



## Database-Independent ADO.NET Providers from DataDirect Reduce Development Time for Knorr Associates

**Goal:** In moving its flagship product, DataPipe, to the .NET platform, they were looking for ADO.NET providers that would work seamlessly across multiple databases.

**Why they embed DataDirect:** DataDirect ADO.NET providers are interoperable across all the databases they support – Oracle, SQL Server, and DB2. This means less development time spent modifying the client code or middleware layer to support each database.

**Business benefits:** Savings in development time and a better experience for their customers.

**Technical benefits:** SQL Leveling and other interoperability features mean much less time coding. 100% managed code design stays completely within the .NET environment for tighter security.

**“DataDirect ADO.NET providers allow us to keep the data access functionality on the back end. You can then add new database support easily. By flipping a switch we can move to Oracle, SQL Server, or DB2.”**

Peter Singer  
Vice President of Development,  
Knorr Associates

1-800-876-3101

For more information, go to:

[www.datadirect.com](http://www.datadirect.com)

For more information on Knorr Associates, go to: [www.knorrassociates.com](http://www.knorrassociates.com)

Knorr Associates, Inc. has been in the environment, health and safety (EHS) business for 25 years. DataPipe™, their flagship solution, is a modular, straightforward approach to collecting and managing EHS information. The modular approach to DataPipe allows their customers, many of them large companies in manufacturing, utilities and petroleum, to incorporate only the functionality they need, and still have a seamless administration.

For the third generation of DataPipe, Knorr Associates evaluated both .NET and J2EE as possible platforms. While they evaluated J2EE first, they waited for .NET. Says Peter Singer, VP of Development, “We saw that .NET included everything that we needed. It has turned out to be a good decision. Our modules run seamlessly on the .NET platform.”

### Interoperability at the Data Tier

Knorr was also expanding its database support to include Oracle, SQL Server, and DB2. And Singer was conscious of the development time necessary to do so. “One of the things we needed from our data connectivity layer was database independence,” says Singer. “We didn’t want to have to modify all the front-end client code to support each database.”

Knorr Associates came to DataDirect. DataDirect Connect® for .NET providers are the only ones that offer consistency across all databases. One of its interoperability features is SQL Leveling – the ability to write a single SQL statement that can be executed across multiple databases. This relieves developers of the extra coding required when using database vendor drivers that support certain ANSI SQL functionality only in a proprietary format. Adds Singer, “This allows you to keep the data access functionality on the back end. You can then add new database support easily. By flipping a switch we can move to Oracle, SQL Server, or DB2.”

Singer evaluated the ADO.NET providers from the database vendors, but found that they have “different levels of conformance to .NET.” In evaluating these providers, Singer’s team encountered extra development work. “We were always ‘special casing’ for different API calls. The database vendor providers were different and they had different levels of support for .NET. In fact, some of the existing providers don’t even support all of their own data types!”

### 100% Managed – Secure in the .NET Environment

Security is a major consideration for Knorr’s enterprise customers. “All of our modules share information with each other. We believe that this data all belongs in one system. So it’s important to us that our application only use managed code. Otherwise the security restrictions of the .NET Framework are not enforced,” says Singer.

Connect for .NET providers are 100% managed code, so they don’t require the presence of client library software (such as MDAC, OracleNet, or DB2Connect). In addition to securing the DataPipe environment, this means that customers experience less installation and maintenance overhead. Says Singer of his customers: “The less we make them do, the better their experience.”