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Advancing the craft of technology leadership

Tackling Data Chaos: 4 Steps to Confident Decision Making

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Introduction

How do you know that you're making the best business decisions?
How can you decide with confidence?

These are questions that business users might regularly ask themselves. They can be tough to answer, because it all comes down to trust: a sense that you have all the information you need to make a decision, and that your data sources are reliable. And to complicate matters, as a decision maker the accuracy of data reflects on you — and your credibility.

When you know your data is trustworthy, you can be confident that you're making decisions based on all the facts

Trust in data is foundational to data-driven decision making. It comes from knowing that the information you have is accurate and complete. When you know your data is trustworthy, you can be confident that you're making decisions based on all the facts — decisions that move the company and your career forward.

Unfortunately, it doesn't always happen this way. Too often, there are questions and a degree of data chaos. Chaos because the numbers don't match up. Chaos because the data in one desktop visualization or spreadsheet is different from another. Chaos because different formulas are being used and no one agrees on the definition for the same data element.

Collectively, this leads to the company not having a unified view of what's available. Suspicions are raised about the reliability of data. This CITO Research white paper looks at the impact of data chaos and what it takes to put confidence back into your data — and your decisions.

Data Debates and Finger Pointing

Too often, business people don't have confidence in their data or their colleagues' data, so they spend valuable time debating the accuracy of information instead of making decisions. If everyone is arguing over numbers, the company isn't progressing, and both you and the company risk losing credibility if decisions are based on questionable information.



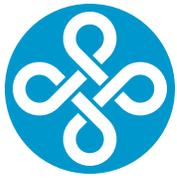
Reliable Data, Confident Decisions

Having reliable data and deciding confidently based on that data help the company achieve its business goals. Not only does confidence in data enable you to work more efficiently, but it also leads to more time for innovation based on the insights gathered from the data. This can ultimately give the company — and you, as an employee — a competitive advantage.



Challenges to Confident Decision Making

But, several obstacles get in the way of confident decision making. These challenges come from the data. Here are six of those data obstacles.



1 Data silos. Oftentimes, companies refer to their data as a homogenous mass entity, but that couldn't be further from the truth. At most organizations, data is not a well-coordinated, holistic resource across the company. Companies have a variety of systems, each of which has grown up over a different period of time with a different group of people and a different technology.

6 contributors to data chaos

- ① Data silos
- ② Unclear or mismatched definitions
- ③ Inconsistent formulas
- ④ Incomplete information
- ⑤ Outdated data
- ⑥ Ungoverned data analysis

2 Unclear or mismatched definitions. The bigger problem, however, is the lack of consistency between data silos. Value comes from making interesting connections between data sources to create a complete and cohesive story about what's occurring within and across the company. But to do that, there must be consistency between the data, including how data elements are defined.

For instance, the term "customer" can be defined in multiple ways. Are gift card recipients customers or is the customer the purchaser of the gift card? Are all customers of equal value or are some more profitable than others? How are different customers being labeled? This example alone demonstrates the necessity of a shared vocabulary across the business. When you don't have a consistent understanding and definition of how the business is run, issues arise.

3 Inconsistent formulas. It gets messier with calculated metrics. When you're taking multiple inputs and performing a calculation to come up with a result, you must understand what those inputs are, whether they are being used consistently, and what calculation to use. You cannot have confidence in the solution if the entire company doesn't have a shared understanding of the factors that contribute to it. It's problematic when, for example, one business unit calculates profit margins in one way and another comes to a conclusion in another way. The shared vocabulary must extend to shared definitions of how metrics are derived.

4 Incomplete information. You may question whether you have access to all the relevant data sources from across the company for your analysis. For example, do you have all the data from the CRM system, the marketing system, the ERP system, and point of sales systems? If you're looking at total sales, does it include all regions and all sales outlets? Does it include distributors, online sales, and brick-and-mortar stores?



5 Outdated data. You also need to know that data is fresh. If you're a sales manager looking at the marketing pipeline, it is important to know the age of the data. Is it a day, a week, a month, or a quarter old? And, of course you want the data to be trusted by others in the company, so you want to be sure that the data is official.

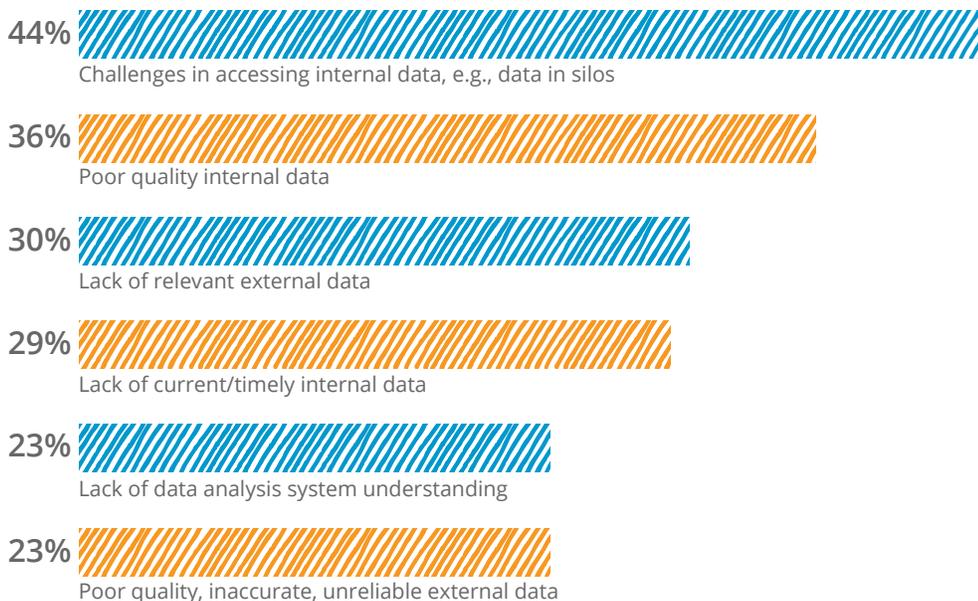
6 Ungoverned data analysis. The challenges don't end there. Many people will get access to data, make a copy, and go off and perform their own analysis. These individual analyses can introduce errors. On the other hand, if a business person corrects errors in the data, the corrections are only applied locally and aren't carried back to source systems. The result is additional inconsistency and even more individualized analyses.

Siloed analysis in Excel and desktop visualization tools also hinder confidence in data because they allow alterations in numbers, definitions, and calculations. Users can alter the name of a field, change how data is aggregated, or include custom aggregations. Two users can create visualizations from the same underlying data and tell two completely different stories. What's more, they can bend the visualization to support their own version of the truth. The result is the same: you go back to debating the data — where it came from, what happened to it — instead of determining the best way to act based on that data.

In fact, a survey conducted by Harvard Business Review Analytic Services revealed common sources of data debates. Forty-four percent of the 374 business and organizational leaders surveyed said their main obstacle was having their data in silos.

Obstacles to Decision Making

Which of the following are the most significant data-related impediments to your current ability to confidently make important business decisions?

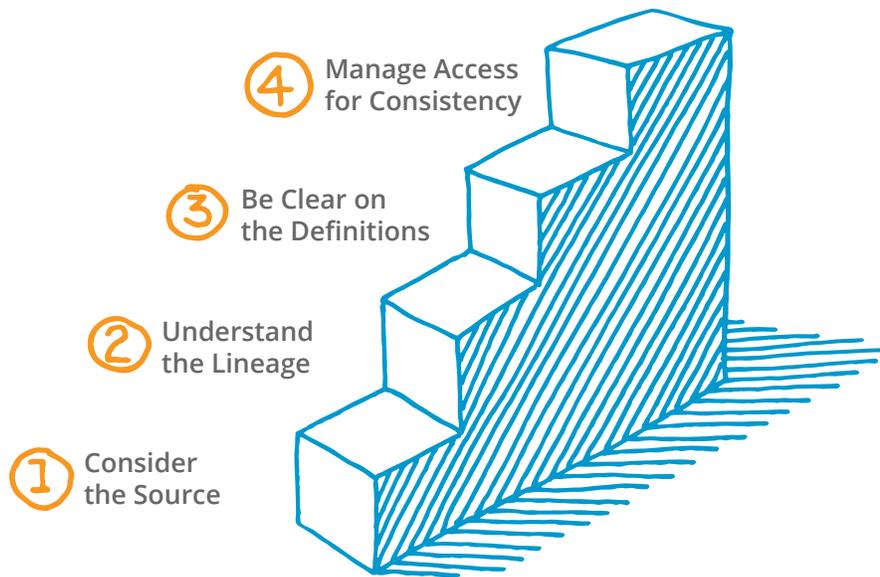


Source: "Learning from the New Breed of Confident Decision-Makers," Harvard Business Review Analytic Services, 2014, p. 8.



4 Steps to Confident Decision Making

Here are four steps you can take to reduce unreliable data and increase its trustworthiness.



① Consider the Source

First, find out about the data's source. You need to know that it is has been authorized as the official source. You also need to consider the timeliness of the data. Do you have the latest and greatest version? And, you need to ensure that you have access to all the relevant data sources, enabling you to see the whole story. This requires a system that can integrate data from across the company. Ideally, it should also let you include external data sources (e.g., weather data, demographics, interest rates) to give you context on how external factors impact your business and to support new insights.

② Understand the Lineage

The second factor to consider is data lineage. This means knowing how "clean" the data is and what, if anything, happened to it along the way. If missing values were added, you need to understand this. For example, if currency was converted, what exchange rate was used? Is it still current?



3 Be Clear on the Definitions

What do the numbers mean? The company must have standard definitions for various types of data elements (e.g., customer, lead, employee type) and associated metrics, and their usage must be consistent across the organization. This will help you avoid making a decision based on a definition of, say, profit margin, that might be different from how somebody else within the company has defined or calculated that metric. Centralized and managed systems where data elements and formulas are defined in one place and applied across all analytics drive consistency and increase confidence.

4 Manage Access for Consistency

Finally, the fourth factor is managed access. The analysis system should have access controls in place that allow people to apply their various skillsets to the same problem while protecting data from unauthorized use.

For example, an IT person who understands how to work with data and backend systems can expose views of datasets for business users. When these datasets are exposed, other business people who know their way around data but don't understand the backend systems can pick up those modules and bring them together in interesting ways for analysis. Another business person can expand on that analysis by adding a new visualization or deriving an element. Finally, those who are interested in simply slicing and dicing data to get answers can do so via a dashboard. Everybody can contribute and collaborate in a managed and protected environment. The optimal solution balances managed access with self service.

Confident Decisions Transform Your Business

You no longer spend your days running in circles tracking down numbers or sitting in conference rooms, arguing the merits of your data versus someone else's. Instead of getting mired in data debates, you spend your time doing work that's valuable to the company. Rather than asking questions about data lineage or data quality, you can ask questions about the business problem and possible solutions. The result is better decision making — and better business outcomes.

When business units share the same language, you can create a holistic view of the company. If everyone agrees on a common set of definitions, everyone can easily access data that is well understood, and everyone knows how to connect the data. You can then apply all of your energy, creativity, and specialized knowledge to focus on the business rather than "data housekeeping."

Finally, you can rest assured that everyone is basing decisions on the same, accurate information. This being the case, decisions made throughout the company can be optimized and ultimately lead to success for you and the company.

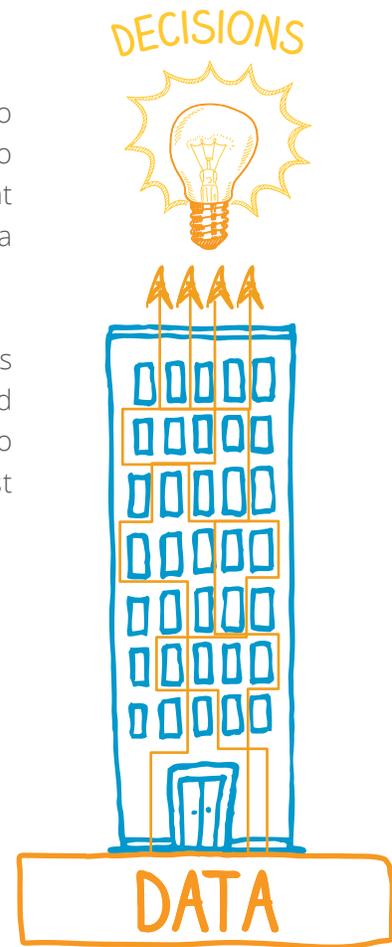


Conclusion

Future business success depends on a company's ability to become a data-driven organization in which analytics are tied to decision making throughout the organization. To make confident decisions, you need to be sure that the foundation — your data — is rock solid and originates from a single source of truth.

CITO Research believes you can't make data-driven decisions without confidence in your data. Qlik® is a thought leader and trusted partner in this space, and its products are designed to promote governance and self service, ensuring you can trust your data and make decisions with confidence.

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