Freescale Semiconductor is a global leader in the design and manufacture of embedded semiconductors. Its products power everything from cars to cell phones, networking gear, appliances and portable media players. The semiconductor industry is very competitive and cyclical; innovation and the ability to adapt quickly are vital to stay ahead of the competition.

“Over the last few years we have worked hard to improve efficiency in design, manufacturing and operations,” says Bobby Ghoshal, enterprise business intelligence (BI) IT manager for Freescale. “We are leveraging IT to transform the company.”

In this environment, a key differentiator is having enough agility to meet these requirements. Freescale’s spinoff from Motorola in 2004 brought additional intensity to the situation. “When we announced our spinoff from Motorola,” Ghoshal says, “we were just a sector within a very large corporation. We had to clone or develop systems to support existing operations as well as new corporate functions like HR, legal and treasury.”

This transition had significant impact on the IT support of the company. “We have eight fabrication facilities worldwide with over 30 test and support facilities, each containing a lot of data,” Ghoshal says. “We had to ensure that we get all of this information together with all of the new business functions—really get it up and running in a short amount of time.”

To accomplish this, Freescale decided to create an enterprise data warehouse (EDW) to support performance and operational efficiency as well as corporate growth. “We needed a place to put all of this information together … providing a single version of the truth, getting all the manufacturing data in one place and then taking it a step further and combining it with the business data and allow end-to-end analysis,” explains Ghoshal. “This really is the vision for enterprise business intelligence and the Diamond Project at Freescale.”

The Diamond Project is the heart of the manufacturing initiative. Currently the data is housed locally in each of the facilities, but the project will bring all of this information together with an enterprise data model, integrate it in one place and tie it to the business model for end-to-end analysis.

Executive support is key in attaining this huge goal. Sam Coursen, the CIO, is the biggest proponent of the BI program, including getting the EDW up and running. Ghoshal explains Coursen’s rationale: “He thinks that this will provide the greatest value to Freescale, as a competitive advantage from IT.”

“‘It’s not just the speed and power of Teradata, but also the support teams, the consulting folks from Teradata who really helped us speed our implementation of the EDW in getting to our endpoint.’”

—Bobby Ghoshal, enterprise business intelligence IT manager, Freescale Semiconductor

Coursen recognizes the importance of these IT initiatives at Freescale. The company had a data warehouse, but it wasn’t sufficient to meet the company’s needs. Only some of the business information was in the data warehouse, but none of the manufacturing data was included because of the large volumes.

Freescale selected the Teradata solution to get beyond the technical limitations of using older technology. “Teradata’s product is well-known for its ability to handle large volumes of data,” Ghoshal

Vision of efficiency
Freescale Semiconductor’s Diamond Project aims to provide a one-stop shop for analysis.

by Vladislav Boz
Bobby Ghoshal, enterprise business intelligence IT manager for Freescale Semiconductor, says executive support has been key in the company’s move to an enterprise data warehouse.