

(Re)vitalize!

Consider an ongoing strategy to maintain the ideal data warehouse. BY LANCE MILLER

Organizations set up a data warehouse when it is perceived that enterprise data is critical to the successful running of their business. They realize that operational and transactional data is a key asset, but alone it won't provide strategic and analytical insights. It must be combined with other analytical, historical and external data in an integrated data warehouse, where it becomes mission-critical to the business.



Many companies begin their data warehouse efforts with an ideal in mind—that a fully integrated, single source of information will facilitate answers to management’s questions and, ultimately, better decision making across the organization. An integrated data warehouse lets staff ask complex questions (both pre-defined and ad hoc) by integrating data from multiple functional areas into

World-class companies **understand** that designing, building, operating and managing a **successful data warehouse** requires **ongoing investment, training, maintenance** and **management support**.

a repository that drives consistent business-critical insights in a timely manner—whether periodic or in near real time. But data warehousing is not a “once and done” proposition.

As the business evolves and grows, an initial data warehouse must often adapt to new problems, additional subject areas, more applications and increased user demands. These factors sometimes cause the platform to grow in unpredictable directions and make the IT staff feel pressed for time and resources to accomplish all that’s possible—or needed. Without continued attention to critical areas, a data warehouse can gradually deteriorate.

To ensure this powerful technology works its hardest to provide the exceptional value it can offer through new capabilities and insights, it’s important to revisit—and revitalize—key areas of the system.

Keys to success

Keeping your data warehouse in top form can reduce expenses, additional work related to quality issues, maintenance costs, the inability to respond to changing business requirements, the need to reconcile erroneous data, and risks associated with incomplete compliance measures.

Organizations can keep their systems more vital in the long run by paying careful attention to fundamental details:

- 1 Build a flexible, scalable architecture.** Over time, you will want to add more data, users and subjects, so pay attention to the architecture. A data warehouse architecture (and data management architecture) that’s flexible and scalable will allow for orderly evolution instead of growth by assimilation.
- 2 Implement a vibrant enterprise model.** Integrated enterprise modeling (both logical and physical) is critical to a data warehouse’s design and alignment to business needs. The model determines how business and IT will define, use, view, update and maintain data. Don’t constrain the data warehouse’s evolution with a data model that imposes inflexible assumptions about the business, fails to allow for new subject areas or is unable to provide a foundation for insight.
- 3 Establish a strategic enabler versus cost center.** The data warehouse may fall into disuse or fail to realize its full potential when it does not deliver on expectations of value. Use business impact analysis and business value assessments to affirm its value. When bringing new departments, subject areas

TABLE (Re)vitalization recap		
TOPIC #	TOPIC	RECOMMENDATIONS
1	Architecture	A flexible data warehouse architecture, data architecture and systems architecture are needed.
2	Enterprise model	An integrated logical model should be in place and kept current.
3	Strategic enabler	Business impact analysis and business value assessments can be used to affirm the value of the data warehouse.
4	Governance	Proper governance ensures alignment of business needs and data warehouse strategy.
5	Skills and training	Ongoing education and training are needed to maintain the highest skill levels to design, maintain and operate a data warehouse.
6	Performance/workload	Periodic monitoring and assessment of capacity, performance and workloads ensures optimal results.
7	Company culture	Governance and service levels minimize cultural politics.
8	Processes	Periodic assessment of processes against best practices optimizes operations.
9	Strategic commitment	Executive support is critical to the success of the data warehouse.
10	Consultants	Use experienced data warehousing consultants with a proven track record and blended delivery rates when needed.

and users into the data warehouse, make sure you've prepared a business case to predict return on investment (ROI) for these efforts. By doing so, the IT department and the data warehouse will be seen as strategic enablers and not just cost centers.

4 Assign accountability. A governance team that reviews data warehouse initiatives for proper planning, prioritization, funding and accountability should be instituted. Governance is defined as the alignment of business and data warehouse strategy. It is based on processes whereby project sponsors present and prioritize proposals, allocate resources, resolve issues, make decisions and hold parties accountable for results.

5 Keep your skills current. On a regular basis, re-examine skills against current data warehouse needs and provide employee training where necessary. A well-trained staff will spend less time on routine tasks and more on strategy, planning, decision making and execution. Users possess different computer skills, perform dissimilar jobs and have varying

integrated with how people do their jobs, processes will need to be adjusted to ensure that every aspect of the data warehouse is documented, understood and optimized. Processes that worked in the initial stages of the data warehouse life cycle may need to be refreshed.

9 Capitalize on strategic commitment. Senior management must constantly review the business value, impact and investment case for the data warehouse, and assess its overall maturity and ROI to ascertain whether it meets corporate goals. If the executive team does not provide commitment, leadership, direction and investment, the project will not reach its potential. If you haven't yet involved senior management and demonstrated the value of your data warehouse, now is a great time to get their support.

10 Leverage consulting services. Most internal IT staffs need help getting their initiatives started correctly and planning for the system's rapid expansion. The process involves

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information needs. Your staff might need training on new concepts or features to keep your data warehouse vitalized. Ongoing education, training and benchmarking will ensure that employees maintain the highest skill levels to design, maintain and operate it.

6 Design for optimal performance. When a data warehouse is initially designed, assumptions are made about the workload, number of users and system capacity. Additional workload, users, queries, loading and other tasks may cause performance to degrade over time. Best practices suggest a proactive approach to measuring the requirements for increased capacity and performance. It's a good idea to periodically monitor and assess the environment's capacity, performance and workloads. Regularly planning for replacement or additional hardware purchases to address unforeseen overhead can reduce costs and ensure proper timing of upgrades. Lastly, automated tools can be used to monitor and manage your system.

7 Address company culture. Establishing a steering committee for your data warehouse helps drive toward best practices that reconcile the politics of human nature and business. Enforcing data governance and service levels can help minimize cultural politics.

8 Keep an eye on processes. Benchmarking your processes against other enterprises is an excellent way to facilitate best practices within your organization. As the system becomes better

complexities, technologies and issues that may be beyond the department's experiences. If a firm has never designed, built, delivered or operated a data warehouse, it's advisable to take advantage of the expertise that experienced, proven data warehousing consultants can offer. Make sure you use consultants who focus solely on data warehousing and whose references are solid.

An ongoing effort

World-class companies understand that designing, building, operating and managing a successful data warehouse requires ongoing investment, training, maintenance and management support. Don't overlook your data warehouse when exploring improved efficiency and business opportunities. Head off problems and improve operations by enabling your system to evolve with your organization.

If your data warehouse team has addressed all 10 critical areas, you have made the commitment to keep its design, model, architecture and other factors running at optimal levels. Under normal circumstances this is a challenge; it's even more difficult during times of economic challenges. Take encouragement that continued efforts go a long way. **T**

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