



The four levels of data readiness

- Why the common practice of data migration is not good enough!

A BackOffice Associates, LLC White Paper

Most companies preparing for an SAP® implementation focus on BPR and configuration in their strategy planning and goal setting. Rarely are these companies given a meaningful explanation of their data readiness and what that means to the coming ERP system, nor do they understand why SAP recommends allocating 20-40% of the implementation budget to data migration. Like many others, your organization has decided to retire the currently running systems and enter the new era of enterprise resource planning, the question you (and many others) have most likely avoided is:

“Is Your Data Ready for your new SAP system?”

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Implementing an ERP solution can seem like an insurmountable task and leave even the most structured CEO, CFO and CIO with a feeling of trepidation. An ERP Implementation absorbs large amounts of company resources and becomes the focal point of corporate strategy in the short term, and the consequences of failing are enough to make any executive dread the decisions involved.

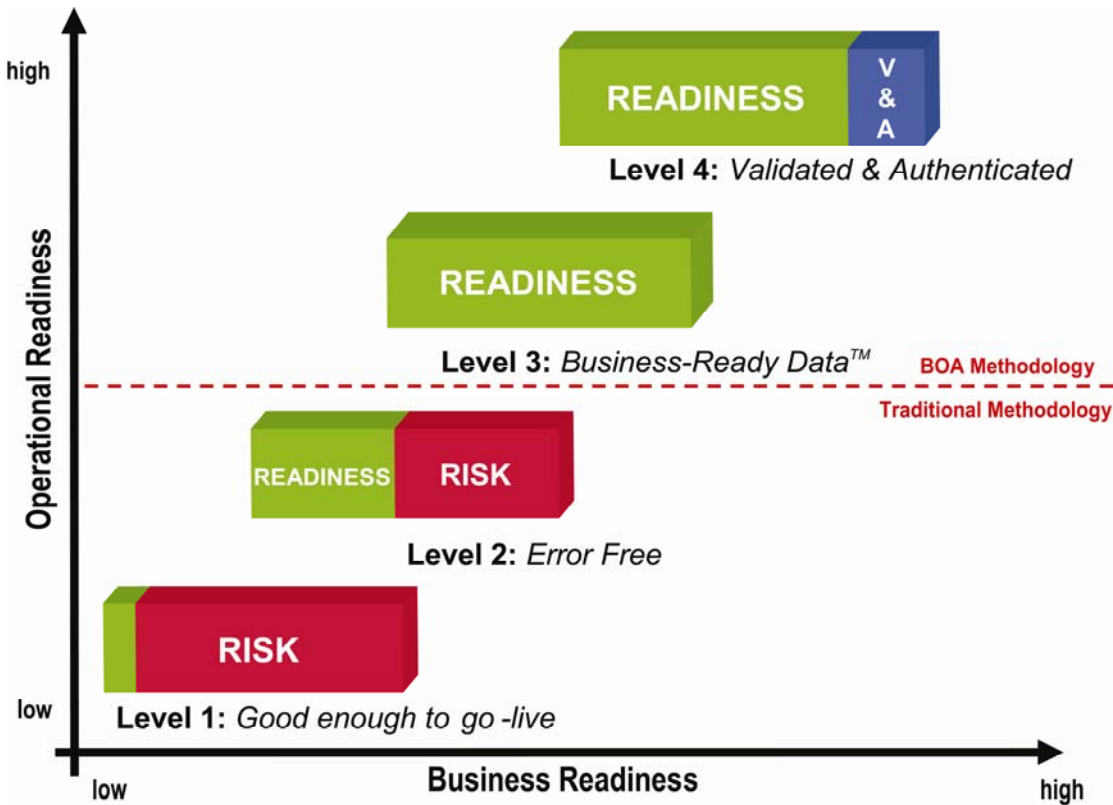
The common corporate understanding for the requirements of a new SAP® system excludes the challenges of data migration. In addition, the tool-set offered by implementation partners generally focuses on configuration and business process challenges rather than the challenges of migrating the thousands of critical business objects in a complete, clean, consistent and properly formatted way. However complicated the existing systems may seem, it's not the complexity that overwhelms implementation teams but that lack of an effective migration methodology.

While there are several ways to tackle the problem, frequently the end results of migration suffer from the compromises made in honoring rapidly emerging deadlines in addition to a lacking or insufficient strategy for handling the data in the first place.

Over time we have recognized four levels of data readiness with associated levels of risk and readiness, which emphasize the importance and consequences of data migration. These four levels are balanced between costs associated with the entire SAP® implementation and the associated risk of a negative impact on the business.

A light touch-up on the data, maintaining only its current state when migrating, may seem to offer a project cost savings but result in a high impact on the business as errors bubble to the surface at go-live or after.

The Four Levels of Data Readiness



1**Good enough
to go-live**

The first level of data readiness, which is often referred to as “*good enough to go-live*”, is the point where a company accepts an error rate simply to get the system up and running rather than risk further delays, frequently because the project has already extended far beyond the estimated dead-line or may face the dreaded costly delay postponing go-live. Most SAP® implementations face this critical point regarding data, and the business ramifications of that “acceptable” level of error are often unknown for some time. The problem is mainly that this process is common practice and most companies are never presented with alternatives other than accepting the “apparent status quo” of data chaos.

2**Error-Free**

Realizing that the bar can be raised because there is no reason to settle with an “acceptable” error rate and that data must be *error free* is the first step in moving towards the second level of data readiness. At this level, all data that is loaded into SAP solutions is accurate. One might wonder why error free is not the standard, but the reality is that many managers are forced to compromise their expectations through a project’s lifespan because of a flawed or absent data migration methodology that leaves them swinging in the wind as configuration and other problems dominate the planning focus of the implementation team.

3**Business-Ready
Data™ migration**

To most people it may seem that error free is the highest level of data readiness – what else is there to gain? Well, at level two you are only assured that the data that has been loaded is error free. Not that *all* business critical data has been loaded. So to make sure that no data is omitted it is necessary to climb one more step to have a Business-Ready Data™ migration. This means that the data as business objects is tracked through normal business procedures assuring that all necessary data is available and loaded error-free and will have zero negative impact on the daily business of the firm when executed on go-live.

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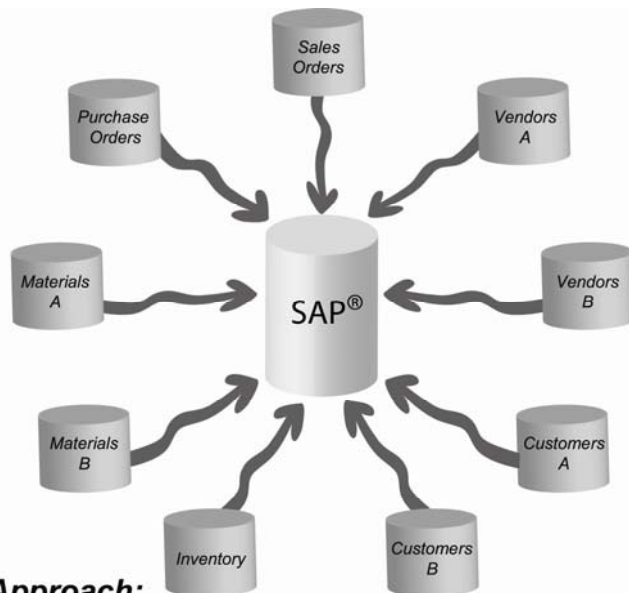
Validated

Throughout all levels of data readiness, data should be validated and traceable but for particular industries needing to adhere to legal restrictions, this final step of validation is a legal or moral necessity. As an example, a company dealing with life sciences not only needs to validate and trace the changes but an authentication of these changes must be recorded as well, so that responsibility can be determined as necessary to meet federal regulations.

The reason that we find it so important to communicate these four levels of data readiness is that most companies never reach beyond the first level of “good enough to go-live”. There is simply too little awareness to the fact that the world of data preparation stretches beyond this level.

Tactical but not Practical

The common practice of data migration is based on a methodology in which the new SAP® database system is considered the center of attention for all the current database systems as shown in the diagram below. Using a method that operates on a tactical and individual level, each database is loaded as an

**Tactical Approach:**

ABAP Data Channels are configured individually and with non-repeatable methods that assume data is clean and accurate upon loading. In addition, under traditional methods the full scope of the data is recognized only one time at Go-Live

misunderstanding of the end purpose for the new database system.

isolated task without respect to the activities simultaneously carried out in the other systems. This may seem like a logical approach that would ensure focus and hence more accuracy, but in our experience this subdivision results in a lack of overview and understanding of the accumulated pool of data as well as a de-emphasis and perhaps even

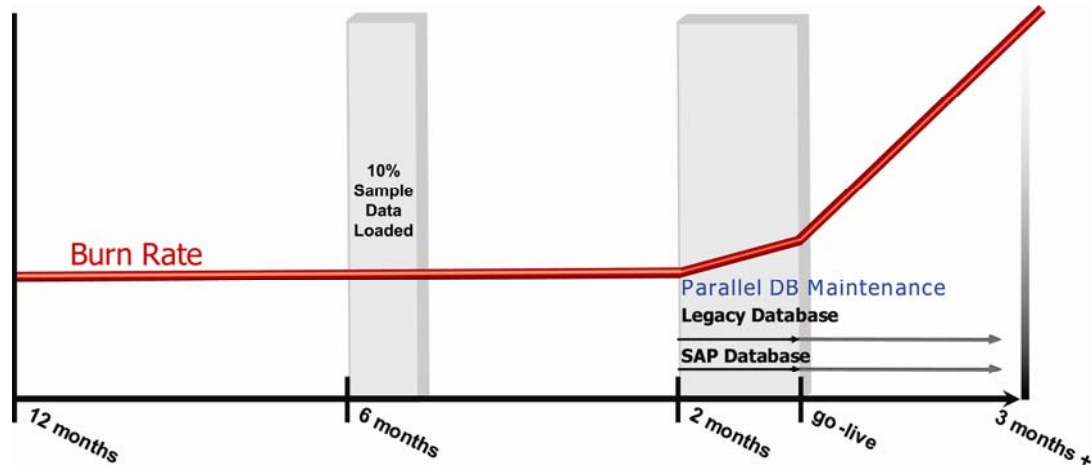
This tactical methodology is based on attacking individual parts of the problem in isolated groups, hoping that the accumulated effort will solve the task. What is not considered under this approach is the complexity of the system and the necessary interaction between the data in the pool of databases, which may overlap and coordinate on a daily basis. Each individual database may therefore be properly sorted for loading, although this does not ensure that the SAP® system will be duplicate-free or totally accurate when all the systems are joined creating confusion but leaving the potential for transactions carried out redundantly with a negative effect on the daily business and cash flow of the firm.

Furthermore, no qualified review of the actual data is carried out when business objects are loaded in this isolated manner, resulting in a transfer of data that may not have been used for several years and probably will not be used in the future. When handling systems in an isolated manner, it is not possible to forecast the connections, interactions or duplicates across the entire set of systems. Not only does this result in a waste of time but more importantly; the data is *not* equipped for Business-Ready Data™ migration.

Following common practice, a project may be launched up to six months before any data is loaded into SAP solutions to check for errors. During this period project costs are accumulated and at the point where any data is loaded this is only carried out using a sample of 10% (see diagram below). If a large error rate is discovered, actions may be taken but with less significant error rates, the project continues while these errors are sought out. What is not accounted for using this methodology is the sample representation.

Even in the case that no errors are found during the loading of the sample, there is no guarantee that the data represented in the 10% sample is truly indicative of all data in the database. Keeping the pool of business objects fragmented and loading the databases individually at different times further exacerbates this problem of getting a full overview of the problems among the business objects and how they will react in a true SAP environment.

Traditionally the only time the entire pool of databases is loaded into SAP® solutions is at go-live and the effort begins two months prior to the actual go-live date. As a result the company is required to begin parallel maintenance of all the legacy databases as well as the newly constructed SAP database,



increasing time and labor costs and the risks for errors while maintaining duplicates. Often a large portion of errors not accounted for when loading the samples is found during this period delaying the go-live date by a month or more and in the worst case declaring the entire implementation flawed. Rarely does the project fail because of time estimates that are too optimistic but because of the applied approach and methodology for solving the task of data migration. In the more merry cases where the go-live date is met, the result is often achieved at much higher costs than first budgeted. Many experienced CEO's will nod in compliance with the fact that the burn rate of the project shot up heavily around the go-live date in order to accommodate programmers working in 24-hour shifts to load data at a newly evolving benchmark for acceptable error.

Keep in mind that most businesses never get beyond the first level of data readiness and simply proceed to go-live with a level of error that may not match their original expectations for what is acceptable. The problem is that an acceptable error rate is a subjective measure that may even change over the project time line. During blue-printing most companies would set their aspirations to go-live without any errors but as the project progresses and time is running out, the majority of companies will have to ask of themselves: "What

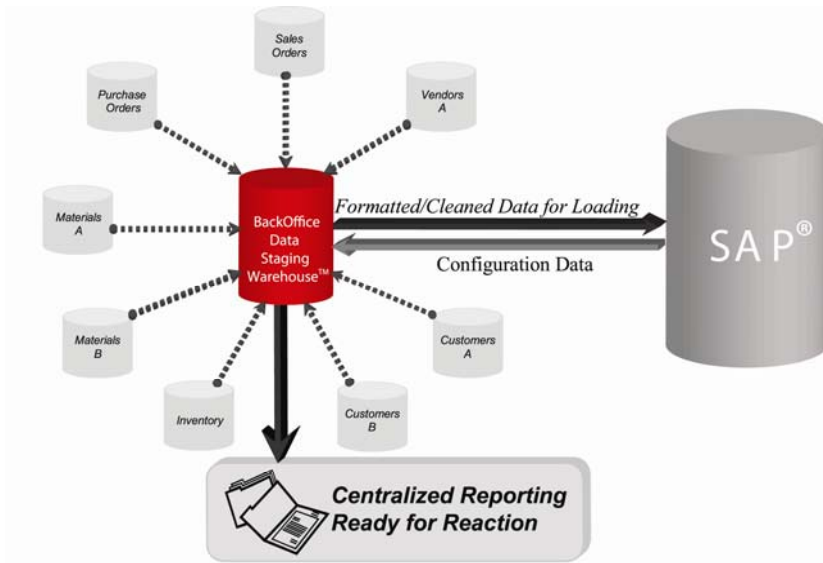
is an acceptable error rate?” Is it 1% or 6%? Or is it just a number small enough to make the post-go-live clean up *seem* less costly than the delay.

We don't find any of these answers satisfying. *To us there is no such thing as an acceptable error rate* – more than zero means that you have discovered a certain percentage of error but what the ramifications of that error can lead to is unknown. It could be that 3% of your customer addresses are missing, meaning that you will not be able to serve that part of your customer group – including your largest customer or that a component used across all product lines is not loaded into your new SAP® system, resulting in no processing of any production orders. So the initial error rate is no measure of the impact on your business – it is most likely showing only the tip of the iceberg you are headed straight into.

But what is the alternative??

The BackOffice Associates, LLC answer: Be *Strategic* about your Data

We don't believe that tactics alone can solve data migration problems. The only way to achieve a timely and successful data migration and SAP implementation is to approach the task with a *strategically global approach*. Isolating the current databases defies the logic behind joining the databases in the first place. There must be room left for the data complexity to be transferred, not only error free but also to a migration that result in Business-Ready Data™. The BackOffice Associates, LLC methodology is a holistic approach where only 100% representation of a sample is accepted. The way to achieve this is to load all data simultaneously and from the start. Under the traditional methodology, time spent interpreting samples is wasted and simply counts for a delay and is a severe shortening of the timeframe to find and eradicate errors.



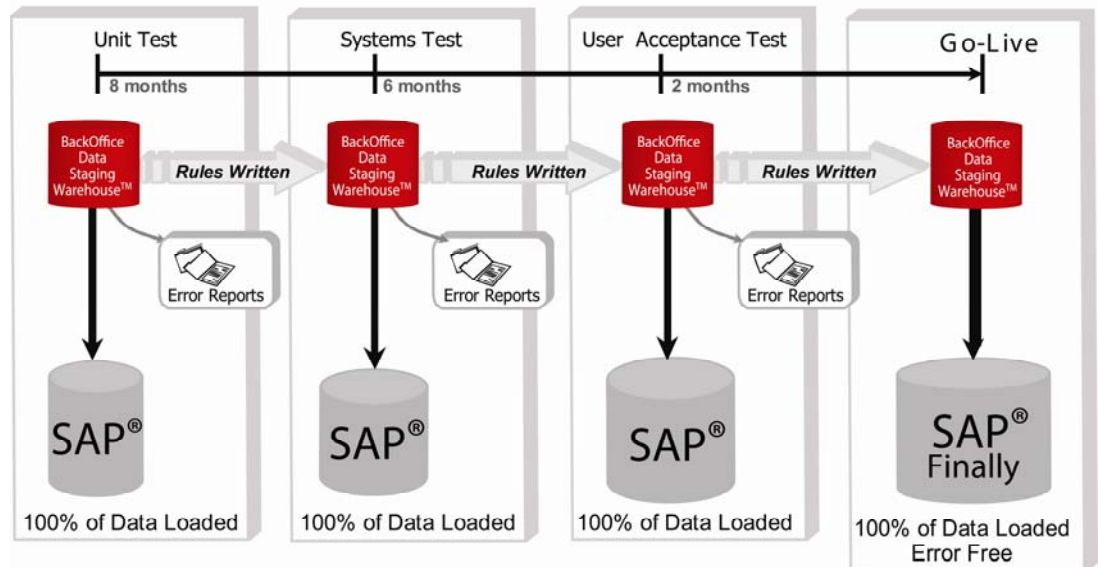
The BackOffice Associates, LLC approach is to extract all the current databases into a central repository and then report the entire data pool against SAP® solutions on a continuous basis and from the beginning. We are then able to flag the data that will not be accepted by SAP systems and have it corrected right away instead of post “go-live”. Besides

Strategic Approach:

Allows a holistic view of the business, data and processes by loading 100% of the data in raw form, which allows the data to speak for itself.

making data error-free, this strategy enables the search for omitted data since all databases are interacting.

The BackOffice Associates, LLC Methodology for Data Preparation in SAP®



Consider the example of an order being processed for a Make-to-Order green car. In the legacy system, the paint is a minor cost and is not allocated to each car built but instead considered a fixed cost. The request for the green color would be captured in the Sales Order; however a Production Order would not be released to the shop floor because there is no green paint in the

manufacturing Bill of Material (BOM). This is important to understand as SAP® solutions will not create a Production Order unless it recognizes all the component materials needed for the order. If a colorless car had been ordered everything would have gone through the system just fine but clearly not in line with the product offerings. Following common practice, the data would have been considered accurate, since all fields from the legacy database had been loaded successfully. However, it would clearly not have been a Business-Ready Data™ migration since no preliminary review of the BOMs has been done to assess data readiness.

Tools and methodologies that allow a complete evaluation of the entire pool of data enable reporting that is much more robust, because it's a very powerful thing for users and developers to see their *actual data* operating in SAP solutions. Ultimately this empowers the development environment to steer a much straighter course through the different phases of a project timeline. When the date for the actual go-live arises, the procedure has already been tested several times and in addition errors in both data and business process have been corrected along the way. No time has been wasted!

While we have proposed four levels of data readiness, it is important to understand that the level of validation and authentication is only a prerequisite for certain industries regulated by federal law namely those under FDA scrutiny. It is not a necessary step in the effort for a timely, error free and Business-Ready Data migration. Because our tools have been constructed with the requirements of validation engrained in their normal processes, we initiate validation as a natural part of our data processes through each level of data readiness. For businesses in these particular industries the legal validation and authentication is part of being business ready and for BackOffice Associates, LLC it is part of the basic methodology.

Conclusion

Compiling the tools and skills for a massive implementation process is a difficult procedure that results in many unique decisions for a firm that have to be answered based on the resources at hand and the strategic challenges ahead. Many firms will do only one implementation while others will do many. Regardless of the size of the firm or the number of times they have or will implement SAP® solutions, data migration is a segment of the process that can make or break the project with challenges that are difficult to predict by those who aren't specialists in this unique craft that blends an understanding of business process with programming expertise. Regardless of the effort at hand, all firms should focus on directing their data preparation on a parallel track of development that has the ultimate aim of achieving the performance potential of SAP solutions through developing a strategy for Business-Ready Data™ Migration with the data.

For more information

To more fully explore how BackOffice Associates, LLC can help your organization achieve a successful SAP implementation, visit:

www.boaweb.com

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About BackOffice Associates, LLC

With experts possessing as much as 25 years of experience in data migration for ERP implementations BackOffice Associates, LLC offers unparalleled expertise and performance through tried and tested methods and tools.

Our innovative method of data preparation has been utilized in both training and assisting SAP® customers since 1997. BackOffice Associates™ has provided better-than-expected go-live migrations by reducing risk through effectively cleansing, constructing and validating data for SAP. Our data validation technology provides a complete set of tools to handle every element of legacy migration to SAP in a fully validated and documented environment.

In addition to a comprehensive offering of migration tools, BackOffice Associates provides a complete proven methodology for migrating any number of legacy systems into your SAP system. We offer service options to complement your migration efforts from initial audit and blueprinting to coaching or total migration responsibility.

Our team of software developers works in concert with our seasoned industry consultants to bring about **real progress** in driving SAP implementations to an unqualified success.

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