



More Data, Less Cost
A Guide to Building Authoritative
Reports from Your ERP System

Mark Twain once famously quipped, “There are lies, damned lies, and ‘Your users will just write their own reports.’” At least he *would* have said that if he had ever purchased expensive software.

So many people buy enterprise software (such as Oracle, Lawson or SAP) on the promise that they will no longer be dependent on the IT Department or external consultants to get the reports they need to run their business. The sales guys make it look so easy— the tools don't look much harder than Excel, the charts are beautiful in the demos, the numbers perfect. But too often this turns out to be less than the whole picture. Sure, the tools are relatively easy to learn, but getting a tool to run and getting numbers that mean exactly what you want them to mean are two very different things.

Let's be clear – the point of this paper is NOT to convince you that you need consultants for every reporting task. We want our customers to be as independent as possible – that makes Red Three a cost-effective resource and leads to long-term client engagements. We'd rather be the trusted advisor than the one-time billing machine. If you want to build reports yourself, this paper will show you both the skills and the process required to create perfect reports. If it makes sense for you to engage an outside resource, this paper will help you identify the areas where Red Three might be most effective in helping you achieve your financial, operational and management reporting goals.

One thing that you'll notice conspicuously absent from this document is the discussion or endorsement of any particular tool or software system. No matter what any salesperson tells you, companies do NOT fail or succeed because they choose one piece of software over another. Yes, each tool has its pluses and minuses and its ardent supporters and detractors, but whether it's Oracle Discover, Crystal Reports, SQL Server Reporting Services, or any of the other software systems available, the actual tool doesn't affect the fundamentals of the procedure.

The process and skills that you'll require are enumerated in detail below, but before you dive in it's important to familiarize yourself with some basic tenets of building accurate reports. Since these principles are (or should be...) etched in stone, I have dubbed them:

The Four Commandments of Report Building

1) Begin at the End

One of Steven Covey's *Seven Habits of Highly Effective People* says that you should begin with the end in mind. Nowhere is that more true than in reporting. Too many people start building their reports without any idea how they will know if the reports they build are accurate. This doesn't work. Before anyone starts building anything, they need to know exactly how they will be certain that their final figures are correct.

2) Respect the Data

Just because an accountant can book a journal entry, doesn't mean he or she can issue consolidated financial statements or run a balance sheet audit. Similarly, it's easy enough to produce a mailing list, but it takes years of experience to master the hundreds of tables in an Enterprise ERP package.

3) Complex Tools Take Time to Learn

And if you don't use them regularly, you won't master them. Would you trust a plumber who hadn't fixed a toilet in two years? Whatever reporting tool is being utilized, it's essential to dedicate sufficient time up-front to master it, and to continue using it with regularity so the knowledge stays fresh.

4) Always Own Your Data

If you want to outsource some or even most of your reporting process, we're certainly here to help. But you *must* own your data - always. Someone on your team has to know how the numbers on which they rely are calculated. They can't just say, "The consultant built the report and we've been booking the number for the last five years." Consultants and programmers come and go, but the data is yours. Own it.

With this white paper we aim to give you the blueprint for building authoritative reports, no matter what tool or software you are using. We hope you find it useful; as always we welcome your feedback. And if you need additional help fulfilling your business reporting requirements, we are always available for a free phone consultation to discuss how Red Three can help you get **the reports you need from the software you already have.**®

Happy reporting!



Adam Jacobson
Founder & President
Red Three Consulting

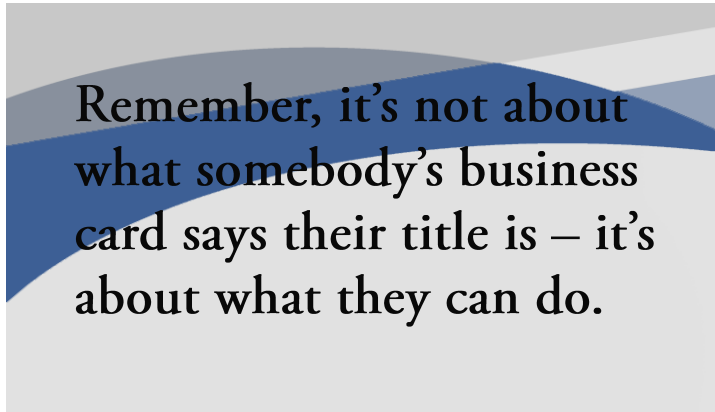
Getting consistently accurate reports is almost certainly going to require several individuals in different areas of your organization. So before we get into the process of actually building reports, we should review the different skills required to ensure that your reports are perfect every time. Once we describe those skills, we'll dive into the process of report building.

Skills

As consultants we're generally in situations where things are not staffed in a "textbook" way, so from our perspective it's less important to think about job titles then about the particular skills needed to get the work done. In order to build perfect reports, you're going to need three individual "Masters" – the Business Master, the Data Master, and the Tool Master -- as well as non-technical end users who will be receiving the final product. Remember, it's not about what somebody's business card says their title is – it's about what they can do.

The Business Master – This is the person who needs the report built (if you're reading this White Paper, this very well may be YOU!). They know what they want – either because they've seen what's being laboriously produced in Excel or because they know in what direction the business is going. The Business Master needs to know some of the basics of the application used to produce the data, but need not be an expert with the report-building software. This person is often someone like a Controller or Assistant Controller.

The Data Master – This is the person who can find the data in the existing system that's needed to build the report the Business Master needs. They need a good knowledge not only of SQL – the common language of databases – but also of the particular software application that's being utilized to build the report. Modern ERP systems are very complex – knowing how to join tables doesn't mean you know the correct tables to join.



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Of the three "Masters" you need, the Data Master is probably the hardest to find. A basic DBA (or Database Administrator) *may* have the skills to fill this role, but they may not. While the title indicates a familiarity with data, DBA's are often focused on technical issues involving speed and backup. If they do focus on queries, they often don't understand the underlying business requirements. It's definitely worth investigating whether your DBA has the skills necessary to be your Data Master, but it's not a foregone conclusion that he or she will.

The Tool Master – This is the person with extensive experience and expertise with the particular reporting tool you’ve chosen, be it Excel, Crystal, Oracle Discoverer, QlikView or any other reporting software. Once the Data Master contributes the accurate data, the Tool Master builds all the variations of the report.

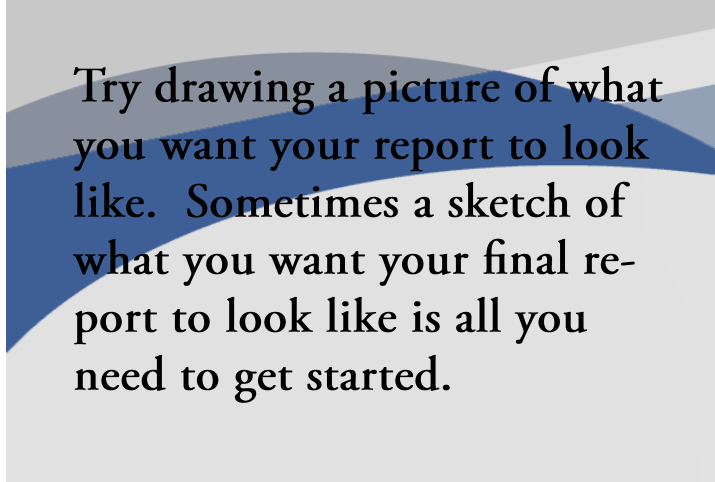
The Tool Master can sometimes be found in IT but more often people try to take a “super user” (such as a Senior Accountant) and train them in the tool. Frequently IT people have other priorities. Most important is that the Tool Master make regular use of the particular software tool that’s being used to build the report. Mastery of any tool requires practice - at a minimum the Tool Master should spend a couple weeks up-front doing nothing but building reports, and then they should spend at least one or two days a month tweaking existing reports or building new ones. If they don't look at the tool for six months, most of their training will be lost.

Non-Technical End Users – They are specifically NOT the masters at any aspect of report building. The most important feature of Non-Technical End Users is that they understand how the report works and know whether it’s accurate or not. This can be anyone in the organization – from a Clerk to a Controller – but they must put in the time to review and understand the data.

Process

When you get a new toy you want to tear the

box open and start playing with it, so when presented with a new report building tool naturally most people want to dive right in and start building reports. For simple vendor listings or customer mailing lists that’s probably fine, but most of the time this is where you need to stop, take a deep breath and consider the report building process from start to finish.



Try drawing a picture of what you want your report to look like. Sometimes a sketch of what you want your final report to look like is all you need to get started.

1. Define Your Objective

The first thing you want to do when planning your report is to clearly and specifically define what you’re trying to accomplish. In IT jargon you’ll often hear this step referred to as “Developing the Spec” (specification). We stress two things in this phase:

- **A Picture is Worth A Thousand Words**
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- **Define the Benefit**
Why are you building this report? Are you look-

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ing to save a particular amount of time? Is senior management asking for this to show to a new investor? You want to have a clear vision of the benefit you're looking for, because if it turns out that building the report takes more effort than you thought, you want some way of determining when to pull the plug.

2. Develop Your Testing Plan

This may seem counterintuitive – doesn't testing come *after* the report has been developed? But there's the rub – the biggest challenge with reporting is often that different versions of the same report are not in agreement and nobody knows which version is right. You need to decide at the top of the process how you'll know whether or not you have the data correct. The test plan will vary depending on the complexity of the report, but here are a few questions you'll want to answer:

How will you tie out?

A report is ultimately just a set of numbers, but those numbers have to tie back to some starting point so you can know you're right. Sometimes the

tie-out is simple, like a custom income statement that ties to net income. Every financial system I've seen has an out-of-the-box income statement, in which case your entire test plan may be simply that the statements must tie out to net income from Oracle or Lawson.

How will you show your work?

Often a custom report is built to replace a cumbersome multistep process. When that's the case it's absolutely vital to "show your work" so that, when your report is complete, you are able to retrace the steps you took to get to the final numbers. You need to be able to prove that you get your results in a valid manner.

What happens when your data changes (and it will...)?

Reports are often designed for very specific situations (like a particular list of accounts or item categories), but when the system data changes the reports become inaccurate. How will you know that your reports are complete? How can you plan ahead for changes in your system data?

3. Dump the Data

Before you start building a report, the Data Master needs to organize a raw dump of data from your database that proves the basic logic of the process. This is the step where the real coding happens, and where we

dig into the data and find the right answer. At this point in the process having a capable Data Master is absolutely essential.

4. Build the Report

With the right query in hand we can now move on to the report-building tool. The raw data query should be transferred or rebuilt in the end user tool so that a less technical person can take over. In this step, we can establish all the things that make a report more than just a data dump. This includes:

- Parameters – Do you want to run a report for a date range, a set of items?
- Sorting – Will you always sort by customer name or do you sometimes need to sort by customer number?
- Grouping – How should the report total?
- Summary – What numbers do you need totaled, and at what level?
- Special formatting – Numbers are numbers, but reports that look great get read.

You should build your report piece by piece, adding (and testing) one parameter at a time so you can be certain you're getting accurate results each step of the way.

5. Test Test Test

It's essential at this point in the process to bring other users into the loop – not just the people assigned to the report. The more people you can involve the

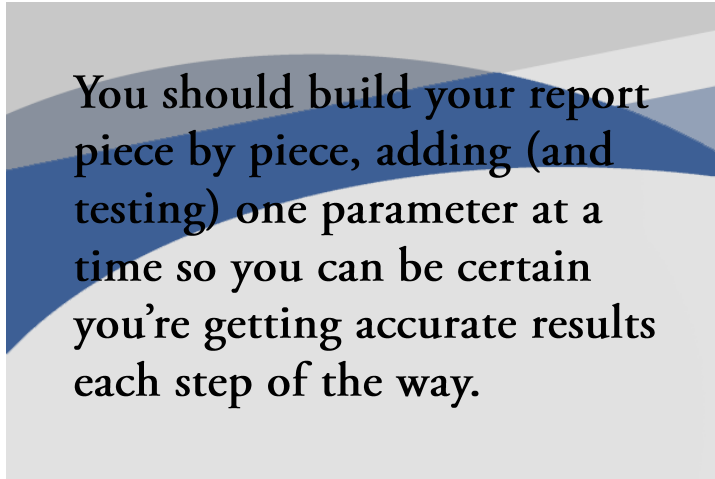
more ways they will find to break the report, and the higher the likelihood that the final report you build will be indestructible.

Approval and Lockdown

Once you're convinced that your report is fool-proof, unbreakable and clear to the end users, you need to get the report locked down. This means that the final, approved version of the report is placed in a specific location holding *only those reports which have been similarly approved*. This is ABSOLUTELY VITAL – do not forget this seemingly simple step. Many of today's end user tools make changing the report so simple that people often make small changes and save different versions. If you're not using the right version of the report, you're not going to get accurate data and all the hard work of building the report will be wasted.

High Value Outsourcing Actions

To outsource or not to outsource – that is the question. How do you know when to rely on your internal resources and when to enlist an outside consulting firm? You want to get the most insight at the lowest



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cost possible, but you also need to be certain that your reports are accurate and reliable.

While we take on an extraordinarily wide array of projects, there are three particular areas in which our clients find a great deal of value in outsourcing their reporting needs to Red Three:

The Data Master

This is the biggest place we find we can help. Again, it's not just knowing databases or SQL, it's understanding how accounting systems work and the terminology involved. In order to be an effective Data Master, one often needs months of exposure to a given product building serious reports in addition to a solid basic knowledge of SQL. We have extensive experience with all commonly used software systems.

Test Planning

Simple tie-outs aren't going to be a challenge for you, but the more complex your reports get the more important thorough test planning becomes. It's also crucial to plan for how the data might potentially change in the future so that your reports remain accurate. Our practice leaders have dozens of years of experience working with data, and most of our consultants spend at least 25% of their time planning and testing.

The Tool Master

As described above, it's very possible that you have someone in-house that you can recruit as your Tool Master; however, a lot of our clients have us take

on this role as well. It's important to remember that if you learn report writing software of any kind and then don't use it for six months, you generally forget most of what you knew. When you return to the software you'll know what you *want* to do, you'll know that it can be done because you've done it before, but you'll spend hours re-learning how it's done with this particular software. And every tool has its own little virtual potholes which can waste a lot of your time. We know these software systems more intimately than anyone in most businesses ever will – what we can accomplish in one hour might take a less experienced report builder two or three.

Step	Outsource value
Define Your Objective	Medium
Develop Your Testing Plan	High
Dump the Data	High
Build the Report	Medium
Test	XXXXXX
Approve and Lock down	XXXXXX

The table above shows the overall value in outsourcing the different steps of the report building process. You'll note that an outsourced value like Red Three should NOT be used for the Testing and Approval/Lockdown steps. While we are happy to assist and oversee these phases, it's imperative that your staff understand these parts of the process so that you are not dependent indefinitely on the outsourced value. Re-

Building authoritative reports is not brain surgery, but you need to know what you're doing. Like anything else, doing it well requires time and attention.

member the 4th Commandment of Report Building – Own Your Data. They are your numbers, you need to understand them, and you need to insure that you understand how they get created.

Building authoritative reports is not brain surgery, but you need to know what you're doing. Like anything else, doing it well requires time and attention. If you're going to utilize internal resources to build your financial reports, those individuals are going to need the time to become the true "Masters" that you require. If they don't have enough time to devote to building reports or if your need for dedicated report builders is not consistent, it may be cost-effective for you to choose an outsourced option like Red Three Consulting.

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