

3 OPTIONS FOR USING TECHNOLOGY TO ADDRESS EVERYDAY CHALLENGES

to Business Intelligence and Reporting in Your Warehouse.

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INTRODUCTION

All distribution operations require accurate reporting to ensure the proper metrics are monitored for optimal efficiency. In an ideal world, an organization has access to clean data that empowers them to make critical business decisions leading to their growth and success. But we are not in an ideal world. There are countless operations working under less-than-ideal circumstances.

In this white paper, we'll discuss options for a distribution operation that has adequate support for business processes from the current ERP and WMS, but that is severely limited in terms of Business Intelligence (BI) with regard to accurate and timely reporting. This is because their overall business landscape (ERP, WMS, and other systems) is made up of a combination of disparate, non-standard applications that are poorly interfaced (not integrated) with multiple and redundant databases.

When a company has a series of disparate systems, redundant databases, and an ill-supported IT infrastructure, inadequate reporting becomes a stubborn roadblock resulting in subpar overall performance. We'll lay out all the options available to address the issue, along with the rationale for why they are and are not recommended.



WHITE PAPER

BACKGROUND

When key data is held in various places, sometimes with duplicate data in multiple disparate places, there is no way to standardize data elements to ensure consistency. This results in knowledge workers not having accurate and consistent data, which means the business has to deal with a lack of reliable BI from which to monitor performance and make important business decisions.

There are a variety of options that could very well address the lack of visibility and reporting within an operation, all with their pros and cons. They are:



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OPTION 1 - REPLACE THE ENTIRE SYSTEM

By replacing the entire system an operation can ensure the new system has all the bells and whistles it needs to succeed. This approach could get everything into fewer databases but only if a single solution is selected that includes all of the necessary functionality. The benefits of replacing everything are:

- Improved integrations between various operating systems.
- Provides improvement in reporting by centralizing the myriad of reports currently originating from multiple disparate systems into one set of reports originating from the new system.
- Reduces system complexity.

However, there are some downsides to a complete system overhaul. For starters, this option is really only realistic for large-scale operations, like a Fortune 500 company. Because of the cost, smaller companies would still require the use of different systems with multiple redundant databases, defeating the purpose of the overhaul. Other drawbacks include:

- Due to the scale of such an undertaking, it would be very expensive.
- This is a broad-scope, high-risk initiative, which means it's prone to failure.
- It would take an exceedingly long time to realize the benefits.

Most importantly, a complete replacement doesn't immediately address reporting issues. Only once the system has been replaced entirely would it be possible to address the BI issue, which could take years.



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OPTION 2 - REPLACE PARTS OF THE BUSINESS APPLICATION ENVIRONMENT

A company may choose to change only parts of its business application environment to address specific needs. Doing so could mitigate the risk of failure, and may even shorten the time to benefit, huge pros, but it doesn't address the fundamental BI issue. In fact, there are many reasons why this option isn't recommended:

- High likelihood of resource constraints across most functional areas.
- A hybrid of new and legacy systems may make it difficult or impossible for the business to adapt seamlessly.
- Maintains an environment with multiple disparate systems and databases, which means anticipated improvements in reporting may be less than desired.

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OPTION 3 - PROPOSED SOLUTION KEEP LEGACY SYSTEMS AND AUGMENT WITH A DATA LAKE

Relative to the other solutions, this is quicker, less expensive, and presents far less risk. A data lake is a centralized database that allows you to store all your structured and unstructured data at any scale. Better yet, it allows for a phased implementation, which facilitates addressing the BI issues much faster than options 1 and 2.

Why this works:

- Directly addresses the most pressing issue, reporting, at minimal cost and disruption to the business.
- Provides initial results within a year.
- Doesn't rely on the need to change current systems or processes.
- Scales as the business grows and integrates with any new systems implemented or acquired going forward.
- All reporting will emanate from a single database.

The organization would see initial results within a year of implementation and would have additional time (depending on the amount of data to be ported over) to clean and bring in all the remaining data. Once all the data has been accounted for, all new data moving forward will automatically go where it's needed, emanating from one central location.



CONTINUED: WHY OPTION 3 IS BEST

This option is the best because it has the minimal risk of completion failure or negative impact on operations. The biggest risk is that of the internal staff not embracing the proper data structure and best practices recommended for implementation, which would result in poor overall system performance. This means extra attention will need to be given to training and ensuring all necessary staff members are well-informed on what needs to happen to maintain accuracy.

This option would demystify reporting for the end users by providing an easy-touse central repository of all necessary reports. A data lake provides consistent and accurate reporting by providing users with "a single source of the truth" rather than the current disparate reports from various data sources that do not tie in as they should.

This option provides more flexibility, but it's not a cure-all. Option 3 doesn't address any current issues with system performance, the cost to operate, or database issues. It also requires attentiveness. The company will need to determine governance rules that must be adhered to at all times, or else there will be duplicate data that will pollute the data lake, and prevent proper synching. With a properly functioning data lake, the organization will:

- Have a central repository of data.
- Create reports that are consistent regardless of who pulls them and when.
- Have the ability to do:
 - Dependable analysis on how business is performing.
 - Pull data out to forecast more accurately.
 - More accurate planning for both peak season and slow periods.



CONCLUSION

One thing is for certain, replacing the entire system is a high-risk and expensive undertaking, and not always the right choice. When it comes to the immediate need for better reporting in your warehouse, a smaller scale and lower-cost solution that addresses reporting issues is the recommended approach. That is why option 3, Keep Legacy Systems and Augment with a Data Lake is an excellent alternative. A data lake provides the needed reporting capability, in addition to ad-hoc user reporting, MS-Excel-based reports, live Excel reports, executive dashboards, etc. A data lake can provide consistent and accurate reporting by providing its users with "a single source of the truth" rather than multiple reports from various data sources.





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