Framework for Corporate Data Quality Management
Assessing the Organization’s Data Quality Management Capabilities
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Information on EFQM and IWI-HSG

The European Foundation for Quality Management (EFQM®) and the Institute for Information Management of the University of St. Gallen (IWI-HSG) have a strategic alliance to promote Corporate Data Quality Management (CDQM) to European organizations and their partners. As part of this, the Framework for CDQM has been developed jointly by EFQM, IWI-HSG and their respective partners.

EFQM
EFQM is a not for profit membership foundation. For the past twenty years EFQM has shared what works between their member organizations as a way to help them implement their strategies. EFQM brings together organizations striving for sustainable excellence. Through their network of members comprising private and public organizations of every size and sector, many active around the world, EFQM applies its know-how and extracts outstanding approaches by engaging with executives and front-line managers. EFQM is the custodian of the EFQM Excellence Model, a non-prescriptive framework that can be used to gain a holistic view of any organization regardless of size, sector or maturity. Over the past 20 years, the EFQM Excellence Model has been a blueprint for EFQM members and organizations across and beyond Europe to develop a culture of excellence, access good practices, drive innovation and improve their results. Those organizations have become more attentive to the needs of their stakeholders. They have learned how to learn, innovate and improve their overall performance. Their leaders have increased their abilities to take informed decisions and to understand the drivers of their strategy. Many of those organizations have acted as role models for other organizations, winning management practices have been re-used and adapted through EFQM "sharing what works". This has led to a significant reduction of waste, increased economic efficiencies and improved societal relations. EFQM is now actively helping to prepare a new generation of business leaders by offering training and development opportunities built on practice-based learning and exchange between organizations. Exchanges are underpinned by shared tools for assessment, calibrated during two decades of use within companies and as the basis for discerning the EFQM Excellence Award, Europe's most prestigious award for organizations.

IWI-HSG
The Competence Center Corporate Data Quality (CC CDQ) is a collaborative research program comprising renowned enterprises from various industries, plus the Institute for Information Management of the University of St. Gallen (IWI-HSG) as the coordinator and scientific director of the program. By order of the consortium, IWI-HSG develops best practices
and tools in the domain of CDQM. Results are based on scientific state-of-the-art knowledge and are discussed, improved and tested in cooperation with large companies acting on a global level. The core objective and guiding principle of the program is the transfer of theoretical preliminary work and scientific research results into everyday organizational and business practices of enterprises.
1. Purpose of the Document
This document describes the Framework for Corporate Data Quality Management (CDQM). It supports organizations in the assessment and analysis of remedies for missed opportunities and unexploited potentials of CDQM. It is based on the EFQM Excellence Model – which is used by over 30,000 organizations in the world – and gives organizations the opportunity to coordinate CDQM activities by applying an approach of demonstrated value. Furthermore, the Framework can be used in several ways:

- as a tool to benchmark with other organizations,
- as a guide to identify areas for improvement and raise awareness for corporate data quality,
- as a common vocabulary and way of thinking,
- and as a framework around which CDQM capabilities can be developed.

The Framework for CDQM addresses professionals in organization which deal with the management of and those individuals benefiting from good corporate data quality.
2. The Business Perspective on Corporate Data Quality
Organizations need to respond to a number of business drivers for which high-quality corporate data are a critical prerequisite.

Risk management and compliance
Many industries have been increasingly affected by legal regulation. This development is very likely to become stronger, as companies need to meet more and more legal and regulatory provisions.

For example, REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) is a provision by the European Union that regulates registration of chemicals and specifies the data requirements (e.g. information on chemicals’ production process and safe handling) needed to do so (‘No data, no market!’). Companies have to take into account these requirements in the master data sets for their materials, and they have to store and update these data for reporting purposes in a consistent, complete and appropriate way.

Another example is Solvency II, by which the European Commission aims at standardizing regulatory requirements for insurance companies particularly with regard to solvency capital. Elements of this guideline are specific provisions regarding risk management and reporting directives for insurance companies. All these provisions result in demands for companywide, standardized management of market, core business and financial data.

Integrated customer management
Organizations whose value-added structure is characterized by a high proportion of services and short product life cycles need to be able to have all information about their customers available by the push of a button (e.g. contracts, pricing conditions, service inquiries, product information). Usually this sets of information need to be taken from various business units, divisions, departments, branches, and information systems of the organization, making it difficult to get a consistent picture of a specific customer.

For example, a telecommunications provider that uses various channels to sell its products and services (such as the Internet, partnerships with resellers, and own shops) needs to make sure that all information about contracts, invoices, and service orders are available in a consistent manner and up to date every time a call center agent talks to a customer.
Business process integration, automation and standardization

Business process standardization and automation allows organizations to benefit from economies of scale and at the same time reduce complexity of their business processes. To be able to do so, there has to be a common understanding of company business entities used in all business areas, since business process standardization cannot be achieved if, for example, corporate data about suppliers and materials are defined, produced and used in different ways.

Example: A chemical company plans to harmonize its business processes on a global level. It wants to replace its three different process templates (one for North and South America, one for Europe, and one for Asia) by one single template. A core element of the project’s blueprint phase will be the definition and specification of master data.

Another example is from the utilities industry. Communication and coordination between the business partners of the utility market is carried out by exchanging huge amounts of data. Automation of the internal and external data exchange processes is required to handle the data masses. Data quality is a crucial prerequisite for the performance of the data exchange processes.

Reporting

When corporate data need to be brought together from different business units, divisions, departments, or branches of a company, they must be used consistently and up to date. As corporate data are used in all company areas, these requirements must be met everywhere corporate-wide reporting takes place (e.g. in procurement, sales and distribution, or financial accounting and controlling).

For example, an automotive supplier wants to conduct a global spend analysis across all company areas in order to find out about the purchase volumes with certain suppliers. To be able to do so there has to be consistency of key fields in the supplier master data as well as transparency about hierarchical relationships in the supplier structure.

For example, the procurement department needs to know that Supplier A is a subsidiary of Supplier B in order to be able to capture the full purchase volume with Supplier B.
Regarding their IT departments, many companies try to live up to the maxim *Do more with less*. They want IT expenses to sink, either in absolute figures or in relation to turnover. The biggest cost drivers are operating costs, which is why companies tend to consolidate application and infrastructure systems. However, due to application system landscapes having grown over several decades, many companies do not know which systems are responsible for which master data, and they do not know about the flow of master data between the systems. So without sufficient transparency about the master data architecture, companies cannot make any sound and reasonable decision as to which systems accommodating master data can be eliminated or consolidated. Especially data migration is often underestimated in projects and not adequately considered which leads to increased costs and scheduling delay.

Figure 1 summarizes the importance of CDQM for multi-divisional organizations.
3. Basic Concepts

3.1 Corporate Data Quality Management

3.1.1 Corporate Data and Master Data

Unlike transactional data (e.g. invoices, purchase orders, delivery notes) and inventory data (e.g. stock information, account balances), master data are attributes oriented. Typical master data is referring to customers, suppliers, products and materials, employees and assets. Master data describes the elementary attributes of objects from the real world, and therefore they are not substantially altered very often. So, for example, while over time various information can be added (e.g. dimensions, weights, replenishment times etc.), the elementary attributes of a certain material usually cannot be manipulated, leaving the basic data as they are. Also, instances of a master data class (i.e. individual sets of customer data) are relatively constant in terms of volume, compared to transaction data. And finally, master data constitute a reference for transaction and inventory data. For example, a purchase order does not exist without material master data and supplier master data (the latter, however, do exist without transaction data).

### Table 1 – Types of Data

<table>
<thead>
<tr>
<th></th>
<th>Time Reference</th>
<th>Modification Frequency</th>
<th>Volume Stability</th>
<th>Existential Independence</th>
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<tbody>
<tr>
<td>Master Data</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
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<tr>
<td>Transaction Data</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Inventory Data</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Low</td>
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</table>

Corporate data are master data of company-wide relevance. They must be defined and used unambiguously throughout the entire organization, i.e. across all units, divisions, departments, branches, and business processes. Apart from that, there are reference data (i.e. externally predefined master data the company has to work with, such as country codes, currency codes, measurement units).

3.1.2 Quality aspects of Corporate Data

Basically, data have a good quality if they serve a certain purpose defined by the user in a certain context (fitness for use). More concretely, data quality is determined by a number of data quality dimensions. Among the most important ones are (derived from The DAMA Dictionary of Data Management, see 6.3.2):

- Accuracy describes the degree to which a data attribute value closely and correctly describes its business entity instance as of a point in time,
- Completeness measures to what degree data have been captured,
- Consistency is a measure of the degree to which data values are equivalent over redundant data sources,
• Timeliness is the degree to which available data meets the current requirements of information consumers (for example, to enable leaders to make effective and timely decisions)

3.1.3 Management of Corporate Data Quality

CDQM is to the whole set of activities intended to improve corporate data quality (both reactive and preventive). Main premise of CDQM is the business relevance of high-quality corporate data. CDQM comprises with following activity areas:

• **Strategy for Corporate Data Quality**: As CDQM is affected by various business drivers and requires involvement of multiple divisions in an organization; it must be considered a company-wide endeavor.

• **Corporate Data Quality Controlling**: Effective CDQM requires compliance with standards, policies, and procedures. Compliance is monitored according to previously defined metrics and performance indicators and reported to stakeholders.

• **Corporate Data Quality Organization**: CDQM requires clear roles and responsibilities for the use of corporate data. The CDQM organization defines tasks and privileges for decision making for CDQM.

• **Corporate Data Quality Processes & Methods**: In order to handle corporate data properly and in a standardized way across the entire organization and to ensure corporate data quality, standard procedures and guidelines must be embedded in company’s daily processes.

• **Data Architecture for Corporate Data Quality**: The data architecture consists of the data object model - which comprises the unambiguous definition and the conceptual model of corporate data - and the data storage and distribution architecture.

• **Applications for Corporate Data Quality**: Software applications support the activities of Corporate Data Quality Management. Their use must be planned, monitored, managed and continuously improved.

3.2 EFQM Excellence Model 2010

The EFQM Excellence Model represented in Figure 2 is a non-prescriptive framework based on nine criteria. Five of these are 'Enablers and four are Results. The Enabler criteria cover what an organization does. The Results criteria cover what an organization achieves and how it does it. 'Results' are caused by Enablers and Enablers are improved using feedback from 'Results'. The arrows emphasize the dynamic nature of the Model, showing innovation and learning helping to improve the Enablers that in turn lead to improved Results. Each of the nine criteria has a definition, which explains the high level meaning of that criterion. To develop the high level meaning further each criterion is supported by a number of criterion parts. Criterion parts are statements that describe in further detail what, typically, can be seen in excellent organizations and should be considered in the course of a Self-Assessment. Finally, below each criterion part are guidance points. Use of these guidance
Basic Concepts

points is not mandatory nor is the list exhaustive but are intended to further exemplify the meaning of the criterion part.

Figure 2 – The EFQM Excellence Model

3.3 RADAR
The RADAR logic is a dynamic assessment framework and powerful management tool that provides a structured approach to questioning the performance of an organization. RADAR logic is a well-established framework in the area of quality management. At the highest level Radar logic states that an organization needs to:

- Determine the Results it is aiming to achieve as part of its strategy.
- Plan and develop an integrated set of sound Approaches to deliver the required results both now and in the future.
- Deploy the approaches in a systematic way to ensure implementation.
- Assess and Refine the deployed approaches based on monitoring and analysis of the results achieved and ongoing learning activities.
Following techniques, amongst others, are used to implement the RADAR logic:

- **Questionnaire**: The Questionnaire is a set of questions based on the criteria of the EFQM Excellence Model to quickly identify areas for improvement. It requires minimal knowledge, or training in, the EFQM Excellence Model. A Questionnaire tailored to the domain of CDQM is provided in Appendix B.

- **The RADAR Assessment Management Tool**: This is the evaluation method used to score applications for the European Excellence Award (EEA) and most national quality awards in Europe. When an organization uses the tool to score, weights are given to the criteria and areas to address, as well as to the different attributes of RADAR. The Tool is not provided in this publication but it can be found in the publications Assessing for Excellence and The EFQM Excellence Model (see [http://www.efqm.org](http://www.efqm.org)).

Both techniques can be used by organizations carrying out a Self-Assessment and wishing to use a score for benchmarking or other purposes.

The Framework for Corporate Data Quality Management (CDQM) applies the EFQM Excellence Model to the CDQM domain. The Framework as presented in the next section consists of ten criteria, of which six are Enablers and four are Results. Enablers define goals to be achieved, as well as activities and guidelines how to achieve these goals. Results describe what the organization wants to achieve with regard to CDQM by providing a catalog of relevant metrics.

Basically, the Framework for CDQM leverages the structure of the EFQM Excellence Model and the assessment approach of the RADAR logic, with the generic contents being substituted by CDQM related contents. These CDQM related contents were jointly developed and compiled with consortial partners of the Competence Center Corporate Data Quality (CC CDQ) of the IWI-HSG over a period of more than five years. As a result, the Framework combines the best of two worlds: contents compiled by CDQM experts (domain reference model) and the model structure and assessment approach of the EFQM (assessment model).

**Figure 4 – Domain reference and Assessment model**

The RADAR logic as an assessment model is adopted without any changes to ensure existent EFQM tools and methodologies are still applicable to the Framework. Furthermore, the aforementioned adaptations are in accordance with the basic principles of the EFQM Excellence Model (see Appendix C) to ensure consistency with the generic model.
5. The Framework for Corporate Data Quality Management

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<th>Strategy</th>
<th>Enablers</th>
<th>Results</th>
<th>Key Results</th>
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<td>sa.</td>
<td>Strategy for CDQM is developed, reviewed and updated based on the organization’s business strategy.</td>
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<td>sb.</td>
<td>Leaders are personally involved in ensuring that a CDQM system is developed, shared, implemented, continuously improved, and integrated with the overall organizational management system.</td>
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<th>Controlling</th>
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<td>2a.</td>
<td>Business impact of data quality is identified and related data quality measures are defined and managed</td>
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<td>2b.</td>
<td>Quality of data is permanently monitored and acted upon</td>
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<th>Organization &amp; People</th>
<th>Processes &amp; Methods</th>
<th>Customer Results</th>
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<td>3a.</td>
<td>CDQM processes are systematically designed, managed, and improved</td>
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<td>3b.</td>
<td>People's awareness for CDQM is established and maintained</td>
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<tr>
<td>3c.</td>
<td>People are empowered to assume CDQM responsibilities</td>
<td></td>
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<tr>
<td>4a.</td>
<td>Corporate data use and maintenance in core business processes systematically identified, improved and actively managed</td>
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<th>Data Architecture</th>
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<tr>
<td>5a.</td>
<td>Common understanding of business entities is developed, permanently assessed, and made available to people</td>
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<td>5b.</td>
<td>Data storage, distribution, and use is systematically designed, implemented and managed</td>
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<th>Applications</th>
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<td>6a.</td>
<td>Application landscape is planned, managed, and improved to support CDQM activities</td>
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<tr>
<td>6b.</td>
<td>Rollout plan is managed and improved to support CDQM activities</td>
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<tr>
<td>6c.</td>
<td>Roadmap for closing the gap between as-is and to-be application landscape is planned, managed and continuously monitored and improved</td>
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<th>People Results</th>
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<td>8a.</td>
<td>Perception Measures</td>
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<td>8b.</td>
<td>Performance Indicators</td>
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<th>Society Results</th>
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<tbody>
<tr>
<td>9a.</td>
<td>Perception Measures</td>
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<td>9b.</td>
<td>Performance Indicators</td>
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Innovation and Learning
5.1 Enablers

5.1.1 Strategy

CRITERION 1

Strategy

Excellent leaders develop and facilitate the achievement of the organization’s mission and vision. They recognize the importance of high-quality corporate data as a prerequisite to be able to respond to business drivers, like compliance with regulatory and legal directives, integrated customer management, strategic reporting, and business process integration and standardization. They encourage a culture of preventive CDQM.

1a. Strategy for CDQM is developed, reviewed and updated based on the organization’s business strategy

This may include:

- Determining, analyzing, documenting and communicating the impact of corporate data quality on business objectives and operational excellence
- Formalizing, reviewing and updating strategy, objectives and processes for CDQM which meet stakeholders’ need and expectations and which are aligned with the business strategy
- Ensuring CDQM strategy to prevent non-coordinated initiatives
- Defining the organizational range and functional scope (i.e. corporate data classes) of the CDQM effort

1b. Leaders are personally involved in ensuring that a CDQM system is developed, shared, implemented, continuously improved, and integrated with the overall organizational management system

This may include:

- Aligning the organization’s structure to support the development, ownership and delivery of a CDQM system
- Ensuring the development, alignment and implementation of a process for measurement, review and improvement of the organization’s CDQM process
- Identifying and ensuring clear ownership of the CDQM system
- Defining and updating priorities for CDQM projects or activities that are aligned with the business strategy and cost-benefit analyses (costs of data defects and benefits of CDQM projects or activities)
5.1.2 Controlling

CRITERION 2 Controlling

Corporate data quality controlling is about the quantitative assessment of the quality of corporate data. Moreover, the interrelations between corporate data quality and business process performance are identified and monitored.

2a. Business impact of data quality is identified and related corporate data quality measures are defined and managed

This may include:
- Identifying and defining corporate data quality dimensions for corporate data classes according to business needs and priorities
- Specifying corporate data quality metrics (e.g. scales, points of measurement, methods of measurement) based on cause-and-effect relationships between corporate data defects and business performance indicators
- Identifying thresholds and targets for corporate data quality

2b. Quality of data is permanently monitored and acted upon

This may include:
- Developing, implementing and improving methods of measurement for corporate data quality metrics
- Defining maintenance processes and responsibilities for corporate data quality measures
- Monitoring threshold values and initiating improvement projects or activities
5.1.3 Organization & People

CRITERION 3
Organization & People
Excellent organizations manage, develop and release the full potential of their people at an individual, team, and organizational level. They ensure that clearly defined roles, which are specified by clearly defined tasks and decision-making rights, are assigned to competent people. Appropriate assignment of CDQM responsibilities allows for efficient and effective performance of related projects and activities.

3a. People resources for managing and supporting CDQM are defined, managed, and improved
This may include:
- Identifying and continuously updating roles and responsibilities required for CDQM
- Identifying and continuously updating decisions and activities for excellent CDQM
- Defining and establishing reporting lines and managerial authority in order to coordinate different roles (i.e. Corporate Data Steward, Corporate Data Quality Committee, etc.)
- Defining and implementing mediation strategies to resolve operational conflicts (i.e. varying opinions of data definitions) between different stakeholders
- Managing recruitment, career development and succession planning for people working in the management of corporate data quality

3b. People's awareness for CDQM is established and maintained
This may include:
- Communicating to people the CDQM strategy and objectives to anchor them in the organizational culture, leverage active participation of stakeholders and eliminate resistance to needed changes (i.e. road shows, success stories, newsletter, etc.)
- Ensuring that people have the necessary knowledge, skills and information to establish, operate and monitor CDQM

3c. People are empowered to assume CDQM responsibilities
This may include:
- Encouraging and supporting individual and team participation in improvement activities in order to reach excellence in CDQM
- Running an adequate CDQM training program to develop people’s knowledge and competencies regarding their current and future needs to manage corporate data
- Identifying and ensuring opportunities to share current issues, problems, experiences and best practices within the organization regarding CDQM (for example, internal workshops)

5.1.4 Processes & Methods

CRITERION 4
Processes & Methods
Excellent organizations ensure through the use of CDQM related processes and services to fully satisfy

4a. CDQM processes are systematically designed, managed, and improved
This may include processes for:
- Identifying, making available, and optimizing needed resources like financial means, people and technology
expectations and generate increasing value for customers and other stakeholders. Furthermore, the use and maintenance of corporate data in core business processes is actively managed to ensure high corporate data quality throughout the whole corporate data lifecycle (from creation to disposal).

- Defining and offering trainings to internal customers (for example, business units) to deepen the knowledge in maintaining corporate data and conducting the processes according to the guidelines
- Designing, improving and offering corporate data products (for example, customer master data, supplier hierarchy data) and services (for example, data integration service, data support service)
- Configuring the service level agreement, pricing the solution (data products and or services) and closing the deal
- Effectively promoting and communicating existing corporate data products and services to the data consumers
- Developing and maintaining rules, structures and standards for handling corporate data (for example, governance and data structures, data models, data migration guidelines)
- Developing and maintaining the technical infrastructure to ensure the optimal support for the processes portfolio from a technical perspective

4b. Corporate data use and maintenance in core business processes is systematically identified, improved and actively managed

This may include processes for:
- Identifying corporate data consumer and other stakeholders who deal with corporate data and managing them to meet their needs and expectations
- Modeling and documenting the life cycle of corporate data (as-is and to-be) for a better understanding of the corporate data use within the organization – knowledge that is needed for bundling appropriate corporate data products and services to be offered to the internal customers (for example, business units)
- Designing, implementing, monitoring and improving data creation, use and maintenance processes – ensures regulatory and business rules compliance of end-to-end business processes (also known as operational excellence)
5.1.5 Data Architecture

CRITERION 5
Data Architecture

Excellent organizations plan and manage the corporate data architecture in order to ensure corporate data quality with regard to corporate data storage and distribution.

5.a Common understanding of a data model for the business entities is developed, permanently assessed, and made available to people

This may include:

- Identifying core business objects that are used company-wide and lie within the scope of the CDQM strategy
- Developing mutual agreement on unambiguous definitions of business objects and their needed respective metadata (for example, attribute definition, synonyms, homonyms, data standards, data quality rules, business rules, scope, maintenance guidelines, regulatory requirements, value lists, allowed values, format, etc.)
- Developing, maintaining and publishing a business data model to establish a common understanding of core business entities

5.b Data storage, distribution, and use is systematically designed, implemented and managed

This may include:

- Formalizing the business object model and their respective metadata using common standards (for example, SBVR for business rules modeling) and communicating it to the organization in order to plan and develop company-wide, consistent data models
- Developing principles and guidelines for operations on data in order to model, assess and monitor data flows between systems and applications (distinguishing between mandatory and optional principles and guidelines)
- Documenting and continuously understanding the gap between as-is and to-be (storage and distribution) architecture for each corporate data class (for example, customer, vendor, etc.)
5.1.6 Applications

CRITERION 6
Applications

Applications for corporate data quality are supposed to provide functionality that supports data quality management tasks. Furthermore, requirements for operational systems and applications have to be derived from defined standards, data quality measures, business rules, data quality rules etc. and finally implemented.

6a. Application landscape is planned, managed, and improved to support CDQM activities

This may include:
- Identifying activities that need to be supported by CDQM (for example, data cleansing, data creation, data profiling, change request tracking, data quality dashboard, etc.)
- Classifying, evaluating and selecting software applications from the vendor base

6b. Rollout plan is managed and improved to support CDQM activities

This may include:
- Documenting and continuously understanding the gap between as-is and to-be application landscape to support CDQM activities
- Documenting and continuously maintaining a mapping between data quality tools and software (both available and evaluated) and identified activities

6c. Roadmap for closing the gap between as-is and to-be application landscape is planned, managed and continuously monitored and improved

This may include:
- Documenting and continuously maintaining time and milestone plan
- Preparing, implementing and continuously monitoring the deployment of the application landscape
5.2 Results

5.2.1 Customer Results

**CRITERION 7**

**Customer results**

Organizations which are excellent in managing their corporate data quality comprehensively measure and achieve outstanding results with respect to their internal customers (for example, business units, and project teams) and external customers (final customers of the core business). In this context, customers are corporate data consumers.

7a. Perceptions measures – measures of customers’ (internal or external) perceptions of CDQM

Depending on the purpose and nature of CDQM, measures to be taken may include those listed below (obtained, for example, from surveys, focus groups, compliments and complaints).

- Easy access to corporate data quality information and material (provided by CDQM)
- Internal customer satisfaction regarding the services of CDQM
- Internal customer recommendation
- Complaint handling
- Demand of support in projects related to CDQM
- Acceptance and use of provided corporate data quality related standards and procedures by the internal customers
- Completeness and accuracy of information about products and services ordered from the organization (for example, contracts, pricing conditions, service inquiries, product information)
- External customer satisfaction regarding corporate data quality

7b. Performance Indicators – internal measures for CDQM, to monitor, understand, predict and improve services to internal or external customers in order to achieve its planned performance

Depending on the purpose and nature of corporate data quality management, measures to be taken may include those listed below.

- Adhered service levels in service level agreements
- Number of internal customers (for example, business units) already addressed
- Number of change requests to business object model in a certain period of time (quality of description)
- Number of reported incidents (related to corporate data quality)
- Number of objects documented in a business object model with regard to a reference list
- Number of information systems conforming to internal or external corporate data quality standards (for example, conformance to business object model)
- Number of projects related to CDQM using standard methodology
- Degree of business participation in CDQM activities
- Number of external customer complaints caused by, for example, wrong address entries
- Number of external customer complaints caused by, for example, defective data exchange
5.2.2 People Results

CRITERION 8
People results
Organizations which are excellent in managing corporate data quality comprehensively measure and achieve outstanding results with respect to their people working in the management of corporate data quality.

8a. Perceptions measures – measures of what CDQM staff's perceptions are of the organization
Depending on the purpose and nature of CDQM, measures to be taken may include those listed below (obtained, for example, from surveys, focus groups, compliments and complaints).
- Confidence in decisions gained through appropriate empowerment
- Access to career development opportunities
- Recognition for achievement in the CDQM domain
- Satisfaction with the workplace/environment/conditions
- Overall job satisfaction, pay and benefits in CDQM
- Degree to which people are proud of their work and convinced of its importance
- Commitment to information and knowledge sharing (for example, participation in the creation of guideline etc. documents)

8b. Performance Indicators – internal measures to the organization, to monitor, understand, predict and improve the performance of CDQM staff, predict their perception and revise any services accordingly
Depending on the purpose and nature of CDQM, measures to be taken may include those listed below.
- Success rate of corporate data quality related training and development of individuals
- Work life balance
- Recruitment rates
- Staff turnover rates
- Number of organizational units, CDQM staff involved in CDQM activities
- Involvement and take up of training and development opportunities
- Number of roles in CDQM assigned to its staff
- Number of corporate data classes assigned to a corporate data owner
- Number of ideas for improvement
- Management commitment to CDQM activities (for example, materialized in regular participation in workshops)

5.2.3 Society Results

CRITERION 9
Society results
Organizations which are excellent in managing corporate data quality com-

9a. Perceptions measures – measures of what the community's perception are of the organization in terms of corporate data quality issues
Depending on the purpose and nature of the organization, measures
to be taken may include those listed below (obtained, for example, from surveys, focus groups, compliments and complaints).
- Fulfillment of regulatory compliance
- Reliability regarding responsible handling of corporate data
- Responsiveness to the community regarding corporate data quality issues
- Reduction of compliance risk (for example, along the value chain)
- Relationships with relevant authorities, groups and networks
- Involvement in the exchange with others (for example, conferences or workshops)

9b. Performance Indicators — internal measures to the organization, to monitor and understand predict and improve the performance of the organization, predict the perceptions of the community, and revise any services accordingly

Depending on the purpose and nature of the organization, measures to be taken may include those listed below.
- Number of complaints related to corporate data quality (e.g. privacy and security issues) received by the community
- Number of corporate data quality related violations during an audit (for example, ISO 9001:2008)
5.2.4 Key Results

CRITERION 10

Key results

Organizations which are excellent in managing corporate data quality comprehensively measure and achieve outstanding results with respect to the organization’s business performance.

10a. CDQM Strategic Outcomes – these measures are key results planned by the organization

Results measured shall be somehow consequences of the way the organization manage their corporate data quality. Depending on the purpose and nature of CDQM, measures to be taken may include those listed below.

- Profitable growth
- Sustainable business innovation
- Compliance to legislation and regulatory requirements
- Innovation
- Shareholder value

10b. CDQM Performance Indicators – operational measures used to monitor, understand, predict and improve likely CDQM Strategic Outcomes

These measures are the operational ones used in order to monitor and understand the process and predict and improve the organizations’ likely key performance outcomes. Depending on the purpose and nature of corporate data quality, measures to be taken may include those listed below.

- Reduced business process cycle time
- Increased process and product quality
- Reduced direct and indirect costs

This measures may materialized in:

- Reduced costs for detection of poor corporate data quality cases
- Reduced costs for the improvement of poor corporate data quality (e.g. cleansing)
- Reduced costs caused by poor corporate data quality
- Reduced cycle time and costs for activities within the corporate data lifecycle
- Improved quality of corporate data lifecycle activities.
6. Implementing the Framework for Corporate Data Quality Management

6.1 The Self-Assessment process

The process flow diagram in Figure 5 shows the steps involved in establishing and undertaking Self-Assessments. A Self-Assessment can be initiated across the whole organization or in one organizational unit and that it is not meant to be a one-off activity.

![Figure 5 – The Self-Assessment (SA) process](image)

Rather it should be repeated periodically, typically annually, as it provides a powerful method for assessing progress and highlighting next improvement opportunities.

**Step 1 - Develop & retain management commitment**

Undertaking any business excellence activity represents an intervention into the daily life of the organization and Self-Assessment is no different. It initiates change and not everyone is necessarily comfortable with the idea of change. For a leader, successful communication, particularly when under pressure, is a combination of two things: behavior and technique. Behavior is by far the more important.

**Step 2 - Develop & deploy the communication strategy**

As with any other change initiative, it is important that a communications strategy is developed at the planning stage. Consider what information needs to be shared and why and also think about who needs to have the information and when they need to have it by. Taking this structured approach at the outset helps to identify potential gaps and synergies and minimize the cost of failure due to poor communications later in the life of the project.

**Step 3 - Plan for Self-Assessment**

There are two key questions requiring an answer at this step in the process. What are the benefits we are looking to get out of the exercise, and, particularly first time round, where to start?

Self-Assessment does not necessarily have to be carried out at the level of the whole organization. Indeed, in the early days of Self-Assessment it may be more appropriate to perform the activity at the level of a business unit, factory, division or directorate. Equally, in some
organizations, where the management structure encourages independence of planning and action on the part of the unit managers, a meaningful assessment at the level of the whole organization may be difficult. A good start is to initially focus on dedicated data classes only (like customer, supplier or product data) and select all departments involved in consuming and maintaining those corporate data for a Self-Assessment.

**Step 4 - Select & train people directly involved in the process**
Dependent upon the Self-Assessment technique chosen, the people involved in the activity will require a level of training ranging from simple awareness sessions through to very rigorous training courses. Training courses covering the relevant areas are available from the EFQM and many of its national partners and licensed trainers.

**Step 5 - Conduct Self-Assessment**
The EFQM Excellence Model provides the criteria against which Self-Assessment is performed and at the heart of the Model lays the logic known as RADAR. When using the Model within an organization the Approach, Deployment, Assessment and Review elements of the RADAR logic should be addressed for each Enabler criterion part and the Results element should be addressed for each Results criterion. An organization that is not experienced with the EFQM model, tools, and techniques may choose the Questionnaire technique instead of the comprehensive, complex RADAR Management Matrix technique (see 3.3). A Questionnaire tailored to the domain of CDQM is provided in Appendix B.

**Step 6 - Consider Outcomes & Prioritize**
Once the actual assessment has been completed you will be left with a list of strengths and areas for improvement, and perhaps a score. No organization has a unlimited resource of people and money and so it is impossible, and inappropriate, to try to address every single issue. It is necessary to prioritize the list and identify those vital few actions that will have the most benefit for the organization and its stakeholders. Each organization is unique, there are no ready-made solutions or lists of actions to be taken.

**Step 7 - Establish & Implement Action Plans**
Having prioritized on the vital few issues that need to be addressed if the organization is to become more effective, the next step is to convert these aspirations into an action plan that, once established, is then implemented. When you move into the action planning stages either teams or individuals need to be tasked with the responsibility for undertaking these improvement actions. The tools mentioned in this section allow for dialogue and interaction to make sure actions and deliverables are understood by all.

**Step 8 - Monitor Action Plan Progress & Review the Self-Assessment Process**
Once the action plans have been established, and implementation is under way, the organization needs a process for monitoring that plans are retaining their momentum, are on
Implementing the Framework for Corporate Data Quality Management

schedule and on track to deliver the desired benefits. Finally, the Self-Assessment process itself needs to be reviewed for effectiveness and the identified learning points fed into the cycle for the subsequent Self-Assessment.

6.2 Choosing the right Self-Assessment technique

There are a number of Self-Assessment techniques in use today (for example, Questionnaire, Scoring Matrix) and there is no single right way to perform it. Choice of a Self-Assessment technique to be adopted at any given moment in time should take into account the specific characteristics of the organization, as well as the benefits desired, for instance:

- Which Self-Assessment technique has the greatest chance of acceptance the first time you undertake the process?
- Is the desired outcome from the Self-Assessment an accurate score that can be used to compare the organization against the best in Europe?

However, regardless of which technique is used, there are three distinct phases to pass through. Phase 1 requires consensus on desired outcomes and clarity on how data and evidence is going to be gathered, assessed and presented. Phase 2 is performing the actual assessment, typically using one or more of the generically known techniques, and Phase 3 is the management team coming together to decide on what to do with the outcomes.
6.3 Further Help
There exist a number of publications, tools and techniques that could be used for effectively supporting the implementation of the Framework for CDQM, thus helping to ensure a value add outcome from the overall Self-Assessment challenge.

6.3.1 EFQM resources
EFQM works in partnership with many national organizations in Europe and licenses a number of organizations to deliver training courses related to the EFQM Excellence Model. A number of events are also organized throughout Europe related to the EFQM Excellence Model. Further information on these organizations and events as well as further material is available via the website http://www.efqm.org.
Implementing the Framework for Corporate Data Quality Management

6.3.2 CDQM resources

The domain of CDQM has been addressed by both researchers and practitioners for many years. Following publications represent a good starting point for the exploration of the state of the art (the list is not intended to be exhaustive).

<table>
<thead>
<tr>
<th>Publication</th>
<th>Purpose</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wang, R. Y., Strong, D. M., Beyond Accuracy: What Data Quality Means to Data Consumers, in: Journal of Management Information Systems, 12, 1996, No. 4, pp. 5-34</td>
<td>To provide an overview of the aspects of data quality that is important to data consumers</td>
<td>Those with an interest in understanding the multi-facets of data quality</td>
</tr>
<tr>
<td>DAMA, The DAMA Dictionary of Data Management, Technics Publications LLC., New</td>
<td>To provide a glossary of terms for the corporate data quality management domain</td>
<td>Anyone wanting a deeper understanding of data quality management and its concepts and terms</td>
</tr>
<tr>
<td>English, L. P., Improving Data Warehouse and Business Information Quality, 1, John Wiley &amp; Sons, New York 1999</td>
<td>To provide a summary what data quality management is, the value of it, activities, roles and approaches</td>
<td>Anyone wanting a deeper understanding of data quality management</td>
</tr>
<tr>
<td>Lee, Y. W., Pipino, L L., Funk, J., Wang, R. Y., Journey to Data Quality, MiT</td>
<td>To provide a summary what data quality management is, the value of it, activities, roles and approaches</td>
<td>Anyone wanting a deeper understanding of data quality management</td>
</tr>
</tbody>
</table>

6.3.3 Consortium CC CDQ

The Competence Center Corporate Data Quality (CC CDQ) is a consortium research program comprising enterprises from various industries, plus the Institute for Information Management of the University of St. Gallen (IWI-HSG) as the coordinator and scientific director of the program. Based on latest research findings the CC CDQ is developing strategies, concepts and solutions supporting the establishment of CDQM in organizations.

More information about the CC CDQ and how to participate in the community is available via [http://cdq.iwi.unisg.ch](http://cdq.iwi.unisg.ch). To get a first impression of how the Framework can be applied, please visit the benchmarking database via [http://benchmarking.cdqm.org](http://benchmarking.cdqm.org). An online questionnaire is provided that allows you to quickly self-assess the current state regarding CDQM in your organization. If you want to you can compare the result for your organization with other results in the benchmarking database (e.g. best in class, industry average etc.).
6.3.4 Tools
This section outlines tools that have been developed in particular for the Framework to either support the implementation or assist in the Self-Assessment process. More information and material about these tools are available via the website http://www.cdqm.org.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Purpose</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Method for Establishing Transparency on Information Objects</td>
<td>To provide methodological guidance how to increase the lack of transparency with regard to an organizations’ fundamental business objects</td>
<td>People involved in establishing data quality management strategies in their organization</td>
</tr>
<tr>
<td>Functional reference architecture for corporate data quality management</td>
<td>To describe and categorize functions deemed necessary for doing corporate data quality management and use this function catalog to compare state-of-the-art software solutions by different vendors</td>
<td>People who need orientation when dealing with corporate data quality management solutions, products and tools offered by a wide range of software vendors</td>
</tr>
<tr>
<td>Method to identify and specify business-oriented corporate data quality metrics</td>
<td>To provide methodological guidance to identify the interrelations between corporate data quality and business process performance</td>
<td>People either charged with, or involved in, developing Self-Assessment strategies in their organization</td>
</tr>
<tr>
<td>Method to adapt and implement the Framework for CDQM</td>
<td>To provide methodological guidance to tailor the Framework to organization specific requirements</td>
<td>People either charged with, or involved in, developing Self-Assessment strategies in their organization</td>
</tr>
<tr>
<td>Reference model for corporate data governance</td>
<td>To provide guidance and best practices regarding the organizational design of corporate data quality management</td>
<td>People involved in establishing a corporate data quality management organization</td>
</tr>
<tr>
<td>Benchmarking Database (<a href="http://benchmark.cdqm.org">http://benchmark.cdqm.org</a>)</td>
<td>To provide a platform for internet-based Self-Assessments and a forum to share CDQM best-practices</td>
<td>People either charged with, or involved in, conducting a Self-Assessment in their organization and are willing to share their best practices and benchmark with others</td>
</tr>
</tbody>
</table>
## Appendix A  Assignment of Result Types to Enabler Criteria

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Criteria</th>
<th>Result Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
<td>1a</td>
<td>Strategy Document</td>
</tr>
<tr>
<td></td>
<td>1b</td>
<td>Mandate, Action plan</td>
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<tr>
<td></td>
<td></td>
<td>Cost/benefit analysis</td>
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<tr>
<td><strong>Controlling</strong></td>
<td>2a</td>
<td>Performance Measurement System</td>
</tr>
<tr>
<td></td>
<td>2b</td>
<td>Incentive System</td>
</tr>
<tr>
<td><strong>Organization &amp; People</strong></td>
<td>3a</td>
<td>Roles, tasks and responsibilities</td>
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<tr>
<td></td>
<td></td>
<td>Role descriptions</td>
</tr>
<tr>
<td></td>
<td>3b</td>
<td>Communication Concept</td>
</tr>
<tr>
<td></td>
<td>3c</td>
<td>Training program</td>
</tr>
<tr>
<td><strong>Processes &amp; Methods</strong></td>
<td>4a</td>
<td>Process Map</td>
</tr>
<tr>
<td></td>
<td>4b</td>
<td>Service and Product Portfolio</td>
</tr>
<tr>
<td><strong>Data Architecture</strong></td>
<td>5a</td>
<td>Corporate Data Dictionary</td>
</tr>
<tr>
<td></td>
<td>5b</td>
<td>Business Object Model</td>
</tr>
<tr>
<td></td>
<td>5c</td>
<td>Data Storage and Distribution Architecture</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>6a</td>
<td>Application Landscape</td>
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<tr>
<td></td>
<td>6b</td>
<td>Rollout Plan</td>
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<td></td>
<td>6c</td>
<td>Roadmap</td>
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</tbody>
</table>
Appendix B  Self-Assessment Tool

<table>
<thead>
<tr>
<th>Enablers</th>
<th>Criteria</th>
<th>Enablers</th>
<th>Criteria</th>
<th>Enablers</th>
<th>Criteria</th>
<th>Evidence to support marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy</td>
<td>1a. Strategy for CDQM is developed, reviewed and updated based on the organization’s business strategy</td>
<td>1- Same approach has been implemented; outcome is still uncertain; deployment is embryonic</td>
<td>2 - Relevant and tested approach have been implemented; systematic deployment has started but not reached all targeted activities</td>
<td>3 - Approach aligned with the strategic needs have been implemented; deployment is well advanced in relevant areas, systematic measurement and review has started</td>
<td>4 - Approach recognized a good practice outside of the organization; full deployment in relevant areas achieved; measurements and review is well structured and regularly practiced</td>
<td>5 - Proven world class approach aligned with the strategy; full deployment; systematic measurement and review</td>
</tr>
<tr>
<td>1b. Leaders are personally involved in ensuring that a CDQM system is developed, shared, implemented, continuously improved, and integrated with the overall organizational management system</td>
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<tr>
<td>Controlling</td>
<td>2a. Business impact of data quality is identified and related data quality measures are defined and managed</td>
<td>0 - Results are not measured</td>
<td>1 – Some measurements have been implemented; objectives can remain unclear</td>
<td>2 – Relevant and tested measurements have been implemented; clear objectives have been established; some positive trends can be seen</td>
<td>3 – Measurements and objectives are aligned with the strategic needs; positive trends are recorded; link with enablers is sometimes unclear</td>
<td>4 – All trends are positive; link with enablers is well understood and some results are the industry standard</td>
</tr>
<tr>
<td>2b. Quality of data is permanently monitored and acted upon</td>
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<tr>
<td>Organisation &amp; People</td>
<td>3a. People resources for managing and supporting CDQM are defined, managed, and improved</td>
<td>0 – Nothing has been done</td>
<td>1 - Same approach has been implemented; outcome is still uncertain; deployment is embryonic</td>
<td>2 – Relevant and tested approach have been implemented; systematic deployment has started but not reached all targeted activities</td>
<td>3 - Approach aligned with the strategic needs have been implemented; deployment is well advanced in relevant areas, systematic measurement and review has started</td>
<td>4 - Approach recognized a good practice outside of the organization; full deployment in relevant areas achieved; measurements and review is well structured and regularly practiced</td>
</tr>
<tr>
<td>3b. People’s awareness for CDQM is established and maintained</td>
<td>5 - Proven world class approach aligned with the strategy; full deployment; systematic measurement and review</td>
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<tr>
<td>3c. People are empowered to assume CDQM responsibilities</td>
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<tr>
<td>Processes &amp; Methods</td>
<td>4a. CDQM processes are systematically designed, managed, and improved</td>
<td>0 – Nothing has been done</td>
<td>1 - Same approach has been implemented; outcome is still uncertain; deployment is embryonic</td>
<td>2 – Relevant and tested approach have been implemented; systematic deployment has started but not reached all targeted activities</td>
<td>3 - Approach aligned with the strategic needs have been implemented; deployment is well advanced in relevant areas, systematic measurement and review has started</td>
<td>4 - Approach recognized a good practice outside of the organization; full deployment in relevant areas achieved; measurements and review is well structured and regularly practiced</td>
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<tr>
<td>4b. Corporate data use and maintenance in core business processes is systematically identified, improved and activity managed</td>
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<tr>
<td>Data Architecture</td>
<td>5a. Common understanding of business entities is developed, permanently assessed, and made available to people</td>
<td>0 – Nothing has been done</td>
<td>1 - Same approach has been implemented; outcome is still uncertain; deployment is embryonic</td>
<td>2 – Relevant and tested approach have been implemented; systematic deployment has started but not reached all targeted activities</td>
<td>3 - Approach aligned with the strategic needs have been implemented; deployment is well advanced in relevant areas, systematic measurement and review has started</td>
<td>4 - Approach recognized a good practice outside of the organization; full deployment in relevant areas achieved; measurements and review is well structured and regularly practiced</td>
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<tr>
<td>5b. Data storage, distribution, and use is systematically designed, implemented and managed</td>
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<tr>
<td>Applications</td>
<td>6a. Application landscape is planned, managed, and improved to support CDQM activities</td>
<td>0 – Nothing has been done</td>
<td>1 - Same approach has been implemented; outcome is still uncertain; deployment is embryonic</td>
<td>2 – Relevant and tested approach have been implemented; systematic deployment has started but not reached all targeted activities</td>
<td>3 - Approach aligned with the strategic needs have been implemented; deployment is well advanced in relevant areas, systematic measurement and review has started</td>
<td>4 - Approach recognized a good practice outside of the organization; full deployment in relevant areas achieved; measurements and review is well structured and regularly practiced</td>
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<tr>
<td>6b. Rollout plan is managed, and improved to support CDQM activities</td>
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<td>6c. Roadmap for closing the gap between as-is and to-be application landscape is planned, managed and continuously monitored and improved</td>
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Results

7. Excellence in CDQM impact on customer results
8. Excellence CDQM impact on people results
9. Excellence in CDQM impact on society results
10. Excellence in CDQM impact on key performance results
## Appendix C  Linking of EFQM Fundamental Concepts to the Framework for Corporate Data Quality Management

<table>
<thead>
<tr>
<th>Fundamental Concepts</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td></td>
<td>1a</td>
<td>1b</td>
<td>2a</td>
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<td>3a</td>
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<td>3c</td>
<td>4a</td>
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<td>5a</td>
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<tr>
<td>Results Orientation</td>
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<td>Customer Focus</td>
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<td>Leadership and Constancy of Purpose</td>
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<td>Management by Processes and Facts</td>
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<td>People Development and Involvement</td>
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<tr>
<td>Continuous Learning, Innovation and Improvement</td>
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<td>Partnership Development</td>
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<td>Corporate Social Responsibility</td>
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</tbody>
</table>
## Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action Plan</strong></td>
<td>An »Action Plan is a possible »Result Type of activities described in the criteria »Strategy. Based on the objectives defined in the »Strategic Document concrete CDQM projects can be derived. An »Action Plan defines CDQM related measures and a timetable for their implementation. The »Action Plan needs to take into account other projects and initiatives in the company, such as ERP projects or process harmonization efforts.</td>
</tr>
<tr>
<td><strong>Application Landscape</strong></td>
<td>An »Application Landscape is a possible »Result Type of activities described in the criteria »Applications. Besides specific methods and techniques, CDQM also may take advantage of a number of software tools, e.g. to increase efficiency in the process of assessing, measuring or improving data quality (provided the requirements such tools must meet from a business, organizational, process-related and architectural perspective are known in advance).</td>
</tr>
<tr>
<td><strong>Business Object Model</strong></td>
<td>A »Business Object Model is a possible »Result Type of activities described in the criteria »Applications. It is a formalized version of the core data objects defined and described in the »Corporate Data Dictionary. It formalizes parts of verbally defined (technical) metadata for each data object in a conceptual data model, with a clear focus on the graphical representation of core data objects and the relationships between them as seen from a business perspective.</td>
</tr>
<tr>
<td><strong>Communication Concept</strong></td>
<td>A »Communication Concept is a possible »Result Type of activities described in the criteria »Organization. Communicating CDQM throughout the entire company is critical for any CDQM project to be successful. The aim of any Communication Concept must be to establish CDQM as a vital part of a company's culture, to motivate all stakeholders to participate actively in CDQM, and to reduce reluctance and skepticism resulting from the need to break new ground in corporate data management.</td>
</tr>
<tr>
<td><strong>Controlling</strong></td>
<td>»Controlling is one of the six enabler criteria of the Framework for Corporate Data Quality Management.</td>
</tr>
<tr>
<td><strong>Corporate Data</strong></td>
<td>»Corporate Data are »Master Data of company-wide relevance.</td>
</tr>
<tr>
<td><strong>Corporate Data Dictionary</strong></td>
<td>A »Corporate Data Dictionary is a possible »Result Type of activities described in the criteria »Data Architecture. The functional units etc. within a company often have different understandings of identical terms. In order to be able to use and treat core data objects the same way across different units, divisions, departments, branches, and information systems, however, there has to be a clear, unambiguous definition of such data objects throughout the entire company.</td>
</tr>
<tr>
<td><strong>Data Architecture</strong></td>
<td>»Data Architecture is one of the six enabler criteria of the Framework for Corporate Data Quality Management.</td>
</tr>
<tr>
<td><strong>Data Storage and Distribution Architecture</strong></td>
<td>A »Data Storage and Distribution Architecture is a possible »Result Type of activities described in the criteria »Data Architecture. It describes how and in which application systems and databases data objects are to be stored, processed, edited and used. It defines guidelines for data operations, specifying how data flows between systems can be modeled, assessed and monitored</td>
</tr>
<tr>
<td><strong>Economic Feasibility Study</strong></td>
<td>An »Economic Feasibility Study is a possible »Result Type of activities described in the criteria »Strategy. Economic Feasibility refers both to establishing CDQM as an overall concept and to conceiving, financing, and prioritizing concrete CDQM measures. An »Economic Feasibility Study should outline how good data quality can help solve business problems and achieve company objectives.</td>
</tr>
</tbody>
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## Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Excellence</strong></td>
<td>Outstanding practice in managing the organization and achieving results based on a set of Fundamental Concepts which will include: results orientation, customer focus, leadership and constancy of purpose, management by process and facts, people development and involvement, continuous learning, innovation and improvement, partnership development, corporate social responsibility.</td>
</tr>
<tr>
<td><strong>Incentive System</strong></td>
<td>An »Incentive System is a possible »Result Type of activities described in the criteria »Strategy. CDQM related incentives are supposed to motivate employees and executives to act in compliance with the principles defined by the CDQM strategy and help accomplish CDQM objectives.</td>
</tr>
<tr>
<td><strong>Leaders</strong></td>
<td>The people who coordinate and balance the interests of all who have a stake in the organization, including; the executive team, all other managers and those in team leadership positions or with a subject leadership role.</td>
</tr>
<tr>
<td><strong>Mandate</strong></td>
<td>A »Mandate is a possible »Result Type of activities described in the criteria »Strategy. As CDQM affects a company as a whole (i.e. all of a company's units, divisions, departments, and branches), support from the company management top level ('buy-in') is critical for CDQM in order to ensure alignment of the CDQM strategy with the overall company strategy and to maintain a sustained interest in CDQM.</td>
</tr>
<tr>
<td><strong>Master Data</strong></td>
<td>»Master Data are attributes oriented and describe the elementary attributes of objects from the real world, and therefore they are not substantially altered very often.</td>
</tr>
<tr>
<td><strong>Metric System</strong></td>
<td>A »Metric System is a possible »Result Type of activities described in the criteria »Controlling. The system leading in CDQM assesses data quality and data quality measures by means of metrics. Generally speaking, metrics provide consolidated information on complicated phenomena from the real world on the basis of quantitative measuring. Metric systems are supposed to increase the meaningfulness of individual metrics by structuring them and defining relationships between them.</td>
</tr>
<tr>
<td><strong>Mission</strong></td>
<td>A statement that describes the purpose or <em>raison d’etre</em> of an organization. It describes why the organization or function exists.</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>»Organization is one of the six enabler criteria of the Framework for Corporate Data Quality Management.</td>
</tr>
<tr>
<td><strong>Organizational Structure</strong></td>
<td>An »Organizational Structure is a possible »Result Type of activities described in the criteria »Organization. It defines which company units, divisions, departments, or branches are responsible for which CDQM related tasks. It also specifies the roles involved in CDQM.</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td>A major of attainment achieved by an individual, team, organization or process.</td>
</tr>
<tr>
<td><strong>Process Map</strong></td>
<td>A »Process Map is a possible »Result Type of activities described in the criteria »Processes &amp; Methods. The Process Map offers a means to visualize the core tasks (or macro processes) of CDQM, referring both to CDQM in a narrow sense (i.e. institutionalization of processes, methods and techniques for identifying and solving data quality problems) and to companywide coordination of the activities of all employees dealing with CDQM in one way or the other.</td>
</tr>
<tr>
<td><strong>Service and Product Portfolio</strong></td>
<td>A »Service and Product Portfolio is a possible »Result Type of activities described in the criteria »Processes &amp; Methods. It is the collection of products and services related to data quality offered to internal or external customers of the organization.</td>
</tr>
<tr>
<td><strong>Result Type</strong></td>
<td>All kinds of artefacts produced by data quality related activities.</td>
</tr>
<tr>
<td><strong>Society</strong></td>
<td>All those who are, or believe they are, affected by the organization, other than its people, customers and partners.</td>
</tr>
<tr>
<td><strong>Stakeholders</strong></td>
<td>Those groups who affect or are affected by the organization and its activities. This may include, but are not limited to: owners, trustees, employees/workers, associations, trade unions, customers, members, partners, suppliers, competitors, government, regulators, the electorate, non-governmental organizations (NGOs)/not for profit organizations, pressure groups and influencers, and communities.</td>
</tr>
<tr>
<td><strong>Strategy Document</strong></td>
<td>A »Strategy Document« is a possible »Result Type« of activities described in the criteria »Strategy«. It defines the scope of CDQM to be applied in a company as well as related activities and projects to be put up. By means of an explicit CDQM strategy a company is able to align CDQM efforts with its overall company strategy.</td>
</tr>
<tr>
<td><strong>Support Organization</strong></td>
<td>A »Support Organization« is a possible »Result Type« of activities described in the criteria »Organization«. Another aspect of CDQM organization refers to the creation and provision of sources of information offering quick support for all CDQM stakeholders, i.e. particularly for Data Stewards or other persons maintaining data or simply entering data into information systems.</td>
</tr>
<tr>
<td><strong>Training program</strong></td>
<td>A »Training program« is a possible »Result Type« of activities described in the criteria »Organization«. No training or insufficient training of people responsible for CDQM often is one reason for poor quality of corporate data. A Training Program for CDQM, however, should encompass all people in a company creating, editing, or using data.</td>
</tr>
<tr>
<td><strong>Vision</strong></td>
<td>A statement that describes how the organization wishes to be in the future.</td>
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</tbody>
</table>
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