

Step by step

A phased implementation of an enterprise data warehouse leads to success. *By Alicia Acebo*

To survive and thrive, organizations must embody a culture of learning. Such “learning organizations” know what’s going on and continually get answers to questions before making decisions, and it shows in their success.

One of the richest sources of information can be an enterprise data warehouse (EDW). But before an organization embarks on such a mission, it is important to ask: Is there a need for near real-time information at an enterprise level? And at what cost is it worthwhile?

Easier answers

At the heart of most learning organizations is an EDW. Virtually everyone recognizes the value of timely information that is readily available to decision makers. Enterprise-wide, cross-functional data can empower insightful analytics and enhance operations. Once business processes evolve based on this analysis, front-line employees or computer systems know what is happening right now, thus enabling smarter decisions.

The requirements are easily understood—answer any question, any time. Building such an environment is far more efficient—and less costly—than continuously creating

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silos reports. So what makes building a data warehouse so difficult? Why do so many efforts fall short of expectations?

It’s because proper execution is a long-term commitment and no easy task. Business and technology must agree on an implementation strategy and work well together. Supportive leadership and good business understanding are required, as well as an IT department with deep technical knowledge and skill.

Quick wins versus analysis paralysis

First, you must debunk the myth of the “quick win.” Many believe the right way must be time consuming, so doing things fast must be sloppy. But the issue should really be about scope and staff know-how. A clear understanding of what you are doing and a simple modular design will

get you there sooner than if no thought is given to architecture. Quick wins should be considered an important part of a deliberate, phased implementation that fosters long-term success.

On the other hand is analysis paralysis. The perception prevails that architecture and design processes are long and costly, and sometimes this is rightly so. Frequently, design meetings get bogged down in creating a perfect solution; new voices join the chorus of opinions; discussions focus on what cannot be done; and, ultimately, no one is held accountable. No wonder so many are eager to skip this step.

The right strategy

The answer is a balanced approach. To achieve quick wins, look for strategic opportunities to increase business value, then:

- > Determine the metrics that constitute success
- > Control the scope
- > Design with a sense of urgency and a time limit
- > Use modular, reusable architecture
- > Bring experienced people to the table and the right people to implement
- > Make necessary compromises
- > Avoid decisions that leave you architecturally at a dead end

It's all about discipline and sticking to the strategy. Along the way, build a team that shares this philosophy.

Work together

A company is more than a compendium of siloed departments. Decisions made by one division affect the others. Airlines, for example, have schedules, aircraft, maintenance, reservations, etc., all interacting with one another. Integrated, detailed information is crucial to efficiently run and optimize operations and sales.

The company culture must be one of trust and cooperation, where sharing information is a value. If this virtue goes unrewarded, building an EDW will be nearly impossible. This is the cornerstone of a learning organization—the ability to

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provide the right information in a timely manner to everyone who needs it, thus enhancing decision making.

In the end, business culture and technical knowledge are more critical to a successful EDW than the size of the project's budget.

Build support

The strategic decision to implement an EDW needs the support of company executives, or at least the CIO, and the main business sponsor. Your next step is to list the subject areas. Usually, these relate to revenue (e.g., products and sales), costs (e.g., labor and materials), operations and customers. Prioritize these areas based on those that will provide the most value at the lowest cost and that have the business users willing to sponsor them. This will be your roadmap.

Three simple rules

These rules should keep you out of trouble during the implementation process:

- 1 Ideally, fix one subject area at a time—at most two.
- 2 Take feeds from the official system of record and have the lowest level of detail data.
- 3 Model the information to the third normal form and as part of the enterprise. Such models are available for different industries, so rarely will you need to start from scratch.

Organizationally, a separate technical team with critical expertise and a passion for this line of work is needed to build the foundation—the enterprise database. The most important factor in delivering quality IT is tapping people with the key technical know-how. It all boils down to having the right people who can take it to the next level.

On the business side, the deployment of information to users is often hampered because the foundation is missing. Instead, users rely on summary denormalized data marts that do not integrate well together. That is the main hurdle to becoming a learning organization. On the other hand, if you have an enterprise

database, the information-delivery process becomes an affordable, short-term project with big returns.

First, do no harm

How can those organizations with replicated data in multiple silos reach an EDW strategy? Look at your next request from the business. If an existing data mart can give you a head start, enhance it to get closer to the strategy. Make it the enterprise subject area. Don't harm the environment even more. Namely, avoid replicating data without a model, creating yet another data mart that will need to be replaced. Enhancing one data mart can provide a first step as you build the enterprise subject area and other improvements.

At some point, you will start replacing data marts. It will take discipline—and time. Use a phased approach. Fix one subject area at a time. Celebrate your successes no matter how small. It is important to recognize that short-term strategy decisions got you what you have: an environment with high maintenance costs and no reusability. So consider your long-term strategy: Build it once and use it many times. Ultimately, you want an enterprise data store that can answer any question, any time.

Lessons learned

To continually evaluate business processes, a company must become a learning organization with an EDW at its core. Building one means aligning short-term and long-term goals. By focusing on measurable value each step of the way and staying on course, you can attain your ultimate strategy.

While the answers are not always in the information, the data raises business acumen to a new level and lets an organization measure the results of its decisions and adjust accordingly. **T**

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