flows and is related across different departments
  - Know how it is secured
  - Know how well it is consolidated or integrated



# NCR Business Need: Understand Our Customer

## NCR Customer Data was like most companies...

- Was not well defined
- had decentralized method of data creation
- had the least-defined governance and rules



- Had over 500,000 customer records, but business said there should only be 1,000 customers
- 20,000 customer accounts were already marked as 'inactive'
- 350,000 customer accounts had not been used for any transactions in the previous three years
- 40,000 customer accounts had no revenue
- 10,000 customer accounts could be grouped into 1,000 customers which represented 92% of our revenues

**A Consistent Definition of "Customer" is needed**



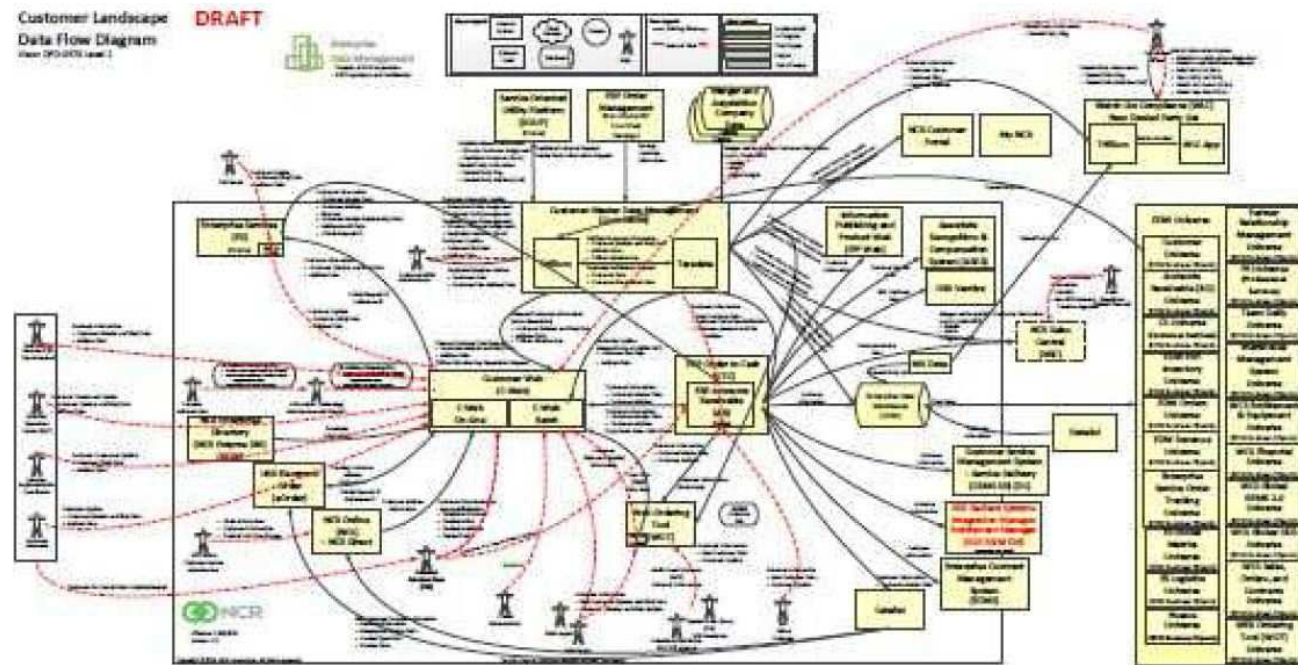


# Data Flow Diagrams

*Help to see how data is created and used*

3 Execute on Tangible Projects

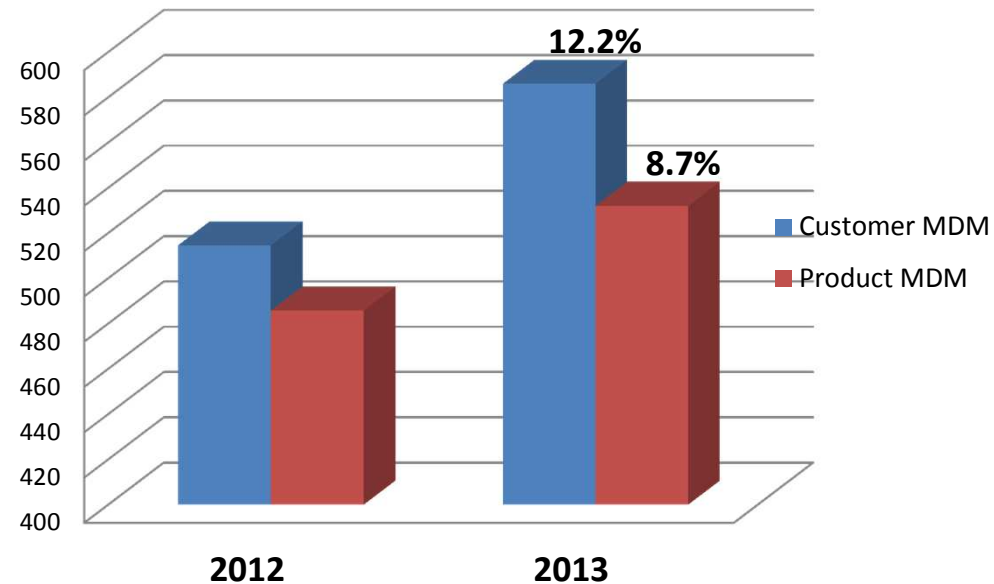
A detailed dataflow of Master Data usage can be quite complex



# MDM Tools can provide value – if they meet your needs.

- Understand Requirements and Use Cases
- Consider Long Term needs (Multi vs Single or Silo Domains)
- Complete a Relative Positioning Map (Vendor Solutions against Requirements)

**MDM Software Revenue  
Market Growth in \$M**



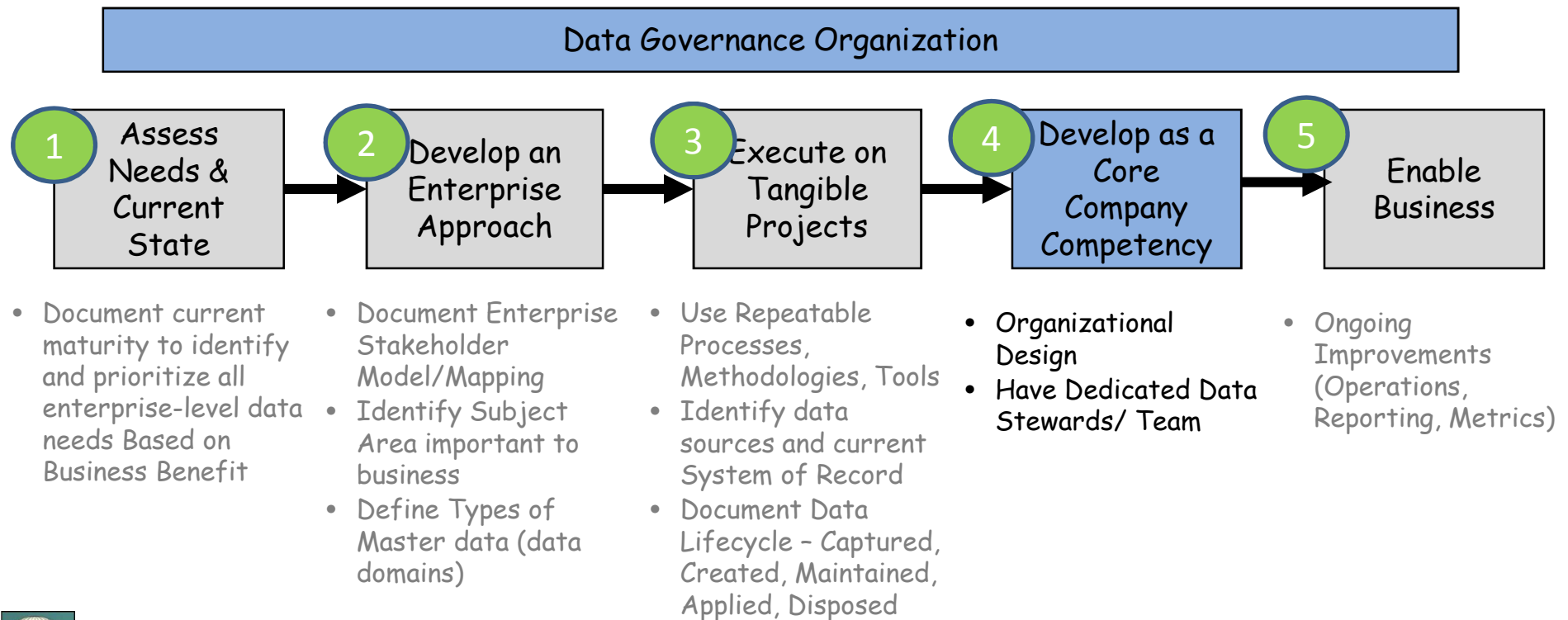
Source: Gartner Magic Quadrant November 2014

## Technologies considered at NCR

- Existing systems that create or update customer data.
- New tools for the MDM needs
  - Data Acquisition – ETL tools like Informatica
  - Data Reconciliation, Cleansing – tools like Trillium or Oracle DQ
  - Enhancement – tools like D&B
  - Publishing – Web Services or ETL tools
- A dedicated MDM Tool to orchestrate the other tools, house the data and provide a user interface to query and change the data.

# Mastering Master Data

## Best Practice Approach



# Organizational Design Example

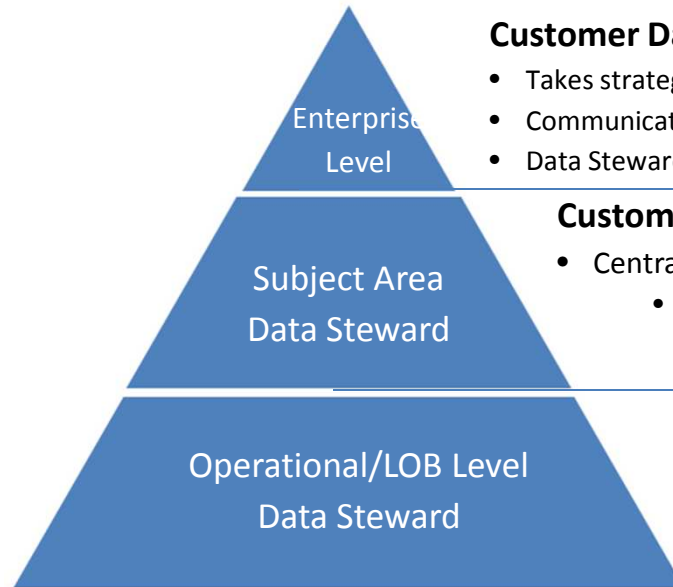
4 Develop as a Core Company Competency

## Data Governance Manager (FT):

*Aligns program with Executive Committee direction, communicates program components and value*

## Executive Data Governance Committee (PT)

- Sets strategic priorities and direction (Company wide)
- Provides executive level support
- Resolves escalated issues



## Customer Data Stewardship Council (PT)

- Takes strategies from Exec Committee
- Communicates to Data Stewards
- Data Stewardship is the execution of decision-making processes

## Customer Data Stewards (FT)

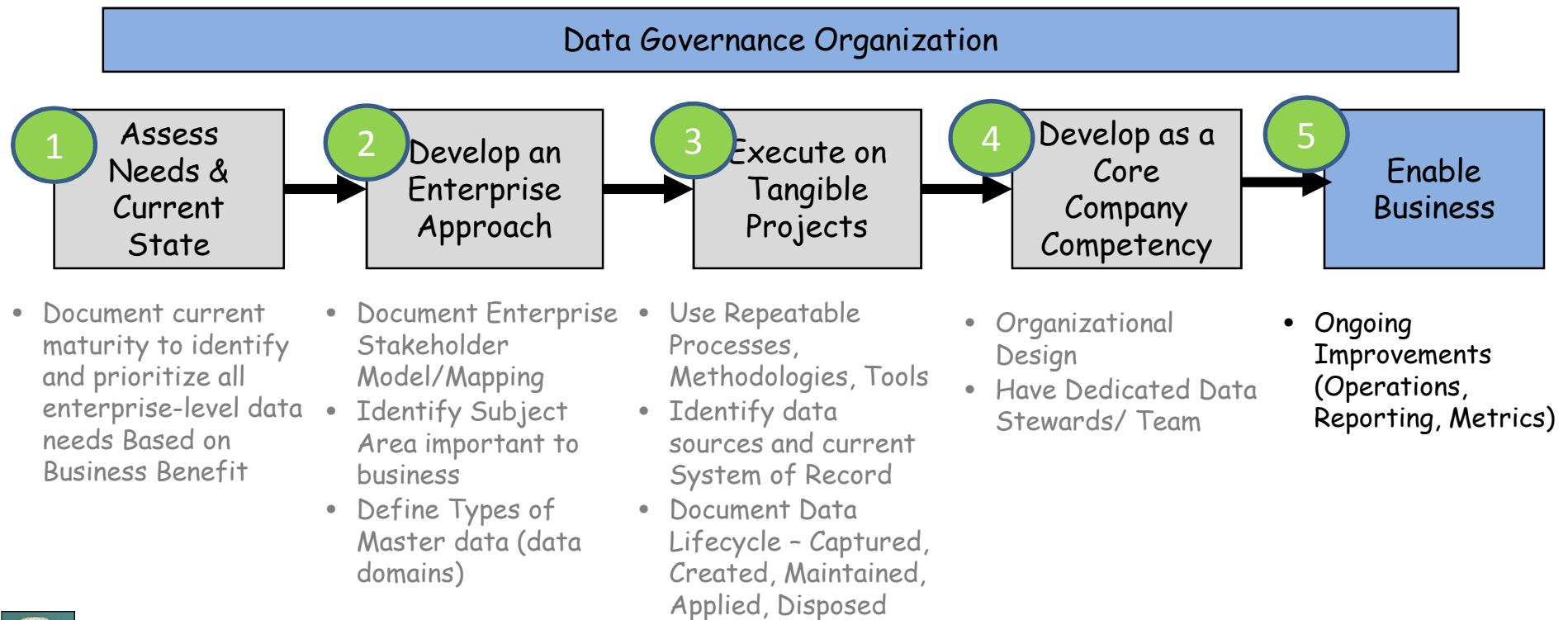
- Central point of contact for in SOR
  - Aligned to support each Operational Data Steward

## LOB Level Data Steward (PT)

- Subject matter experts in LOB
- Works with Customer Data Steward on business definitions, quality requirements, business rules for their area

# Mastering Master Data

## Best Practice Approach



# Enable the Business through On-going Improvements

## *Develop and track a set of Enterprise Metrics for Master Data*

“Measurement is the first step that leads to control and eventually to improvement. If you can’t measure something, you can’t understand it. If you can’t understand it, you can’t control it. If you can’t control it, you can’t improve it.”  
— [H. James Harrington](#)



- Based on **business goals** related to Master Data
- Determined **key consistent metrics** important across all LOBs
- Use a formal Metrics **planning process**
- Determine the **data, process, people and technology** for collecting, reporting, and acting on the metrics
- Determine **dimensions of quality** to be tested
- Test to ensure the metric can be **collected and reported accurately**
- Set the **baseline**
- Set **goals and targets**
- **Automate**
- **Publish and communicate** the metrics
- Define **RACI** for **clear responsibilities** related to the metrics process

# Master Data Maturity (Example)

## Use as an Improvement Metric for Roadmap



\*Detailed Governance Maturity Model created and owned by Mary Levins

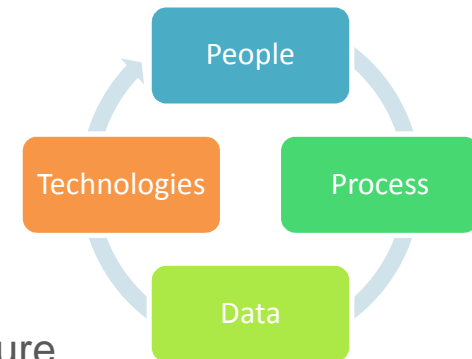




# Summary



- **Master Data is an Asset** and should be managed under the **Data Governance Umbrella**
- Develop a **Stakeholder Model** and **Ensure there is Business Sponsorship and Engagement**
- Understand where you are now, where you want to be, and the business readiness to get there (**Cultural Shift**)
- Understand **existing systems and sources** when defining the future architecture
- Successful MDM initiatives must consider all **Data Governance components** across People, Processes, Technologies, and Data
- Use the Level of Maturity across each Component and Sub-Component as an **Improvement Metric** for your roadmap
- **Measure** your master data across the enterprise so you can manage it. Manage it so you can **continually improve** it.



# QUESTIONS? COMMENTS?



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- Bill Wise – [william.wise@ncr.com](mailto:william.wise@ncr.com)