

# Is your EDW ready for the future?

## Seven ways to ensure the survival and success of your EDW through proper governance

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**W**ith every corner that's turned in an enterprise data warehouse project, end-users can discover new ways to unlock their organization's vast treasure trove of data. An EDW is the most powerful tool devised for enabling organizations to have a single view of their data. Once an EDW is put into production, end-users from throughout the organization can look at the data and ask questions in ways previously unimaginable.

Getting the EDW up and running is only the first step on a long journey of exploration and **discovery**. To make the most of this journey, the EDW needs to be a business tool with business managers just as intimately involved in the growth of the data warehouse as the information technology team that manages the nuts and bolts of the process. Businesses don't stand still, and neither should the EDW. Markets, competitors and regulations keep changing. Business units, divisions and departments are constantly being created, dismantled, acquired, merged and divested to respond to these changes. Properly managed, the EDW will grow as the business grows.

A business's ability to fully leverage the **value** of an EDW environment might even vary by department. Some organizations are quickly ready to mine and act upon the rich data accessible through the EDW, while others take time to emerge from stovepiped systems that have taken years to develop.

Keeping an EDW growing, thriving and continuously delivering value to the business demands adroit **leadership**. Someone has to assume accountability and responsibility for the EDW, even to the point of acting as an advocate or evangelist for its continued development and proliferation throughout the business within a company.

"The greatest risk to an EDW is the collapse of governance," says Paul Kirby, research director of data management, AMR Research. "A true enterprise effort requires a strategic enterprise-wide governance strategy backed by the senior leadership team."

EDW **governance** is a process that should continue for as long as the EDW itself exists. But what does governance require of a business? What's involved, and how do you ensure that proper checks and balances are in place?

*Teradata Magazine* contributing writer Joe McKendrick unearthed seven key factors that are essential for establishing a **successful** EDW governance structure. Find out who leading industry experts recommend to lead the EDW effort and how they believe governance is best accomplished.

## 1

## Develop and maintain momentum

**OFTEN, ORGANIZATIONS ASSUME THAT ONCE THE EDW** has been planned, tested and put into production, the bulk of the project is essentially complete. However, good governance requires that the EDW be viewed as more than a one-time project; it's a continuous effort that constantly evolves as the business continues to grow or change.

"The data warehouse you have delivered now is not what you're going to have six months or a year from now," says Sid Adelman, president of Sid Adelman & Associates. "You're going to have to be continually improving it and making changes as your business grows."

As early results start to positively impact the bottom lines of participating departments, the EDW will grow quickly, with many new parts of the business anxious to come aboard. This calls for an oversight process that will manage and channel the plethora of requests for new data sources and applications into the burgeoning EDW. Members of the organization need to know who to turn to for applications, tools, technical support and business case support as they embark on their own data mining explorations.

Such efforts "need to be coordinated, so that project needs are interrelated to each other, with each working toward a specific goal," says Claudia Imhoff, CEO of Intelligent Solutions, Inc. "That philosophy needs to carry through after the data warehouse is up and running. You'll continue to add new functionality, data, users and tools. The only way I know of doing that is to have some overarching structure, at least a governance or program-management type of functionality."

The first phase of a project, for example, may consist of providing insights to the customer service department about the likelihood that new customers will become long-term customers. And next you may expand to include additional business areas—such as marketing—which can use those insights to better target promotions to these customers.

In time, many applications from many departments will be sharing and gaining insights from the same set of data within the EDW. But, if the project is never fueled, it will never grow. Be sure the data warehouse remains fluid—able to expand in any direction to meet any need.

No single department should be responsible for the EDW project; rather, it should be a joint effort.

## Have business and IT work together



2

**TYPICALLY, A COMPANY'S INFORMATION TECHNOLOGY DEPARTMENT** runs enterprise application projects. Implementations are shepherded through the organization by IT while soliciting input from end-users at regular intervals. While that process works great most of the time, it's not necessarily the best way to govern an EDW. Because EDW implementations are highly business focused, experts call for balanced oversight involving both the business side and IT working as equal partners to grow the EDW.

"With effective business and architectural governance of the warehouse, you can determine how your priorities are set, how you decide what to invest and how to architect the environment to support various parts of your business," says Anita Murphy, Teradata senior industry consultant. "Business governance and architecture governance go together."

Should EDW governance be a 50/50 proposition, equally shared by business and IT? The answer, according to most experts, is "it depends." Bill Inmon, a partner with Inmon Associates, Inc., notes that there is no "right way" or clear formula for determining the correct balance between business and IT oversight. "I have not seen a pattern in the companies I've studied; governance tends to be all over the map," he notes. "Some EDWs are handled under the CIO, but I've seen others managed by the CFO or head of marketing. It all depends on the organization and the history of the data warehouse." But the natural give and take between business units and IT as EDW issues are addressed can be healthy and productive.

Inmon agrees that the various constituencies "are not necessarily in harmony with each other." However, he adds, "it's fairly normal for there to be conflicts. ... The question of who controls the budget and how it will be spent becomes a soccer ball in the middle of the field. Things get kicked around, but that's an absolutely normal part of the process."

Because EDW implementations reach across the enterprise, no single department should be wholly responsible for the project—rather, it is an effort to be led jointly by all business units from across the organization.

"IT, finance, the business and, in many cases, the vendor work together to define major business goals and the metrics to measure the effectiveness of the initiative in addressing those goals," says Dan Merriman, president of Chapin Consulting Group. Such goals typically consist of increasing business value metrics, such as sales and revenues, but also EDW implementation indicators such as usage and data quality."

"The scope of governance applies across all dimensions of the EDW program," says Teradata's Murphy. "There are many business improvement opportunities that can be identified, including customer relationship management, revenue assurance and individual customer profitability, just to name a few."

There needs to be an executive accountable for each agreed-upon value metric. Merriman urges that accountability "be placed with the appropriate person, generally the senior manager, who 'owns' the majority of the required people, processes and technology that must change to achieve the benefits. Responsibility for increases in

revenue and reductions in business costs resides within the business organizations. IT plays a major enabling role, with the CIO or senior IT manager generally being accountable for improvements in IT cost-effectiveness.”

Together, IT and business leaders can be sure the company’s goals are met via the EDW without neglecting the specific needs of either side. When everyone is on the same page, the whole project can move forward with confidence.

## Recruit an EDW “evangelist”

**LIKE ANY PROJECT, THE EDW AND THE GOVERNANCE PROCESS NEED LEADERSHIP**, and in this case it should come, in part, from an executive sponsor drawn from the business side of the organization. This person provides the vision for the data warehouse project and helps to prevent organizational inertia from delaying the business value that can be gained from it.

“Ultimately, business users need to be in charge of the EDW to make sure that projects are prioritized and that the mission of the warehouse gets carried out,” says AMR’s Kirby. “An executive sponsor provides a signal to the rest of the business that the initiative is important. The sponsor makes sure adequate funding is available and keeps the effort focused.”

While some of the most successful and well-known data warehouse implementations have had the active support of the CEO, the sponsor can be any high-ranking executive, whether it’s a senior vice president, a vice president or a C-level executive of IT, finance, or marketing. “The champion could be the director of marketing, the VP of marketing or even the head actuary,” relates John Ladley, president of KI Solutions. “Often, there’s a business sponsor who gets data ‘religion,’ and he or she pushes hard for the data warehouse. Or, you may have a CIO or someone in IT that sees the data warehouse as a solution to a nagging problem. Either way, you end up with a person who champions the data warehouse to the organization.”

The sponsor should be influential within the organization and should have the political savvy to bring various business units together to recognize and work toward the common purpose of the EDW.

The sponsor should be able to identify pressing business problems that the EDW can address and also convey enthusiasm for the project to the rest of the organization. This leader must be kept up to date with the progress of the project and should be well educated about the mission of the data warehouse. This can be accomplished through regular meetings between the executive and the EDW team.

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—Paul Kirby  
AMR Research



3

# A steering committee oversees the application of business improvement opportunities to pressing business problems.

Some experts advise creating an actual position along the lines of a “data warehouse evangelist” to keep the EDW’s benefits in focus. “Sometimes we sort of rest on our laurels after the first one or two successful business intelligence deployments,” says Jill Dyché, partner with Baseline Consulting Group. “But it’s important to have someone doing ongoing missionary work, continually proselytizing the EDW’s value—someone who can communicate evolving business requirements to IT while at the same time keeping new EDW functionality on the business side’s radar to ensure that the data warehouse stays top of mind in both organizations.”

Whether or not you decide to designate a full-time employee as your “evangelist,” and regardless of his or her background within the company, the main thing is to make sure that the chosen person can help keep a sustained focus on the EDW project. A data warehouse evangelist can keep the project fresh in the minds of IT and business decision-makers charged with approving ongoing funding.

## Use steering committees to govern collaboratively

**AS IMPORTANT AS EXECUTIVE SPONSORS ARE TO THE HEALTH OF AN EDW**, they should not be solely responsible for shaping the future of the project. It’s imperative that companies form an oversight committee responsible for governing the EDW.

This group of leaders from across the organization can take the form of a steering committee or a project management office (PMO).

A steering committee provides enterprise guidance to ongoing EDW efforts. The executive sponsor should be a member of this group, which is comprised of business and IT managers from across the enterprise. A steering committee oversees the application of business improvement opportunities, which are expressed as specific queries, to pressing business problems.

The committee should regularly review the progress of individual projects and set EDW priorities. Members determine where the need for the EDW is greatest and which projects will provide the greatest ROI. “The committee decides which applications are added, which data you bring in and with what resources you do it,” says Adelman. “The EDW is a living, breathing organism, and it constantly needs to be looked at to make sure it’s being deployed for the right reasons from a business point of view.”

This committee is the key expression of the business requirements driving the EDW forward, Teradata’s Murphy emphasizes. “The steering committee keeps the priorities and overall objectives of the business out in front,” she explains. “This includes the business strategy itself and understanding clearly what capabilities of the warehouse are required to support business objectives and strategies.”

While the steering committee oversees the strategic concerns of the EDW, a PMO oversees the actual day-to-day functioning of the EDW. This functional area, also called a center of excellence, is “the brains behind the body,” says Imhoff. “Projects related to the EDW need to be coordinated, as project needs are interrelated to each other. The PMO ensures that projects are adhering to the corporate standards used to build the data warehouse and provides a way to mitigate exceptions.” For example, an



4

important task of the committee may be to recommend or approve new business intelligence applications that best fit the environment or to establish formal change management procedures and change request channels.

The make-up and mission of a PMO varies widely from company to company. It might include members of the steering committee or it may consist of IT managers working with the executive sponsor and other business leaders. Company and EDW size also can shape the lines of reporting among the PMO, steering committee and executive sponsor.

“In large-scale, Teradata-class data warehouse environments, you’re more likely to see formal data warehouse development reporting to top management, because the data warehouse has proven itself, and it’s viewed as a strategic solution,” says Dyché. “In smaller organizations, it depends more on the size and scope of the project.”

The PMO should include IT professionals with dedicated roles for managing the EDW. “Everyone may be engaged in the massive effort to get the warehouse ready, but after everything’s ‘done’ there’s a temptation to leave and go back to our ‘real’ jobs,” says Kirby. “Often, people aren’t prepared for the onslaught of requests. It’s tempting to think of data warehousing as just another IT project, but it isn’t. Successful data warehousing never ends, and that’s what makes it different from other kinds of IT efforts.”

Whatever you choose to call it or how you decide to organize it, an oversight committee can make the difference between EDW order and chaos. Along with promoting the benefits of the EDW to the rest of the organization, the PMO members’ basic mission is to apply the discipline and rigors of project management at every phase of the EDW’s development, just as they would for any large project. “The number one reason why data warehouse projects falter is lack of basic execution of project management blocking and tackling,” says Ladley of KI Solutions. “The success of an enterprise data warehouse project has nothing to do with data quality, tools or anything else. It boils down to effective project management. There is no distinction between a large data warehouse project and any other large project. This is a real project, and it’s going to tie up a lot of resources and a lot of people. You can’t give users access to integrated data and change the face of the business and not have effective project management.”

### EDW governance flowchart

#### EXECUTIVE MANAGEMENT

- Ensure the project continues



#### EXECUTIVE SPONSOR

- Champion the EDW cause



#### OVERSIGHT COMMITTEE

- Align with business goals
  - Gather end-user input
  - Set project priorities
- Measure ROI/usage metrics
  - Manage infrastructure
  - Create internal “PR”

# EDW funding should come from the various lines of the business for which the data warehouse is providing value.



## Funnel change and do it carefully

**ONE OF THE GREATEST CHALLENGES TO GOVERNING AN EDW IS MAKING SENSE** of the inevitable requests for change. Various business units throughout the enterprise will quickly realize the capacity and capability of the EDW and how they can benefit from the innovative thinking and insights that can be gleaned continuously from the EDW. End-users will want new functionality for their projects. For example, end-user analysts may want to change or upgrade a table layout. Or members of the marketing department may want more information on financial histories of prospective customers, and request reporting capabilities against a new database. Sales representatives may discover they need access to customer service request records to paint a better picture about customer satisfaction. “As soon as you put a new update into production, somebody’s going to say, ‘Gee, this is nice, but I want a new report,’ or ‘I want a new set of data,’ or ‘I want access to different data than I already have,’” says Imhoff.

Thus, the EDW architects and managers may find themselves overwhelmed by requests for changes and new functions. They must avoid the temptation to say yes to every request.

Working with the executive sponsor, the cross-organizational EDW oversight committee needs to put formal channels in place for handling requests. The group should review all formal requests and either schedule an update in a future release or, if not appropriate for the EDW, send the request to the appropriate department. Requests should be formally submitted as a thoughtful business case with strong analysis of organizational benefits.

“As data warehouses mature, too many companies forget that business requirements should be a formal activity,” says Dyché. “There’s a propensity to say, ‘Now that we have all this data, we don’t necessarily need to listen to the business in a rigorous way. We can just have a meeting or a conversation.’ There needs to be a structured way to continue gathering business requirements and document them across the enterprise for the EDW.”

These requirements documents can be stored and made accessible on an internal data warehouse Web site, Dyché continues. “The site can include different requirements from different business organizations for applications in the business intelligence portfolio.”

With a formal process in place, businesses can be sure that only the functionality that furthers the EDW’s mission is put into place, and it can prevent the disorganized, random growth that comes from having too many cooks in the EDW kitchen.

**“As data warehouses mature, there needs to be a structured way to continue gathering business requirements and document them across the enterprise. ”**

—Jill Dyché  
Baseline Consulting Group

## 6

## Secure long term funding for the EDW project

**A CRITICAL TASK OF BOTH THE OVERSIGHT COMMITTEE** and the executive sponsor is to secure funding to continue growing the EDW. By growing along with the business, the EDW becomes a critical tool for increasing revenue and cutting costs. However, it still requires funding, and every organization has its own approach to securing the money.

Experts concur that, ideally, funding should come from the multiple lines of business for which the data warehouse is providing value. This can either be drawn from individual budgets or from a general infrastructure budget covering the entire organization.

Initially, the EDW may be benefiting specific business units that signed on in the beginning of the process, so funding might be limited to those departments. “The finance group may be providing a strategic application that helps executives understand their companies’ top lines at the end of every month, week or even day,” says Dyché. “In that case, the finance organization may be funding the development of that application. Or, if the EDW is supporting a campaign management application, the marketing department may be funding it.”

“We get into trouble when we expect IT to fund it all,” says Dyché. “The warehouse is not just another technology platform. IT shouldn’t be building and owning and creating all the applications by themselves and then paying for the whole thing. If that’s the case, you’ll see data warehousing get shoved to the back of the line very quickly behind new operational systems.” It will get lost in hardware purchases.

Some companies are working with a hybrid model that spreads funding across enterprise units without burdening any single department with infrastructure costs. In other organizations, Imhoff says, “the funding comes from two halves—from the central infrastructure, and from business users themselves. It’s much cheaper for the business users if they only pay for what they use. At the same time, data management standards can be enforced.”

Ultimately, the EDW quickly pays for itself either by generating additional revenues, cutting costs or a combination of the two. With a comprehensive governance structure in place, companies are well positioned to be able to document the EDW’s return on investment, as determined by key value metrics.

That balance between funding sources and organizational standards is, ultimately, the goal for any data warehousing initiative.

# The objective use of metrics helps companies get around the “squeaky-wheel syndrome” that drives many IT projects.



## Keep up with the metrics

**FUNDING THE EDW BECOMES A MUCH EASIER SELL**, of course, when the business starts to see results. ROI is even more important after the EDW goes into production than during the initial implementation, and it's critical to the governance process.

However, while it's common practice to measure and project potential ROI during the start-up phase of EDW, many companies drop such measurements once things are up and running.

Ironically, industry experts point out that ROI measurements made after implementation are far more reliable than estimates leading up to the project.

“It's very difficult to estimate tangible ROI before a business intelligence application is deployed,” Dyché points out. “The companies that do it right start out that way and define success metrics, but then they re-measure and re-quantify their success after the application is up and running.” That's the only way businesses can even begin to answer a question such as, ‘How much have we saved or earned from the use of intelligent mailing lists from the data warehouse?’ “ROI in the data warehousing arena is more of a process than a standalone activity,” Dyché explains. “It gets better over time as more data gets deployed and used within the business.”

Value metrics usually fall into one of three areas: increasing revenues, reducing business costs or reducing IT costs. But those aren't the only areas that an EDW can benefit. “Businesses need to measure performance, response time for queries and reports, and how long the ETL process takes,” says Adelman. “We also need to measure customer satisfaction, data quality and availability. We need to measure all those things, because if we don't, we don't know where we need to improve.”

Merriman states that metrics need to be defined at two levels. “Value metrics indicate the effectiveness of the initiative in addressing business goals, but are lagging indicators, as they only capture the result after the business process has been completed,” he explains. “Underlying analysis metrics—leading indicators—support each value metric, enabling the oversight committee to actively monitor the effectiveness of the people, process and technology components of the solution and determine the likely places to focus when problems arise.”

Examples of analysis metrics may include such leading business indicators as number of sales opportunities, number of qualified prospects, number of proposals, number of closed deals and number of signed contracts, Merriman relates. Leading implementation indicators may include factors such as level of EDW usage, quality and completeness of data and degree of systems integration.

The objective use of metrics helps companies get around the “squeaky-wheel syndrome” that drives many IT projects. “Users that yell the loudest get the most support and most development time, but they don't necessarily have the highest impact project needs,” says Dyché. “Metrics are a great way to separate the high-value applications from the lower-value ones and prioritize them in the development pipeline.”

## Conclusion: Share the project's success

**JUST BECAUSE YOU MEASURE SUCCESS DOESN'T MEAN EVERYONE KNOWS** that the EDW is delivering business value. It takes a concerted effort—led by the executive sponsor and steering committee/program management office—to ensure the entire organization is updated regularly on the successes of the EDW so that proper governance can continue.

“Data warehousing opens up a lot of potential, but if people have never used a data warehouse before, they don't know how to fully appreciate its benefits,” says Kirby. “An enterprise data warehouse enables business users to restructure their thinking and their approaches to problem solving. It's a conceptual shift, and it takes time to maximize on that.”

Once everyone is aware of how the EDW is impacting the business, the oversight committee can more effectively prioritize projects in relation to specific business goals and strategic alignment.

“If the data warehouse is showing a very significant return and financial impact, and it's aligned with the key goals of the company, then it should be ranked high as a corporate priority,” Merriman says.

An effective governance strategy helps ensure that the EDW gets the visibility required to gain ongoing organizational support. The various individuals involved in EDW governance—the executive sponsor or data warehouse evangelist, the business leadership, the IT department and the cross-organizational oversight committee—can work together to guarantee that the entire business is seeing the results of its EDW investments.

The key to making it work, Inmon says, is putting the EDW “at the center of an information architecture and strategy.”

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—Dan Merriman  
Chapin Consulting Group

*Joe McKendrick, research consultant and author, contributes to Evans Data Corp., IDC, and Gartner, as well as journals such as Database Trends & Applications and Enterprise Systems.*

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