Customer Case Study

Delivering Key Business Information Where and When it is Needed

About Interconnector UK

Interconnector (UK) Limited, headquartered in London, operate a sub-sea gas pipeline between the UK and Europe providing a strategic link connecting the two energy markets. The system comprises compression terminals at Bacton in the UK and Zeebrugge in Belgium and is capable of transporting upwards of 25 billion cubic metres of gas per annum. A large number of major energy companies (referred to as "shippers") on either side of the pipe share the pipeline capacity and can be readily flow gas in either direction as trading and demand fluctuate.

The Challenges

The sheer scale of the operations involved in shipping gas across the Channel itself provides a significant challenge. Multiply that by the varying demand from the large number of shippers and the challenge of ensuring supply is delivered correctly and in the safest and most efficient manner is a massive undertaking. One that can only be met by ensuring the data used to make key decisions is up to date, accurate and timely. More significantly, there needs to be a unified view of this data to ensure the different areas of the business are making their judgements from a common point of reference.

With such a rich and varied range of data sources management information reports took many different forms and guises and a significant amount of effort to produce. With internal systems ranging from operational systems such as SCADA or bespoke information systems to financial systems heavily based around Excel and external data services such as XML web services provided by partner agencies or "screen scraping" relevant internet sites the data sources used throughout the Company's business processes couldn't have been more widespread.

Within the Company also, there were a number of different consumers of this data. Across the different functions of the business, users would receive the data and correlate with other data to produce the necessary information reports for their department's specific needs. This would often require significant manual effort and would add a dependency to the process.
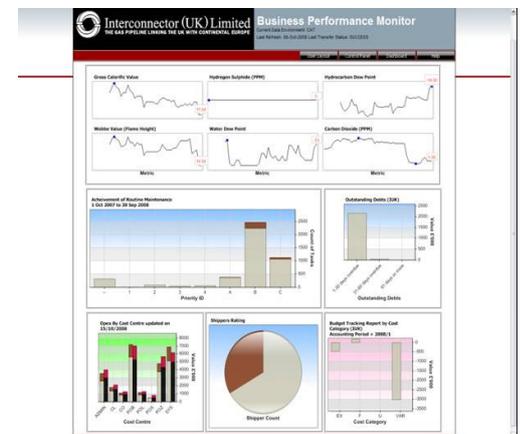
The Solution

Having established a close working relationship, Cooper Software worked with the Company to elicit, understand and document the requirements. Along with key stakeholders, an innovative and ambitious enterprise wide solution was designed that would automate the gathering of data from all of the different data sources, consolidate the data into a data warehouse-type location and provide a highly visual method allowing users to view the information as and when they required.

The solution needed to be extensible to allow new data sources to be easily added, new information reports to be created and new users to be added to the system as required. It must also be flexible enough to support the varying needs of the expected various different user types.

Using an iterative and incremental development process, the application was delivered in manageable chunks according to business priorities. This allowed a working solution to be delivered early allowing the benefits to be realised quickly. Due to the flexible nature of the application, additional charts and data feeds were the developed and delivered often to supplement and enhance the application.

The final result was an application known as the Business Performance Monitor (BPM). This solution encompasses a highly visual dashboard web application (see Figure 1 below) along with a library of the necessary data gathering adapters for mining data

Figure 1 - Example User Dashboard

ISO 9001 REGISTERED FIRM

from the required data sources. The full solution is completed by the provision of the necessary administrative functions for controlling and monitoring the data imports, users and security to ensure data is only seen by the appropriate persons.

Each user can individualise their dashboard to view the charts most relevant to them and in a format that best suits their requirements. The underlying data is refreshed as necessary ensuring the most up to date picture is always provided. Each chart displayed on the dashboard offers the ability to "drill down" though the chart to view the underlying data. From there, further analysis options, such as filtering, are available.

Figure 2 – Drill-Down Page

The Results and Benefits

The Business Performance Monitor application provides Interconnector with the ability to distribute near real time information to the users who need it. The application provides user customisation ability allowing users across the different functions of the Company to see the information most relevant to

them allowing them to make more informed business decisions.

The flexible architecture of the solution means the process of delivering new charts and new data feeds is straightforward and does not require that the full application is updated. This reduces time to develop new content for the dashboard and streamlines the delivery process as only relatively small database deployments are required to deliver the updates.

Under the hood of the application, data is gathered from the data sources using components known as "data adapters". These adapters mine data from the disparate, disconnected data sources into a single data-warehouse style database that provides a single point of reference for business information reporting. With all data in a single place, data can be cross-referenced allow detailed analysis to be performed to support the key business decisions.

Additional Benefits

The component-based development of the BPM offers the opportunity to integrate the dashboard/charting functionality into other applications. As part of a separate but related development, the charting component has been re-used to deliver the same key business metric but using plasma screens (see Figure 3) displayed in public areas and throughout the Company.

Comments

"Cooper Software was innovative in the approach they took to deliver this solution and worked closely with incumbent service providers to ensure the iterative system deliveries were implemented smoothly and with the minimum of fuss."

Terry Stephens – Interconnector (UK) Limited

CUSTOMER
Interconnector UK

LOCATION
United Kingdom

INDUSTRY
Oil and Gas

WEBSITE
www.interconnector.com

PROBLEM
Management information spread across a number of disparate systems making it difficult and time consuming to produce the necessary reports efficiently and on time.

SOLUTION
A user configurable intranet application for creating highly visible management information dashboards to display key business metrics.

BENEFITS
Consolidation of data.
Single point of reference for management information reporting.
Elimination of manual effort for preparing and distributing reports.

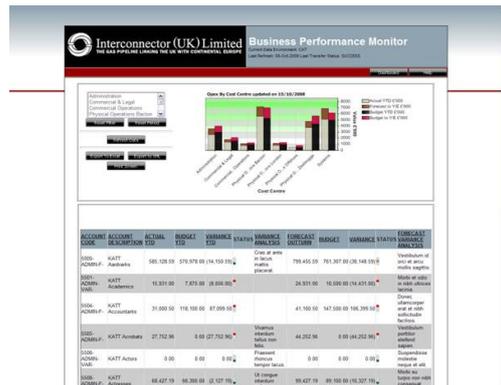**Figure 3 – Plasma Display with Charting Integration**