Think back to the time when your company first implemented SAP’s ERP. That may have been many years ago (i.e. SAP R/3) or much more recent (ECC or Business Suite). Those were exciting times for a lot of people. Scores of consultants, project meetings, deadlines, various go-lives and, in the end, a functioning ERP system that would support your business for many decades to come.

Your business case probably included benefits such as; common business processes, a single source of the truth, and standardization. In some cases a return on investment (ROI) and payback period were built into the business case, but in many companies a discrete ROI was not calculated because having an ERP as a “critical enabler” was seen as a requirement for corporate growth. Now that the “dust has settled” from your implementation and your usage of SAP is reaching steady-state, you may be facing a series of challenges that are common to companies running SAP, across industries, continents, and SAP versions. Take a look and decide for yourself as we list some SAP and non-SAP related challenges.

**Transactions in - Easy! Content Out - not so Easy!**

Entering transactional data into SAP is easy (and very powerful). SAP has been designed for transactional processing and that is exactly what it is good at. The challenges arise when we have to extract information out of SAP in order to support reporting, dashboards, and operational analytics. In most cases, SAP is your “system of record” so let’s focus on the four reasons that make creating content from raw SAP data so difficult.

1. **Data Model Complexity**

Looking back at the days of SAP R/3, the system had a data model and internal data structures that were optimized for transactional efficiency. Cluster tables (BSEG and MSEG), internal indexes to other tables, highly normalized table structures, and large numbers of tables were just a few of the issues that, when combined, could make the task of creating a data model for reporting and analytics a significant technical challenge. Since R/3, SAP has added to the data model, but in most cases the tables have the same fundamental data structure. So regardless of the version you are running, you will need expert knowledge of SAP tables in order to answer even the most basic business questions. In fact, to answer a business question correctly, 5, 10, 25, even 50 or more SAP tables may need to be joined. Plus, joining the tables is only part of the challenge. Creating the logic to look through bills of material, batch splits, numerous date fields, multiple shipments for a single sales order, and much more, can be a daunting task.

2. **Configuration**

When your team implemented SAP, you configured it to embody the characteristics of your business. Your MRP controllers, lead times, planning strategies, replenishments triggers, and much more were built into your unique implementation. This activity was time consuming and expensive but necessary to make the system work properly for your business. Now, as you extract raw data out of SAP for reporting and analytics, applying the business logic that is in the configuration is incredibly difficult. Therefore, in most cases, the configuration is left behind. This means that you either rebuild the logic in the external reporting system (more time and money), or skip over it all together and risk inconsistencies when compared to your ERP data.
3. Data Volume

Even the smallest SAP implementations generate millions of transactions. Large multinational firms create hundreds of thousands of transactions a day. In fact, one large US manufacturer adds over 50,000 general ledger records every day. Extremely high data volumes stress the ability of the SAP ERP server to export data, even when delta triggers are used. To keep data volumes manageable, data is often aggregated before it is loaded into a reporting or BI system. Aggregated data does not help when you need very specific details, such as exact order numbers, materials or GL postings. Unfortunately, details are precisely what professionals in operations require.

4. Poor Data Quality

Data quality in SAP is a function of two components: Master Data and Transactional Data. Cleaning up master data is a common activity because master data is reasonably static. Transactional data is a rapidly moving target, therefore pinpointing errors is difficult. In fact, many companies have users dedicated to cleaning master data. Even so, keeping master data clean and accurate is a big challenge. Simple errors like having externally procured materials with a lead-time of zero days can really foul-up the results of your MRP calculations. Other master data challenges can be found in the various classification fields for customers, materials, and equipment because these typically have company specific business rules. Poor quality transactional data is often overlooked. These are typically old orders that are no longer relevant, but still active in the system. For example, open sales orders or purchase orders due more than a year ago, production orders that have not been “technically closed”, or fragments of orders remaining open due to partial receipts or deliveries. These can be very hard to find and their individual impact on business performance can be subtle. However, when they accumulate to thousands, even tens of thousands of errors, the impact can be significant, resulting in lost revenues, unneeded procurement, and unreliable MRP results.

If any of the four reasons above got you nodding your head in agreement, then you can sympathize with your colleagues in IT and your operational departments.

What to do?

If the points in this document make you think “that’s us”, “I agree”, or “nailed it!”, then think about this for a minute. Other companies that run SAP: big, small, and in between, have faced the exact same challenges as those covered in this paper. The difference? They solved the problem in one user friendly, cost effective, easy to implement and maintain, SAP certified solution.

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