

Focus



Analytical Templates: The Fast Path to Business Intelligence for Small and Mid-Size Companies

When the goal is business intelligence, starting to develop a data warehouse from scratch may not be an affordable option for the smaller company. Pre-developed templates could be a better solution.

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When it comes to using enterprise reporting and business intelligence, small and mid-size companies tend to focus on what they need to sustain day-to-day operations. That usually means running dozens, if not hundreds, of queries everyday over the production database and maintaining a variety of spreadsheets for the sales, marketing, and financial people.

Production data is a tremendous source of information for middle managers, sales and customer service representatives, accountants, and others. You couldn't run your business without it. But for deeper insight, you also need a multi-level data model that supports the very different perspectives on customers, revenue, expenses, and overhead that exist at the different levels of your management structure.

Historically, building this type of data model required an extensive research and development effort. Consequently, while few small to mid-size business owners would turn down the opportunity to obtain a deeper analysis of their customer, sales, or financial data, most of them would consider it a luxury. They think that actually taking steps to achieve that end is something better left to the big guys who can afford the cost, risk, and labor associated with such a challenging project.

Analytical Templates—Learning from Others' Experiences

Today, packaged analytical templates are emerging as a viable middle road for enabling business intelligence in the small to mid-size enterprise. Let's explore how analytical templates work and enable business intelligence in the small to mid-size company.

If you were asked to design a data model for your company this week, chances are that after a little experimentation, you would turn to Google and start searching to see if someone in your industry had a design you could use to get things rolling. After all, you can't be the first one in your industry ever to do this. That's exactly the concept behind the packaged analytical template.

Packaged analytical templates embody the knowledge gained from past data warehousing and business intelligence projects and translate it into a model that a small to mid-size

business can deploy and manage.

The well-designed analytical template provides a pre-defined and fully documented, industry or function-specific data model and a set of ready-to-use performance dashboards, reports, and multi-dimensional presentations built over that model. The data model consists of a set of files, usually based on the star-schema structure, containing the fields needed to construct the desired analytical views, performance dashboards, reports, and other forms of output.

To design a useful data model, the developer must have a thorough understanding of the questions that managers want to answer, how they define terms, and how they need to see the data. In other words, the developer must back in toward the data model design after documenting the desired outputs. Once that's been achieved, it isn't too difficult to train someone within the IT staff to "extract, transform, and load" (ETL) the company's production data into the data model's files. In some cases, even the queries and programs needed to perform this ETL work over a specific business application solution may be provided as part of the template.

Do You Need a Data Model for Analytics?

You might be saying to yourself, "Why can't we just find a good query and reporting tool and let the users develop what they want on their own? Isn't the point to empower the users so that the IT staff can do other work? Isn't all the data we need already in our production files?" Let's take a look at each of those questions.

First, while it's true that some users in your company have the motivation, skills, and time to use a query tool and can be trained to understand some of the structure of your production database, there are many other users in the company who don't. At the higher levels of your company, you probably have managers who expect someone else to extract and organize the critical business data and make it available to them in formats that enable them to go straight to the analysis and decision-making part of their job. Query tools are plumbing to these managers, and their interest in plumbing begins and ends with what comes out of the faucet, not with what is underneath the counter.

Business intelligence tools can empower non-technical business users to do work that previously required the support of an IT staff member. But, the real payoff from business intelligence comes when you enable business users to go beyond ad-hoc queries and production reporting. The packaged analytical template data model can make this possible.

Production databases, particularly those associated with robust System i-based ERP and financial software, are very complex. Understanding the data flow through such a system requires skill and experience. Additionally, some of the useful details needed for analysis at one or more levels of management are usually lost during posting from a sub-ledger to the general ledger. The structure of the analytical template data model is much simpler for business people to understand because it's organized to mirror the way they think about the business and to contain the level of detail they need.

Will a Template Work?

Many data warehousing consultants will tell you that an "off-the-shelf" data model can't address your company's unique needs. Yes, every company is different, but hundreds of

companies in a given industry manage to run the same enterprise resource planning (ERP) or financial software, customized in key areas, to preserve their uniqueness. Shouldn't the software industry be at the point today where a standardized, industry-specific, customizable data model can satisfy the analytical requirements of these companies in functional areas like sales, customer profitability, inventory management, and financial reporting? Fortunately, the answer is yes, and packaged analytical templates are now an option for System i customers.

What about Risk?

Reducing risk is one of the most compelling reasons to seriously consider using a packaged analytical template. Small to mid-size companies need to see a quick payback from every IT investment. They don't have the luxury of spreading project costs across multiple entities and budgets. In business intelligence, as in other application development projects, one of the primary sources of risk is misunderstanding the intended user's requirements.

Maybe you are familiar with the time consuming, iterative process of research, development, feedback, design modification, more feedback, and more modification, required to align a new application with business processes and needs. This is because, given a blank screen, most people have a difficult time communicating their needs in terms you can translate into a concrete design and action plan for a development team. If you are a consulting firm looking for a lengthy engagement, you might think this is a good thing. If you are a small to mid-size company interested in using your data to plot strategy, you simply can't afford to take this approach.

Using a packaged analytical template enables you to start your development project much closer to the finish line. You have sample dashboards, reports, and multi-dimensional views that your users can immediately evaluate. It's always easier for people to tell you what needs to be changed or added to the samples than it is for them to describe their needs from scratch. The development cycle is greatly simplified, and risk is reduced. This is because the analytical template, and/or its output, can be extended and customized over time, yet the company gets quick, tangible results from a model designed to satisfy the most common business intelligence requirements in their industry or functional area.

While production reporting based on live data is always going to be essential to business operations, packaged analytical templates provide small to mid-size companies with a cost-effective approach to business intelligence. They simplify development, shorten implementation time, reduce risk, and enable companies to benefit from the experiences of others with similar needs.

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