

: What criteria should be used to evaluate BI/DW vendor solutions?

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Selecting an enterprise business intelligence (BI)/data warehouse (DW) vendor solution is an important decision. According to Boris Evelson (2013), a principal analyst at Forrester Research, "Forrester's Forrsights Strategy Spotlight: Business Intelligence And Big Data, Q4 2012 survey showed that enterprises that invest more in BI have higher growth." Improving, upgrading and replacing enterprise decision support software can help managers make decisions that lead to a more successful organization. Providing great BI/DW capabilities related to customers and products or getting the same quality of information faster than competitors creates an advantage.

Major traditional BI/data warehouse vendors include: IBM/Netezza, Microsoft, Oracle, SAP/Sybase, and Teradata. Of these companies, Gartner Inc. (February 2012) listed Teradata as the leader in its Magic Quadrant for data warehouse database management systems. Gartner rated Teradata ahead of Oracle and IBM on both of the key dimensions of 1) "ability to execute", a measure of market share and financial resources; and 2) "completeness of vision", a measure of product features. There are however other important standards that should be considered in a selection decision. A detailed criteria list linked to needs and objectives is useful in making a rational decision.

Lin and Hsu identify six categories of criteria: 1) technical, 2) managerial, 3) total cost of ownership, 4) benefit, 5) vendor, and 6) social. Social is the most ambiguous of their categories and includes training and the work environment. Technical factors include both 1) the frontend user interface and query tools, and 2) the backend tools like metadata management, systems administration, and ETL and links to source systems.

Lumpkin and Colgan (2006) note that as part of an evaluation of BI/data warehouse vendors "you may choose to do a 'benchmark': a technical test where two or more vendors are asked to run a test that you design, for the purposes of comparing the performance, scalability, and/or functionality of the vendors." Their paper guides a technical analyst in designing and managing a benchmark comparison. Criteria include query performance, incremental daily load, backup/recovery and scalability.

In general, a data warehouse uses a relational database technology, but columnar and in-memory database technologies are sometimes used. Parallel database processing is common in very large enterprise data warehouses. The issue of front-end independence or a capability to share data with various analytics and business intelligence tools is usually an important criterion. Preserving prior investments in hardware and software is often a major consideration. Using familiar technologies

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and vendors may reduce costs for training and lower the overall project risk. Some other criteria are cost per seat, data volume capacity, and user recommendations.

From Gartner (February 6, 2012): "A data warehouse is a database in which two or more disparate data sources can be brought together in an integrated, time-variant information management strategy. Its logical design includes the flexibility to introduce additional disparate data without significant modification of any existing entity design. A data warehouse DBMS is now expected to coordinate virtualization strategies, as well as distributed and/or processing approaches such as MapReduce, to handle one aspect of big or extreme data situations."

Gartner evaluates major BI/DW vendors qualitatively as well as on its two primary dimensions. The following is a checklist for comparing data warehouse vendor offerings:

- Does the vendor solution have easy to use tools for retrieving data?
- Is vendor solution easy to administer and have good ETL, security and maintenance tools?
- What is the estimated total cost of ownership?
- What is the reputation of the vendor for service and support?
- Are benchmarks satisfactory for anticipated requirements?
- Is the DW product a good fit with existing systems and needs?
- Is it likely the proposed solution will be accepted?
- Does the proposed solution have additional benefits that are valued?

The latest [Forrester BI Platforms Wave](#) evaluated core BI capabilities such as:

- Advanced data visualization
- Analysis or OLAP

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- Exploration and discovery
- Dashboards
- Performance management
- Predictive analytics
- Reporting and querying

Forrester also looked at the information delivery capabilities of BI platforms such as:

- Embedded BI
- Integration with Microsoft and other Office applications
- Portal integration
- Thick and thin clients
- Report and dashboard distribution capabilities

Forrester evaluated the top 11 vendors (by BI revenues) — Actuate, IBM, Information Builders, Microsoft, MicroStrategy, Oracle, QlikTech, SAP, SAS, Tableau Software, and Tibco Software — and researched, analyzed, and scored them.

The BI/DW evaluation team should determine criteria and their importance prior to contacting vendors for proposals. Donald Feinberg, vice president and distinguished analyst in Gartner Intelligence in the Information Management group, notes "The Data Warehouse DBMS market continues to be tumultuous with acquisitions and new innovations, such as in-memory DBMS. Add to that market drivers such as Extreme Information and Business Analytics and you will find a fascinating example of change in IT".

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The evaluation team needs 7-9 major evaluation criteria that are weighted to reflect organization needs and workloads. Some criteria will be "must" criteria and others will be desired. Make sure desired criteria are commensurable, i.e., can be evaluated with comparable measures.

Assessing and evaluating BI/DW vendors is an important task. The distinctions between software and service providers for BI and DW are overlapping and managers need to assess the needs before contacting solution providers.

References

Beyer, M., D. Feinberg, M. Adrian, R. Edjlali, "Magic Quadrant for Data Warehouse Database Management Systems," Gartner Report February 6, 2012 ID:G00219281 at URL <http://www.gartner.com/technology/reprints.do?id=1-196T8S5&ct=120207&st=sb> .

BI-DW Info, "Data warehouse software comparison," at URL <http://www.bi-dw.info/data-warehouse-software.htm> last accessed December 24, 2012.

Evelson, B., "Assessing Enterprise BI Platforms," Information Management, Dec. 26, 2013 at URL <http://www.information-management.com/blogs/assessing-enterprise-bi-platforms-10025178-1.html>

Feinberg, D., "Magic Quadrant: Data Warehouse Database Management Systems," presentation October 9, 2012 at Gartner CIO & IT Executive Summit.

Lin, H. & Hsu, P., "Criteria used in Selection of Data Warehouse Systems," at URL http://www.ncu.edu.tw/~ncu7020/Files/Phd_Repord/94/Management/lwy/paper.pdf .

Lumpkin, G. & M. Colgan, "Conducting a Data Warehouse Benchmark," Oracle White paper, August 2006 at URL

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<http://www.oracle.com/technetwork/middleware/bi-foundation/twp-bidw-benchmark-planning-129609.pdf> .

Sybase, "Sybase a Leader in the 2012 Gartner Magic Quadrant for Data Warehouse DBMS," at URL <http://www.sybase.com/Sybase-leader-in-Gartner-MQ> .

The Data Warehousing Information Center at URL <http://www.dwinfocenter.org/>

For 2012, Gartner evaluated 1010data (www.1010data.com), Actian (www.actian.com), EMC/Greenplum (www.greenplum.com), Exasol (www.exasol.com), IBM (www.ibm.com), Infobright (www.infobright.com), Kognitio (www.kognitio.com), Microsoft (www.microsoft.com), Oracle (www.oracle.com), ParAccel (www.paraccel.com), SAND Technology (www.sand.com), Sybase, an SAP Company (www.sybase.com), Teradata (www.teradata.com), and Vertica, a HP company (www.vertica.com).

Modified and expanded from Power, D., "What criteria should be used to evaluate data warehouse vendor solutions?" Decision Support News, Vol. 14, No. 01, January 6, 2013.

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Last update: 2013-12-26 08:36