

## Arcadia dresses up business intelligence capabilities with WebFOCUS and DB2 on System i



With more than 2,000 outlets across seven brands, Arcadia Group is the UK's largest clothing retailer. The group is now expanding its overseas presence, with a particular focus on the US market. For the year ended 2 September 2006, Arcadia Group recorded sales of £1.8 billion (approx. USD 3.6 billion) and EBITDA of £357 million (approx. USD 715 million).

The 2002 takeover of Arcadia Group brought a new management style and greater focus on strategic planning, leading to a surge in the use of data warehousing and business intelligence tools.

"As the number of users grew, and as their reporting requirements became more diverse, we wanted to enable greater flexibility in development," says Matthew Evans, Development Manager, Arcadia. "We were not confident that our existing reporting tool would scale adequately, and in development terms it was something of a black box: a change in one area might trigger an inexplicable degradation in performance."

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### Overview

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#### ■ Challenge

*Arcadia needed to deliver more detailed business intelligence more rapidly to a growing number of users, while maintaining low infrastructure and operational costs. The platform for data warehousing needed to be both stable and highly scalable, and to offer continual performance enhancements.*

#### ■ Solution

*Arcadia runs its 2.25 TB data warehouse on an IBM System i570 with the latest-generation IBM POWER5+™ processors. Data management is handled by IBM DB2® for i5/OS®, an integral component of IBM i5/OS, and WebFOCUS is used for creating and delivering business intelligence reports.*

#### ■ Key Benefits

*IBM System i™ platform offers a stable, high-performance environment for data warehousing, with ability to manage very large data sets; integration of DB2 database into i5/OS helps simplify data management and reduce costs; query performance enhancements in DB2 enabled Arcadia to maintain six-hour window for overnight batch jobs while data volumes doubled.*

*“The System i platform has kept ahead of our rapid growth, and the continual improvements in DB2 optimization on the platform mean that we’re getting better performance even as data volumes and user numbers rise.”*

– *Matthew Evans, Development Manager, Arcadia*

#### **Focus on reporting**

Arcadia selected WebFOCUS from Information Builders as its new reporting and business intelligence tool, running the software on the System i platform. “WebFOCUS is very flexible—it’s almost a language for our development team,” says Evans. “The ability to tailor reporting to a very fine degree will become increasingly important as the data set grows.”

The deployment of WebFOCUS in a logical partition alongside the data warehouse on an IBM System i570 enables very fine-grained performance tuning, and takes advantage of highly secure virtual Ethernet connections to speed data delivery and keep traffic off the LAN.

“One of our tables now stands at 700 GB, with 650 million records,” says Evans. “WebFOCUS with the DB2 data warehouse on the i570 produces extremely good response times for users running reports on this very large table.”

He adds, “The agreement between IBM and Information Builders to integrate WebFOCUS into the standard System i software stack as IBM DB2 Web Query for System i vindicates our decision to invest in the software, and is likely to enable further optimization of System i as a platform for data warehousing.”

#### **Improved performance throughout growth**

When Arcadia introduced data warehousing, the company ran it on a UNIX® platform. Matthew Evans recalls: “There was significant effort involved in getting the hardware, operating system and database working together reliably. As a result the platform lacked the stability we needed, especially when compared to the systems we were running on the IBM System i platform.”

Following a successful test migration at the IBM DB2 Center of Competency in Rochester, MN, Arcadia moved its data

warehouse to the System i platform.

“The System i platform was clearly more than capable of delivering the performance and scalability required for a data warehouse. Ever since, the System i platform has kept ahead of our rapid growth, and the continual improvements in DB2 optimization on the platform mean that we’re getting better performance even as data volumes and user numbers rise.”

The data warehouse holds all sales- and inventory-related data across the group, and enables reporting down to the level of individual stores. It now runs in a logical partition on an IBM System i570 with the latest-generation IBM POWER5+ processors. Over the past three years, the number of registered users of the Arcadia data warehouse has grown from 150 to more than 600, and the volume of data has doubled to 2.25 TB.

The increased speed of processing offered by the System i platform with DB2 means that Arcadia can use the data warehouse to create more detailed reports on business performance more rapidly. Business users can see the effects of new sales strategies sooner, and use this feedback to tweak operations to help maximize profitability.

### Continual optimization

The IBM DB2 Center of Competency in Rochester runs a cut-down version of the Arcadia data warehouse, enabling the IBM DB2 developers to test new optimization techniques on a real-life customer system. “We’re currently working with the Rochester team to tweak the performance of our data warehouse for i5/OS V5R4,” says Evans. “We’re very conservative about new operating system releases, because we absolutely cannot risk increasing the time taken to load the overnight batch. The batch window is around six hours at peak times, and we need to complete processing before the first users come online.”

The IBM DB2 Center of Competency has a dedicated team of engineers working on the i5/OS SQL Query Engine, which optimizes access to the database and builds a plan to retrieve the relevant data in the most cost-effective way.

“We can see that IBM has really put a lot of effort into improving the performance of DB2 on the System i platform,” says Evans. “The speed of the overnight batch schedule has continually improved over the last three years, even as the data volume has doubled.

There’s an element of faster hardware in that improvement, but a key factor is the enhancement of the DB2 optimization engine and the Encoded Vector Indexing technology.”

He adds, “Encoded Vector Indexing is an extremely powerful technology for data warehousing that is unique to DB2 for i5/OS—just another function built-in at no extra charge.”

*“There is never any question of moving to a different platform for data warehousing: IBM System i gives us everything we seem to need in terms of reliability, performance and cost of ownership.”*

– *Matthew Evans, Development Manager, Arcadia*

### All-in-one data warehousing solution

The System i platform offers out-of-the-box data warehousing capability, thanks to the integration of the DB2 database into i5/OS. This also reduces complexity and can help cut down the long-term cost of ownership.

“For data warehousing, IBM System i gives us everything we seem to need in terms of reliability, performance and cost of ownership,” says Evans. “The integration of DB2 into the operating system saves a huge amount of effort, and means that we don’t need to employ database administrators to determine where the data actually gets put. On our previous platform, that was a significant task, and we’ve probably freed up a couple of people by moving to System i.”

The close working relationship between Arcadia and IBM pays dividends for both parties, giving Arcadia access to the highest levels of support and the latest developments, while IBM gains valuable feedback from its customer.

“IBM is a highly responsive and professional organization, particularly when it comes to DB2 support,” says Evans. “In the retail industry it is difficult to plan for the long-term—after all, this is the fashion business. We need to be very reactive, and in the data warehousing arena that means being able to give the business whatever information it needs as soon as possible. The emphasis in reporting can change very rapidly from one day to the next; with WebFOCUS and DB2 on the System i platform, we know that we are well-positioned to meet this need.”

**For more information**

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