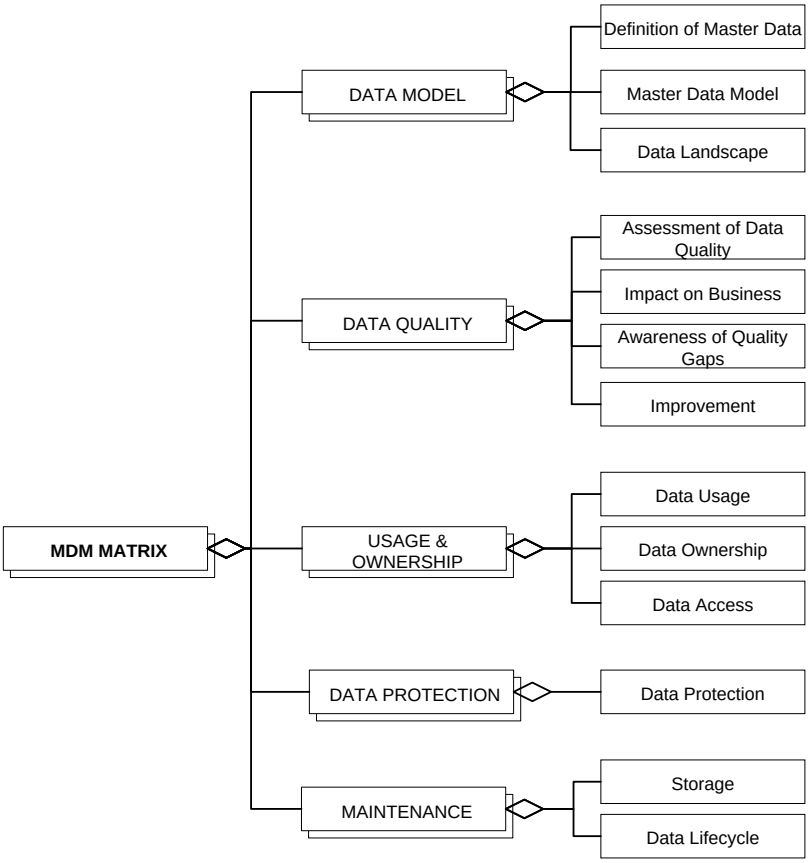
The MD3M Questionnaire:
Assessing Master Data Management Maturity



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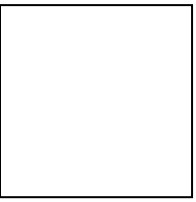

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The MD3M Assessment Questionnaire

With these questions, the influential factors are assessed.

Influential Factors	
Does your company belong to a group and your company needs to interact regularly with other internal members of the group and exchange data?	
Is your company a non-profit organizations, and/or a governmental or military organization?	
Does your company exceed a number of employees of approximately 250?	
Do the employees need to work with many different systems for executing their daily work and have to follow different processes when doing this?	
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This questionnaire contains one question for each capability.

Nr.	Capability	Statement	Answer
Definition of Master Data			
1	A	Is there a basic understanding in your department or in other departments about the definition of Master Data?	
2	B	Have there been discussions between functional units about master data with the target of getting a common understanding?	
3	C	There is a shared definition of some departments in the organization of master data.	
4	D	There is one official definition of Master data in the organization which is communicated to everyone and the employees all know where to find it.	
5	E	There are standard interfaces for exchanging data between companies belonging to the same group	
Master Data Model			
6	A	There are some initial - possibly incomplete and isolated - attempts to get an overview about the master data.	
7	B	Some departments who are highly related to master data can present a master data model of data relevant to their daily work. It covers their daily work but does not regard	

		the other units.	
8	C	There are some models from different departments. There is already some knowledge about master data objects in other business functions and how the data relates.	
9	D	There is an enterprise-wide master data model which was developed from all relevant departments.	
10	E	The master data model is maintained regularly and the responsibilities for the maintenance are clear.	
Data Landscape			
11	A	An overview exists with information on systems that use or access master data	
12	B	The overview is complete.	
13	C	It has been investigated if there are redundancies in the storing and accessing of data.	
14	D	There is an overview of all data sources and systems and their interaction. Redundancies can be mapped to systems and sources.	
15	E	The overview gets maintained on a regular basis and redundancies are resolved if possible. Superfluous systems are substituted.	
Assessment of Data Quality			
16	A	There is a common estimation about the quality of the master data within the organization.	
17	B	The organization has formalized quality criteria that are important and need to be measured.	
18	C	There are quality requirements defined taking into account the requirements of different business units.	
19	D	A quality assessment has taken place in the organization and it is known which quality the data has.	
20	E	There are defined intervals in which quality assessment is conducted and changes in quality are monitored.	
Impact on Business			
21	A	The organization is aware of the reputational impact on the business if data quality is insufficient.	
22	B	The organization is aware of the monetary impact on the business if data quality is insufficient.	
23	C	The organization knows how much money gets lost due to	

		insufficient data quality (e.g. Lost sales opportunities).	
24	D	The organization knows how insufficient data impacts the firm from a non-monetary perspective (e.g. Reputational, customer-retention).	
25	E	The organization can classify the impact of bad master data quality from both monetary and reputational aspects into financial arguments and can state how much money is lost.	
Awareness of Quality Gaps			
26	A	The organization knows about different reasons for quality issues in master data.	
27	B	The organization knows which reasons for bad quality are relevant in the organization	
28	C	The organization can precisely state which reasons for bad quality are involved at which source of data entering.	
29	D	The employees are aware of reasons and sources of poor master data quality and the consequences for the business.	
30	E	The organization can precisely state the weak spots in data setup (e.g. Entering information manually - especially foreign words or numbers - results in spelling mistakes).	
Improvement			
31	A	The organization precisely knows in which areas the data quality is not sufficient according to the defined quality requirements.	
32	B	The organization is aware of the increasing efficiency and effectiveness in daily work if the quality adheres to the requirements. This is relevant for both employees setting up data and those using the data.	
33	C	There is a company-wide benchmarking system in place to measure data quality objectively.	
34	D	Improvement measures are in place to increase data quality.	
35	E	There is a constant loop of monitoring and improving quality to ensure it has the required quality.	
Data Usage			
36	A	The organization knows who is using i.e. has access to what data in the organization.	
37	B	The employees know where to get required data. If is assessed if the employees use the provided data sources.	

38	C	For every source of master data it is communicated to the appropriate users that they have access and that the data contains relevant information.	
39	D	Data repositories get regularly maintained and do not get outdated.	
40	E	The employees are aware of the sources they have access to and are not reluctant to use any of them (e.g. because of ignorance of the usage)	
Data Ownership			
41	A	Data elements have an owner who is either an individual or a department.	
42	B	The data elements are logically owned by related roles/departments. The data owner defines purpose, usage and content.	
43	C	The responsible persons for master data are communicated throughout the organization. The persons have documented responsibilities.	
44	D	Data stewardships are established for data areas.	
45	E	Data stewardship is promoted within the organization and fixed in role descriptions of jobs.	
Data Access			
46	A	There is a protocol to obtain access to data for the employees.	
47	B	Unauthorized personnel are not given access to sensitive data.	
48	C	Every employee is given access to necessary data beforehand. He is automatically equipped with the main sources.	
49	D	The employees have efficient data sources and have access to the data they need and not much more.	
50	E	The employees know their sources and have a good overview about what they can find where.	
Data Security			
51	A	The data is secured against external or default threats with up to date solutions.	
52	B	Data access is only activated on request which was granted by the responsible authority.	
53	C	There are clear rules communicated for granting access for	

		certain roles.	
54	D	Access to data (especially sensitive data) is restricted with passwords that need to be changed regularly and adhere to common standards.	
55	E	There is awareness about data security among the employees, e.g. the employees do not leave their computers unlocked when leaving their desks).	
Storage			
56	A	The data is stored in an efficient way. Loading does not take too long.	
57	B	The data logic is displaying the real world situation.	
58	C	Automated tools regularly check for redundancies and duplicates.	
59	D	The data base logic is regularly compared to the real world situation it is meant to depict.	
60	E	The data is stored with innovative solutions to enable data analysis and forecasting (BI solutions).	
Data Lifecycle			
61	A	Data is considered as an object that is undergoing a lifecycle and changes over time.	
62	B	Data is valued as an organizational asset that brings value to the organization.	
63	C	The data logic is scalable to treat data according to its position in the lifecycle.	
64	D	For every data item, a single source of truth is established.	
65	E	Maintenance labor like entering and updating is automatically logged by the systems.	

The Abbreviations of the MD3M

Table: *Abbreviations Capabilities*

Abbreviation	Focus Area	Capability
DMD-A	Definition of Master Data	A basic understanding of master data exists within some units or within individuals.
DMD-B	Definition of Master Data	First cooperative definitions have been made between single units. Discussions are held about the topic.
DMD-C	Definition of Master Data	The definition bases on more information from different departments and is a cooperative result. Fewer units have their individual understanding, but thriving towards a shared definition.
DMD-D	Definition of Master Data	There is an official definition of master data for the organization with regard to the special circumstances of the organization
DMD-E	Definition of Master Data	There is a company-wide definition of Master data containing which parts of the data belong to master data and why.
MDM-A	Master Data Model	There are initial attempts to design a model. Probably, there are already some models focusing on data for a particular topic.
MDM-B	Master Data Model	The different departments can give an overview about master data and how it is interrelated relevant in their scope. There is no knowledge about the data model for the other departments.
MDM-C	Master Data Model	The different departments can give an overview about master data and how it is interrelated relevant in their scope.
MDM-D	Master Data Model	An enterprise wide master data model was constructed and agreed upon throughout the different units which are concerned

		with master data.
MDM-E	Master Data Model	The enterprise wide master data model is maintained regularly. A clear plan with the intervals and the responsibilities concerning the maintenance exists and is communicated throughout the relevant roles.
DL-A	Data Landscape	There is an overview about systems that use or access master data.
DL-B	Data Landscape	There is a full overview about which systems have reading or writing access to data.
DL-C	Data Landscape	It is pointed out if data is stored and accessed redundantly.
DL-D	Data Landscape	There is a consistent inventory of all data sources and by which systems they are used. Redundancies are pointed out and concepts are developed to resolve them.
DL-E	Data Landscape	There is a consistent inventory of all data sources and by which systems they are used. Redundancies are solved. The data logic is scalable. Superfluous systems are substituted.
ADQ-A	Assessment of Data Quality	There is a feeling about data being of good or bad quality for data items and that good quality data creates added value for the company.
ADQ-B	Assessment of Data Quality	It is clearly stated which aspects are part of data quality and need to be measured in terms of assessing data quality
ADQ-C	Assessment of Data Quality	Data quality is defined regarding the requirements of different stakeholders.
ADQ-D	Assessment of Data Quality	Data quality is measured objectively and for each piece of master data it is known which quality it has
ADQ-E	Assessment of Data Quality	The data quality assessment is conducted regularly for every group of data.
IB-A	Impact on Business	The organization knows that quality issues in certain data will impact the business

		from a reputational point of view.
IB-B	Impact on Business	The organization knows that quality issues in certain data will impact specific parts of the business as direct monetary loss.
IB-C	Impact on Business	The organization knows how bad master data impacts the business from a monetary perspective.
IB-D	Impact on Business	The organization knows how bad master data impacts the business from a non-monetary perspective, i.e. loss in reputation, lacking customer retention etc.
IB-E	Impact on Business	The organization can state how insufficient master data influences the business in monetary and non-monetary terms and can classify this in financial arguments.
AQG-A	Awareness of Quality Gaps	The competence team is aware of the fact that there are different reasons for poor data quality.
AQG-B	Awareness of Quality Gaps	The organization can state which reasons for poor data quality occur in the organization.
AQG-C	Awareness of Quality Gaps	There are patterns investigated about poor data quality.
AQG-D	Awareness of Quality Gaps	The employees are aware of the reasons and sources of bad master data quality in their daily work and the consequences thereof.
AQG-E	Awareness of Quality Gaps	The organization is aware of different reasons for poor data and where they are existent inhouse. The company knows where the weak spots are and what the reason for that weakness is
I-A	Improvement	The organization figures out areas in which the data quality is not sufficient
I-B	Improvement	There is awareness of the importance of high quality data in terms of efficiency and effectiveness.
I-C	Improvement	The organization has a benchmarking system in place to assess whether the data

		quality is sufficient or not.
I-D	Improvement	Improvement measures are installed to improve the data quality.
I-E	Improvement	The organization regularly assesses the data quality along the benchmarking system and ensures that the data quality stays within the defined quality.
DU-A	Data Usage	The organization knows for the area of master data that is using which data.
DU-B	Data Usage	It is known if every employee uses the data he has. The employee knows where to get the needed data.
DU-C	Data Usage	Every source of data that an employee might need it communicated to him and he is given access to.
DU-D	Data Usage	Data repositories are maintained regularly and do not get outdated, ergo unusable.
DU-E	Data Usage	The employees use the possibilities they have and are not reluctant to use certain systems to obtain data from.
DO-A	Data Ownership	Data elements are owned by individuals/departments.
DO-B	Data Ownership	Data elements are owned by logically consistent roles/departments. The owner defines usage, purpose and content of data
DO-C	Data Ownership	Responsible persons for data are openly communicated and known throughout the company. The data owner has defined responsibilities for treatment of the data.
DO-D	Data Ownership	Data stewards are established for chunks of data.
DO-E	Data Ownership	Data stewardship is promoted and fixed in the role description of the job. Data quality standards are defined and adhered to.
DA-A	Data Access	There is a defined process how to get access to data.
DA-B	Data Access	Access to data is denied to unauthorized personnel.
DA-C	Data Access	Every employee has access to the data he

		needs to fulfill his job.
DA-D	Data Access	Every employee has access to the data he needs to fulfill his work and only this data. He does not have access to data that he either does not need or should not be seeing.
DA-E	Data Access	Every employee knows which sources he has access to and what he can find there for his purposes.
DS-A	Data Security	The technical requirements for data security are fulfilled
DS-B	Data Security	Access to data must be activated on request.
DS-C	Data Security	There are rules for which roles data access can be granted.
DS-D	Data Security	Passwords exist for systems with data access which have to adhere to common security standards and have to be changed regularly.
DS-E	Data Security	Awareness for data security must be raised among the employees.
S-A	Storage	The data is stored in a persistent, performant way
S-B	Storage	The data logic is regularly checked for up-to-datedness.
S-C	Storage	Automatic tools regularly check for redundancies and duplicates.
S-D	Storage	The data base logic is regularly checked for persistence, performance and efficiency
S-E	Storage	The data is stored in an innovative way with possibilities of forecasting and analysis
DLC-A	Data Lifecycle	The organization is aware of the fact that data has a lifecycle and that data structure will change over time.
DLC-B	Data Lifecycle	Data is considered as an organizational asset.
DLC-C	Data Lifecycle	Guidelines must be established for treating data over the lifecycle.

DLC-D	Data Lifecycle	For every data item, a single source of truth is established.
DLC-E	Data Lifecycle	The entering, updating and deleting of data is automatically logged by the systems to decrease documentation effort and facilitate auditing.