

Build a Blueprint for Success

MANUFACTURING



Teradata Manufacturing Data Model

You would never consider building your manufacturing plants without a blueprint because you would not know if you had sufficient production space, ample storage room, or if inventory could flow easily in and out of your production lines. So why would you build a data warehouse without first knowing all the details of exactly where data will be stored and, just as importantly, how you can quickly find it?

To make the most of your data warehouse investment, you need a blueprint that will save you time and money, a blueprint that provides convenient access to cross-functional, integrated information and provides a single view of your business that allows personnel across your enterprise to clearly see how different types of data relate to each other. You need a Teradata® Manufacturing Data Model (MFGDM).

The Teradata MFGDM provides the structure and standardization you need to address your most crucial business questions.

That is because it details how to combine data between the manufacturer, internal systems, suppliers, and demand to provide analysis in areas including:

- Manufacturing
- Supply chain
- Financial Management
- Customer Relationship Management

Clear Answers to Key Business Questions

The day-to-day demands of manufacturing operations can bring you and your business a wide array of challenges. Maybe you want to integrate SAP® R/3® order and shipping data with non-SAP invoice data from hundreds of locations around the world to determine total landed costs.

What If?

What if you're an international manufacturer facing the growing problem of counterfeit goods mingling with your own products?

The Teradata MFGDM, with its ability to store RFID tag data and readings, can help identify every counterfeit unit in their inventory and its location. The result? Only the fake products are destroyed—not an entire inventory.

Perhaps you are a consumer products company depending on retail POS data to determine the optimal volume to manufacture with supply chain visibility down to the SKU level. If you are an automotive manufacturer you might want to track and trace serialized parts and analyze vehicle service history to manage quality and reduce warranty costs better. And if you operate customer call centers, you may want to respond with offers based on individual customer profitability or product usage based on real-time analysis. And in the increasingly regulatory environment today, you must be able to meet Sarbanes-Oxley demands and provide financial transparency through centralized reporting based on rapidly integrating data from disparate divisions.

The key business questions the Teradata MFGDM can help answer cut across every facet of your operations, including:

Production

What is the standard manufacturing path, yield, and cycle time for a specific part number at a specified factory?

Forecasting

What is the historical forecast accuracy out 30, 60, 90, and 120 days?

Procurement

What is the requirement for a raw material across the company? Does it vary by season? By geography?

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Logistics

What caused a shipment to be late? Was there a breakdown? Were the standard routes followed? Was there abnormal weather?

Inventory Management

What are our most serious raw material shortage problems?

Best Practices for Best Results

Just as important, the Teradata MFGDM incorporates data management best practices that can be customized to meet your specific requirements. It builds on a strong foundation that allows you to support an array of key areas, including track and trace, test/inspection/experiment measurements and metrics, as well as warranty management and advanced logistics data.

Track and trace analysis can yield benefits around everything from precision recalls and warranty expense management to shrinkage control, counterfeit item detection, and inventory optimization.

Meanwhile, the measurement capabilities of the Teradata MFGDM let you track the planning and actual performance

Find the Hidden Facts

The Teradata MFGDM can help centralize, capture, and analyze unstructured text, making it easier for you to see patterns and trends—before they develop into problems. The model lets you collect comments about shipments, sales, service orders, and a multitude of other entities, then identify facts and events buried in the text and place them in the MFGDM for analysis. The new unstructured text capabilities will let you see:

- If the latest customer service requests identify a component problem.
- If service department notes identify the real reason for the repair.
- What costs are hidden in sales order special requests.
- If the maintenance log shows a trend just before the equipment failure.
- What events contributed to batch contamination.

of tests, inspections, experiments, and metrics against any object including products, equipment, buildings, even companies and people.

Teradata MFGDM and SAP R/3 are also pre-mapped for rapid implementation and let you track electronic product code (ePC) tagged units to better support RFID efforts. And it offers you the kind of increased visibility you need into fleet movements and routing, carrier bid scoring, and freight bill reconciliation.

Teradata MFGDM helps you keep track of each shipment through the supply chain to see the events occurring around each item—and each trip.

Finally, the Teradata MFGDM gives you the ability to look across your entire enterprise at real demand versus perceived demand. The Teradata MFGDM provides a foundation for building a demand signal repository and participating in the emerging world of demand-driven supply networks (DDSN). A Teradata demand signal repository supports powerful predictive analytics that sense and respond to real-time demand signals across a supply chain, allowing you to synchronize production, optimize inventory, and gain competitive advantage.

An End-to-End Solution

The Teradata Manufacturing Data Model provides the capability to drive strategic and tactical analysis from a single, integrated view of your business. It also brings you additional built-in benefits such as:

Enhanced Competitive Advantage

The Teradata MFGDM helps you gain insight into how every aspect of your business is performing by sophisticated modeling of relationships between departments. That is vital information you can use to your competitive advantage.

Reduced Development Time

The Teradata MFGDM can save you valuable data warehouse development time, as well as considerable human and financial resources. And that means faster time to market and faster ROI.

Added Investment Protection

The Teradata MFGDM also protects your investment by using proven modeling methodologies and an experienced Professional Services team to avoid the common—and expensive—pitfalls inherent in building a data warehouse.

Increased Flexibility

A Teradata MFGDM is flexible. So it is easily adapted and extended as your business grows and changes or as new subject areas, entities, or sets of attributes arise. It makes it easy to add enhancements and new applications without re-architecting your data warehouse.

International Adaptability

The Teradata MFGDM is set up to deal with the geography of the entire world, not just the U.S. We also designed it to handle all types of global currencies.

Take an Active Role

Making sure you deliver the right products to the right location at the right time takes tremendous planning capabilities. That is why Teradata focuses our modeling on Active Data Warehousing™ (ADW)—to allow you to take a much more proactive role in:

- **Production management** – track both standard and actual step-by-step production.
- **Logistics management** – trace the planned and actual leg-by-leg movement of goods through your supply chain.
- **Order fulfillment** – compare requested delivery schedules, shipment plans, and actual deliveries for a sales order.
- **Quality assurance** – look at expected results and actual results for each QA test.

Keep Pace with Change

To keep pace with the changing needs of global manufacturers, we regularly update the Teradata MFGDM. Among the newest features are improved and expanded capabilities for activity-based costing, planogram, trade fund management, legal case management, party preferences, account budgets and unstructured text.

The Teradata Difference

Teradata is the technology leader in enterprise data warehousing, analytic applications, and data warehousing services. Organizations around the world rely on the power of Teradata and our award-winning solutions to get a single, integrated view of their business to enhance decision making, customer relationships, and profitability.

Teradata brings you a blend of technology and experience unavailable from any other source. We have been providing innovative, best-in-class business solutions and technologies for some of the most successful data warehouses in the world for 35 years. And we have long supported integrated, centralized data warehouses under some of the most demanding environments.

To help guide your model development, Teradata Professional Services consultants will help plan and select the applications that support your unique business needs. Then we will work with you to prioritize and implement an effective data warehouse strategy—a strategy that delivers the strongest return on your investment and implements a world-class business solution.

For More Information

To find out more about how the Teradata Manufacturing Data Model can help you maximize your investment in your Teradata solution, improve your decision-making capabilities and grow a stronger, more productive business, contact your local Teradata representative, or visit Teradata.com.

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