



E-Book

# How Legacy Systems & Bad Data Quality Hinders a Digital Transformation Plan



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## Introduction

Cloud. Automation. Analytics. With the rapid influx of tech developments and trends that affect business, organizations are doing everything they can to embrace digital transformation to meet demands of a fast-changing business landscape and new regulatory standards.

Unfortunately, the focus remains on superficial aspects of digital transformation: New tools for customer service. New automation tools for work processes. Fancy mobile apps and web interfaces. It is only after the initial excitement dies down that companies realize these digital initiatives did little to actually transform their business.

Digital transformation isn't just about experimenting with technology - it's about rebooting the organization's systems and transforming the business itself. But as companies implement digital transformation initiatives, they come to this realization that they cannot let go of legacy systems.

As if legacy systems were not enough pain, companies also begin to realize they have poor data quality. They cannot replace legacy systems or migrate from an old application to a new CRM until they have clean master data. When companies are hit with this realization, then they either act fast to get it sorted or they keep the whole transformation idea on the backburner.

Working with private and government organizations for nearly two decades, we've seen how poor master data quality residing in outdated legacy systems can potentially destroy a business. Loss of revenue and business credibility, employee fatigue, talent drain, stressed management are all problems that can drag a business down.

This whitepaper is an attempt at finding the middle-ground solution - giving up a legacy system and **improving master data quality** is a huge and expensive undertaking, one that doesn't happen on a whim. Keeping this limitation in mind, there ought to be a middle-ground solution, one that enables a business to optimize their data while making the gradual move from legacy to modern.

## Why Legacy Systems are Still Being Used in Organizations

Legacy systems refer to any computer system, programming language, application or process that can no longer receive support and maintenance; however since they've been woven into the very foundation of the organization, they are not easily replaced or updated for several reasons. While the system may still be functioning well, **it does not support growth**. As an example, a legacy CRM may not offer integrations with third-party marketing platforms or tools like Google or Facebook.

As technology advances, most organizations find themselves dealing with the oddities of a legacy system. Even with updates, some systems keep the company in a rut, preventing growth or scaling opportunities.

Despite being a bottle-neck, legacy systems are still being used in organizations. There are several varying reasons for this:

**High Overhaul Costs:** Imagine a system that has been holding decades of data, a system that a business's model depends on, a system that is being used by hundreds of employees. Overhauling a legacy system at this level is not only expensive but also detrimental to business operations. Moreover, upgrading to a new system would require an up-front investment, both in money and in talent.

**Staffing Challenges:** Legacy systems are often built on programming languages that are no longer in use. It's hard and even expensive to find new talent with the skills to migrate from the legacy system to the new while retaining the original functionality and scope. For enterprises that have been running on decades-old systems, there may be little to no documentation about the system. Original developers may no longer be employed with the company. In such cases, even the idea of migrating may seem overwhelming.

**Uncertainty & Doubt:** Companies want systems they know, understand and can rely on. Legacy systems like the IBM or IBM mainframes offered bulletproof reliability and their characteristics, as well as their limitations, are well understood by organizations. Legacy systems remain in use because of their reputation for reliability and although modern systems offer much more flexibility, some of them are not as reliable or sturdy as legacy systems. Companies are aware of this so they would rather risk being outdated than use a system that could open the doors to vulnerability and instability.

**Tailor-Made Systems:** Many enterprises operate on systems that have been tailor-made (or tailor-coded) to meet their requirements. Some of these systems even operate with external stakeholders and vendors who are equally comfortable with using the platform. This becomes a challenge for organizations especially since migrating would affect not only business performance but also internal/external operations.

## What are the Risks Associated with Legacy Systems?

Although legacy systems are integral to business operations, they can cause a myriad of problems, including the most critical issue - the exorbitant maintenance and update costs. As much as organizations are afraid of the up-front costs of upgrading, they are paying even more as the cost of maintenance. The main difference? That cost is a gradual expense that does not alter the functionality of the business.



**64% of public sector IT spend is consumed by legacy IT.**

Global Data,  
Open Text Innovation Tour

A legacy system may offer stability, reliability, and familiarity, but in a rapidly-changing digital landscape, these systems may become a costly liability. The issues associated with legacy systems far outweigh the convenience of continuing to use them.

Some of the most critical problems are:

### Multiple Data Silos

Legacy systems were never designed to have integration features, and many legacy solutions are built on frameworks that can't integrate with newer systems. This means that each system in the organization has its own silos leading to disparate data sources that can never be used to obtain a unified single source of truth.

### Data Quality Issues

Data quality remains a consistent challenge with legacy systems. Organizations have years and years of master data that have not been structured, optimized or cleaned. It's only when companies are beginning to invest in data analysis and data intelligence programs do they find it critical to improve data quality. Again, they meet with another challenge - it's not easy to fix data when it's stored in multiple legacy systems and when those systems do not allow the flexibility of data matching and cleansing.

## Compliance Issues

Compliance regulations like the GDPR require companies to be accountable for customer data. With increasingly complex compliance regulations, companies cannot risk being careless with data. The problem? Legacy systems are not equipped to meet these compliance challenges especially if they are records stored in outdated, siloed systems.

## Vulnerabilities & Security Issues

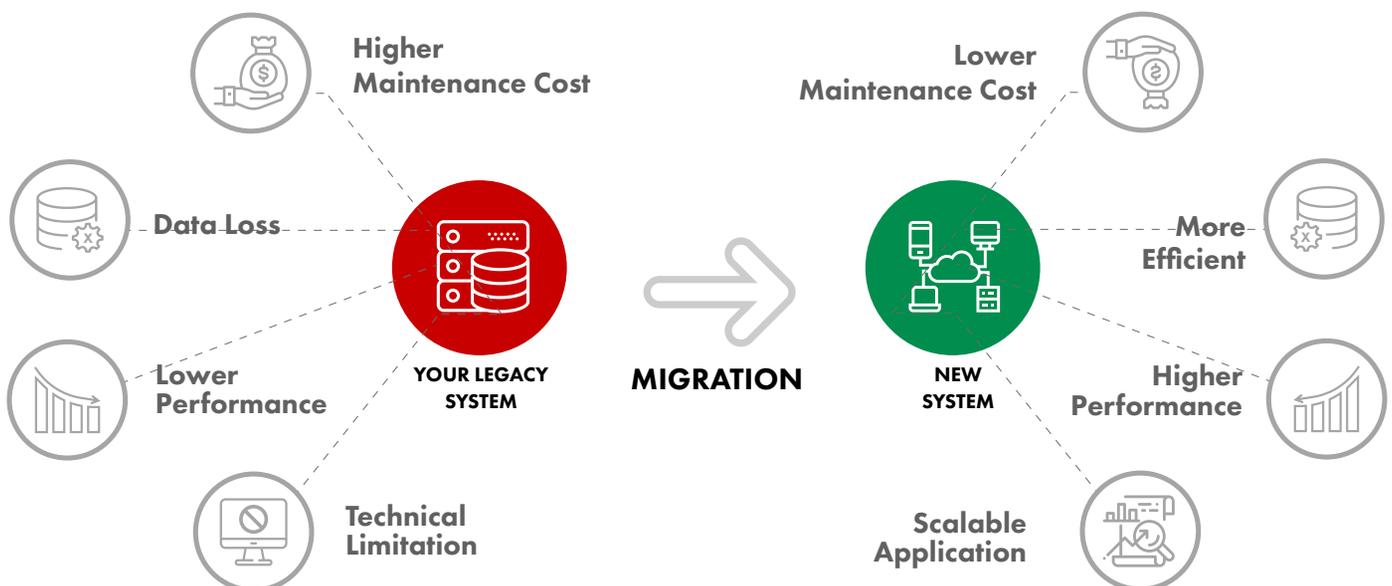
When legacy systems were built, they did not have to face the constant threat of security and data breaches. Hackers and digital criminals are becoming increasingly malevolent posing a serious threat to businesses. Organizations running on legacy systems have outdated data security measures that puts the entire organization at risk.

## Inability to Meet with Current Digital Demands

Today and in the near future, systems are expected to be hyper-connected - meaning, multiple data sources, processes, apps, systems are expected to collaborate together in real-time. A legacy system's inability to integrate with other technologies or ERPs prevents the organization from growing with confidence.

*There is only so much you can do in a legacy system. It's like forcing an old horse to win a race - you may make it run, but you can never make it outperform other horses.*

# Don't let lagging legacy systems affect your business



Additional risks we've seen some of our clients suffer from include:

- Unstable and often incompatible with new OS, browsers or other applications
- Companies may stall upgrades but they always have to keep improving one component or the other. Sometimes fixing one component causes other components to malfunction.
- The more patches these systems have, the more susceptible they are to security issues
- As the years go by, performance will be slower, failure will be more frequent and efficiency will take a big hit. Considering the pace at which technology is moving, legacy systems will fail in the next five to ten years.
- Talent with legacy system knowledge and expertise will no longer be available to manage and sustain the system.
- Data from legacy systems will no longer be reliable or good enough for business intelligence analysis.

So while organizations may stall an upgrade of their legacy system or a critical migration, they will have to realize that eventually, the risks with outdated systems far outweigh the current benefits of using them.

## **Legacy Systems and Poor Data Quality Hindering Digital Transformation**

Master data is an organization's raw data that remains unchanged over a period of time. Every organization will have master data of their products, customers, finances, operations, processes and other operational areas. This data, while previously lying ignored in the depths of oblivion has immense value in today's age. In fact, this data plays a crucial role in a digital transformation strategy - it is only unfortunate that master data in most organizations is not robust, reliable or up-to-date.

It seems obvious that companies should already be ramping up their data management game plan if they haven't yet done so in 2020. But while companies invested in fancy technologies, they neglected to upgrade their data management processes, causing their data to become a significant roadblock in any digital transformation initiative they try to take on.

Data is central to the operation of a business, however, in today's digitally empowered world, data is more than just a component of a business. It is literally the lifeline of a business. The quality of the underlying data is paramount in ensuring the making of correct business decisions.

But what do we specifically mean by poor data quality? And how does a legacy system affect data quality?

Here's what we found out after years of working with our clients.

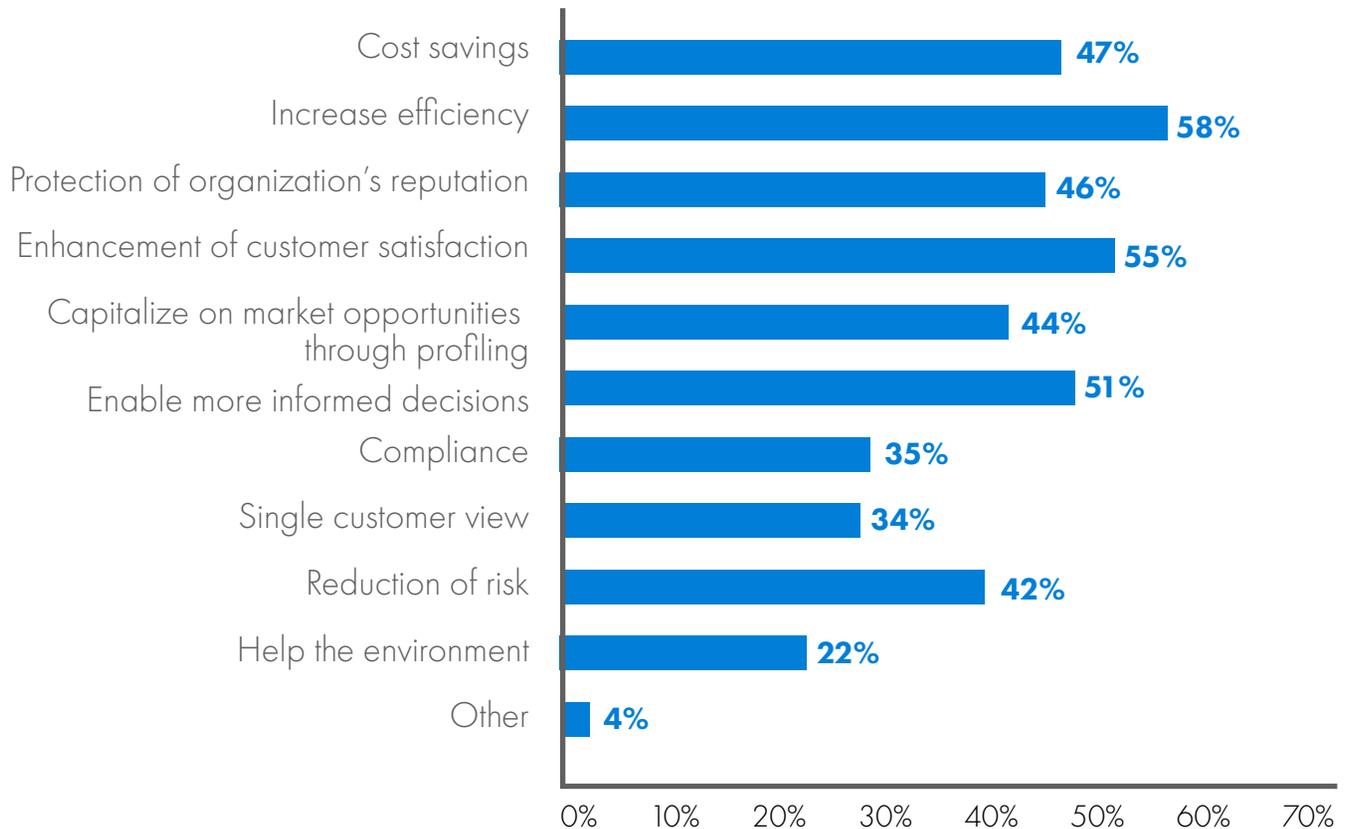
## Understanding Poor Data Quality

When we talk about data quality, we're talking about the accuracy, consistency, reliability, usefulness, and completeness of data. Poor data quality refers to data that is incorrect, invalid, irrelevant and out-dated.

### Examples of good data quality:

- Accurate shipping addresses.
- Complete vendor information.
- Correct contact information including rightly spelled names, email addresses etc.
- Consistent standards (first letters of names capital, no abbreviations etc) across different data silos.
- Organized information where customer info can easily be accessed by any department.

## Reason for maintaining high quality data



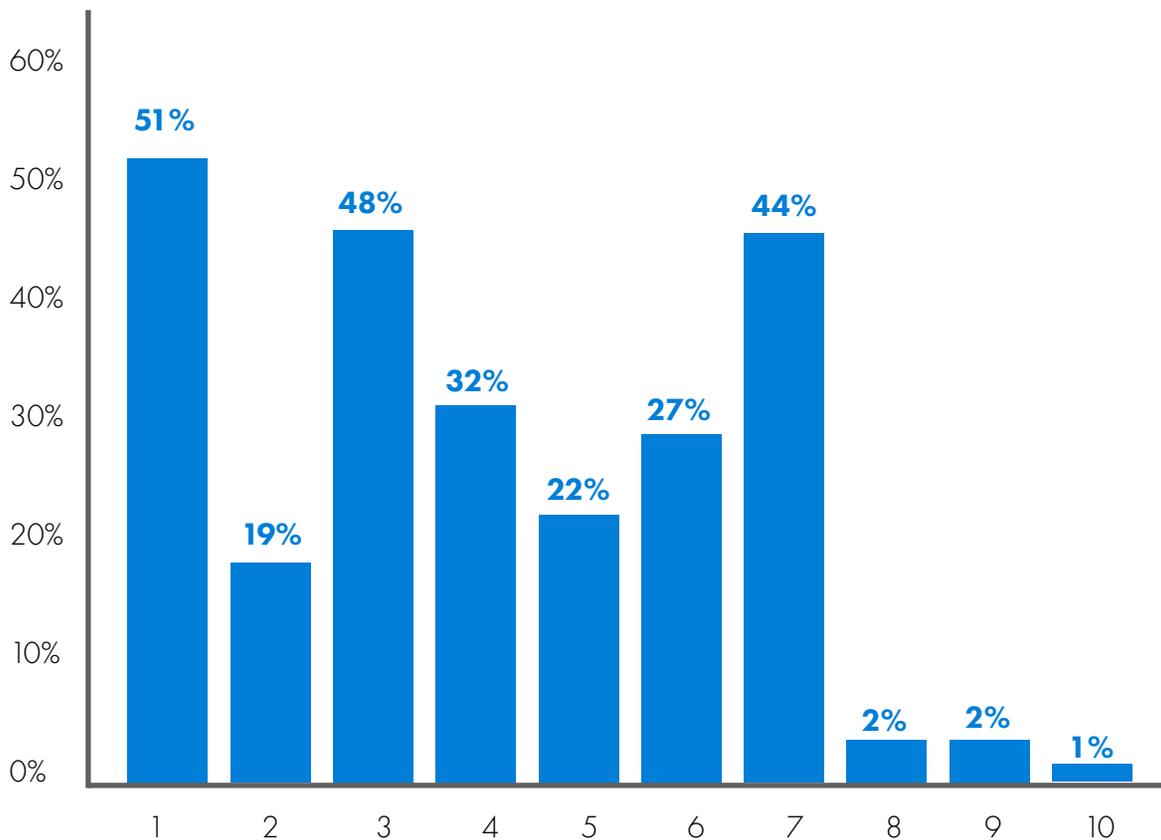
### Examples of BAD data quality:

- Incomplete addresses such as missing zip codes, missing city codes for phone numbers
- Mangled data where one record does not represent one entity but different entities
- Data that has no unified meaning and can easily be misinterpreted
- Data that is duplicated and redundant found in multiple systems
- Data that is unstructured or corrupt but is still occupying space in databases

Although these examples may sound pretty basic, in the long run, they become a nightmare for IT teams and data analysts hired to optimize or upgrade the company's digital infrastructure.

In fact, when data is migrated from one existing database to another, it presents a host of quality issues.

Let's see some situations where data quality can be a significant roadblock to a transformation plan.



1. Incomplete or missing data
2. Spelling mistakes
3. Outdated information
4. Duplicate data
5. Typos

6. Data entered in the incorrect field
7. Inaccurate data
8. Other
9. None
10. Don't know

## Situations that Create or Exacerbate Data Quality Issues

**1. Data Migration Process:** If data was manually entered into the legacy system and remained unchecked for years, the migration process from the legacy system to the new database could be a potential disaster. Data migration in itself introduces serious errors which coupled with any previous, unresolved error could render the data useless. In cases where the legacy system's metadata is out-of-sync with the actual schema, it can lead to serious problems in data quality.

**2. Consolidating ERPs or Systems:** Often when business mergers or acquisitions happen, data consolidation is part of the process. If the acquired business had outdated data and it was not corrected before the consolidation process, the business itself could suffer from adverse setbacks. Merging databases with differences in data and compatible fields may also impact data accuracy.

**3. Manual Data Entry: Humans are still significantly** involved in the data entry process. With human involvement comes the chances of human error. Since legacy systems usually have humans entering data manually, there are high chances of incomplete, inaccurate or duplicated data. End-users may be filling in shortcut information while data operators may make assumptions of this information and proceed to enter incorrect values.

**4. During a Batch Processing Process:** There may be situations where organizations automate bulk processing of volumes of data. For example, importing data between third-party CRMs is commonly done by batches to save time and effort. During this time, the system may push large amounts of wrong or duplicated data as well. This leads to severe issues of duplicated data that may result in incorrect analysis and miscalculated decisions.

**5. Data Manipulations:** System upgrades, database redesigns, and other such activities may result in data issues or worse data deterioration if prior planning or backup was not implemented. These processes may also cause junk data to reside in databases which may eventually cause data quality issues.

There are many other instances where processes and operational changes within an organization can have a direct or indirect impact on data quality. With organizations focusing on the automation of internal processes, high volumes of data are at risk of being either neglected or being mishandled by team members who may not necessarily be data experts.

In conclusion, data quality may be lost due to processes that bring data into the system, or by processes that seek to enhance existing systems in the organization.

Successful digital transformations, therefore, rely on replacing existing legacy systems, provided it is done with a data management plan in place. As obvious as it is, only a few organizations have a data strategy in place when embarking on an ambitious digital transformation initiative.

Needless to say, data transformation is the first step to a successful digital transformation, but for data transformation to happen, it's necessary for the organization to set clear goals and vision for the value it expects both transformations to create.

Organizations need to identify the obstacles that are holding them back - from the lack of front-office controls that are the root cause of poor data input, to inefficient management of data within multiple legacy IT systems, to a lack of business support and technical talent and finally the unclear goals and ambitions that stall a data & digital transformation initiative.

## Transform Dirty Data

Full Name	Address	Email
j smith	10 Main Street, springfield, 01234	Jsmith#JSLwaw.com
Jon Smyth	10 Main Street	NULL
jonathan smith law firm	10 Main Street, Apartment 304	NULL



## To Deduplicated, Cleaned and Merged Data

First Name	Last Name	Address	ZIP	City	Apt	Email	Industry
Jonathan	Smith	10 Main St.	01234	Springfield	304	Jsmith@JSLaw.com	Legal

## Solution - What Can Be Done to Improve Data Quality & Update Legacy Systems While Keeping in Mind Existing Challenges?

Digital transformation is not something you can achieve in a month or a year. It takes months and years of planning ahead, assessing risks and challenges, and trying to find a middle-ground. Go too fast and you disrupt a functional business - go too slow and you lose out on growth, opportunities & business value.

So let's boil it down to the basics.

### Data Strategy as the Key to Updating Legacy Systems

Consider digital transformation as the ultimate destination. To get there, legacy systems have to be updated. To update legacy systems, one has to start from data.

Therefore, creating a data transformation strategy is the key to updating legacy systems and ensuring a successful digital transformation.

Here's what can be done at the most basic level:

**1. Extract Data from the System:** This might sound rudimentary, but even at an enterprise level, data has to be safely extracted from the system and backed up before any other processes take place. Migrating data out of a legacy system starts with making sure it can be extracted safely.

**2. Mapping the Data:** When migrating to a new system, old data needs to be mapped on to the new system. The mapping process is to analyze whether the data in the old system is compatible or can be mapped to the new system. This step is important for the new system to understand data from the legacy system.

**3. Cleanse & Optimize Data:** Data from a legacy system are bound to have quality issues. Prior to mapping or moving to a new system, old data must be cleansed and rid of duplications, incomplete data and unstructured data. For example, a legacy system with dashes in phone numbers will not work with a new system that doesn't allow or use dashes.

**4. Validate and Standardize Data:** Once data is cleansed, a sample set of data is imported to the new system to test for potential problems and errors. This weeds out potential issues before the new system goes live. The validation and standardization procedures ensure that old data is standardized according to the new system's features.

**5. Ensuring Consistency:** It is here that staff training, front-end data input procedures must be conducted. Often organizations end up committing the same mistakes with the new organization by overlooking the human factor in data input. For example, addresses must be written in its full form. Names must not be abbreviated and so on. Set standards across the organization ensures everyone's on board with best practices. While this doesn't completely prevent errors, it does give employees much needed awareness.

Once data has been cleansed, standardized and stored in a centralized system, it becomes easier to manage and analyze. A robust backup and recovery plan, a scalability plan in terms of performance and capacity, a storage location plan must all be part of this data strategy.

**"The data journey:  
It's only the beginning for digital transformation."**

**CLOUDERA**

**Doug Cutting**  
Chief Architect

## **Creating a Single Customer View to Optimize Business Processes**

The whole purpose of digital transformation is to meet customer expectations and enhance customer experience.

**56% of CEOs say digital improvements have led to increased revenue**

But digital improvements are not a shot in the dark. In order to know what to improve, companies have to get accurate insight from their customer data. This insight can only be obtained if the data is reliable and is able to provide a unified, single customer view.

**A single customer view** is a holistic, consolidated and consistent representation of an organization's customer data. Companies may not need to make drastic overhauls to their data or digital platforms in order to achieve a single customer view. Instead, they can make small steps to clean, dedupe, match and consolidate customer data held in more than one system - resolving customer entity discrepancies both within and between systems.

In a **Harvard Business Review** study, more than 400 customer experience executives were surveyed, and achieving a single customer view came out as one of the top challenges.

Sales, marketing, billing, shipping, customer service are some of the core departments that share the same customer info. If these departments are each using their own CRM or data input methods, the same data is being recorded, used and distributed in multiple ways.

This means a company could potentially have dozens of records across data sources for each customer. Some records may contain their buying preferences, some may have demographic data, others may have more complete contact data, etc. And in each of these records, the key identifier is a little different. Perhaps the customer used a nickname when filling out a loyalty rewards program card, or they could've used their personal email address when signing up on the website. Regardless of the reason, there is now a variety of representations for each customer stored across a variety of systems.

Take for example the case of a retail food distributor that does not have a unified source of data. Their data problems:

- The [phone] token has missing city codes in the number.
- The [address] field has missing zip codes.
- The [name] token has typos, abbreviations, nicknames, fake names, missing first/last names and son.
- Spellings are inaccurate and contact info has been updated multiple times by different people across different departments.

When executives want to analyze their data to make a key business expansion decision, they can't seem to get reliable statistics from their data.

Billing data gives a different story than customer service data. Feedbacks and reviews from customers are random and inconsistent.

External stakeholders or third-party distributors send in their own data which doesn't map with the retailer's existing data pattern. Because retailers send local information, they don't record phone numbers with city codes.

When marketing obtains this information, they are dealing with broken email records, missing phone numbers, typos in spellings and much more.

Data duplication and data inconsistency spells disaster for this company.

## How Do You Obtain a Single Customer View?

Now that we have a better idea of what a Single Customer View is and how it's a primary challenge that can be resolved, let's take a look at the capabilities necessary for creating a single view: Integration, Profiling, Cleansing, and Matching.

**2. Data Profile**

Field Name	Filed	Type	Length	Pattern	Total	Valid	Invalid	Filed	Null	Distort	Numbers	Numbers Only	Letters	Letters Only	Punctuation	Leading Spaces	Non-Printable Characters	Min	Max	Mean	Median	Mode	Ext
Rowid	100%	Int32	4	Unclassified	8487	8487	0	8487	0	8487	8487	0	0	0	0	0	0	0	2	8488	4245	4245	2
Company Name	100%	String	30	Unclassified	8487	8395	92	8487	0	8116	159	0	8486	7036	158	1323	0	0					
Industry	100%	String	62	Unclassified	8487	8213	274	8487	0	2165	0	0	8487	4778	0	3709	0	0					
Address 1	100%	String	36	Unclassified	8487	8487	0	8487	0	6670	8487	0	8487	14	8487	0	0	0					
Address 2	5%	String	16	Unclassified	8487	444	0	444	8043	223	415	0	47	0	18	439	0	0					
City	100%	String	25	Unclassified	8487	4776	3711	8487	0	2333	0	0	8487	8487	0	0	0	0					

**Data Exploration**

#	Rowid	Compn...	Industry	Address 1	Address 2	City	State	ZIP	ZIP	Contact...	Phone	Birthdate	Email	National...	#.# Creation...	#.# Creation...
3	Brooks America	Loan brokers, nec	6 Sullen Centre Dr	# 1020	Santa Ana	CA	92717-6763			Michael A Brooks	TEL 714 788 5311	1/18/1963	mbrooks@brooksam.com		809559310	7
4	Armstrong Deep Tours	Tour Operators & P...	841 E Paradise Ln		Phoenix	AZ	85022-2142			Mrs Tom B Deatonis	137 998 1510	10/10/1961	tdeatonis@armstrong.com		469164642	3
7	Southern Utah Feder...	State credit unions	85 N 200 W		Hurricane	UT	84737-2076			Ms Kelly E Blake	TEL 585 331 2271	9/20/1968	kblake@southernuta.com		908789758	1
8	Maec Lizzy Fenging	Landscape Contractors	3000 S Yates St		Denver	CO	80236-2025			Rich D Maec	787 638 5025	11/1/1978	rmaec@maeczyfen.com		435282478	12
9	GPX Inc	Importers	900 N 23rd St		St Louis	MO	63106-2835			Bill B Fetter	985 761 1003	4/15/1980	bfetter@gpxinc.com		756599918	6
10	Barber Supply Co	Fence (Wholesale)	815 N 7th Ave		Phoenix	AZ	85007-2088			Robert B Barber	TEL 609 955 9246	8/21/1964	rbarber@barbersup.com		357812118	4
11	RDC Electrical Corp	Electric Equipment &	3411 S 44th St		Phoenix	AZ	85040-1947			Glen D Rodolico	889 433 1442	3/2/1960	grodolico@rdlect.com		595116532	12
12	Bowden Motors	Automobile Dealers...	1101 S Main St		Belfontaine	IL	43311-1434			Mrs Joe B Bowden	587 746 7590	11/3/1976	jbowden@bowdenm.com		173307118	10
13	John's Barber Shop	Barbers	3929 E Main St	# 19	Mesa	AZ	85205-8541			John C Lepanska III	593 243 6010	12/20/1972	jlepanska@johnsbarb.com		340351758	22
14	Wallboard Specialtie...	Drivall/insulating co...	108 James St		Smithville	MO	64089-8178			Bob E Sargent	777 446 9029	12/23/1967	bsargent@wallboard.com		589452282	7
15	Hobbs Campers	Business Services Nec	3732 E Hobbs Canyo...		New Hanover	VT	84757-1225			Fred A Hoeger	614 560 3818	12/11/1972	fhoeger@hobbscam.com		377807196	8
16	Hill Ind Soc	General Ca	Suite 102		Puerto Rico	PR	23790-2313			Mr Hal B Higginbotham	939 529 8153	12/1/1961	hhigginbotham@hillsoc.com		523405322	3
17	Dan Monachino & As...	Groceries-Wholesale	1 E Butler Dr		Trافر 14	PH	3521A2			Dan C Monachino	758 529 5558	11/3/1956	dmonachno@daam.com		772123558	2
18	Town Office	Government Offices...	Office 402		1 E Main St	Health	97066AA			Joi D Fymore III	758 529 5558	10/29/1981	jfymore@townoffic.com		326425562	10
19	Save On Business Ca...	Painters	1 N Main St		St George	UT	84770-3947			Tim E Humphrey	393 561 4056	9/23/1956	thumphrey@saveon.com		371353118	7
20	Rgt Capital Hange...	Swimming Pool Serv...	1 Park Pl		Valle	CA	92014-5999			St Ash A Narayan	742 529 9803	4/17/1964	anarayan@rightcapital.com		860205902	5
21	EV Equipment Inc	Water Pollution Cont...	1 Princeton Ave		Dover	DE	25140U			Bob B Abbott Sr.	779 799 2068	2/21/1974	babbott@evequip.com		691392378	2
22	Arby's	Restaurants	10 E Center		Pensacola	FL	84759-0000			Arm C Dodds	111 892 7481	2/1/1977	adodds@arbys.com		103610042	12

## Data Integration:

The first step is obviously to identify and **integrate first-party**, second-party, and third-party data sources that contain the customer information to bring together. Which format is the company receiving data from partners, vendors or suppliers? Which applications or databases are in place internally? What public data sources is connected or used?

Customer data sources needed to build a true Single Customer View can include:

- Social media
- Transactions
- Sales team interactions
- Firmographics
- Customer preferences
- Web and mobile browsing activities
- Demographics
- Sentiments
- Etc.

Make a list of data sources and create a strategy for the integration of these sources. Now cross-check this list against your legacy system to identify which of them can be integrated perfectly in the system and which would require external options.

## Data Profiling:

When integrating data from multiple sources at scale, data quality, like typos, irrelevancy, incompleteness, inaccuracy, and lack of standardization need to be sorted. Profiling data after integration helps give an overview of quality issues such as punctuation in names, missing zip code in addresses etc. Fixing these issues gives better results when matching different representations of the same customer in the final step of the process.

## Data Cleansing:

Once quality issues are identified, it's time to scrub it clean and standardize it to get the best results. The cleansing step can be very time-consuming and requires considerable attention to detail. For faster, accurate results, investing in a **data cleansing software** is a good choice.

### **Data Matching:**

This is the most important part of the process where data is matched to identify and remove duplicates, compare data, identify patterns and enable greater standards. For best data matching results, data must be standardized to minimize false negatives. Ideally, a good data quality solution software will also allow for **visual data matching** where the user can define their own match conditions.

### **Create a Master Record:**

Once the data is cleansed, deduped and standardized, it's time for the final step in the process: Choosing a master record. After all, the purpose is to build a Single Customer View that contains the cleanest, most complete record for every customer. Now that you've matched all of your data sources that contain customer data, it's time to bring all of that information together. DataMatch Enterprise, the data quality software of Data Ladder allows for a Merge & the Survivorship step where the user can merge data into a single, comprehensive record.

Obtaining a single customer view will not only help the business identify opportunities but will also assist them in upgrading from legacy systems without disrupting the customer experience or the core operations of the business.

It must be noted once again that digital transformation is not about uprooting existing systems - it's about **how well you optimize business processes to meet customer demands** while keeping in mind budget and operational restraints. With the experience we've had with hundreds of clients over the years, we know for certain that the most successful transformations always start with data. New systems and processes are a later investment.



# Case Study

## Maxeda DIY Group

Achieves Single Customer View Before Moving  
into a new CRM and PIM



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**maxeda**  
DIY Group

## Company Profile

Maxeda DIY Group is a renowned Dutch retail group with 376 stores and nearly 7,000 employees across Belgium and the Netherlands. This company is a classic example of a large enterprise operating on multiple enterprise apps, trying to make sense of data streaming in from dozens of locations and sources. While the company's brick and mortar stores are doing exceptionally well, they plan to increase digital sales through their website. For this purpose, they needed clean data that they could use in a CRM and a new PIM.



## Business Situation

Maxeda's primary purpose for going digital was to keep customers loyal. They also wanted to acquire new customers and increase their customer base by focusing on personalized and relevant marketing.

In order to this, they needed data that could give them insights on user behavior both online and offline as well as information that they could use to create a more personalized communication channel with their customers. With digital transformation, Maxeda wanted to achieve customer loyalty and increase business value.

# Data Challenge

Like many large enterprises, Maxeda had lots of legacy system issues that were affecting their digital transformation plan. Their data was split not just between different systems, but also between different countries. Additional challenges included non-unified methods of collecting and storing data. All this disparity eventually led to numerous data challenges such as the **lack of unified systems, unorganized data, old and dirty data that needed cleaning and standardizing**. These challenges were significant roadblocks to Maxeda's digital plans. Before they could move into a new CRM or PIM or implement a marketing plan, they had to ensure optimal data quality.

## Canada



First Name	John
Last Name	Oneel
Address 1	16 M.Street
Address 2	Norwich, NY
Address 3	NULL
D.O.B	10/11/1980
National ID Number	256 489 458
University	Berkeley
Title	Architecture

## Netherlands



Full Name	Jon O'Nil
Address 1	16 Meke! St.
Address 2	Norwich, NY
Address 3	13815
D.O.B	11/10/1980
National ID Number	256489458
Annual Revenue	\$45,000 USD
Email	johny@gmail.com



MASTER DATABASE



## Spain

First Name	Johnny
Last Name	O'neal
D.O.B	10/11/1980
Purchase	Electric Fan
Ref	015CGH589
Price	\$235 USD
Customer ID	8956
Fidelity P	Yes
Points	1245 pts
Status	Active



## Italy

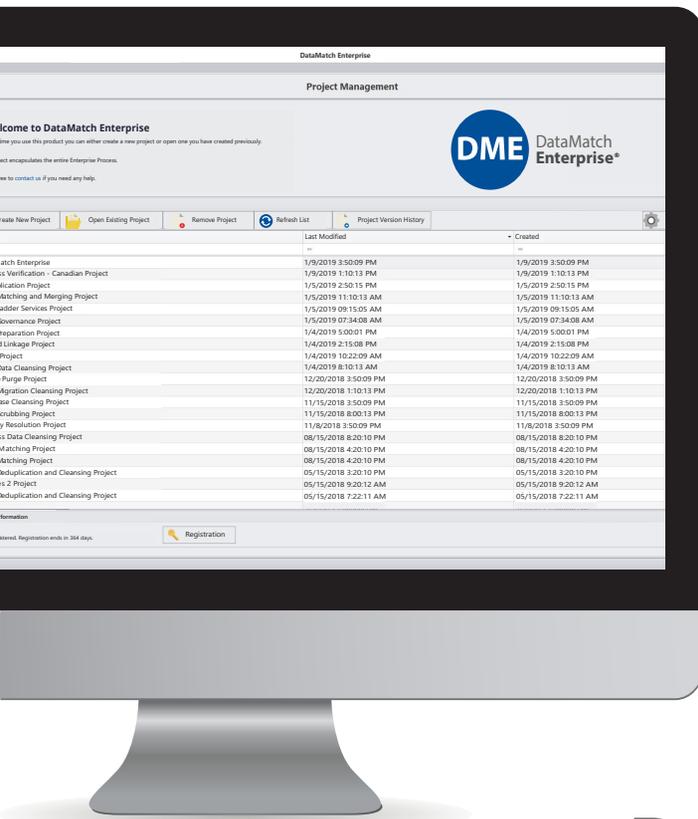
First Name	John O'Nil
Address 1	NULL
Address 2	Norwich, NY
Phone Number	718 274 2237
D.O.B	10/11/1980
National ID Number	256 489 458
Disability	NO
Marital Status	Divorced

UNORGANIZED DATA

## DataMatch Enterprise Was Used to Provide a Single Customer View

Maxeda used DataMatch Enterprise to clean, profile, identify and remove duplicates of customer profiles, addresses, DOBs, and emails. There were 5 data sources of 3 different brands spread across 2 countries, which were brought together to generate a single customer view.

Once this view was created, it would be stored in the new CRM and Maxeda could achieve their marketing and personalized communication goals.



## Benefits



It took just 2 months and 3 people to deliver Maxeda the results they needed. The manual method would have taken at least 10 IT experts over the course of 6 months to sort out data.



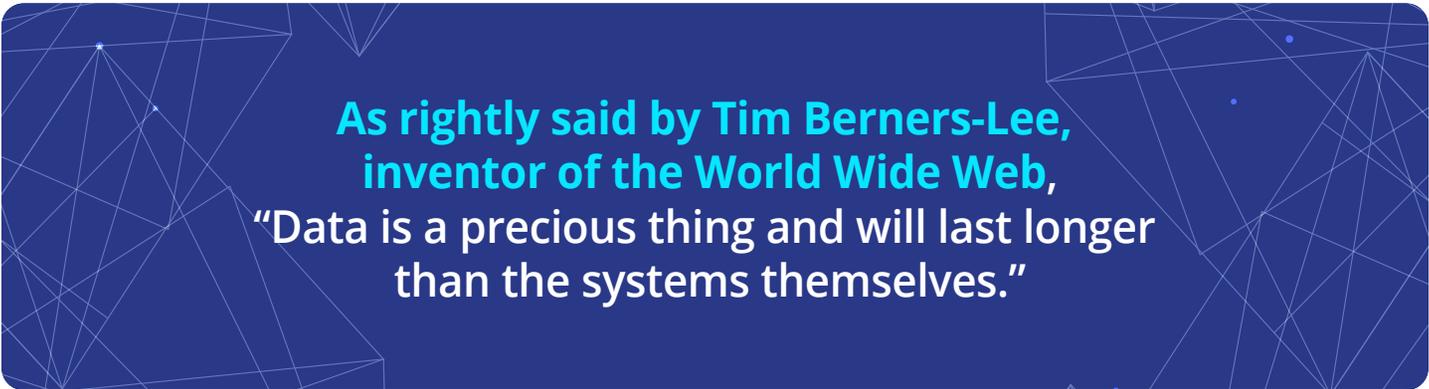
For the first time in its history, it took just 2 months to obtain a first-ever single customer view stored in a single source in a single location!



The company had more accurate data and were able to accomplish complicated data goals in a short time span.

## Conclusion

Aging systems and infrastructure is bogging down processes and hurting company revenues. But it's not just about a slow system - it's the data in that system that has not been brought up to par with modern digital needs. So while organizations aim for augmented or virtual reality, blockchain, cloud computation, data lakes, and many other digital initiatives, they will find it hard to succeed unless they don't find a way to unleash their data.



**As rightly said by Tim Berners-Lee,  
inventor of the World Wide Web,  
“Data is a precious thing and will last longer  
than the systems themselves.”**

Essentially then, the true essence of transformation is not systems, but data, which is the soul of a system.

# ABOUT US

Data Ladder is a data quality software company dedicated to helping business users get the most out of their data through data matching, profiling, deduplication, and enrichment tools. Whether it's matching millions of records through our fuzzy matching algorithms, or transforming complex product data through semantic technology, Data Ladder's data quality tools provide a superior level of service unmatched in the industry.

**DataMatch Enterprise, was proven to find approximately 5-12% more matches than leading software companies IBM and SAS in 15 different studies.**

- Unparalleled Matching Accuracy and Speed For Enterprise Level Data.
- Cleansing beating IBM and SAS.
- Proprietary Matching Algorithms with a high level of matching accuracy at blazing fast speeds on Desktop/Laptop Hardware.
- Big Data Capability with data sets up to 100 Million Records.
- Deduplication and Merge Purge within and across any number of files.
- Suppression of existing customers or Do Not Contact from marketing lists.
- Advanced record linking technology to create data warehouses.
- Quick Data Profile tool finds and fixes Data Quality issues within the first 5 minutes of setup to improve match quality.

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