

# Master Data Management for Data Driven CSPs

(Communication Service Providers)

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WHITEPAPER

## Executive Summary

Master Data Management (MDM), when implemented, creates golden records, mitigates data quality errors and hence, saves OPEX. MDM is one of the most sought-after business transformation which global customers across industry verticals are aspiring for, and market for MDM software is booming up.

All industry verticals specially Telecom, Retail and Banking are faced with unprecedented structural metamorphous driven by nontraditional competitors, a disillusioned customer base with high expectations, and a regulatory environment that mandates massive compliance efforts. In addition to this challenge, a gigantic increase in the volume of business data that needs to be processed, becomes a herculean task. To manage these challenges, industry verticals are progressing towards simple truth - timely access to accurate data that is essential to the business, which means 'Master Data' is the key.

The industry must ensure that they implement effective strategy to deal with its most treasured asset – **Data**.

A data management strategy is the need for business-driven Communication Service Provider (CSP) that can provide timely and high-quality information. Creating single version of truth and 360-degree view of a customer, product or supplier, will enable CSP to optimize their costs, while enhancing customer satisfaction.

## CSP Business Challenges

Communication industry forms the core for any business vertical, and hence, CSPs are always at the front line to manage industry challenges.

The fundamental business objectives for the CSPs revolve around the following key aspects:

- Customer acquisition
- Customer satisfaction and retention
- Network excellence
- Faster technology adoption
- Effective marketing and selling
- Reduction in OPEX
- Optimization of assets and inventory

In such a fast paced and rapidly changing environment, CSPs face an ocean of challenges. It becomes inevitable to have a process and system in place, that can control and monitor data, store in usable format for business and present in actionable format without compromising trust and integrity.

Following are the typical challenges, that drive the industry towards Master Data Management initiatives:

### Volume of Data

Data is an asset but can also be the most notorious liability. The major challenge today's telecom providers face is, the consistent flow of data and lack of proper methods/systems to employ it. The data, although huge and machine created mostly, cannot be trusted due to its nature of generation and multiple points of entry. Consistent and trusted master data is required, or the processes will break down leading to chaos.

### Customer and Supplier Satisfaction

As customer churn is one of the biggest concerns for CSPs, retention mechanisms are important. Customers have ample options available in market for their service needs. It is always a top priority of the Telco to be on toes to keep up with the competition and control customer churn. Quick TAT for complaints is also a major factor for customer experience enhancement. Same is true with suppliers, vendors and partners.

## Competitive Disadvantage

Telcos record event driven data, for example CDR, SDRs and XDRs. There can be millions of changes to a simple customer record in a day. All of them are treated as events. Unless data is digitally managed in a single repository and is of desired quality, it is challenging to keep up with these changes. Data assets directly impact the customer service. Unless CSP has a centralized view on the serviceability options, quality of service can be a big gap. Product lifecycle management as per customer demand and well-organized Product information system are also key aspects for staying ahead on the competition.

## Customer Centricity and Risk management

CSP are customer and customer experience driven organizations. They now face the strongest competition from within their own different lines of business e.g., data, OTT, Traditional services (fixed line, broadband and TV services). Customer experience and satisfaction has been the top priority ever in the ages. Without a consolidated and centralized approach to customer (e.g., hyper personalization of services), CSP runs the risk of losing to competition.

## Resource Optimization

There can be millions of transactions or events associated with a customer or product based on the range of services. CDR (Customer Data Records) can grow from 0 to petabytes in a matter of hours. It is vital to keep track and have a 360 view of all transactions with a single point of reference and an omni channel view of data.

Without a proper and structured system to control, CSP may end up investing huge amounts to manage the data and would risk legal, customer churn and other problems.

Master Data Management (MDM) is a discipline of defining policies, protocols and procedures to enable best form of data around business-critical entities. A set of technology supported systems collectively enable Master Data Management. Once properly designed and implemented, Master Data Management systems unlocks data potential to fullest. A CSP spends millions on key systems like CRM, ERP, Data Warehouses, Data Lakes and Network Management Systems (NMS). It makes perfect sense to invest in an MDM platform to elevate the overall data management environment. It can be a customer 360 platform or a multidomain MDM with robust reference data management and enterprise wide data governance platform, based on how the growth strategy is planned.

MDM implementation and governance – are the two sides of a coin when it comes to effective Master Data Management.

## Digital Solution for Data Driven CSP

CSP experience high customer churn and are constantly faced with legal scrutiny and the need to comply with data retention and privacy regulations. This puts tremendous pressure on their bottom line and hampers their ability to focus on growing their business. The data, which otherwise is treated as an Asset, unless properly organized and employed for use, becomes a Liability. To avoid this, companies need a modern data management platform helping meet compliance objectives.

Telecom CEOs digital technologies are creating value for their companies when it comes to data analysis and operational efficiency.

CSP are relying on Mergers, Acquisitions and splits for business growth and sustainability. Companies are diversifying their own lines of businesses into distinct entities for focused strategy. Sometimes, they become their own competitors, when it comes to customer cross-sell and up-sell specifically.

Telcos business mantra today revolves around a three-tier strategy:

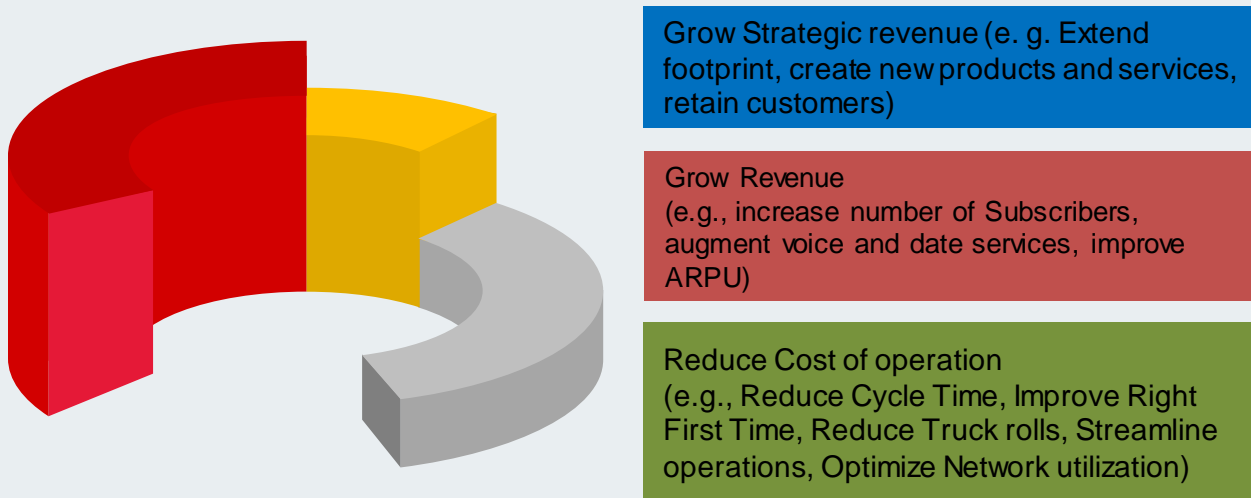


Figure 1: 3-Tiered strategy of CSPs for growth and profitability

In such a context, applying MDM to a CSP environment is like taking a basic product and tuning it to perfection. CSPs need solutions that enable:

- A flexible multidomain platform that permits easier management of different entities under one solution
- Create a single, cross-enterprise instance of a business data
- Capture and master the relationships between critical data entities like Customer – Product – Services etc.

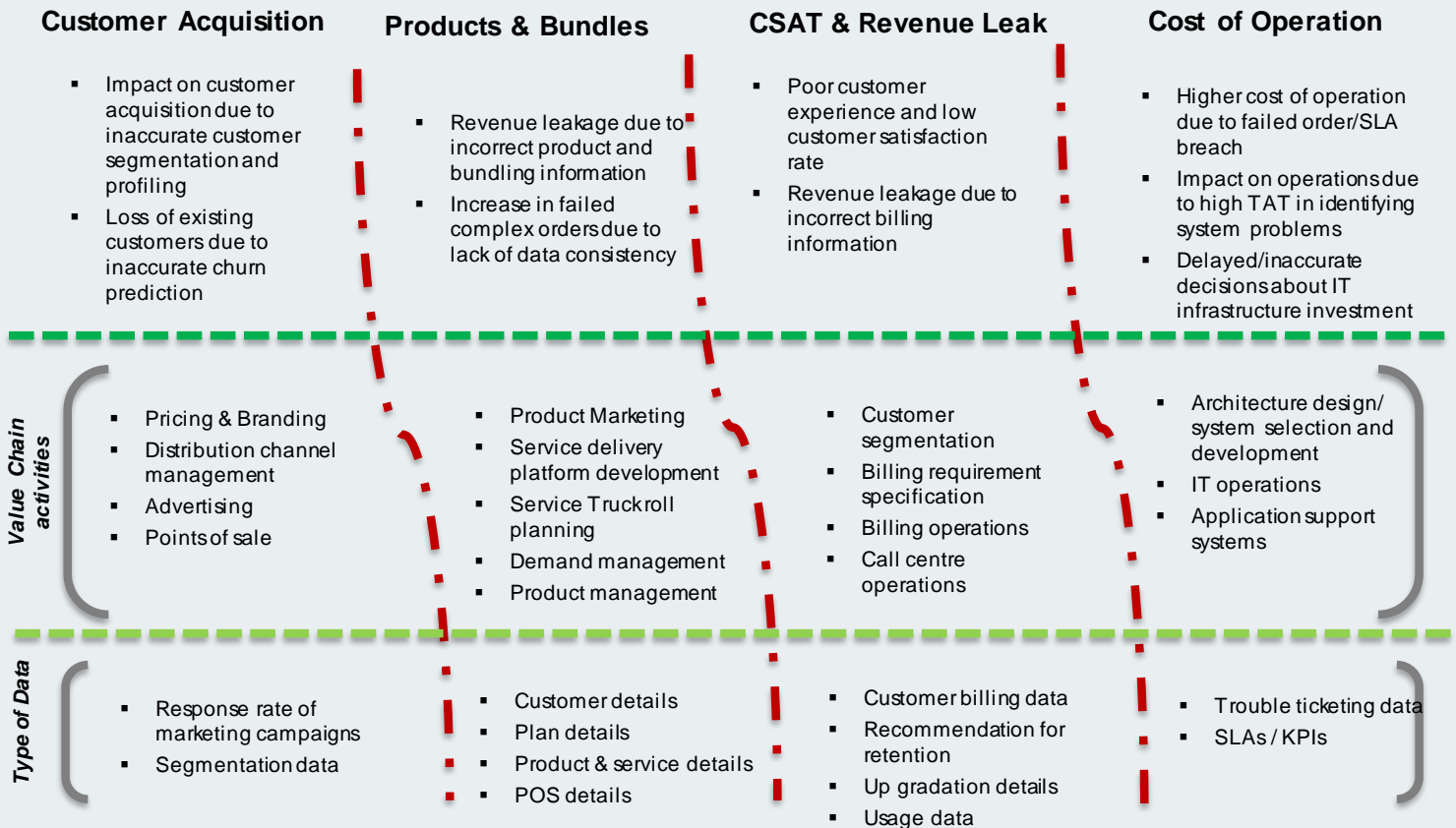


Figure 2: Data Applicability across Telco Value Chain

## Customer 360 MDM Solution

A CSP's major focus point revolves around customer, customer care, cross-sell and up-sell and churn control. A Customer 360 solution or a customer data platform as some call it, addresses this requirement. A robust Customer 360 platform provides reliable and consistent data platform across enterprise. Basic components include:

- Central customer platform with Master Data
- Strong peripheral Reference Data Systems
- A cohesive Data Governance Layer

## MDM Strategy

CSPs have realized the need for a true 360 view pretty early in the industry. Organization readiness and data readiness are two crucial points to start with.

A Master Data Management program should be more driven by people than management. It's a vision that may start with organization's future plans, however, it should be adapted and executed at each level to the optimum. Most of the MDM programs fail due to lack of adaption and usage. People tend to stick to the erstwhile comfortable traditional methods of mastering the data and hence, the entire plan of a common data platform fails. Here comes the other side of the coin, data governance - the art of taking people along with technical implementation.

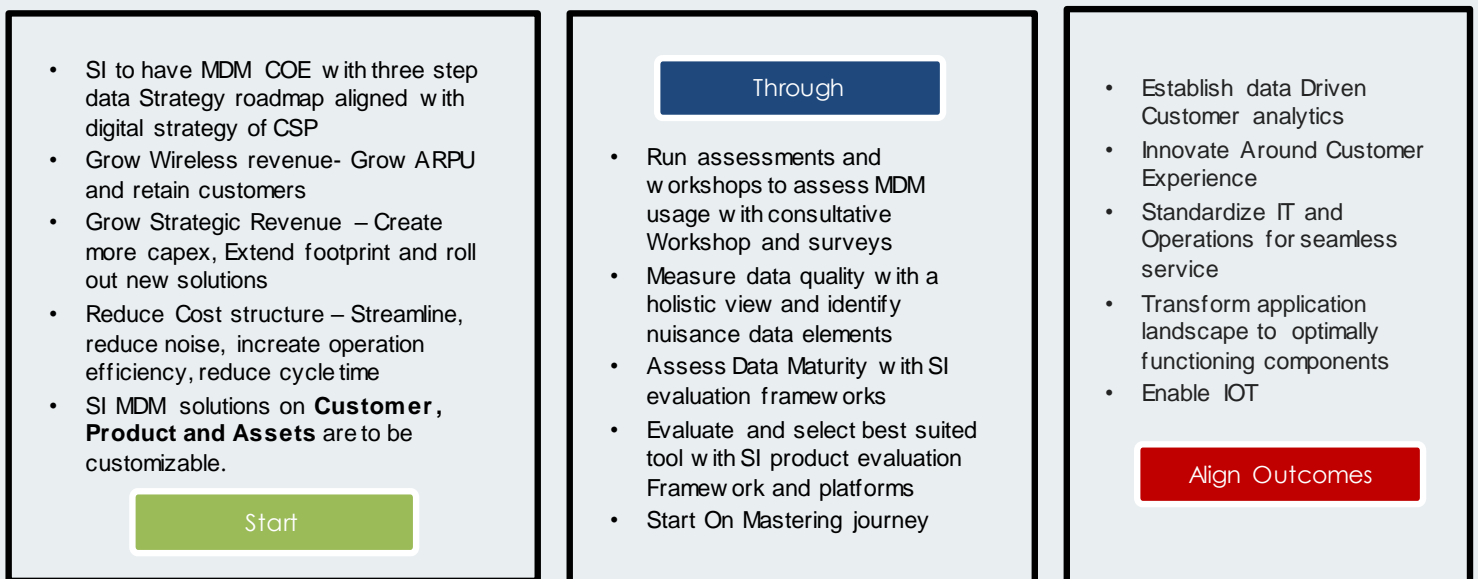


Figure 3: MDM Strategy and Roadmap

## Exhaustive Partner Selection Framework

As much as it is important to put the right strategies in place, it is important to choose the right MDM product and the right implementation partner to make ensure a successful home run. One of the critical steps to put effort on is to identify the partner who can provide end-to-end of MDM services starting from business readiness assessment to product evaluation to implementation to support. Some of the facets to watch out for, are captured in the below depiction

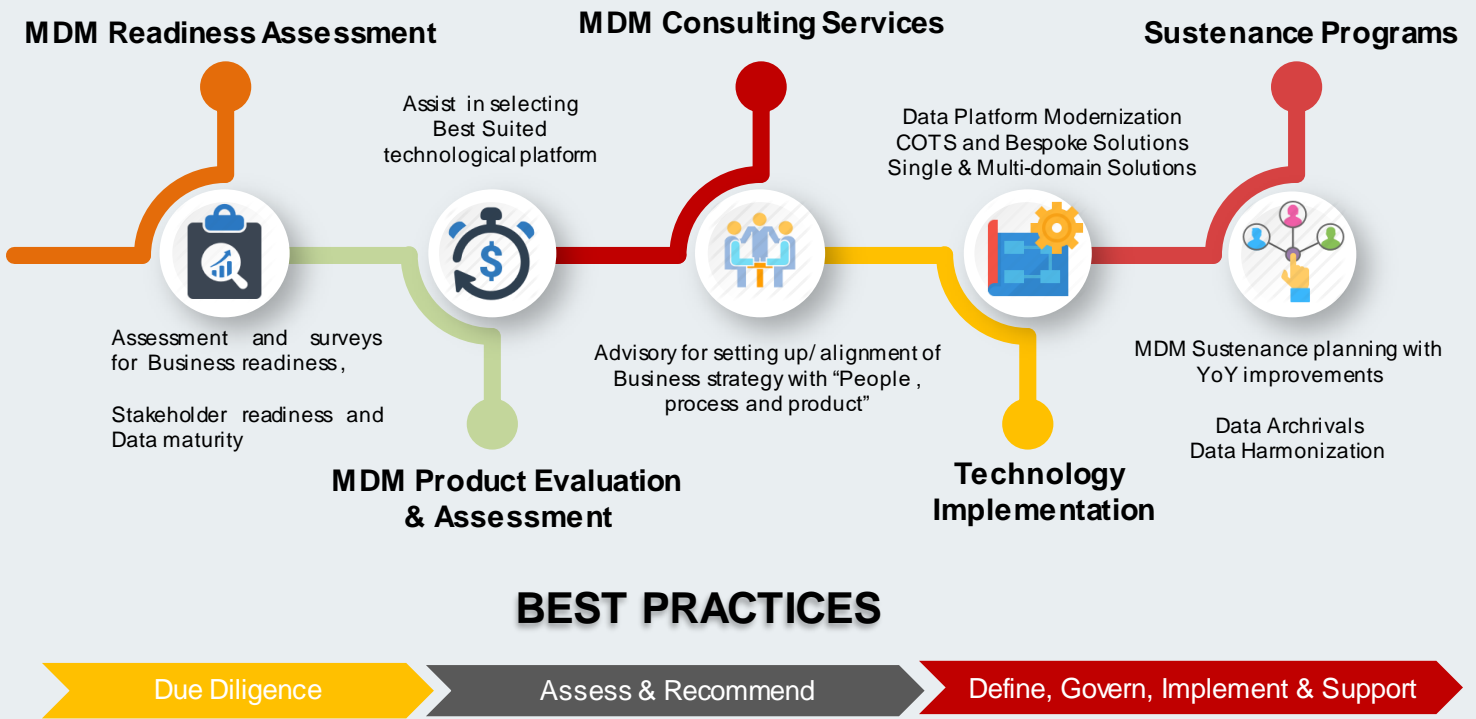


Figure 4: MDM Framework

The selection process should take accountability for current state as well as future road map. CSP need to be very careful with this investment. A structured approach should be applied to product selection process to make sure no stone is left unturned.

## Best Practices

Master Data Management should be driven by data and its users. It is vital to create an architecture aligned to addressing most frequent data issues rather than only the critical ones. Once user and usage driven approach is followed, everything lines up quickly. Data culture change and adaption to new way of using data are two of most critical aspects that needs to be addressed even before the technical implementation starts. The suggestive best practices are:

- Start with a hypothesis, collect data, generate a model and use it to explain the data across Assets – customer – Products and Services  
Evaluate the credibility of the model based on how well it explains the data observed so far and how well it explains new data that future
- Measure, Communicate and Incentivize – For adaption of Data Governance and MDM  
Define the need – redefine the business processes  
Engage right stakeholders  
get executive buy-in  
Socialize the concept
- Choose and Prioritize  
Business value-based criteria to identify assets for Master Data Management  
Prioritize business goals  
Establish role: Place right people in charge of data  
Review: Data strategy frequently

- Data Quality & Integrity – Clear measures and rules to assess data quality of critical assets  
Make it iterative: Make data quality a way of working, a BAU affair.
- Clear R&R for Data Stewards, Business Data Stewards, Champions, Owners, LoB Owner, Council  
Collaboration: Create MDM committee  
Assign responsibly: Make stewards responsible for maintaining clean metadata
- Synergize business and IT  
Business users when involved during MDM implementation, brings better adaptation  
No Single catalog fits all: Customize visualizations  
Join the dots: Connect business terms with technical terms
- Maintain clear Measures & Metrics & KPIs to keep executive sponsors engaged  
Risk prevention: Frequent vulnerability assessment  
Manage data access: Right data access for right people with right role
- Connect silos of Information

## Conclusion

As ever-increasing customer, product and network data volumes pour through the organizational networks worldwide, a coherent, collaborative enterprise-wide data strategy is the key to business transformation. MDM provides a platform to design a persistent data strategy to ensure that the consistency, accuracy, stewardship and accountability of data is kept intact across the organization.

Master data along with reference data management system and strong information governance is the key to business excellence and staying one step ahead of the rest.

A possible game changer MDM solution for CSP could be as below:

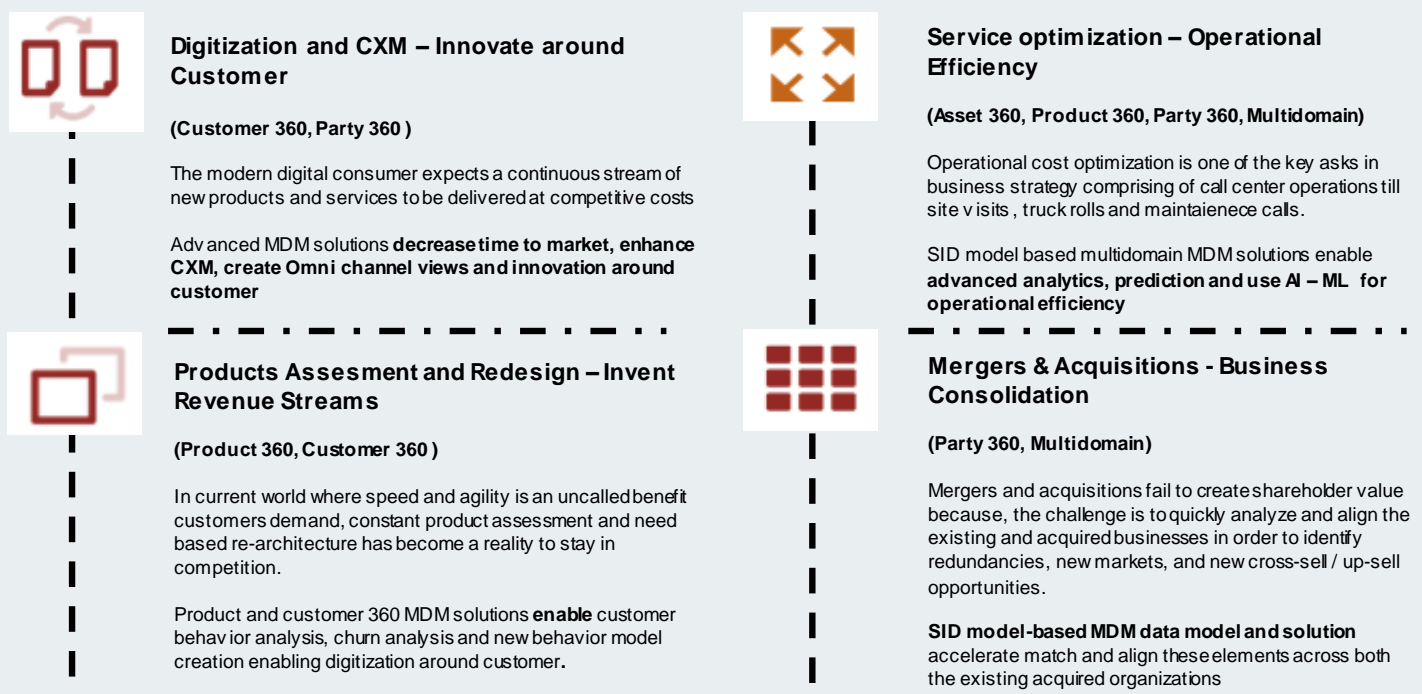


Figure 5: Game Changer Solutions

**Disclaimer:** The views expressed in this article are of the authors based on their industry experience gathered over decades. Any coincidence with any media or site will be purely coincidental.

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