Presentation Overview

1. What is Data Governance and why is it important?
2. What are the key concepts of Data Governance and Best Practices you need to know
3. What are some steps you can take to create a successful Data Governance strategy?
4. Risks and Issues to Avoid
5. Recommendation and Way Forward
Many public organizations and private produce and collect a broad range of different types of data in order to perform their tasks.

The extraordinary quantity and centrality of data collected by governments, private sector and the Civil Society make these data particularly significant as a resource for increased transparency.
- Big data is any type of data
  - Complex structured and unstructured - such as text, sensor data, audio, video, email, log files, etc. that can enable data scientists to gain insights when these data types are analyzed together
Africa can take advantage of Big Data to gain useful knowledge and identify unexpected phenomena in many societal or global challenges;
What is Data Governance?

• **Data Governance**: is an organizational approach to data management, formalized as a set of policies and procedures that encompass the full life cycle of data.

• Tools, policies and processes to:
  - Improve data quality and reduce data redundancy.
  - Protect and secure sensitive data.
  - Ensure data and IT compliance with National Regulations.
  - Encourage use of data, correctly.
  - Platform for robust data analytics.
The Pillars of Data Governance

- Information Lifecycle Management
- Master Data Management
- Data Driven Decisions
- Metadata Management
- Data Quality
- Data Privacy and Security

Data Governance

Metrics of Data Governance
Governance Pillars: Data Quality

**Data quality** is about having data that is ‘fit for purpose.’

- **Benefits of Data Quality:**
  - Accuracy in reporting and business decisions
  - Time and cost savings by removing redundant data storage
  - Reduced time spent on manual data reconciliation
  - Build trust in your data
Governance Pillars: Metadata

Metadata is data about the data.

- Business Processes data glossary
- Technical data dictionary
- Operational Data Dictionary
- Data lineage

Benefits:
- Consistent understanding of data definitions
- Traceability of data transformations
- Reduced data redundancy
- Save time and effort of tracking down data or reconciling duplicated data
- Ability to identify ahead of time possible consequences of changes to processes, storage, applications or reports.
Governance Pillars: Masterdata Management (1)
Governance Pillars: Masterdata Management (2)

• ‘Masterdata: Critical data used across the organization by multiple departments

• ‘Masterdata management’
  - Process and policies to achieve consistent master data, which is managed centrally

• Benefits
  - Single source of all Masterdata, managed centrally and disseminated
Governance Pillars: Data Analytics

- Data analytics is the tools and processes for data discovery to improve business outcome. Analytics is the discovery and communication of meaningful patterns in data.

- Analytics Governance is the setting of policies and procedures to better align users with the investments in analytic infrastructure.

Benefits

• Cost saving in analytics (system and people)
• Improved system performance of production servers
• Data consistency across business divisions
• Improved business decisions
Governance Pillars: Privacy & Security

Data privacy ensure legal expectation and public expectation of data is met from its creation to archival.

Data security protects the data from data loss and data corruption

**Benefits**

- Data Privacy and Data Security ensures valuable data is protected from misuse and loss
Governance Pillars: Information Life Cycle Management

A systematic, policy-based approach to data collection, use, retention and deletion.

Benefits

• Improve timeliness in reporting
• Improve system performance through the process of archiving unused data
Create a Successful Data Governance Strategy

1. Conduct Governance Maturity Assessment
2. Create a roadmap for areas needing improvement
3. Implement Data Governance Committees
4. Start workgroups in all Governance Pillars
5. Measure Governance benefits and improve
Step 1: Governance Maturity Evaluation

• Evaluate where your organization is, and where you want to be
• Identify areas of weakness, pressure points, or strengths that can be built upon
## Governance Maturity Model

<table>
<thead>
<tr>
<th>Maturity Level</th>
<th>Characteristics</th>
<th>Type of Metrics to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Optimised</td>
<td>Improvement feedback to data quality, with a mix of data management skills, knowledge etc</td>
<td>Data plus feedback for changing the Data</td>
</tr>
<tr>
<td>4. Managed</td>
<td>Measured data. Formal proactive team</td>
<td>Data plus feedback for control</td>
</tr>
<tr>
<td>3. Defined</td>
<td>Data defined and Institutionalised but no dedicated team in place</td>
<td>Specialised area, Finance, marketing etc.</td>
</tr>
<tr>
<td>2. Repeatable</td>
<td>Data dependent on individual, There is informal data management</td>
<td>Project Management</td>
</tr>
<tr>
<td>1. Initial</td>
<td>Ad-hoc, Sporadic effort to repair data</td>
<td>Base line</td>
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Step 2: Create a Roadmap

• How to go from your current level of maturity to where you want to be
• Use results of Maturity Assessment to identify critical needs
• Move on to step 3 and have Data Governance committees develop roadmap
Data Governance Committee Structure

- Steering Committee
- Data Governance Board
- Data Technical Committee
<table>
<thead>
<tr>
<th>Data Governance Committees Roles and Responsibilities</th>
</tr>
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<tr>
<td><strong>Level of Focus</strong></td>
</tr>
<tr>
<td><strong>Who?</strong></td>
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</table>
| **Roles** | • Champion data governance  
• Provide guidance on tools, policy and processes  
• Sponsor, approve and champion the governance goals in all pillars  
• Communicate expectations and requirements in data governance  
• Address and resolve escalated issues  
• Provide incentives and impetus for data decision making |
<table>
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</table>
| **Roles**             | • Creates and approves policies, processes and tools and define standards to meet Governance goals  
                          • May initiate or select tools, policies and processes  
                          • Prioritizes Governance works in all pillars  
                          • Assigns Governance work  
                          • Address and resolve issues escalated to this level  
                          • Participate in workgroups in pillars  
                          • Meet regularly to address data issues |
Data Governance Committees Roles and Responsibilities

<table>
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<tr>
<th>Role</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Technical Committee</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Level of Focus</strong></td>
<td>Detailed, Tactical</td>
</tr>
<tr>
<td><strong>Who?</strong></td>
<td>Data owners, data managers or data analysts who implement, work with or enter data.</td>
</tr>
</tbody>
</table>
| **Roles** | • Lead and organize workgroups for addressing continuous improvement projects in each Governance Pillar  
• Conduct data training  
• Suggest policies, business rules, processes for each Governance Pillar, to the Data Governance Board  
• Participate in tool selection processes  
• Communicate concerns, issues, and problems with data to the individuals who can influence change. |
Key Workgroups to be Formed: Data Analytics

How many reports do we create, in what areas, and how often?
• How long does it take to produce each report?
• What is the time/cost of producing a new report?
• Are there canned reports we could create to serve multiple purposes?
• Something to Consider:
  - Business Intelligence Competency Center (BICC) to educate users, evangelize business intelligence, and develop reports. Having a robust Data Warehouse becomes a key deliverable.
Key Workgroups to be Formed: Data Privacy and Security

• Where is our sensitive data?
• Has the organization masked its sensitive data in production and non-production environments (development, testing, and training) to comply with privacy regulations?
• Are database audit controls in place to prevent privileged users, such as DBAs, from accessing private data, such as employee salaries?
• Set policy and processes to protect sensitive data.
Risks and Pitfalls to Avoid

- **Lack of interest or knowledge** Disinterested or disengaged executive sponsorship
  - Members of the data governance council who don't care.
  - Resistance to change
  - Ignorance about data governance

- **Getting everyone on the same bus**
  - Limited authority/power of the data governance council
  - Poor communications through the organizational hierarchy

- **Taking the right approach**
  - Scope is too wide ("big bang") or too narrow
  - Piecemeal execution without a clear road map and defined release cycles

- **Not showing the value**
  - No measurable deliverables
  - Lack of or a poor reporting framework
  - Low value due to incorrect priorities
Recommendations: Dos & Don'ts

Dos

• Obtain solid leadership sponsorship
• Tie benefits to real goals
• Obtain stakeholder buy-in
• Focus on governance and process
• Continuous improvement

Don'ts

• Lack of shared vision and commitment
• Viewed purely as an IT effort
• Separate data quality efforts
• Weak or disjointed metrics
• Don’t boil the ocean
• Technical goals masquerading as business goals
Value of Big Data Governance

• Improving Organisational accountability, transparency, responsiveness and democratic control
• Promoting citizens self-empowerment, social participation and engagement
• Building the next generation of empowered knowledge workers
• Fostering innovation, efficiency and effectiveness in services
• Creating value for the wider economy
• Understanding the value chain of Big data governance
Thank You!

- I wish you a Pleasant Stay in Mombasa

Questions & Answers

- email: dwilliams@kca.ac.ke
Key References