

HIGH-QUALITY GOVERNANCE AND DATA QUALITY IN THE VEHICLE SUPPLIER INDUSTRY

Business Intelligence/Analytics
to Drive Better Decision Making
Think Tank White Paper

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PROBLEM STATEMENT

In May of 2024, the Business Technology Council Business Intelligence/Analytics Think Tank sent out a survey to members asking several questions focused on business intelligence, analytics, current challenges, and future plans. As the team reviewed the data, it became clear that data quality and governance was a key point of conversation that impacted so many areas of the business. Therefore, the BI/Analytics Think Tank decided to create a framework focusing on data from a governance and quality perspective.

The first part of this white paper provides a comprehensive roadmap for achieving excellence in governance and data quality, focusing on four key organizational aspects:

1. responsibilities
2. systems
3. people
4. processes

The second part of this white paper will focus on the development of a roadmap based on the size of an organization.



EXECUTIVE SUMMARY

In today's data-driven world, the importance of data quality and governance cannot be overstated. Organizations increasingly rely on vast amounts of data to drive decision-making, optimize operations, and gain a competitive edge. However, without robust data quality measures and governance frameworks, the value of this data diminishes significantly, leading to flawed insights, inefficiencies, and compliance risks.

Data quality ensures that information is accurate, consistent, and reliable, forming the foundation for effective decision-making. Poor data quality can lead to costly errors, misguided strategies, and missed opportunities. It also undermines the trust that stakeholders place in the data, which is critical for any organization's success.

Data governance, on the other hand, provides the overarching framework that ensures data is managed, used, and protected according to organizational policies and regulatory requirements. It involves the establishment of roles, responsibilities, standards, and processes to maintain data integrity, security, and availability.

Together, data quality and governance create a synergy that enables organizations to harness the full potential of their data assets. This white paper explores the critical importance of these concepts, highlighting how they contribute to achieving strategic objectives, maintaining compliance, and fostering a culture of data-driven excellence. Through a combination of best practices, case studies, and industry insights, this white paper aims to provide a comprehensive understanding of how robust data quality and governance can transform organizations in the digital age.



INTRODUCTION

The vehicle supplier industry is evolving rapidly, driven by technological advancements, regulatory requirements, and market demands. Ensuring high-quality governance and data quality is critical for companies of all sizes—small, medium, and large.

A small and midsize business (SMB) is a business that, because of its size, has unique information technology (IT) needs and often encounters distinct IT challenges compared to larger enterprises. These businesses typically operate with limited IT resources, such as budget and staff. For the purposes of this exercise, SMBs are categorized based on the number of employees and their annual revenue.

The most common criterion is the number of employees. Small businesses are generally defined as having fewer than 100 employees, while midsize enterprises have between 100 and 999 employees. Large companies are defined as greater than 1,000 employees.

The second common criterion is annual revenue. Small businesses typically generate less than \$50 million annually, whereas midsize enterprises earn between \$50 million and \$1 billion per year. Large businesses are defined as greater than \$1 billion per year.

¹ Gartner. (n.d.) *Definition of small and midsize business (SMB) - gartner information technology glossary*. Small and Midsize Business (SMB). <https://www.gartner.com/en/information-technology/glossary/smb-small-and-midsize-businesses>



FRAMEWORK

In this framework, we will outline responsibility, systems, people and processes required to ensure data governance and quality can be addressed within different business models.

Small-Sized Business

1. Responsibilities:

- a. **Data Stewardship:** Typically handled by IT managers or senior data analysts who ensure data accuracy, consistency, and privacy.
- b. **Governance Oversight:** Managed by top management or the owner, ensuring alignment with business goals and compliance with regulations.
- c. **Operational Responsibility:** Shared across departments, with clear guidelines and responsibilities outlined in the company's data governance policy.

2. Systems:

- a. **Basic Data Management Tools:** Use of cost-effective tools like Microsoft Excel, Google Sheets, and simple database management systems.
- b. **Cloud Solutions:** Adoption of cloud storage solutions such as Google Drive or Dropbox for easy data sharing and collaboration.
- c. **Security Systems:** Basic cybersecurity tools like antivirus software and secure password management.

3. People:

- a. **IT Managers:** Oversee data management and governance practices, ensuring data integrity and security.
- b. **Data Analysts:** Responsible for data quality, analysis, and reporting.
- c. **Cross-Functional Teams:** Collaboration between departments to ensure data accuracy and relevance.

4. Processes:

- a. **Data Entry and Validation:** Establish clear protocols for data entry and validation to ensure accuracy from the start.
- b. **Regular Audits:** Conduct periodic data audits to identify and correct inconsistencies.
- c. **Basic Data Governance Policies:** Develop simple, clear data governance policies outlining roles, responsibilities, and procedures.

FRAMEWORK (CONT'D)

Medium-Sized Business

1. Responsibilities:

- a. Data Governance Committee: Comprising representatives from IT, compliance, operations, and senior management to oversee data governance policies.
- b. Data Stewards: Assigned within each department to manage data quality and ensure adherence to governance policies.
- c. Chief Data Officer (CDO): Responsible for overall data strategy, policy enforcement, and coordination among data stewards.

2. Systems:

- a. Enterprise Resource Planning (ERP) Systems: Implementation of mid-range ERP systems (e.g., SAP Business One, Oracle NetSuite) for integrated data management.
- b. Data Quality Tools: Use of data profiling and cleansing tools like Talend or Informatica Cloud Data Quality.
- c. Enhanced Security Systems: Deployment of comprehensive cybersecurity solutions including firewalls, intrusion detection systems, and data encryption.

3. People:

- a. Data Governance Committee Members: Representatives from IT, compliance, and business units to develop and enforce data governance policies.
- b. Data Stewards: Designated individuals within each department responsible for data quality and compliance.
- c. CDO: Leads the data governance strategy and ensures alignment with business objectives.

4. Processes:

- a. Data Governance Framework: Implement a comprehensive framework covering data management, quality, security, and compliance.
- b. Data Lifecycle Management: Establish processes for data collection, storage, usage, and disposal.
- c. Continuous Improvement: Regularly review and update data governance practices to adapt to changing business needs and regulatory requirements.

FRAMEWORK (CONT'D)

Large-Sized Business

1. Responsibilities:

- a. Data Governance Board: A dedicated board including CDO, Chief Information Officer (CIO), and senior executives from key departments, responsible for strategic oversight.
- b. Data Stewards and Data Custodians: Multiple data stewards per department with data custodians managing specific datasets.
- c. Dedicated Governance Teams: Specialized teams for compliance, risk management, and data quality assurance reporting to the governance board.

2. Systems:

- a. Advanced ERP Systems: Deployment of robust ERP solutions (e.g. SAP S/4HANA, Oracle ERP Cloud) with extensive data management capabilities.
- b. Data Governance Platforms: Use of specialized data governance platforms like Collibra or Alation for comprehensive data management.
- c. Advanced Security Systems: Implementation of advanced security measures including multi-factor authentication, AI-driven threat detection, and continuous monitoring.

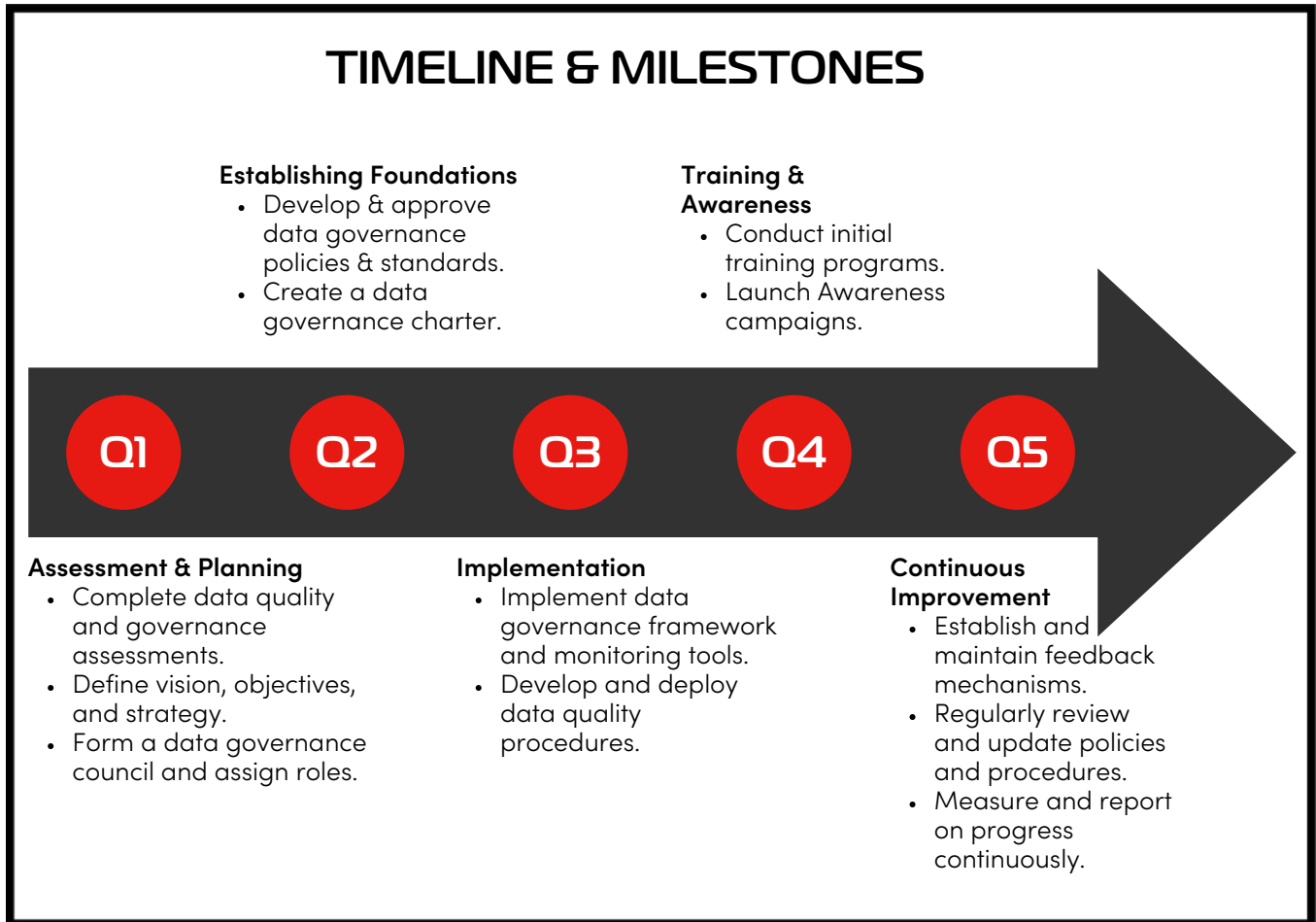
3. People:

- a. Data Governance Board: High-level executives including the CDO, CIO, and departmental heads to provide strategic direction.
- b. Dedicated Data Teams: Teams focused on data management, quality assurance, compliance, and security.
- c. External Consultants: Engaged for specialized expertise and to ensure best practices in data governance.

4. Processes:

- a. Formalized Data Governance Processes: Develop detailed processes and workflows for data governance, aligned with industry standards.
- b. Advanced Data Quality Management: Use sophisticated tools and methodologies for data profiling, cleansing, and enrichment.
- c. Compliance and Risk Management: Implement rigorous processes to ensure compliance with regulations and manage data-related risks.

ROADMAP



Small-Sized Business

Phase 1: Assessment and Planning

Step 1: Assess Current State

- Conduct basic data quality and governance audits.
- Identify key stake holders such as the owner, IT manager, and department heads.

Step 2: Define Vision and Objectives

- Develop a clear, concise vision for data governance and quality.
- Set SMART objectives focused on immediate improvements and regulatory compliance.

Step 3: Develop a Strategy

- Create a simple strategic framework aligning data governance with core business objectives.
- Identify and prioritize areas needing improvement.

ROADMAP (CONT'D)

Small-Sized Business (cont'd)

Phase 2: Establishing Foundations

Step 4: Define Roles and Responsibilities

- Form a small data governance council including the owner, IT manager, and key department heads.
- Assign roles such as Data Owner (owner), Data Steward (IT manager), Data Custodians (department heads), and Data Users (staff).

Step 5: Develop Policies and Standards

- Develop straightforward data governance policies.
- Establish basic data quality standards for accuracy, completeness, and consistency.

Phase 3: Implementation

Step 6: Implement Data Governance Framework

- Implement the data governance framework with the council and defined roles.
- Create a simple data governance charter outlining the structure and responsibilities.

Step 7: Develop Data Quality Procedures

- Implement procedures for accurate data entry and collection.
- Establish basic processes for data cleaning and updating.
- Develop simple procedures for integrating data from various sources.

Step 8: Implement Monitoring and Reporting Tools

- Deploy basic tools for continuous data quality monitoring.
- Establish simple mechanisms for regular data quality reporting and feedback.

Phase 4: Training & Awareness

Step 9: Conduct Training Programs

- Develop role-based training programs for different roles within the data governance framework.
- Implement continuous education programs to keep staff updated on data governance and quality best practices.

Step 10: Launch Awareness Campaigns

- Conduct campaigns to raise awareness about the importance of data quality and governance.
- Organize workshops, seminars, and webinars to engage stakeholders.

ROADMAP (CONT'D)

Small-Sized Business (cont'd)

Phase 5: Continuous Improvement

Step 11: Establish Feedback Mechanisms

- Set up feedback loops to capture input from data users and stakeholders.
- Develop processes for addressing data quality issues based on feedback.

Step 12: Review and Update

- Conduct regular reviews of data governance and quality processes.
- Update policies and procedures based on review findings and evolving business needs.

Step 13: Measure and Report Progress

- Define key performance indicators (KPIs) and metrics to measure progress.
- Regularly report on progress to stakeholders and the data governance council.



ROADMAP (CONT'D)

Medium-Sized Business

Phase 1: Assessment and Planning

Step 1: Assess Current State

- Conduct comprehensive data quality and governance audits.
- Identify key stakeholders from IT, compliance, operations, and senior management.

Step 2: Define Vision and Objectives

- Develop a clear vision for data governance and quality
- Set SMART objectives for data governance and quality improvement.

Step 3: Develop a Strategy

- Create a strategic framework aligning data governance with business objectives.
- Identify priority areas for improvement.

Phase 2: Establishing Foundations

Step 4: Define Roles and Responsibilities

- Form a data governance council comprising key stakeholders.
- Assign roles such as Data Owners, Data Stewards, Data Custodians, and Data Users.

Step 5: Develop Policies and Standards

- Develop comprehensive data governance policies.
- Establish data quality standards for accuracy, completeness, consistency, timeliness, validity, and uniqueness.

Phase 3: Implementation

Step 6: Implement Data Governance Framework

- Implement the data governance framework including the council and roles.
- Create a data governance charter outlining the governance structure and responsibilities.

Step 7: Develop Data Quality Procedures

- Implement procedures for accurate data entry and collection.
- Establish processes for data cleaning and updating.
- Develop procedures for integrating data from various sources.

ROADMAP (CONT'D)

Medium-Sized Business (cont'd)

Step 8: Implement Monitoring and Reporting Tools

- Deploy tools for continuous data quality monitoring.
- Establish mechanisms for regular data quality reporting and feedback.

Phase 4: Training & Awareness

Step 9: Conduct Training Programs

- Develop role-based training programs for different roles within the data governance framework.
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- Update policies and procedures based on review findings and evolving business needs.

Step 13: Measure and Report Progress

- Define KPIs and metrics to measure progress.
- Regularly report on progress to stakeholders and the data governance council.

ROADMAP (CONT'D)

Large-Sized Business

Phase 1: Assessment and Planning

Step 1: Assess Current State

- Conduct in-depth data quality and governance audits.
- Identify key stakeholders including the CDO, CIO, and senior executives from key departments.

Step 2: Define Vision and Objectives

- Develop a clear vision for data governance and quality
- Set SMART objectives for data governance and quality improvement.

Step 3: Develop a Strategy

- Create a strategic framework aligning data governance with business objectives.
- Identify priority areas for improvement.

Phase 2: Establishing Foundations

Step 4: Define Roles and Responsibilities

- Form a data governance board comprising key stakeholders.
- Assign roles such as Data Owners, Data Stewards, Data Custodians, and Data Users.

Step 5: Develop Policies and Standards

- Develop comprehensive data governance policies.
- Establish data quality standards for accuracy, completeness, consistency, timeliness, validity, and uniqueness.

Phase 3: Implementation

Step 6: Implement Data Governance Framework

- Implement the data governance framework including the board and roles.
- Create a data governance charter outlining the governance structure and responsibilities.

Step 7: Develop Data Quality Procedures

- Implement procedures for accurate data entry and collection.
- Establish processes for data cleaning and updating.
- Develop procedures for integrating data from various sources.

ROADMAP (CONT'D)

Large-Sized Business (cont'd)

Step 8: Implement Monitoring and Reporting Tools

- Deploy advanced tools for continuous data quality monitoring.
- Establish mechanisms for regular data quality reporting and feedback.



Phase 4: Training & Awareness

Step 9: Conduct Training Programs

- Develop role-based training programs for different roles within the data governance framework.
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- Update policies and procedures based on review findings and evolving business needs.

Step 13: Measure and Report Progress

- Define KPIs and metrics to measure progress.
- Regularly report on progress to stakeholders and the data governance board.

CONCLUSION

By investing in better data quality and governance, a company can unlock a multitude of strategic advantages. High-quality data governance ensures that data is consistently accurate, secure, and accessible, laying the foundation for more precise and reliable business intelligence. This, in turn, empowers organizations to make better-informed decisions, fostering growth and innovation across all levels.

With robust data quality and governance in place, companies can confidently leverage advanced technologies such as large language models and artificial intelligence, knowing that these systems are built on trustworthy and well-managed data. This not only enhances the performance and accuracy of AI implementation, but also drives meaningful insights that lead to competitive advantages in the market.

Moreover, better data governance and quality directly contribute to operational efficiency, reducing the risk of costly errors, improving compliance, and ensuring that resources are used effectively. As data becomes increasingly central to business operations, the ability to manage it effectively becomes a critical factor in organizational success.

By following this roadmap, organizations can achieve high-quality data governance and data quality, leading to better decision-making and overall organizational efficiency. This approach will position companies to not only meet current challenges, but also to capitalize on future opportunities, driving sustained growth and success in an ever-evolving digital landscape.

KEY TAKEAWAYS

An anonymous survey was performed to assess the data management maturity levels among our MEMA Aftermarket Suppliers Business Technology Council members (or Mobility Technology Council/Marketing Executives Council/Heavy Duty), and for the BI/Analytics to Drive Better Decision-Making Think Tank, the main takeaways were:

- Integration of data management practices are very fragmented.
- 89% of our network place importance on data management practices.
- 54% of respondents believe their organization's data governance structure is somewhat defined but lacking clear roles.
- 57% of respondents perform ad-hoc quality checks as issues arise.
- 61% of our member organizations have robust security measures with compliance frameworks.
- Integration of data management practices are very fragmented.
- 89% of our network place importance on data management practices.
- 54% of respondents believe their organization's data governance structure is somewhat defined but lacking clear roles.
- 57% of respondents perform ad-hoc quality checks as issues arise.
- 61% of our member organizations have robust security measures with compliance frameworks.
- 82% say their organization's data integration capabilities requires manual processes—lacking system connectivity.
- 90% of organizations utilize current tools and technologies like relational databases, SQL databases, data lakes, data warehouses, visualization tools (ex. Microsoft Power BI, Tableau, Infogram), artificial intelligence including machine learning and generative AI (ex. Microsoft Co-Pilot), and robotic process automation (ex. Power Automate, UI Path, Another Monday, Automation Anywhere, etc.) with back-end platforms like Microsoft, Google, and AWS.
- 78% of organizations are ready to adapt to emerging trends in data management like AI, machine learning, and/or big data analytics.
- The most significant challenge our organization faces is ensuring effective data governance and maintaining high data quality.



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Thank you to all the Business Intelligence/Analytics Think Tank team members for their participation and contributions to this white paper.

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