

Take the fast path to greater information insight with the telecommunications data warehouse models from IBM



Industry Models for Telecommunications

Executive summary

Understanding and responding to customer buying behavior has always been an important task. But for those in the telecommunications industry, it becomes more crucial with each passing day. In some markets, customer churn now tops out at nearly 40 percent annually.¹ Losing even a single customer comes at a high price; it is much more expensive to acquire a new subscriber than to retain an existing one. On the flip side, the more you know and understand about your customers, the more opportunity you have to increase revenue and lower costs.

Data analytics capabilities allow you to profit by knowing your customers—and your business—better. And if you're like most organizations, you may have one or more data warehouses or data marts to help gather customer and operations information. But how skillful is your organization at turning this information into actionable insight? Ask yourself these key questions:

- *Can you calculate your revenue leakage?*
- *How effective are you at understanding who your most profitable customers are?*
- *What is your current churn rate?*

Knowing the answers to these questions is the first step toward true information insight. The telecommunications data warehouse models (TDW) from IBM can help you get there faster by providing a blueprint for a comprehensive data warehouse and the business intelligence applications that run on it.

This executive brief discusses how TDW can help you establish a platform to gain a more complete understanding of your customers and business, and thereby help you choose the best strategies for:

- *Retaining customers.*
- *Increasing wallet-share.*
- *Aligning IT with business goals.*
- *Facilitating compliance measures.*
- *Improving the bottom line.*

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/08/01	31.875	3784932	02/12/01	21.75	3749506	02/18/01	23.75	3749
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/09/01	35.437	6879043	02/13/01	25.475	7939475	02/19/01	45.375	7938
/09/01	24.75	2848506	02/13/01	55.5	3540253	02/19/01	34.275	3540
/09/01	23.25	6570867	02/13/01	23.25	7884932	02/19/01	28.125	7884
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/10/01	40.25	4383902	02/14/01	39.175	7923586	02/20/01	43.375	7923



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Dig deeper to uncover greater insights

Many telecommunications companies are finding that their current business intelligence solutions can no longer keep up with the massive changes impacting the industry. Rising levels of competition, continued deregulation and the convergence of voice, data and video are forcing telecoms to examine—and reexamine—their next move closely.

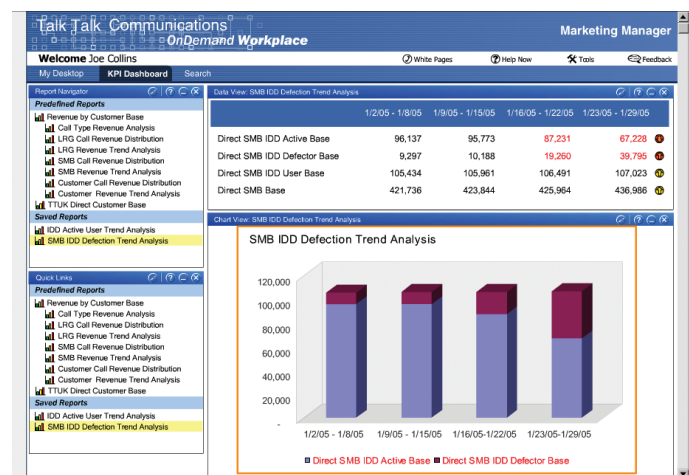
Widespread consolidation through mergers and acquisitions is one way telecoms have sought to maintain financial viability. Another is to offer value-added services to help boost revenue and increase customer loyalty. Providing the services customers need is a great way to start. But to do that, you have to know a lot about them. What they like and what they dislike. Which ones are more likely to switch to another provider. And why.

All too often, however, the answers are locked away in multiple silos—the inevitable result of industry mergers and the inherent differences between various divisions or departments. A near real-time telecom data warehouse solution enables you to move toward an on demand environment by creating a central repository for virtually all of your critical data, across disparate systems and formats, and across diverse departments.

Consolidating all types of information—including customer, ordering, billing and service information—into a unified view of consistent and trusted information helps you gain a more complete and accurate understanding of your customer base. With near real-time insight, you can:

Pinpoint and focus on your most profitable customers to improve financial performance. For many telecoms, a relatively small percentage of subscribers contribute a very large percentage of total profit. But broad marketing campaigns never reach the most profitable customers. Other customers should be converted to profitability or spun off. A dynamic telecom data warehouse delivers the information insight you need to determine customer profitability and to precisely target marketing campaigns and promotions.

Respond quickly to customer needs. The ability to collect and share customer data across channels can help you develop a single view of a customer relationship—including multiple accounts, dropped calls, payment history and product details. With this information at their fingertips, customer service agents can quickly and efficiently respond to whatever the situation calls for: refunds for dropped calls, focused incentives to retain specific customers, or potential up-sell and cross-sell opportunities to gain greater wallet-share from existing customers.



An executive dashboard fed by TDW can be a powerful business tool.

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Analyze marketing campaigns. Every advertising dollar counts in a fiercely competitive environment. You don't want to just launch a broad campaign and wait for something to happen. Increase your chances of success by analyzing critical data to segment customers and target market plans to top prospects. Then evaluate the results to find out what's working—and adjust your campaign to fix whatever doesn't.

Minimize revenue leakage. As you gain more insight into payments processing and call detail records, you can identify potential sources of revenue leakage. A top-of-mind challenge for virtually all telecoms, leakage often accounts for losses averaging nearly 12% of annual revenues.² Real-time information that summarizes potential indicators of fraud, such as unusual call usage and billing information, can help you stem revenue leakage.

Of course, analyzing customer activity is only part of the story. The more visibility you have across your infrastructure, the more insight you have into your network operations and utilization.

With near-real-time network information at hand, network administrators can:

- *Detect network problems faster and take steps to avoid widespread outages.*
- *Reduce the amount of time required to recover from a network failure.*
- *Identify where additional capacity is required.*
- *Reduce network expansion budgets.*

Accelerate your time to value

An effective data warehouse solution offers value beyond simple data gathering and analysis. It forms the foundation of a true Information On Demand infrastructure—where trusted, relevant information is available to the people who need it, when they need it, so they can make better and more timely decisions.

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Just as critical as having a data warehouse is how you implement it. Do it right, and you can speed your time-to-value while continuing to produce ROI as your business evolves. IBM offers a business-focused approach and tools to facilitate the development of a data warehouse. The IBM telecom data warehouse contains the necessary knowledge of the telecommunications marketplace to assist business users and IT staff to communicate about and deliver a data warehouse on time and on budget. It enables you to build both comprehensive enterprise data warehouses as well as departmental data marts through rapid, phased development.

A comprehensive platform for business intelligence, the IBM telecom data warehouse can tie together disparate data warehouses and data marts. It acts as a blueprint—helping to significantly reduce the cost and time needed to develop a data warehouse, and increase your success rate along the way.

Most important, it's flexible enough to evolve with the ever-changing requirements of the telecom industry. Unlike proprietary solutions, where the reporting data and scope

can double every 12 to 18 months, the open standards-based telecom data warehouse solution makes it easy to build out additional features on demand.

The IBM telecom data warehouse solution can help reduce the risk of implementing a data warehouse solution while considerably reducing time and costs through the ability to:

- Facilitate rapid data warehouse implementation.
 - Enable IT to focus on data integration and business users to focus on analytics.
 - Integrate with existing systems to preserve investments.
 - Scale to adapt to growing needs.
 - Facilitate data governance, data quality and privacy initiatives.
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Align IT and business goals

IBM telecom data warehouse empowers business users to participate in the gathering and analysis processes. While the telecom data warehouse already contains more than 80 percent of the requirements needed, business users can easily scope and add additional requirements.

Another benefit of the telecom data warehouse is the ability to help improve collaboration between IT and business users. The telecom data warehouse separates areas of responsibility so that IT can focus on data integration, and business users can focus on what they know best—the content. Business users can also set priorities based on those that offer the greatest returns and technical feasibility. This approach helps ensure future projects will be aligned with a single, proven data architecture and overall business goals.

European telecom gains more insight

A telco in Europe used TDW to establish a data warehouse focused on customer knowledge, CRM, international service, finance and products. A common customer and product view across lines of business and merged subsidiaries provides vital business intelligence information to 1,000 employees and hundreds of business customers.

A blueprint for success

The IBM telecom data warehouse solution encapsulates extensive experience in delivering effective data warehouse solutions to some of the world's leading institutions. Tailored to address the specific needs of the telecommunications industry, the integrated, interlinked and customizable models represent thousands of man-hours of IBM experience in delivering data warehouse solutions for wireless and wireline service providers of all sizes.

With the IBM telecom data warehouse solution, seemingly overwhelming tasks such as gathering data required to comply with compliance and records-related laws and regulations become simpler. Decision making gets easier. And, ultimately, information transforms into actionable insight.

Some of the key components include:

Telecommunication Services Data Model

The Telecommunications Services Data Model is a customizable hierarchy of business terms and definitions that provide a direct link between analytical requirements, data concepts and your environment.

Telecommunications Data Warehouse Model

The Telecommunications Data Warehouse Model offers an entity relationship logical model with pre-defined data warehouse structures. Independent of any particular account, product, organization or channel hierarchy, the model provides more than 80 percent of the data structures typically needed to build a data warehouse and can help automatically generate the physical data warehouse database from the model.



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Telecommunications Business Solution Templates

TDW includes nearly 40 key performance indicators within eight focus areas that enable quick and easy specification of analytical reporting requirements that form the basis of reports and executive dashboards. Based on real-world industry experience, the solution templates feature data mart designs for the following business areas:

- *Channel, campaign and marketing performance*
- *Churn and credit risk management*
- *Content and portal usage profiling*
- *Customer relationship management*
- *Customer segmentation*
- *Network usage*
- *Operations and finance*
- *Product lifecycle and service quality management*
- *Wireless and wireline usage profiling*
- *Yield management*

By unlocking information contained in individual applications and repositories from a variety of vendors and making it readily available to the people and processes that need it, the IBM telecommunications data warehouse can create a foundation for future projects, such as master data management (MDM) initiatives, and help put you on the path toward a service-oriented architecture (SOA).

Telecommunications Data Warehouse Solution

This comprehensive solution offering exploits a range of components from across the IBM software platform as well as best-in-class Business Partner applications. These include some or all of the following:

- *IBMInformation Server – for delivery of trusted, consistent and re-usable information*
- *IBMDB2® Data Warehouse Edition – integrated platform for dynamic data warehousing*
- *IBMWebSphere® Customer Center – real-time, transactional customer data integration*
- *Rational® Data Architect – enterprise data modeling tool*
- *BusinessIntelligence applications – tools from IBM Business Partners*

Asian telecom speeds time to value

TDW helped an Asian Telco with 20 million customers reduce access time to sales, customer management, and facility information from 1 month to 1 day; ad-hoc information access time from 3 days to 1 day, and data analysis turnaround time from 3 weeks to 6 hours. The 50 Terabyte data warehouse, fed by 86 data source systems, was up and running in 9 months.



Why IBM?

Whether you need to analyze hundreds of call details, or hundreds of millions of calls, IBM can help you achieve near real-time insight into your customers and operational systems. IBM has spent decades helping businesses generate, manage and extend their enterprise data warehouses, and offers extensive telecommunications expertise and industry best practices, as well as leading information management solutions. Employing more than 1,500 consultants and service professionals dedicated to data warehousing and data management, IBM is ready to help you:

- *Lower your total cost of ownership by exploiting open standards architectures.*
- *Streamline operations by automating administration of your information infrastructure.*
- *Leverage the latest hardware and software technologies, as well as telecom best-practices information services.*
- *Minimize risk and improve time-to-value with proven results.*
- *Maximize results across your enterprise.*

For more information

To find out how IBM can help you start unleashing the power of your enterprise information, contact your IBM representative or IBM Business Partner, or visit: ibm.com/software/data/ips/products/industrymodels/.



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¹ http://www.telecommagazine.com/International/article.asp?HH_ID=AR_2440

² <http://www.globalbilling.org/pdf/Benchmarking/Nick%20Milner.pdf>

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