Data Strategy & Insights

Regardless of industry, every organization creates a vast amount of data each day. Data can reveal your successes and opportunities, allowing your organization to optimize plans for the future. However, this is only possible when your organization effectively maintains and manages your data. Learn how to overhaul your data management, including locating your data, examining your data pipeline, standardizing your process, and garnering valuable insights.

Data Management: What's Ideal?

The Data Management process describes how your organization finds, shares, and interprets your metrics. Most modern organizations generate large amounts of data each day. Employee performance, production capacity, sales numbers, social media outcomes, market trends, and many other pieces of information can paint a picture of your performance. It's vital to capture data in the following steps to gain a clear and accurate understanding of your organization.

1. Locating Your Data

Your organization likely has data from a range of sources. Depending on your industry, you may work with POS systems, inventory monitoring, audit results, payroll, employee metrics, website visits, and a variety of other data points. The first step in managing your data is the identify all its sources.

2. Examining Your Current Data Pipeline

A "data pipeline" is the path your data takes as it spreads throughout your organization. Consider how information is shared between teams, departments, facilities, and other silos. Ideally, your data pipeline standardizes and streamlines the flow of information.

3. Creating or Upgrading Your Pipeline

Any organization can improve its data communication. Whether you need to build your data pipeline from scratch, or simply desire an optimized strategy, there are several options to improve your internal communications.

4. Garnering Insights

Interpreting your data to garner insights is a separate process from daily data management. This vital task can generate a surprising amount of ROI after your organization invests in robust data management.

Locating Your Data

Finding your organization's data sources lays the foundation for your data management strategy. Every organization already has data. The challenge in this step of data management can be identifying how much data you have and where it is currently stored.

If your data is currently unstructured or is kept in a variety of mismatched repositories,

you have a "data lake." As a lake is fed by a variety of streams, your data lake is made up of several different data sources. In these scenarios, your data may use non-compatible formats, excessively large file sizes, and incorrect metrics. A data analyst can offer insights on your performance by taking samples of your data lake, but most non-specialists will struggle to make sense of the data.

The long-term goal of a data management plan is to store all data in a "data warehouse," or a searchable SQL database that uses a standardized format. This reduces the amount of "dirty data" you need to sift through. Dirty data describes flawed data points that are a poor reflection of your actual performance. This data may be inconsistent, incomplete, or inaccurate. Dirty data is often created through human error such as misspellings, punctuation errors, duplicates, or metrics entered in the wrong field. However, dirty data can also be caused by malfunctioning hardware or software.

Key Takeaways
- Your organization sources data from multiple systems, leading to unstructured data that's hard to analyze.
- Data lakes are full of information but are difficult to study.
- Data warehouses are your ideal solution for storing data in a structured, searchable method.

Examining Your Current Data Pipeline
The data pipeline is the path information takes throughout your organization. When different departments, divisions, or teams need to share information, the data pipeline describes the standardized path that data follows. Begin by examining the current method through which your organization shares internal information.

If your data pipeline sprang up organically, without a clear guiding plan, you may find a variety of different communication methods are in place. From informal word-of-mouth and instant messaging, to a more structured knowledge base or shared portal system, simply begin by studying your current pipeline. You should seek feedback from the members of your team who currently use your pipeline. If you see that staff is learning incorrect data, unable to answer their questions, or don't know how to use what they find, your organization is prime for a new solution.

Creating Or Upgrading Your Pipeline
When you find problems with your current pipeline or discover you need to start a system from the ground up, you should first consider your goals. Identify why your team needs data. For example, perhaps your Customer Service team regularly fields calls about a specific product problem. These calls are taking a disproportionate amount of time and resources because the Customer Service representatives need to find the client identification, then contact the development team regarding each case. This scenario misuses your internal resources while also causing frustration among your clients.

A data pipeline could streamline these calls in a variety of ways. When your current customers call support, the client information tied to their phone number can automatically display for the Customer Service team. The client phone number is already stored in your organization's data. By leveraging this single data point, you can optimize the Customer Service experience for both clients and staff.

In this scenario, the why clearly justifies an upgrade to your data pipeline. You can state the why as: "We need to improve our customer retention and make life easier on our support team by giving them instant access to data required for a more successful call." Your organization may have multiple whys, so give your motivations some careful thought.

Once you establish the why, you can determine the how. Consider the data you already have access to, as well as how this data needs to be used. Look at what teams require which data points, when they need the data, and the specific details of their requirements. You'll find that not every team needs the same level of information.

After determining the necessary data access, you can build a "roadmap" of your goals, including the KPIs you'll use when quantifying success.

Need Help? Data Assessments & Evaluations

It's common to encounter obstacles when establishing a new data pipeline for your organization. Data management is a specialized field that typically requires a high level of education to master. It's also a challenge to take an objective, high-level look at your own organization. Yet an expert understanding of data principles and a fresh perspective are necessary for creating a functional data pipeline.

DAS Analytics offers expert data management services thanks to our robust experience in working with a range of diverse organizational structures and pipelines. Our process includes the following steps:

- Uncover the "why" of your organization
- Discover your necessary data and assess its current structure
- Examine your data management processes as they stand
- Build a "Data Roadmap" to bridge the gap between where you are and where you want to be
- Develop best practices for each process throughout your organization
- Iterate until success!

Our data management expertise covers more than just establishing an effective process. We also assist you with one of the most valuable aspects of data management: garnering insights from your data.

Garnering Insights

After your data management system is effectively up and running, you can explore the world of data analytics. Your organization's data can generate surprising insights and impressive ROI through the use of machine learning, AI, algorithms, and more.

What's The Problem?

When your organization faces a problem, data analytics can produce insights that drive ROI. Here are some common problems that can be examined through the data.

- "Why do we lose so many customers at the 2-month mark?"
- "Our drivers complain that their routes are inefficient and full of unnecessary stops. How do we improve route planning?
- "How can we forecast which customers are most likely to repurchase?"

Such questions allow you to dive into data with a purpose, viewing your data through the correct lens to drive results.

Finding A Solution

Data scientists and analysts are specialists who can identify solutions for your organizations. Our data analysis experts can create models and leverage algorithms to uncover the answers you need. Today's data scientists also make use of machine learning software and AI, solving problems through the power of automation.

Depending on your particular needs, we may uncover the answers to your questions through basic data analysis, complex algorithms, or modern machine learning solutions, but every situation is complex. It's important to work with a data analysis team such as DAS that offers experience and expertise. This is your best strategy to discover the "closest version of the truth" that your data offers.

Wrapping Up

A successful data management strategy is a foundational part of any organization. Proper data management encourages the open flow of information among your team, uncovers hidden opportunities, and reveals insights to solve problems that can be improved with more robust information.

Your organization can greatly benefit from DAS's expert assistance. We can help you with everything from a basic data management framework, to the cutting edge of garnering insights through analysis and machine learning. Get in touch today to discuss your challenges, needs, and the potential solutions that will find treasure in your stored information.

SOURCES USED:

https://docs.google.com/document/d/1fEa1vw9tWt9dtRpV3NkyxMvNPTNIYTeeMuRm0qpRvaA/edit