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Data quality buyer's guide

What every organization should know when selecting a data quality vendor

This guide is intended to help you understand each of the following so that you can confidently select the best data quality tools for your organization and ensure that your information is fit for purpose:

1	The need for data quality tools
2	The definition of data quality
3	The path to defining a custom data quality strategy
4	The means and methods of identifying the best solutions

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Summary

The Big Data age has taken hold, with organizations collecting and using more information than ever before. It is estimated that the volume of business data worldwide across all companies doubles every 1.2 years. Data has penetrated every aspect of business, and is being used for basic operations, but perhaps more importantly, for intelligence, marketing insight and much more. Each department wants more information to help them better understand how they can operate more efficiently, intelligently and successfully.

Business leaders who want to truly understand the consumer and make their organizations more profitable are investing more in data. However, this investment could be going to waste if the information being gathered, analyzed and leveraged is inaccurate.

The data quality imperative

Data quality is no longer a concept tied to certain pieces of structured data, or something that can be addressed on a reactive basis when a problem occurs. It is a critical part of any operation; an ongoing, real-time process that is imperative for achieving business success today.

However, for most organizations, their data quality strategy has not yet caught up with their appetite for data. While many are taking core data sets and plugging them into sophisticated models and algorithms, few truly understand the quality of their data, and are therefore unaware that these efforts are actually resulting in poor analytics and intelligence.

The tricky reality with data quality is that no one-size-fits-all solution exists. Organizations collect and consume data in different ways and each organizational structure is different. This means that the same out-of-the-box solution will not solve all data quality problems for every company. Each organization needs to review their needs and data usage to best decide what vendor and tools are right for them.

The goal of data quality

Data quality practices help organizations better understand consumers. Through accurate data, organizations can make more informed decisions that ultimately create a superior customer experience.

Deriving insights from data allows users across a business to understand and leverage the valuable asset of information. But in order to do this, businesses need accessible, relevant and timely data that is easy to use. The goal of data quality is to make sure information is available to fit a desired purpose.

Is a data quality strategy really necessary?

The demands of the ever-changing consumer

The way companies connect with consumers is constantly changing. Today's more savvy digital and mobile consumer demands consistent interactions through social media, mobile devices and company websites. In addition, interactions do not occur in one-off silos; a given consumer could be on Twitter one minute while standing in a brick-and-mortar store the next. This forces companies to be on-call 24/7 to coordinate interactions across all channels.

Through all of these channels, there is a flow of information. Organizations are using an average of 3.4 channels to collect contact data. Multinational companies are using even more channels than those who operate in a single country. The most common channel for interacting with customers is the organization's website, followed by a sales team and a call center.
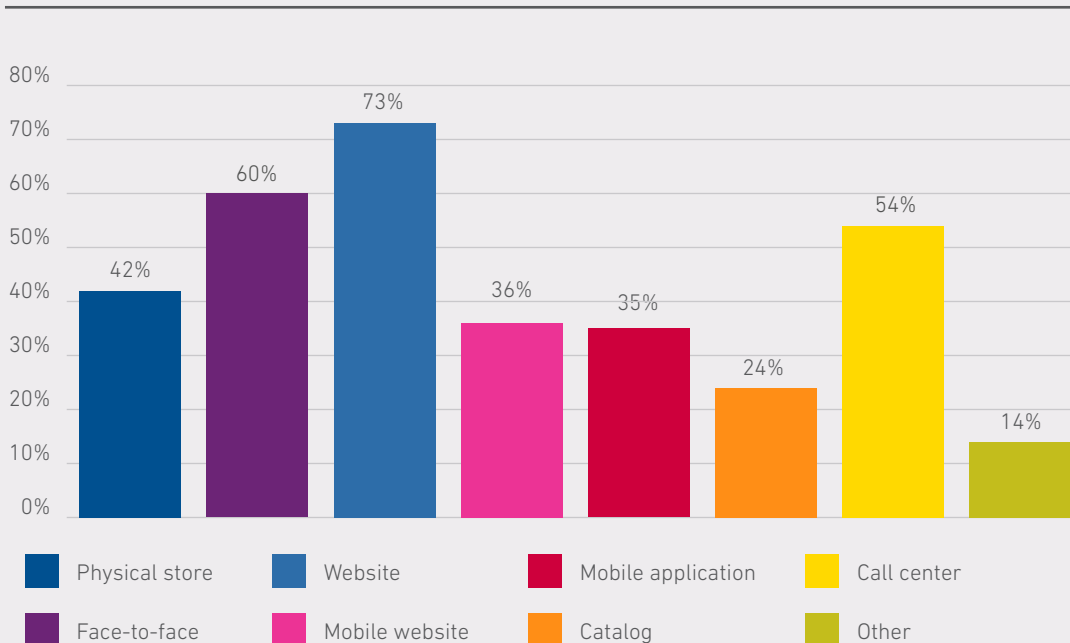
Keeping up with the increasing need for data

Consumers' increasing demand for multichannel interaction is driving changes in business practices. In particular, organizations are looking to more effectively monetize the data they collect for consumer insight.

One example is in marketing departments, where organizations are looking to coordinate interactions across channels to provide the customer with a consistent experience rather than a more segmented, multichannel approach. Eighty-seven percent of companies are now engaged in cross-channel marketing.

To deliver a coordinated approach across channels, organizations need more data than ever before to gain the necessary insight about a given consumer. They need information to make better strategic decisions, personalize

Chart 1
Channels to collect consumer contact data

Channel	Percentage
Physical store	42%
Face-to-face	60%
Website	73%
Mobile website	36%
Mobile application	35%
Catalog	24%
Call center	54%
Other	14%

Legend:
- Physical store
- Website
- Mobile application
- Call center
- Face-to-face
- Mobile website
- Catalog
- Other

messages, operate efficiently and more. However, not all data collected can provide the desired insight.

The state of data quality

With poor data management strategies in place at many organizations, the state of data quality is relatively poor. Today, 91 percent of companies suffer from common data errors. The most common errors are incomplete or missing data, outdated information and inaccurate data.

Because of the prevalence of these errors, the vast majority of organizations suspect their contact data might be inaccurate in some way. U.S. organizations believe that on average, 25 percent of their data is inaccurate. Collectively, 78 percent of companies have problems with the quality of data they collect from various channels, with call centers producing the poorest data quality, followed by websites. Considering how heavily businesses rely on this information for key business initiatives, the level of inaccurate data is staggering.
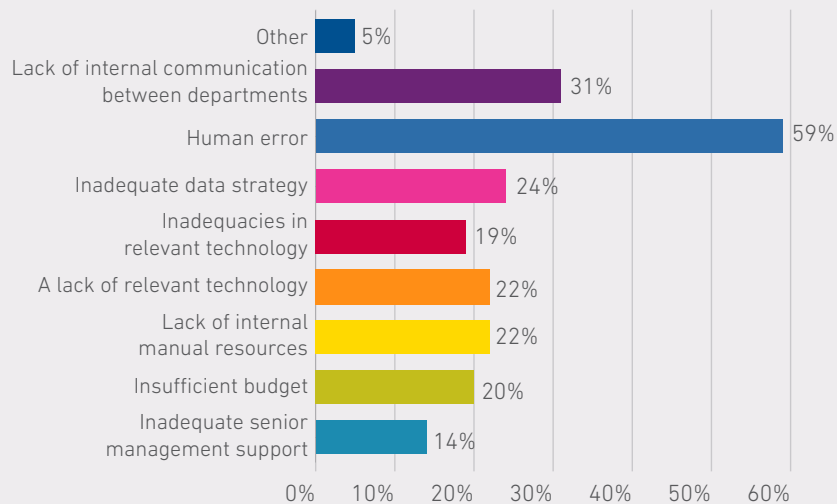
Part of the problem stems from the methods used for data management. While most companies have some sort of data management process in place, that process is often segmented by department or manual in nature. This creates an increased level of human error.

Consequences of poor information

The high degree of inaccurate information is causing organizations to experience a number of challenges related to key business initiatives. When powered by inaccurate information, each of these areas has a lower return on investment.

1. **Budget** – Seventy-seven percent of companies believe their bottom line is affected by inaccurate and incomplete contact data. On average, 12 percent of revenue is believed to be wasted.

Chart 2
Reasons for data inaccuracy

Reason	Percent
Other	5%
Lack of internal communication between departments	31%
Human error	59%
Inadequate data strategy	24%
Inadequacies in relevant technology	19%
A lack of relevant technology	22%
Lack of internal manual resources	22%
Insufficient budget	20%
Inadequate senior management support	14%

2. **Cross-channel marketing** – 83 percent of organizations face challenges when engaging in cross-channel marketing. The principal challenges relate to da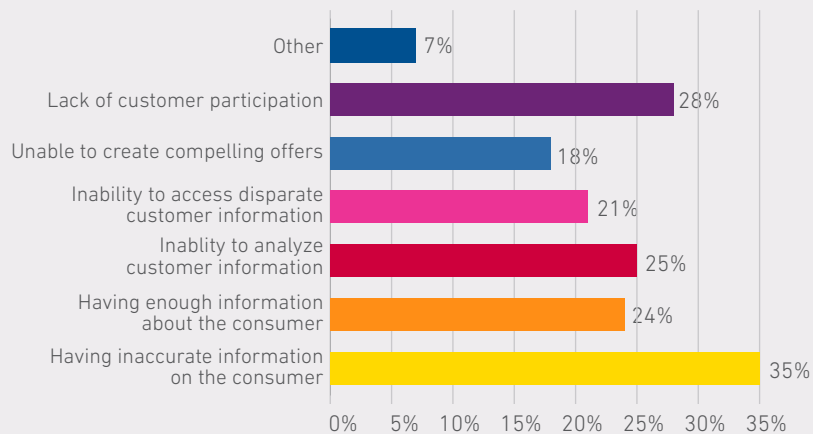ta about consumers, with information accuracy and quantity being the two primary concerns when communicating across channels.

Chart 2
Challenges to cross-channel marketing

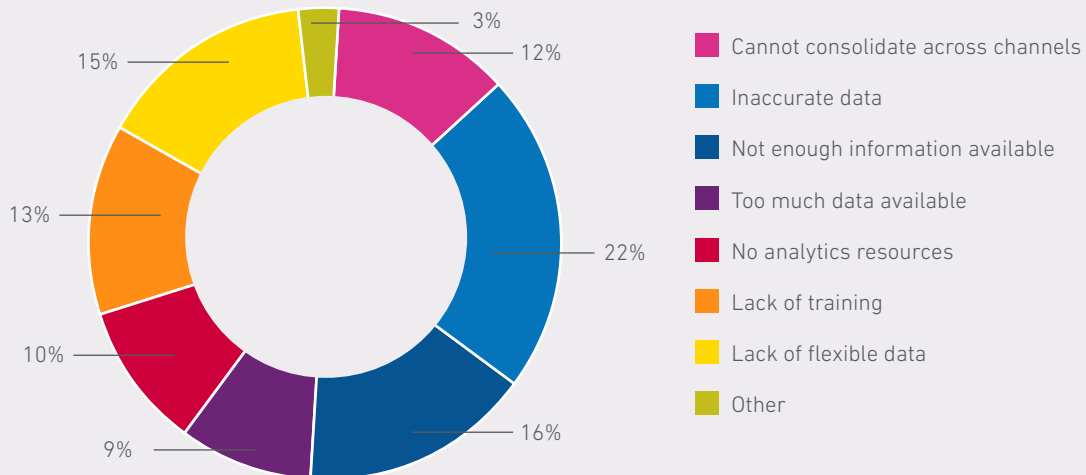| Challenge	Percentage
Lack of relevant technology	28%
Siloed departments	18%
Linking different technologies	21%
Targeted marketing	25%
Enough information about the consumer	24%
Accurate information on the consumer	35%
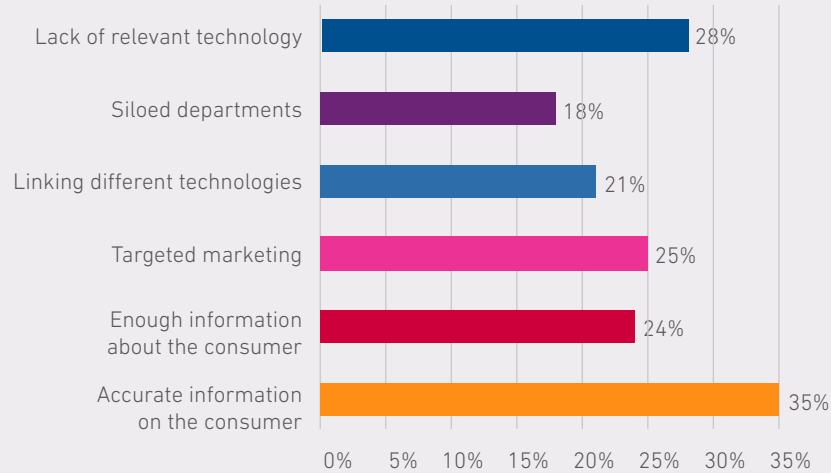
3. **Loyalty programs** – Seventy-four percent of companies have encountered problems with their customer engagement and loyalty programs, with the main cause identified as inaccurate information.

Chart 3
Problems with loyalty programs

Problem	Percentage
Other	7%
Lack of customer participation	28%
Unable to create compelling offers	18%
Inability to access disparate customer information	21%
Inablity to analyze customer information	25%
Having enough information about the consumer	24%
Having inaccurate information on the consumer	35%

4. **Business intelligence** – While the use of analytics and business intelligence is on the rise, 81 percent of companies face problems when trying to generate meaningful business intelligence. Data inaccuracies are largely to blame.

Chart 4
Problems with business intelligence

- Cannot consolidate across channels
- Inaccurate data
- Not enough information available
- Too much data available
- No analytics resources
- Lack of training
- Lack of flexible data
- Other

The value of insight
With improved data quality, organizations are able to gain better insight. This allows them to improve functional areas and key business initiatives, such as:

1. Strategic decision making

2. Product development

3. Risk analysis

4. Consumer interaction

5. Organizational efficiency

It is essential that organizations implement a data quality strategy that is right for their needs and ensures that information is accurate and fit for its desired purpose.

Creating a customized data quality strategy
Identify your requirements
While the fundamentals of data quality remain consistent, the implementation of data quality will vary widely depending on the organization. The need for data changes depending on the department, user and functional use for the information. Therefore, it is important to customize a data quality strategy that fits your unique business.

There are several steps to take when deciding what data quality strategy is right for your business and what tools should be implemented to satisfy specific requirements. Each of these steps should be completed in order to identify the solution that is right for you.

Tear down silos

The most important first step when creating a data quality strategy is to think of it as an entire business strategy, rather than individual department approaches. For years, many organizations implemented one-off departmental strategies for improving accuracy and data manipulation. However, the speed and volume at which data is consumed have increased dramatically over the past few years. Segmented approaches no longer provide the level of data quality needed for today's desired level of insight.

Even with these changes in how data is used, strategies have not evolved. While the majority of companies have some sort of data quality strategy in place, very few have a centralized strategy. Today, only 30 percent of companies manage their data quality centrally, through a single individual or department. That means that 66 percent of companies lack a coherent, centralized approach to data quality.

To actually find a data quality strategy that works, all departments that collect and consume data need to come together to identify one approach. Create a task force for data quality that incorporates all stakeholders and allows them to provide input into the strategy to ensure it will create information fit for all desired purposes. The

group can prioritize projects and ensure that a return on investment is collected from any effort spent on data quality. Measurement and tracking are key components of that effort.

However, the first task of this group is to create a data map, which will outline all of the ways information is collected and consumed.
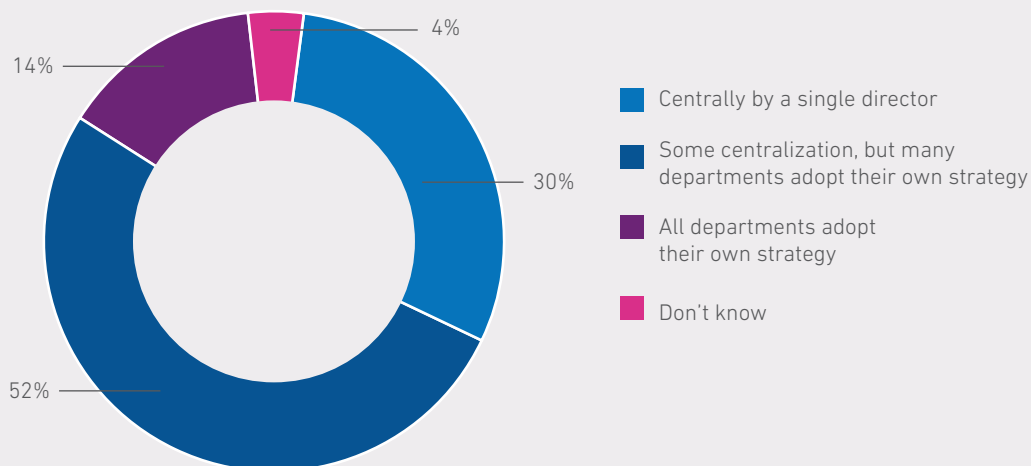
Create a data map

To create a data quality strategy, organizations should start by mapping data to understand the flow of data across the organization. This will vary dramatically from business to business, depending on the structure and consumption methods for information.

While data maps can become quiet complicated, there are several basic components that should be considered:

- Collection points for data

- The data elements collected at each point

- Data quality practices that already exist to standardize and clean that data

- Standardization or data governance rules that exist and whether or not they are followed

- Locations of where the information is stored

Chart 5
Data strategy management

14%

4%

30%

52%

- Centrally by a single director

- Some centralization, but many departments adopt their own strategy

- All departments adopt their own strategy

- Don't know

Data collection points	Required data inputs	Data quality practices	Place of storage	Business usage	Current inefficiencies due to bad data
Website	Name, email, address, telephone number, transaction information	Double entry of email address, phone number formatting, product coding, third-party data append	Central CRM, marketing database, loyalty database	Loyalty program, strategic decision making, marketing programs and messages, package fulfillment	Returned packages, transactional messages not reaching consumers, increased customer service calls, wasted costs, poor information from data appends, negative customer experience and/or brand perception
Mobile application	Email, social media tags	None	Loyalty database	Marketing programs and loyalty	Loyalty communications not received, poor marketing results, email sender reputation damage, negative brand perception
Call center	Name, address, telephone number, representative notes	Address validation, phone number formatting	Central CRM	Package fulfillment, customer service communications, marketing	Customer packages not delivered, longer handle times, increased call backs, negative customer experience
Point of service location	Email, transaction information	None	Marketing email database and product development spreadsheets	Order fulfillment, product distribution, marketing	Email sender reputation damage, product distribution mistakes
Sales team	Name, title, email, address, representative notes	Email validation check monthly, batch address cleansing	Sales-specific CRM	B2B product lines, product distribution	Poor customer communication, product distribution mistakes, delivery failure
Bulk data imports	Wide range	Batch contact data validation	Central CRM	Marketing	Email sender reputation, lost new customer revenue

- How the business is using data today
- Problems within the organization as a result of poor data collected in this channel

After all of these areas are defined, organizations can then map out how they would want the data processes to operate and clearly articulate what the business need is for a centralized data strategy.

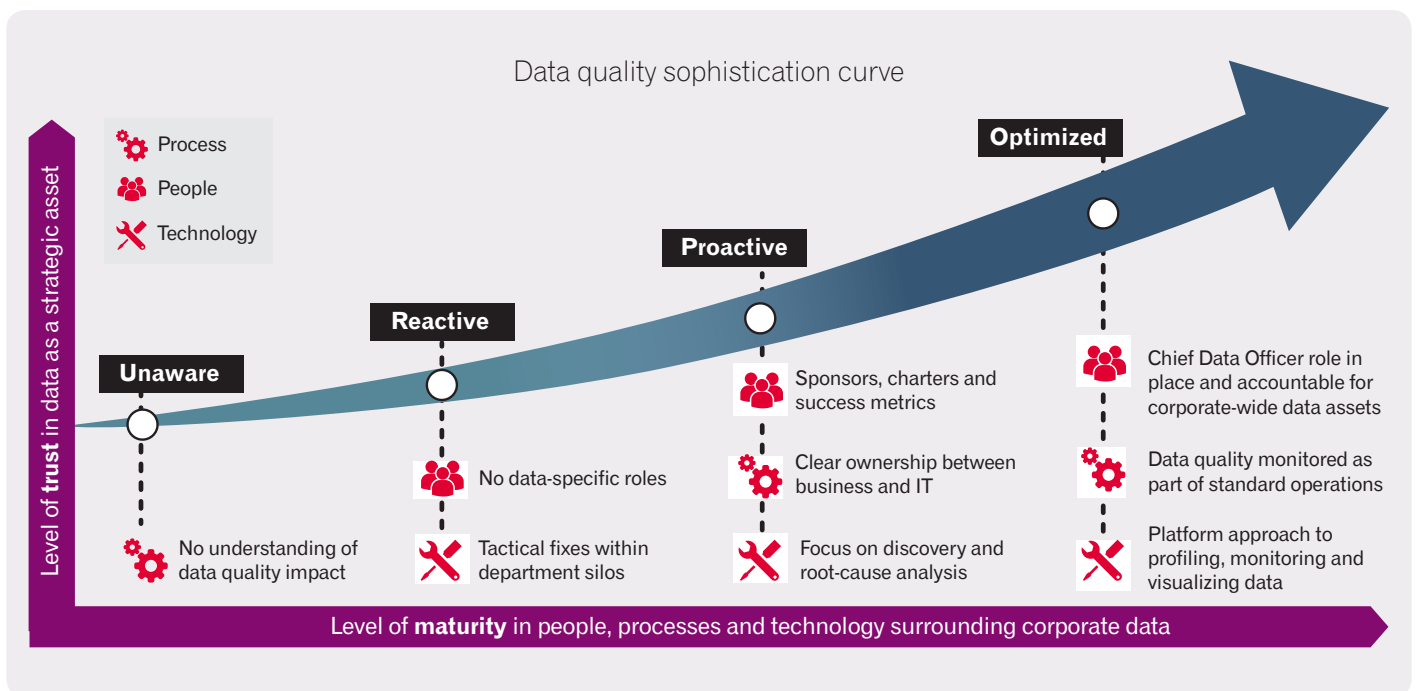**Understand the data quality sophistication curve**

After a data map has been created, review it to understand how sophisticated your data quality strategy is today and what you want to achieve. You can see below a data improvement curve, which outlines various stages of data quality and level of sophistication.

There are four key stages of data quality sophistication:

- Unaware – The organization is unaware of the importance of data quality and its impact on the business. They do not have a strategy in place.
- Reactive – The organization only performs data cleansing and analysis as issues occur. There are no specific data roles and tactical fixes reside within departmental silos.

- Proactive – The organization has a proactive data strategy with clearly defined roles within the business. There is a clear ownership between the business and IT and a focus on discovery with root-cause analysis.
- Optimized – Data quality is monitored as a core factor of the business with documented data quality rules in place. The organization reviews profiling, monitoring and visualizing data as part of a complete strategy.

While 88 percent of companies have some sort of data quality strategy in place, many are in early stages of sophistication. Only 18 percent of companies say they have reached the optimized state of data quality. By contrast, 43 percent of companies perform data analysis and cleansing only as issues arise. For some organizations, a lower level of data quality sophistication may be fine depending on how they use data. However, for many organizations, more advanced data management practices and greater data accuracy can mean more efficient and intelligent operations.

Data quality sophistication curve

Level of **trust** in data as a strategic asset

- Process
- People
- Technology

Unaware
- No understanding of data quality impact

Reactive
- No data-specific roles
- Tactical fixes within department silos

Proactive
- Sponsors, charters and success metrics
- Clear ownership between business and IT
- Focus on discovery and root-cause analysis

Optimized
- Chief Data Officer role in place and accountable for corporate-wide data assets
- Data quality monitored as part of standard operations
- Platform approach to profiling, monitoring and visualizing data

Level of **maturity** in people, processes and technology surrounding corporate data

Deciding what types of tools are needed

Where you fall in terms of data quality sophistication today will help determine the types of tools you need. This section explains the main categories of tools you will find within the data quality space.

Data cleansing

Data cleansing is defined as the modification of data values to meet domain restrictions, integrity constraints or other business rules that define when the quality of data is sufficient for an organization.1

The goal of these tools is to provide accurate information for business use. Common tools that fall into this category include address verification, email validation, phone validation, etc.

Parsing and standardization

This category includes the decomposition of text fields into component parts and the formatting of values into consistent layouts based on industry standards, local standards (for example, postal authority standards for address data), user-defined business rules and knowledge based of values and patterns. These tools provide a standard format for information that allow for better data consolidation and consistency.

Monitoring

Monitoring means deploying controls to ensure that data continues to conform to business rules that define data quality for the organizations.

These are back-office solutions that monitor data to ensure it stays fit for purpose over time. If there is a degradation of the data or large changes to its composition, the software can track a change and alert staff to a problem.

Enrichment

Enrichment increases the value of internally held data by appending related attributes from external sources.

Appending third-party data sets to customer information is very common; in fact, we see 86 percent of companies doing this today. These insights can be modeled to provide actionable customer insights.

Data profiling

Data profiling is the analysis of data to capture statistics that provide insight into the quality of data and help to identify data quality issues

Data profiling allows organizations to identify when data elements are degrading in quality and may need to be updated or replaced.

Matching and linkage

Matching is defined as identifying, linking or merging related entries within or across sets of data.

These tools combine like pieces of data into a single record. For instance, if Jon Smith and John Smith have enough matching components, such as email address and phonetic name, then they could be the same person. This means the information should be combined into a single master record to better understand who John Smith is and track the interactions he has had with the business.

All of these tools can be used for a holistic data quality solution. However, not all of these capabilities may be needed at your organization depending on size and data usage. These solutions can easily be implemented in a tiered approach or be tailored to fit your given data quality needs.

The data map created earlier can identify where some collection points may have better solutions than others, what gaps exist and where you eventually want to go with a data quality strategy.

The most popular capabilities today are monitoring and audit technology, standardization technology and data profiling technology. This makes sense due to the nature of information being collected today and the fact that there are known ways to track and demonstrate ROI for these capabilities. For example, address validation can easily be tracked and if returned mail rates drop by a certain percentage, then a return can be calculated.

Core data quality stakeholders should have a discussion to prioritize these areas and then start looking for solutions for the highest priority capabilities. Remember that data quality is ever evolving and organizations will need to review capabilities and tools on a regular basis to ensure information continues to serve its desired purpose.

Evaluating vendors
The data quality space is saturated with a variety of vendors across all of the capabilities listed above. You should take several factors into consideration when evaluating vendors, including: strategic fit for your organization; usability/accessibility of the suite of tools; the completeness of the data quality solution; and the ability to easily test these tools to ensure they work in your environment.

Strategic fit
Given the importance of data quality to overall business results, any vendor you work with should be a strategic fit for your organization. You want to make sure they can work with you to provide the best possible data quality solution for your unique environment.

Data is essential to business success; ensuring the quality of that data is paramount.

The success for your data and analytics program will depend heavily on your selected data quality vendor's capability to understand your business model, but also the internal operations supporting that model, your near- and long-term objectives and how best to ensure the accuracy of your data throughout the customer life cycle.

Flexibility
It is important for data quality solutions to be flexible. This means:

1. **Product customization** – Your data environment is unique to your organization. While certain channels and data elements may be similar to other organizations, your infrastructure and specific needs will be different. Make sure the data quality tools you use can be customized to fit your unique needs. For example, evaluate how well how the software can adjust to the look and feel of your individual e-commerce site or think about whether you can standardize data to fit your specific data governance requirements. Make sure the selected solutions work for you and don't disrupt your customer or internal end user.

2. **Implementation capabilities** – While data is a powerful engine driving many of your business decisions, your IT infrastructure will never be built solely around data quality. It should be built around your customer and employee experience and the platform's ability to call data when it is required. Data quality solutions need to be flexible, integrate seamlessly into your environment and be customized to fit your needs. The goal is for the solutions to work and exist without much customer or user interaction. Therefore, it is important to find a data quality vendor that will work within your environment, rather than expecting you to work within theirs.

3. **Adaption to requirement changes** – Your data quality requirements will change over time as new data elements emerge and desired data insights change. Find a vendor that is constantly innovating, not just resting on a single solution that is never updated or improved. As your needs change, you want to

work with someone who will listen to your emerging requirements and either have a solution in place to fix that need, or look to create a new product based on market feedback.

Collaboration

Data quality is not a simple process; it requires collaboration between your company, the vendor and sometimes third parties. In fact, third parties are frequently used for data management strategy suggestions: 64 percent of companies have used or still use third parties for their data quality strategy.

Look for a vendor with a background in collaboration. The company should understand the business objectives behind a data quality solution and help tailor a series of capabilities that is right for the individual organization.

Holistic insight

A vendor's data quality recommendations are a good indicator of their collaborative nature and the flexibility of their products. Understanding the core business needs around data quality and the business demands for information is essential. However, that's only the first step. Vendors should then be able to take that newfound understanding and develop a series of recommendations for customized solutions. This sets a knowledgeable vendor apart from a fledging vendor, and can help determine if they are a good partner for your business.

Tools you can understand

The data quality industry is packed with vendors looking to sell IT-specific data quality solutions. While IT stakeholders certainly play a certain role in choosing and defining data quality solutions, data quality is increasingly in the hands of the business user. It is common for analytics professionals to sit within various departments, generating intelligence for business management, marketing, financial services, product and much more.

Achieving data quality today requires a different organizational and philosophical mindset of empowering all departments to understand their data quality solutions.

Why this matters

Many of today's data quality vendors provide 'black box' solutions. These are complex platforms that take years to integrate and hundreds of hours of services to put into place. The problem is that these platforms are not understood by anyone at the business. Business stakeholders are unsure how information is being captured, standardized and cleansed. This lack of knowledge can creates distrust in the information and raise questions around analytics and data insight.

Further, by the time these platforms are implemented, they may no longer be relevant for the given business need. However, so much time and money has been invested that companies are hesitant to look for a solution they can actually understand and deploy with confidence.

Ways to test

Given the increasing need for data, it is no wonder that many vendors have emerged in the space with their own sets of tools, services and solutions. Therefore, organizations must complete their due diligence to when choosing tools that will ultimately meet their requirements.

Here are some early warning signs that a data quality system may not work for you:

Inability to test the solution in your environment – Some vendors may only show you a demo of the solution or do a basic data test. For more complex data quality implementations, it is important to move beyond just a data test to a full review of the solution in your environment. If a vendor can't do a demo or proof of concept in your environment, it may be a sign that the solution is difficult to implement.

Lack of customer references – Vendors should have customers who can speak on their behalf. Just like consumers write online reviews for most everything they use, vendors have references for data quality solutions. Be sure to talk to someone with similar challenges who is using a solution similar to the one that you are considering.

Limited data quality capabilities – Some data quality vendors are niche, specializing in one data quality capability. While many of them can execute on that capability very well, you will then need to work with multiple vendors for the other capabilities you want to implement. Be sure to work with a vendor that has a comprehensive set of solutions that can be tailored to your environment.

Verification based on old list-based systems – While data verification of the past was based on matching information against old, stale lists, this is no longer the case. Some systems today can reference databases that are updated daily or even check a user's email address in a matter of seconds by reaching out to the actual email. Don't fall victim to checking your customer data against a file that is months or years old. Check with your vendor to see how often their reference data is updated and understand what algorithms they use for validation.

Finding a complete solution
The key to an effective data quality solution is a holistic, organization-wide implementation that covers multiple data quality capabilities. There are certain key areas to evaluate when choosing tools and services to fit your individual needs:

Data quality capabilities
As detailed above, there are a number of different data quality capabilities available on the market today. It is crucial that capabilities are selected that can provide reliable, accessible and accurate information. Based on the capabilities you have outlined in your desired solution, you should evaluate which organization demonstrates the strongest performance in those given areas.

Ideally, you will find one vendor that can meet the needs of each of these capabilities and that vendor will suggest a complete data quality solution based on your input. However, sometimes there may be a need to work with multiple vendors to implement the right overall solution.

Speed
Consumers today move faster than ever before and so should your data quality solutions. Data sets are used instantaneously for product shipment, email notifications and more. Consider a vendor's ability to rapidly capture, clean, enrich, manage, process and analyze information in a scalable, flexible environment.

While certain data management processes inherently take a little longer, like enriching large data files or profiling your entire database, others should move in a real-time fashion, such as cleansing, standardizing and enriching a single incoming customer record. Find a vendor that can work within your time frames to process simple files quickly and efficiently. Remember, the volume of data is constantly growing and what could be a million records today could easily be 10 million before you know it.

Accuracy
If a vendor's solution cannot provide accurate data, the quality of information is instantly compromised and potentially harmful for your business. It is important to remember that accuracy applies to all data quality capabilities, not just data cleansing.

For example, matching records to external files or finding duplicate records is a standard process for many businesses. While one given software solution may find more matches than another, it is not necessarily better. If the algorithm for matching does not produce quality matches, the time spent waiting on software to process files could easily be wasted by forcing a manual review of too many records.

When it comes to data quality,
it isn't just about the quantity,
it's about the quality.

Be sure that your data quality provider has algorithms that fit your organization, offers solutions that check details in real time and leverages a reliable and complete data source for enrichment that can be trusted and produce improved consumer intelligence.

Scalability

As the number of data sources and data elements continues to grow, it is imperative that the data quality tools and services you select possess the ability to scale easily and rapidly to accommodate those changes.

Data quality vendors that can address multiple capabilities across a broad scale can easily grow with your business and the changing nature of your data. This allows you to simply add and configure additional services within your existing structure without making unnecessary and potentially costly changes to your core application. This is important because the longer you wait to make a change to data quality based on a given business need, the more likely you are to experience a loss in intelligence and ultimately revenue.

Application flexibility

Data environments come in many shapes and sizes, from the latest software-as-a-service (SaaS) infrastructure to a mainframe system that hasn't been updated in years. No matter the existing infrastructure, data quality remains equally important.

Find a data quality vendor that can work in any application. This is critical for your existing infrastructure, but also for changes you may make in the future. Technology is constantly evolving and many organizations are struggling to keep up. Find a long-term data quality partner that can consult with you and adjust to fit any environment you may desire.

SaaS versus on premise

Many organizations are moving to SaaS solutions to ease burdens on technical updates, take advantage of more flexible pricing options and ensure they have the most up-to-date products available. Today, over half of companies are using SaaS to manage data quality. Only nine percent of organizations have no plans to implement SaaS solutions for data quality.

While traditional data quality tools have been housed on premise, more are moving to the cloud. It is important to find a vendor that can accommodate both technical deployments. This will enable you to keep the same solution consistent across your organization and allow you to prepare for future updates to the cloud.

Security

The security of customer data has never been more important. Consumers expect the organizations they do business with to respect their privacy and to safeguard their personal information, which means organizations in turn lean heavily on their vendors to extend those same safeguards to their own solutions.

The vendor should follow Organization of Standardization (ISO) 27001, which provides a model for establishing, implementing, operating, monitoring, reviewing, maintaining and improving an information security management system.

At a minimum, ensure the data quality solutions you choose provide:

Data integrity

- All client data is uploaded over secure FTP/FTP over SSL, and that SSL encryption is used for any data upload via the application interface.
- The vendor uses a shared environment and all client data is logically separated.

Security assessments

- Applications must undergo security assessments. These assessments should include static testing (testing of the code itself), dynamic testing (application subjected to automated exploit attempts) and manual testing (person acts as a hacker to ensure the application is not subject to intrusion/abuse).

Global scalability

The business environment is only getting smaller, with organizations operating across more regions than ever before. If you are a multinational organization, find a data quality vendor that can work with you in any environment, anywhere. With data used for more than just basic business operations, it is important that a global organization performs analytics on a global database to understand their customers and influence strategic business decisions.

Many data quality vendors promote their tools as global in reach and scope, but more often than not, their localization capabilities are limited.

Businesses with an international presence or who operate in multiple countries should consider:

- Is it a single, global data quality solution set that can be accessed and shared by global teams?
- What are the vendor's localization capabilities?
- Are there local support teams?
- Does the vendor have local expertise or insight into the markets in which it operates?

Ensuring return on investment

With today's organizations required to do more with the same budgets and resources, or even sometimes less, ensuring you have the right software and services that will support you today, as well as plan for tomorrow, is imperative.

Although it is important to select a vendor that has the services, infrastructure and features necessary to perform effective data quality management, for most organizations, what ultimately determines success is return on investment. As such, pricing will always factor into any purchase decision.

However, with many different pricing models offered by various vendors, it can sometimes be hard to determine which models best support the organization's current needs and sophistication as well as align to future growth.

It is important that a vendor work with you to ensure a return on investment is achieved through benchmarks and data insights. Without that assistance, data quality solutions can be viewed as cost centers rather than essential business tools.

It is difficult to calculate a return on investment for data quality because the benefits will be unique to each business and organization. However, there are several key areas an organization should measure: revenue growth, improvement to the customer experience and reduction in costs.

The best way to measure return on investment is to start with a single project. Then, engage in the following steps:

- Define the data quality metrics that relate to the project
- Document baseline metrics prior to implementation
- Define the period of time for testing
- Calculate the improvements made to each metric and the baseline impact on the business
- Share and validate your success metrics with relevant stakeholders

While metrics will be different for each organization, here are a few to consider:

- Number of duplicate records
- Number of records with invalid or blank fields
- Total amount of returned mail or packages
- Number of bounced email records or sender reputation issues
- Number of records changed in a batch run
- Number of enrolled clients with complete contact information
- Number of customer service calls for data quality reasons
- Drop in call handle time
- Number of personalized offers accepted
- Top must-ask questions for data quality vendors

Knowing the right questions to ask potential vendors can be extremely helpful in narrowing down the field to only the vendors who can truly support your organization. To guide you, here are 17 key questions that every data quality stakeholder should pose to potential vendors:

Conclusion

Data quality software and services have a dramatic impact on an organization's ability to understand and serve their consumer. No matter the industry, data is playing an increasingly important role in strategic initiatives.

Finding the right data quality vendor is crucial to the success of using data. The tools they implement can make a dramatic difference in your ability to access and trust data. The wrong solutions could waste valuable resources and set you back further from achieving your data quality goals.

Be sure to find a vendor that is a strategic fit for your organization, has tools that users across the business can understand and provides a complete solution for your needs today and tomorrow. These are essential to finding a long-term partner that can evolve your solution over time.

We've managed to improve our customer data, reduce costs, and provide a better customer experience — all while staying way ahead of the ROI.

– Steve Tryon, SVP of Logistics, Overstock.com

Top must-ask questions for data quality vendors

Knowing the right questions to ask potential vendors can be extremely helpful in narrowing down the field to only the vendors who can truly support your organization. To guide you, here are 17 key questions that every data quality stakeholder should pose to potential vendors:

QUESTION 1 — What data quality capabilities can you execute in real time?

There are a variety of data quality options available to suit specific business needs. Information is collected and consumed at such a fast pace that it is important that data quality capabilities be implemented to validate, enrich or standardize information as soon as it is collected.

Look for vendors that can supply at least a portion of your data quality tools in real time at the point of capture. This will ensure only accurate information is collected and that data can be leveraged quickly.

QUESTION 2 — What is your company's history in data quality solutions?

As the volume, velocity and variety of data continues to grow, data management history and innovation will become more important.

Look for a vendor with extensive experience in data management solutions. Without a true historical commitment to the complexities of data management, inexperienced vendors may fall short of meeting today's data quality challenges.

QUESTION 3 — What is the long-term strategy for your data quality products?

It's important to understand if the vendor has plans to extend the functionality of their solutions to meet your technology goals. Ensure that the vendor is continuing to innovate and improve functionality.

Look for a vendor that is willing to share their product roadmap and explain which solutions they are prioritizing for improvement. To be useful. roadmap discussions should cover the next several years.

QUESTION 4

What are your support hours, response times and escalation procedures?

Support for data quality tools is an important part of selecting a solution. If and when a problem does arise with your solution, you want to be able to speak with a vendor quickly, without being put out of protection.

Vendors should respond with support hours and service-level agreements. You should ask for a detailed response for escalation procedures to see if the vendor can provide you with the best service possible.

QUESTION 5

What is the source of your data?

For any data enrichment project, it is important to know the source of your data. Your organization will make strategic decisions based on data; therefore, it's very important that data remains trustworthy and accurate.

Look for a vendor that can provide information about data sources. It's also important that the vendor receives information from multiple sources to cross reference information. This will ensure the most accurate information is used to enrich customer files.

QUESTION 6

How often is data updated?

Data update timeframes are as important as the sources of information. You do not want old information being used for a reference file or data enrichment solution. It is important that information be kept up to date or algorithms be incorporated to avoid reference data for certain data assets.

Look for vendors that can provide a schedule for data updates or can demonstrate how often enrichment data is checked. If you are able to implement cloud solutions, data should be kept up to date at all times.

QUESTION 7 — How do you prevent human error?

Human error is the leading cause of data quality errors and helps contribute to the belief that in the average database, a quarter of the data is inaccurate. If the vendor cannot prevent bad data from entering your system, poor quality information will inevitably propagate into business processes.

Find a vendor who can help maintain your data over time, but also prevent human error. Expect a detailed response around what solutions help prevent human error and check information to see if poor data has entered the system.

QUESTION 8 — How will my account be managed?

When reviewing a data management vendor, you want to be sure you have a partner that can help evolve your solution over time. This will allow you to keep up with changes in data quality technology and innovate your organization's policies as needs change.

Find a vendor that will assign you an account manager that you can contact with questions or to review your account on an annual basis to discuss changes that need to be made to the technology.

QUESTION 9 — How do your solutions maintain performance and scale?

While you may only have a small volume of data today, your business will hopefully grow and consumer behavior will certainly change. A large volume of data could need to be processed before you know it. While understanding how solutions perform against accuracy and speed for your data needs today is important, knowing how that performance is maintained with increased volumes and how data quality solutions can scale across a larger sized organization can be even more so.

Talk to vendors about the volume of data you have today as well as volumes that are even triple the size. Look for vendors that can handle your size company today with specific data quality solutions, but can also describe how to scale those solutions to larger enterprise businesses.

QUESTION 10

Describe the strategic consulting services you offer.

Strategic consulting services are very important in the data quality space as the evolution of data continues to change and organizations look at new ways to gain insight. By leveraging the expertise of professionals versed in data quality solutions, organizations can implement tools to solve the root of data quality problems, rather than just basic needs for a particular data element.

Look for vendors with experience in data quality consulting. They should be able to help you tactically and have expertise in developing a customized data quality solution that allows you to improve your ranking in the data quality sophistication curve.

QUESTION 11

Describe your company and product's global presence and support.

As brands expand globally, they can capitalize on efficiencies and simplify operations by using a single global data quality vendor.

Look for a vendor with a strong history of global presence and local expertise. Ensure the tools have localization features.

QUESTION 12

Can you assist in providing a return on investment?

Showing a return on investment is essential to demonstrating value in data quality solutions, but also the data asset itself. Today, 79 percent of companies say they achieve a return on investment from data quality tools, but not all measure that on an annual basis.

Look for a vendor that can help you demonstrate a return on investment for their solution. They should suggest metrics to calculate before and after implementation based on your business needs. In addition, look for reporting tools if you are leveraging a self-service environment.

QUESTION 13 — What sort of APIs or standalone products do you provide?

Usually, by the time most companies start looking for a data quality solution, they are already experiencing the negative impacts of poor data quality. Therefore, you want to find a vendor that can implement technology easily to ensure it is providing value as quickly as possible.

Look for a vendor that has APIs or easy-to-integrate products that you can test in your environment. Find out how long it typically takes to integrate a client and how long it may take given any customizations you are making. While these timelines will vary by capability and implementation, you want to be sure the vendor can work within given business timelines.

QUESTION 14 — What is your partner strategy?

Data quality solutions need to fit your individual environment. Therefore it is important to know if the vendor partners with system integrators or builds their own integrations/product capabilities.

If you are working with a system integrator already, speak with them about the data quality solutions you are considering. Also, find out what integrators the vendor has already worked with or whether they can provide you with custom-built integrations that fit your business environment for any customizations.

QUESTION 15 — Do you have pre-built integrations for key enterprise applications?

There are a number of common systems that businesses use to house data, including SAP, Oracle, and Salesforce.

Look for a vendor that integrates solutions into these core platforms. You want a vendor that has good relationships with existing suppliers to ensure the implementation is as easy as possible.

QUESTION 16 — Are your products based in the cloud or on premise?

An increasing number of companies are moving data quality solutions to the cloud. In fact, 96 percent of companies have implemented SaaS data quality tools.

Even if you are looking at an on-premise solution today based on business needs, look for a vendor that has cloud-based tools. This allows you to implement solutions that can plan for the future and alleviate time-consuming upgrades and updates.

QUESTION 17 — What type of security and privacy practices are in place?

When purchasing software, platform security should be high on your organization's agenda. It is important to be confident that the solution will perform to the expected level but also that the solution is safe and secure.

Look for a vendor that has Organization of Standardization (ISO) 27001, which provides a model for establishing, implementing, operating, monitoring, reviewing, maintaining and improving an information security management system. Make sure the security is a core part of how they operate.