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Turning Telecommunications Data into Up-To-The-Second Customer Insight

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-Vedat Güneş, Data Management Manager, Türk Telekom

Turkey's Leading Communications Provider

Türk Telekom Group is the leading communication and convergence technology group in Turkey. The organization provides integrated telecommunication services, including fixed line, mobile and broadband services to residential and commercial customers all over the country. According to the most recent figures, Türk Telekom has 13.7 million fixed line customers, 7.3 million broadband connections and 14.5 million mobile subscribers.

Turkey's telecommunications market has significant potential for growth, with low penetration rates and high growth in both the mobile and broadband markets. Indeed, demand for mobile data services are rising faster in Turkey than in almost any other European country.

Other mobile virtual network operators are already moving into the Turkish market, drawn by the promise of low penetration rates and high average revenue per user (ARPU). The challenge for Türk Telekom has been to keep abreast of these competitors—to make informed decisions quickly about which new services to invest in, which customers to target and how to maximize the revenue growth and penetration among existing audiences.

Putting the Potential of Data to Work

To stay competitive and capitalize on the growth opportunities in this fast-changing market, Türk Telekom needed to put the potential of its data to work. The company had to quickly and efficiently integrate data from multiple operational and business systems. This included call detail reports (CDRs), location-based services, financial billing information, and other unstructured data.

The advent of high speed internet communications and other trends was also creating an explosion of data. Every single CDR or billing record could hold the key to identifying a customer, selling more to an existing one or highlighting an opportunity for a new service. The data used for decision making also had to be available more quickly. For example, there was a 24 hour lag between CDR data being captured and it being available for decision-making. By this time it was often too late to be useful.

Türk Telekom has created a next-generation business intelligence and data warehousing strategy to unleash the potential of this data. Three previously separate data warehouses have been migrated and integrated into one Teradata data warehouse. By integrating CRM, CDRs, billing, fraud and other data sources with current systems, the Turkish telecommunications provider is transforming customer data into consumer insight. The

Business Initiatives

- Deliver accurate data to decision makers more quickly

- Increase revenues through improved customer targeting and more responsive customer care

- Lower the cost of managing data

Technology Strategy

- Integrate CRM, CDRs, billing and marketing and other data

- Streamline how data is collected, managed and used

- Increase the performance of data delivery

Nuts and Bolts

- Informatica PowerCenter® Advanced Edition

- Informatica Data Quality

Informatica Partner

- KOMTAŞ Information Management

company is then monetizing that data by providing timely, integrated, enriched intelligence to sales, marketing, revenue management and other lines of business. All of this is being achieved without compromising data quality and control.

"Timely, trusted information is now available to our sales, marketing and customer care teams in a fraction of the time it used to take," explains Vedat Güneş, data manager, Türk Telekom. "This allows Türk Telekom to deliver more agile and personalized marketing promotions, create cross-sell and up-sell offers, and ensure our customer service agents manage more issues effectively. This ultimately cascades into increases in customer loyalty, ARPU, and gross margins."

Results

Türk Telekom has transformed business agility using this unified data warehouse environment. The CDRs that used to take 20 hours to be available for reporting, for example, are now available in less than one hour. This accelerates decision making among the sales, marketing and other teams and improves competitiveness. Likewise, it used to take 24 hours to segment a particular group of customers for use in a marketing campaign: it now takes just 40 minutes.

Costs have come down too. By migrating data from the three data warehouses into one, Türk Telekom has reduced the volume of data under management from 200 terabytes (TB) to 40 TB.

Mete Kısacık, data warehouse and business intelligence group manager comments, "Informatica is helping to transform Türk Telekom's business intelligence. With a 40-fold increase in performance, we are able to analyse data a lot faster now. This increased agility will deliver advantages throughout the organization."

The Role of Informatica

Türk Telekom chose Informatica for the next-generation data warehouse project, based on a number of factors. First, Informatica is widely regarded as the gold standard for data integration—proven to help many of the world's leading telecommunications companies to unleash the potential of their data. Second, the combination of Informatica and the Teradata Unified Data Architecture (UDA) enables Türk Telekom to use the Informatica Virtual Data Machine to map data integration processes once. These processes can then be deployed to run on workload-specific platforms within the Teradata UDA to power many type of analytics—all within a single data architecture.

Turk Telekom's data warehouse team was also already using Informatica Identity Resolution to match customer data and identify appropriate customer segments for accurate and reliable data mining, campaign management and cross-selling.

Informatica also offered Türk Telekom a single, unified platform for data integration, incorporating multiple features in one solution, including metadata management and a pushdown optimization feature that allows transformation logic to be pushed into the target databases.

Informatica worked closely with the local partner in Turkey, KOMTAŞ Information Management, on the project. The entire transformation process was completed to budget and within just six months. "Informatica offered everything we needed for enterprise data integration in a single package," says Güneş. "The technology is easy to work with, it scales seamlessly and integrates fluidly with Teradata."

Inside Türk Telekom's data warehouse

The first phase of the data warehouse transformation project involved the migration of three existing data warehouses (SQL Server, Oracle and Sybase) into a Teradata UDA. The second (ongoing) phase is to adapt the model, including the creation of improved data integration workflows—all based on Informatica PowerCenter.

Informatica PowerCenter integrates data from multiple, disconnected legacy sources, including CRM, CDRs, billing and marketing. The solution converts raw data into actionable information, integrating mission-critical data processes into their daily business activity. The integrated data is used by a variety of Türk Telekom business units, including Marketing, Customer Care, Revenue Management and Campaign Management. Türk Telekom uses BusinessObjects and other reporting systems to enable end users to exploit the data available in the data warehouse.

Türk Telekom uses the Metadata Manager functionality of Informatica PowerCenter Advanced Edition to explore the data lineage between the Oracle source systems and the Teradata UDA and BusinessObjects reports. Metadata Manager enabled the company to react more quickly to changes in the data, see the impact of the changes up and down stream and explore the data flow throughout the architecture.

Türk Telekom is also using the Pushdown Optimization option within PowerCenter to 'push down' data transformation processing into any relational database to make the best use of database assets. This optimizes the performance of Türk Telekom's data warehouse in response to changing run-time demands, peak processing needs, or other dynamic aspects of the production environment.

Accurate matching and address cleansing is also now being introduced. Informatica Data Quality will help ensure authoritative and trustworthy data will be available to all Türk Telekom stakeholders and data domains, for all projects and business applications.

Informatica
Put potential to work.™