DAT 515 group discussion

Criteria:

1. Data Governance (DAMA International, 2010, pp.37-38)
   1. Able to protect, manage and leverage the resources
   2. Able to coordinate, lead and represent business data
   3. Able to define and control data for business use
2. Data Quality (DAMA International, 2010, pp.41)
   1. Define data quality requirements and business rules and ensure data are met the quality requirements
   2. Able to lead data clean-up efforts and identify proactive ways to solve root causes of poor data
3. MDM Reference Data Management (DAMA International, 2010, pp.20,171)
   1. Able to define domain values/vocabularies, standardized terms, code values and other unique identifiers and business definitions
   2. Able to share accurate, timely and relevant reference data values to classify and categorize data
   3. Able to plan, implement and control activities to ensure consistency with a golden version of contextual data values.
4. Data Integration (Master Data Management and Data Governance, pp. 367-368)
   1. Ability to support initial batch load and real-time processing of new records
   2. Accuracy and key characteristics of matching algorithms
   3. Flexibility of configuration and customization
   4. Merge and split capabilities
   5. Solution change control
   6. Support for automatic and manual error processing
5. Data warehousing
   1. Able to integrate data from all potential sources into a single golden record
   2. Able to assess, detect, and prevent data security breaches
      1. Encryption, key management, data masking, privileged user access controls, activity monitoring, and auditing
   3. Able to manage complex data structures/transformations and redundant data
   4. Able to be deployed across all relevant platforms and applications
   5. Reporting capabilities in support of operational processing
6. Business intelligence (DAMA International, 2010, pg. 197)
   1. Able to perform query, analysis, and reporting
   2. Able to provide solutions that influence business decisions
   3. Able to ensure quality of data
7. Metadata Management (DAMA International, 2010, pg. 259)
   1. Able to create and maintain business metadata including names, meanings, and business rules
   2. Able to easily integrate metadata
   3. Able to ensure quality and security of metadata
8. Data security (DAMA International, 2010, pg. 151)
   1. Able to execute security policies and procedures
   2. Able to provide authentication, authorization, access, and auditing of data
   3. Able to protect information assets and data
   4. Able to meet the privacy and confidentiality requirements of stakeholders
9. Data modeling and design

The purpose of data model is to facilitate, communication, formalization and scope.

1. Define and Analyze data requirements
2. Design data structures that support these requirements.
3. Accurately express and effectively communicate data requirements and quality solution design.
4. Data storage and operation
   1. Clear Functional requirement such as: Data size and data format., Scale and structure, schema flexibility and data lifecycle.
   2. Non-functional requirements: Performance and scalability, reliability, replication, and limits.
   3. Management and Cost: Managed Service, portability, licensing, and overall cost.
   4. Security: encryption required, auditing, networking requirements.
5. Visualization and analytics
   1. Standardized data structure and elements.
   2. Ability to accommodate growing volumes of data and data sources.
   3. Visual reports should be simple and easy to be interpreted.

Tool Analysis:

Some of the criteria of the *Data Governance*, *Data Quality* and *MDM Reference Data Management* are set and listed in above. The software named *Talend* is suitable to use as a tool for the above areas of enterprise data management.

*Talend* can centralized the data with machine learning-aided tools that is able to assist searching and governing data (Talend, 2021). Therefore, productivity is increased and the time of data processing is reduced (Talend, 2021). Also, *Talend* can regulate data governance capabilities and integrates market data, social media feeds, real time GPS data and web analytics to provide better customer outreach and engagement (Talend, 2021). That met the criteria of *Data Governance* to control, define, coordinate and lead the data from all resources for business use.

*Talend* can help to deliver complete, clean and uncompromised data for enterprise to make decisions and improve data trustworthiness with automatic quality checks (Talend, 2021), which it meets the criteria of *Data Quality* to clean up and define data for the business rules and requirements for decision making.

*Talend* is capable to match enterprises’ policies and then process the data for the best decision making (Talend, 2021). It meets the criteria of MDM Reference Data Management.

Microsoft Data Storage, operations and Data Modeling.

Among an enterprise’s portfolio of solutions must be a tool that handles the complex process of integrating data sources and applications. There are many tools available on the market today that contain this functionality, some industry or product specific and some more universal, such as Informatica’s suite of data integration products. These products include Advanced Data Transformation, B2B Data Exchange, Connectors (PowerExchange), PowerCenter, Enterprise Data Catalog, and Ultra Messaging.

This suite of data integration products is considered a top performer when it comes to the criteria above. Specifically, the product page boasts its ability to support integration in both batch and real time, as well as the ability to easily support new and complex integration patterns. (Informatica, 2021) These abilities make the Informatica suite a reliable option for handling an organization’s entity match, merge, and split capabilities. Additionally, these products are able to integrate any data source whether it is in one or multiple cloud systems or on-premises, which could be an added benefit to Third Star Financial Services, who will be attempting to integrate customer data from a wide variety of sources and storage mechanisms.

When it comes time for Third Star to decide how to include a data integration tool into their portfolio of solutions, Informatica should be the leading candidate. Despite being an advanced and expensive technology, it has proven through customer success stories to transform the value of a business’s data and lead to a worthwhile Return on Investment. The Data Integration products from Informatica that would be especially useful to Third Star in its data management overhaul are Advanced Data Transformation, Informatica Integration Hub, and Ultra Messaging. Together, these products would provide Third Star with the necessary technologies to initially integrate its numerous complex data sources, to support on-going and reliable data integration at the transactional level, and to serve as a communication platform for data movement between distributed applications.

Building out new capabilities to rationalize Third Star Financial data architecture requires selecting the right tools and technology and evaluating products. It is important for this organization to consider the company’s current architecture and technology. Microsoft Offers wide selection of data warehousing options that Third Star Financial will benefit from. In this section I would focus on the criteria’s that Microsoft Azure has to offer and TSF would benefit from having this tool.

The criteria for this tool analyses consist of cost and scaling.  
 Microsoft offers organizations services that include servers, storage, databases, networking, software analytics and intelligence through Microsoft Azure. All of these services are offered with through cloud computing.

Cost Microsoft Azure offers organization a pay as you go pricing model. For an ever-changing environment and the appetite for change that this company has, pay as you go pricing is an excellent choice for this organization. Instead of maintaining CPU’s and storage in a datacenter.

The company can rent what they need when they needed with MS Azure, and the cloud provider will take care of maintaining the underlying infrastructure.  
 Scaling Microsoft offers versatility as it relates to scaling, changing computing capacity can be increased by adding RAM or CPU to virtual machines.

I believe Tableau is the essential data visualization and analysis tool for Third Star Financial. It is a widely used data analysis and visualization tool in the industry and provides the most powerful, secure, and consistent data analysis to help users prepare, analyze, collaborate, and share big data insights. It helps create interactive diagrams and charts in dashboards and worksheets to gain business insights. And all this fact is made possible through gestures as simple as drag and drop. Several Tableau options are available, including a desktop app, servers, hosted online versions, and a free public option that includes hundreds of data import options, from CSV files to Google Ads and analytics data to Salesforce data (Kaur, 2020).

Advantage of using Tableau

Diagram, venn diagram

Description automatically generated

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